

THE EFFECTS OF PROGRAMMATIC ADVERTISING CHARACTERISTICS ON
CONSUMER ATTITUDE AND INTENTION TO CLICK



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THE EFFECTS OF PROGRAMMATIC ADVERTISING CHARACTERISTICS ON
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BY

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PLAGIARISM

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

20.09.21

Çağkan ÖNER

ABSTRACT

Advertising has been around for a long time. Starting with the printing press and papers, nowadays you can see them in all aspects of our daily lives. The internet is used widely and the emergence of social media platforms opened new possibilities for advertisers and companies. On the other hand, even though some people never use these social media platforms, nowadays most people use the internet for various reasons. And thanks to the developments in the advertising industry, we now have programmatic advertising which is in short, an automated buying and selling of online advertising. Programmatic advertising helped advertisers to eliminate the publisher negotiation process and minimized time consumption and introduced us to machine learning and AI-optimisation to increase efficiency and transparency. This study aimed to examine how consumers are affected by programmatic advertising and how are they likely to click these kinds of ads. From the former studies and the literature review, a questionnaire has been created. 318 responses have been collected from all over Turkey with different demographics and tested with factor analysis, reliability analysis, and regression analysis using SPSS to test the hypotheses. This study showed us different relations between some characteristics of programmatic advertising that affect consumers and their intention to click. In the end, we hope that this study helps and contributes to further studies regarding programmatic advertising and its effects on consumers.

Key Words: Advertising, Online Advertising, Internet Advertising, Online Marketing, Digital Marketing, Marketing, and Programmatic Advertising.

ÖZET

Reklamlar uzun zamandır hayatımızın bir parçası. Matbaanın bulunmasıyla başlayan ve gazetelere yayılan reklamlar günümüzde hayatımızın her yerinde karşımıza çıkıyor. Dergilerden televizyona, e-mailimizden uygulamalara kadar her yerdeler. İnternet'in kullanımının artması ve sosyal medya platformlarının ortaya çıkmasıyla birlikte reklamcılık alanı da oldukça gelişti. Sosyal medya platformları ortaya çıktığı günden beri sürekli büyüyor ve yeni reklam fırsatları yaratıyor. Diğer yanda, bazı insanlar hiç sosyal medya platformu kullanmıyor olsalar bile bu günlerde çoğu insan interneti fark amaçlar için kullanıyor. İnternet'teki bu büyüme reklam çeşitliliğini geliştirip bugünlerde programatik reklamcılığı karşımıza getirdi. Programatik reklamcılık, kısaca, online reklam alım ve satımının otomatik hale getirilmesidir. Böylece yayıncılarla yapılan görüşmeler aradan çıkarılarak zaman tüketimi minimum indiriliyor ve makine öğrenmesi ve yapay zeka ile verimlilik ve şeffaflık ilkesi göz önünde bulunduruluyor. Bu çalışma, programatik reklamların kullanıcıları nasıl etkilediği ve bu gibi reklamlara tıklama olasılıklarını ölçüyor. Önceki çalışmalar ve kaynak taraması sayesinde bir anket oluşturuldu. Bu ankete, Türkiye'nin farklı yerlerinden, farklı demografik özelliklere sahip 318 kişi cevap verdi. Faktör analizi, güvenilirlik ve regresyon analizleriyle SPSS kullanılarak hipotezler test edildi. Bu çalışma bize programatik reklamların farklı özelliklerinin tüketicileri nasıl etkilediği ve onların tıklama olasılıklarını görmemizde yardımcı oldu. Sonuç olarak bu çalışmanın gelecek çalışmalara katkı sağlamasını umuyoruz.

Anahtar Kelimeler: Reklamcılık, Online Reklamlar, İnternet Reklamları, Online Pazarlama, Dijital Pazarlama, Pazarlama ve Programatik Reklamlar.

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LIST OF ABBREVIATIONS

SEM	Search Engine Marketing
SEO	Search Engine Optimization
PPC	Pay-Per-Click
CPM	Cost-Per-Mille
SSP	Supply Side Platform
DSP	Demand Side Platform
RTB	Real-Time Bidding
RTT	Real-Time Trading
AdX	Ad Exchange
IAB	International Advertising Bureau
B	Unstandardized Beta
CI	Confidence interval
KMO	Kaiser-Meyer-Olkin
M	Mean
n	Subsample size
p	Probability level
SD	Standard Deviation
t	t test statistic

VIF Variance inflation factor

β Beta



1. INTRODUCTION

In the introduction part, significance of the programmatic advertising topic, research objectives and scope of the study are presented.

1.1. Significance of the Topic

Technological advances and improvements in internet technologies changed how marketing works nowadays. Usage of the internet has been increasing since the birth of it and because of this growth businesses and companies started to move their practices over to the internet as well. However, there are millions of companies and businesses out there to make a profit from their sales and services. Hence the digital marketing practices have started. They have to introduce their product to the market in different ways and competition is tough. Therefore, new digital marketing techniques have emerged over the years for the different needs of these companies and businesses. Using the internet, social media, mobile apps, and other digital communication technologies has become part of billions of people's daily lives (Stephen, 2016)

Social media platforms and social media marketing have something quite different from traditional media practices. The advertising on these platforms is not like a one-way communication channel as TVs, magazines, etc. The recipient of these ads can communicate with brands and others through the ads with comments, reviews, and many more possibilities. So, social media platforms and ads put potential customers in a more important position than ever and introduce a new kind of word-of-mouth marketing over the internet.

These advances and improvements of digital marketing practices started introducing new media-buying techniques and data usage. Martinez-Martinez,

Aguado and Boeykens (2017) also stated that the effects of these great developments related to the advertising and media-buying ecosystem. The potential customer data was and is still growing and managing this growth manually is close to impossible. Therefore the usage of complex computing technologies with the help of machine learning and artificial intelligence became part of the programmatic advertising process.

Programmatic advertising is different from most traditional marketing practices. It uses an automated sales and delivery techniques that have access to million websites. The data management and computing technologies allow programmatic advertising to efficient, faster, and more reliable targeting. The ability to collect detailed data supports the greater customization of the ads delivered to consumers (Martinez-Martinez et al, 2017). Since the aim of programmatic advertising is matching the related ad to the related potential consumers.

Even in 2016, the majority of advertisers, agencies, and publishers (websites publishing advertisements) in Europe were using programmatic advertising, programmatic trading accounted for 50.1 percent of European display ad spend. Furthermore, programmatic video has grown at an exponential rate of 155 percent, accounting for over 45 percent of total internet video ad expenditure. With 65 percent of mobile ad spend handled programmatically in 2016, mobile remains the "most" programmatic format (IAB Europe 2017). Based on these percentages, we can state that today it is even higher and most likely the people have been exposed to these programmatic ads. Thus programmatic advertising and programmatic ads can cause different reactions, attitudes towards them by the recipients who are potential customers. From how frequent these ads are to the usefulness of them can be varied from one and another.

1.2. Aim of the Study

With technological advances, digital marketing has become one of the most important marketing practices. Emerge of the e-commerce and social media platforms, traditional marketing practices started to leave their place to digital/internet advertisement. And technologies on the internet, computing, machine learning, and more led to programmatic advertising.

The aim of this study is to share what is programmatic advertising, how it is done, the properties of programmatic advertising, and how Turkish people react to these kinds of ads. We will see with which properties/attributes impact positively or negatively according to the public's reactions and emotional attitudes such as usefulness, likeability, and many more. Since we will be seeing how people react to programmatic ads, the results would help the advertisers in this field. The study will help the other researchers and advertising regarding the attitudes of the people and would benefit their research and advertising techniques.

1.3. Scope of the Study

This thesis starts with the literature review in which we explain digital marketing, advertising, properties, and methods, etc., and same with the programmatic advertising. It contains the conceptualization, progress, advantages, and disadvantages. Then we move to the methodology part in which we explain the process of sampling, data collection, how to analyze, and the interpreting of this data. Then we move on to the findings part which we can see mass data from our findings in great detail. Then we examine our data, do the hypothesis testing and finally end with the conclusion, discussion, and further studies part.

2. LITERATURE REVIEW

Digital marketing is basically, marketing of products and services over the internet. It is also called internet marketing, web marketing, e-marketing, and online marketing. Digital marketing efforts can be defined as driving traffic to online businesses where consumers can purchase the products or use the services. It also includes communicating with consumers with a well-defined message for the brand.

When we investigate the birth of anything related to digital marketing, we can see that the term e-commerce started to being used in 1995. With the expansion of the internet all over the world, the term e-commerce has become bigger and bigger. In favor of the internet, businesses starting to create websites to increase their sales over the internet. However, we can state that the first big and successful approach to e-commerce was Amazon. In the year 2000, now a search engine advertising market leader Google created Google AdWords (now called Google Ads) in which the consumers are already in search of something they need. After that, in 2004, Facebook emerged as a social media platform and become quite big. However, Facebook started advertising in 2007. Developments in information technologies helped and have always been helping the new marketing and data techniques for digital marketing.

Digital media and the usage of social media platforms have an important place on people's daily lives nowadays. Advanced techniques and a new way of thinking related to the digital developments, they have changed the world. (Högström & Wallin, 2017). Ever-evolving digital marketing techniques made it easier to gather and use the data. Thanks to the advances related to internet, digitization, digital media, and etc. ads placed on newspapers, televisions, radios or billboards move to the internet. (Yuan, Abidin, Sloan & Wang, 2012).

Digital marketing has a wide range of platforms and strategies. From paid advertising to affiliate marketing. And there are different strategies and techniques for every one of them.

SEM: Search Engine Marketing can be used to promote a website to increase visibility on search engine result pages such as Google and Bing. With SEM, using paid advertising, advertisers can bid for different keywords related to the businesses and optimize the website for better matching on result pages. Thus, increasing the traffic and profitability. There are different ways for paid click; advertisers can pay for every click (PPC) or advertisers can pay for mille* impressions (CPM).

(*mille=thousand)

SEO: Search Engine Optimization is increasing the visibility of the website without paid advertising and rather optimizing the content and the website. Search engines use bots to crawl the internet and match the content of a website to what people search for. So, whenever someone searches for something related to a website and the keywords used on the website, that website is there for the searchers. Other than the content, there are other optimization techniques for the website such as links, page speed, mobility, and so on.

Social Media Marketing: Facebook, Instagram, Twitter, etc. are examples of social media platforms. Any marketing effort on these platforms to gain traffic is considered social media marketing. As in SEO and SEM in search engine marketing, there are two ways of social media marketing. The first one is organic in which businesses do not pay for it. Communicating with the consumers (or potential consumers) and delivering the right brand message can be a good example. The

second one is paid where businesses or advertisers pay for the advertisements on these social media platforms.

Video Advertising: Another way to deliver the message to related people is through video marketing. Businesses or advertisers can create related, engaging, and fun videos to promote the business through different platforms such as Youtube and Vimeo. On the other hand, they can deal with other businesses that can promote videos and can reach your potential consumer on these platforms as well.

Display Advertising: Display advertising is delivering the business's messages with engaging, funny, exciting creatives. These creatives can be seen in billions of web pages and platforms. The creative should be loud and clear about the business. Businesses and advertisers do not want to gain traffic from irrelevant sources. They can use pay per click (PPC) or cost/pay for a thousand views (CPM) on this advertising as well as on search engine marketing (SEM).

Email Marketing: As can be understood from the name, email marketing is marketing efforts regarding emails. But first, businesses need to collect emails. There are various sources for that. They can use their membership on websites, work with other marketing strategies, such as social media marketing to gather an email list, they may offer a discount for sign-up, and so on. After that, these emails can be used to promote content, discount, newsletters, giveaways, and many more even to create automated email campaigns for abandoned carts, reviews after shopping, subscriptions, and more.

Content Marketing: It is a marketing strategy where businesses create content to draw consumers' attention to their website for engagement. They need to promote

and disturb these related content constantly. Infographics, videos, blog posts, podcasts, e-books, webinars, etc. can be used.

Affiliate Marketing: When businesses pay marketers or websites for promoting their content, generate traffic for sales or services it defines as affiliate marketing. Basically, referring to another business in exchange for money. Other websites and marketers get paid when there is traffic, sales, or a completed action from the referred website. It depends on the deal between the two parties.

Influencer Advertising: Influencers became important in recent years. But what is an influencer? An influencer is a known person by the general public. Such as actors, celebrities, athletes, writers, video creators, and such. So, influencer marketing is promoting a product or a service with these influencers. Since they have lots of followers, their voice is heard, and therefore these promotions by the masses as word-of-mouth or going viral widely. Hence, it creates a great consumer base who knows about the product or service.

Programmatic Advertising: Programmatic advertising is a way to automatically buying and selling process of digital adverts rather than buying directly from publishers. It is the process of selling inventory on publishing sites via various platforms and, on the advertising side, buying inventory and placing ads on a publisher's site. It has been seen as a black box, an unknown of digital marketing.

Advertising and the media-buying ecosystem have been profoundly improved by the digital transformation and new technologies. Also, due to technological and sociological changes, the advertising environment is constantly changing. Therefore the number of publishers has increased and the old way of media buying, negotiating with these publishers one by one had to change. Nowadays, programmatic advertising

is an essential part of digital marketing and it became the answer to these increased numbers of publishers.

2.1. Conceptualization of Programmatic Advertising

Programmatic advertising is buying and selling process of advertising via software based on automation. It is also called programmatic buying, programmatic trading, programmatic marketing, and automated advertising. Interactive Advertising Bureau defines programmatic advertising as by digitally connecting the buyer and seller and enabling the programmatic purchase of ads via trading platforms, the buying and selling process is simplified, resulting in operational and pricing efficiency. Thus, changing the position of the media negotiators, publishers, and account managers or the related workers. The automation of programmatic advertising simplifies the segmentation, profiling, and inventory management. The effective gathering and use of data are distinctive and revolutionary to programmatic advertising. It allows for easier campaign optimization, campaign planning, segmentation, and analysis. Machine learning, artificial intelligence, new software, and so on make this process easier and faster in every way. This productive automated system enables high-speed decision-making (Grossberg, 2016).

Another great opportunity with programmatic advertising is gathering, accessing, and analyzing a huge amount of consumer data. These data can be connected and processed in the blink of an eye. Högström and Wallin (2017) state, “Programmatic advertising implicates real-time trading, real-time information, and real-time creation, as the trading occurs when the ad opportunity is created.” With developing and ever-growing technologies, storing and managing has improved, become more affordable and simpler. As a result, better customer databases emerged. With these new data storage and technology in the advertising trading process, the

customization of advertisements has increased. As Martinez-Martinez et al (2017) stated in their research programmatic advertising, which can handle and manage huge amounts of consumer data, became a valuable financial asset. For Kumar and Gupta (2016), data-driven advertising has two objectives; maximize return on investment (ROI) and higher and relevant interactions with consumers. Programmatic advertising tries to achieve the best-matched advertisements. However, the question is now how to define best-matched. According to Grossberg (2016), it means “meaning how much a prospect looks like your best customer, the interactions between a prospect and your organization, and key actions across the web that indicate buying intent for both known and unknown accounts.” This makes advertisements more relevant and decreases the expenses.

“Programmatic, or automated, spending on display advertising (desktop and mobile) is a \$9 Billion market that is expanding at almost 30 percent a year” (Field, Zwillenberg, Zuckerman, & Ruseler, 2015). If this growth continues, the programmatic advertising is going to outgrow the direct sales worldwide until 2021. Big part of advertisement spend is with programmatic ads nowadays. (Field et al, 2015). A report made by IAB (2015), stated that More than 1,000 advertisers, agencies, and publishers from 29 markets were polled to gain insight into programmatic advertisements current adoption and stakeholder perceptions on its strategic competitive advantage potential. Over 90% intend to raise their programmatic investment or revenue in the next 12 months, with 40% expecting a more than a third rise. With time, the amount of trust in the programmatic is getting stronger by marketers, advertisers, and businesses, and the volume of inventory space increases which results in campaigns shifting to programmatic. Today, mobile devices are a greater part of our lives and consequently programmatic ads are on mobile as

well (Field et al, 2015). Most people are using mobile devices nowadays thanks to technology.

With the developments on mobile devices, ads shifted over them as well. Today, we can see ads on our mobile browser, apps, games, etc. Since these devices are portable, they can be used to target potential consumer anywhere and anytime. Advertisers can combine location, search, and behaviour to deliver relevant and targeted mobile ads (Grossberg, 2016). Hence, nowadays, consumer decision process takes place in portable devices as much as computers. Because sometimes a customer can look for something on a mobile device and then sees the ad for it on a computer and then decides to buy it on their tablet. So, the advertising must be done by cross-device solutions. According to Field et al. (2015), 25 % of all programmatic buying contains ads on mobile devices.

On the other hand, even social media platform, such as Facebook uses programmatic advertising. They switched to social media platform too because of the content of these platforms have. More and more people are using social media platforms and these platforms gather huge data sets of these people. Therefore, with these huge data sets, they have higher reach which makes these platforms great suppliers of programmatic advertising. This higher usage rate also causes new ad formats, new automation processes and more. Facebook also uses mobile advertising.

2.2. Programmatic Advertising Techniques

Programmatic advertising or programmatic buying has more than just one technique; direct programmatic, real-time bidding (RTB), preferred deals, header bidding, private marketplace (PMP), and programmatic direct. The second technique, RTB, is perhaps the most widely known when talking about programmatic

advertising, meaning to auction advertising space in real time and the highest bid wins in seconds. Then the winning bid takes that ad space and shows the specific advert for the selected users. The RTB has different actors.

Advertisers: Marketers in different businesses and companies. They are responsible for buying, optimizing, and analyzing advertisements and ad impressions.

Publishers: Owners of the websites which have the ad inventory. The advertisements are displayed on these websites.

Ad Exchange (AdX): It is a market place which brings together buyers and sellers for ad impressions in which the auction process takes place. As examples, Double-Click for Publishers and Yahoo Ad Exchange can be given.

SSPs (Supply Side Platform): Platforms where publishers manage and sell ad impressions. They hold ad space information and help the publishers to optimize their ad inventory.

DSPs (Demand Side Platform): Platforms used by the advertisers, and help them purchase and manage ad inventories from multiple ad sources. After an SSP has forward an ad impression into the Ad Exchange, it is received and analyzed by the DSP. With the help of the artificial intelligence, provided data, forecasts, criteria, specifications and more from the advertisers, the best matched and most efficient impressions can be found by the DSP.

DMPs (Data Management Platforms): Where the data is stored and managed. They support the advertisers in the bidding process. They also gather data from different sources to support DSP. It can be said that they have an important role in

data-driven, data-oriented marketing practises which acquire important and unique insight related to consumers.

Högström & Wallin, 2017, have given us a great way to explain this process and the actors of it. It all starts with an Internet user browsing the website of a publisher. An auction for the specific ad impression will be triggered through the opening of the website, containing information about the specific consumer that is browsing. Supply-Side Platforms (SSPs), which help the publisher with distributing ad inventory, send the consumer information forward to the Ad Exchange (AdX). Eligible Demand-Side Platforms (DSPs), that represent advertisers, will eventually possess the consumer information from the Ad Exchange. And the Data Management Platforms (DMPs) support the DSPs for data-related purposes.

Aside from RTB, a trading approach between a buyer and a seller that uses an automated procedure is known as programmatic direct. This buying technique, on the other hand, does not rely on auctions and instead allows marketers to purchase assured ad impressions in advance from pre-selected publishers. The RTB system is not used with programmatic direct, so possible to use for similar media as well. With this power over impressions and advertisements, it gives great control and accuracy to advertisers for ad impressions.

In terms of pricing and real-time supply, a Private Market Place (PMP) is comparable to an RTB auction; the distinction is that Private Marketplace agreements are more exclusive (IAB, 2016). It is known fact among advertisers that ad inventory and space is considered better for viewability, brand safety, and the publishers. Because of this, most of the time, advertisers need private invitations to participate in these auctions. PMPs also give great control over ads and placements.

The sole distinction is that advertisers are promised a certain quantity of impressions in Programmatic Guaranteed, which employs the RTB process and its various actors. Basically, it is selling guaranteed inventories with price allocations. It supports a higher control over ad inventory to advertisers. It might also be due to advertisers willing to pay the same rates but using programmatic pipes for efficiency. (Högström & Wallin, 2017). And DMPs can also be used with this technique.

On the other hand, Facebook used to have another method to sell ad inventory which was then called Facebook Exchange (FBX). It was a RTB-based Ad Exchange that was quite successful. With DSPs and the Ad Exchanges, advertisers used to connect to Facebook and buy ad inventory for programmatic advertising. With the developments in smart phones and portable devices, and the increasing number of Facebook Mobile users on smartphones and portable devices, advertising became a bigger part of Facebook's business model. In November 2016, Facebook decided to shut down FBX. Because it was incompatible, inefficient, insufficient and useless for mobile. The revenue from mobile advertising is at 82 % back then. Nowadays, Facebook has an interface called Facebook Marketing API (Application Programming Interface) in regard to programmatic advertising. The process is similar to RTB but has no connection with DSPs and so. Advertising on Facebook is still rely on user information. People who are using Facebook give their information about their age, gender, occupations, and interests, and so on with or without their knowledge like other social media platforms. It also has pixel integrations for websites to track users and gather data.

In the report of IAB Europe (2015), revenue from programmatic mobile advertising increased by 240 percent to €552 million in 2014, up from €230 million in 2013, and currently accounts for 27.3 percent of the mobile display market.

Programmatic video advertising increased by 176 percent from €76 million to €205 million, accounting for 12.1 percent of the online video industry. The market for programmatic desktop display is worth €2.9 billion. Almost all players in the digital ecosystem, including strategists, planners, buyers, and operational teams, are embracing programmatic advertising and capitalizing on its value-creation potential. Only 13% of advertisers, 8% of publishers, and 7% of media agencies say they do not use programmatic technology (IAB Europe, 2016). Due to the better quality of inventory, the Programmatic Direct technique may be preferred over the RTB technique. However, as technology advances, some experts anticipate that in the near future, more complex Real-Time Trading (RTT) will supplant RTB.

2.2.1. Personalized Advertising

Personal advertising has been defined with different explanations. The most suitable one for this thesis is as defined customized promotional messages that are delivered to each individual consumer through paid media based on personal information (such as consumers' names, past buying history, demographics, psychographics, locations, and lifestyle interests) (Baek & Morimoto, 2012). The essence of personal advertising is for segmentation and increasing the efficiency of advertisements. Through detailed segmentation, the message can be more personalized. It can extend to a specific consumer, an individual's interest, wants, needs and preferences. From location to their behavior, related data to the individuals should be collected. Such as browsing and search history, pages they like, their interests, hobbies, videos they have watched, their demographic information, and so on. They create a huge amount of data to be collected, analyzed, and used.

If a consumer think that there is match between themselves to the product or the service advertised, the attraction to the ad should be higher (Anand & Shachar,

2009). On the contrary, related to the uniqueness, message, and information used in an ad with higher personalized message can also have negative effects on the consumer (Malheiros et al., 2012). This is called personalization reactance. White et al. (2008), explains it with three different influences; the level of personalization, justification (explicitly justifying the fit between the distinctive personal information and the focal offer in the message), and the perceived utility. Their study was conducted with higher level of personalized emails with consumers' name, state, and the movie preferences. Perceived utility turned out low, because the personalization level was too high, hence the consumers experienced personalization reactance. So, the click-through intention was low as expected. On the contrary, when they tested with the higher perceived utility, personalized message had no importance at all and did not cause any reactance. On the other hand, Tucker et al. (2014), compared the click-through rates of two different Facebook ads on their study. Their study was conducted once without improved privacy controls and once with it. With the personalized ad, recipients' undergraduate school or the name of a celebrity that they are fan of mentioned. With the non-personalized one, there was no specific information mentioned. As it turns out, with improved privacy controls recipients of the ads had higher click rate to the personalized ad. We can state that, when consumers feel like in control of their personal information, the higher click rate can be achieved. However, we can also say that the effects of personalization and personalized advertising differ from platform to platform.

This kind of personalization is used in tailored digital marketing as well. In tailored digital marketing practices, personalization refers to presenting customers with one or more currently available products that fit their measured or stored preferences. (Kramer, Spolter-Weisfeld, & Thakkar, 2007). This kind of

personalization can be found in businesses like Netflix, Hulu, Amazon Prime, and e-commerce websites, Amazon, eBay, etc. These businesses use similar audiences, products that have been reviewed before, and more complex techniques for better personalization. So, these tailored digital marketing efforts and personalization work on a specific website or platform. Personalized advertising, on the other hand, is primarily concerned with paid commercial media messages that are specifically tailored to a single consumer (Baek & Morimoto, 2012). Thus, personalized advertising can be found on different websites, different platforms and not contained like tailored digital marketing efforts. As an example, someone can see another business' products on a different and unrelated website or a platform.

However, there can be negative effects of personal advertising as mentioned before. As an example, tailored advertising has been connected to privacy concerns among consumers, which has influenced their ad skepticism and avoidance. (Baek & Morimoto, 2012). Most of the advertisers state that they do not hold consumers' real names. However, there can be advertisers who do the opposite. There are several statements that some advertisers and social media platforms can have access to personal information and there have been leaks. Some internet users believe that advertisers can access their personal information (Malheiros et al., 2012). According to a recent study, more than 30% of users believe that sites with which they are registered (e.g., Facebook, Google, Microsoft Live, Yahoo) share personal information with advertisers without their consent, and more than half of users (52%) believe that their personal information is linked to tracking activity. (TRUSTe, 2011).

Personalization and personalized advertising are two different things, even though there are similarities they have some unique characteristics as well. Thus, with

these differences and characteristics we should use personalization and personalized advertising in different aspects.

2.2.2. Targeting and Retargeting

Targeting is tracking people, individuals with cookies. It is mostly used for matching the proper content with the right person at the right time. Targeting people individually or in segments increase the efficiency of the ads, as content and expanse wise instead of general advertisements. Basically, with targeting, individuals can be tracked using cookies to deliver the correct material to the right consumer at the right time (Kim & Huh, 2017). Cost-effectiveness and matching the suitable advertisement to the right people are essential for advertisers. Because people will click the advertisements more if the advertisement is relevant to them. It generates a higher value and cost efficiency, less advertisement goes to waste and unnoticed.

“Personalized advertising is not site contained, meaning that a user may receive a personalized advertisement on any site they visit and the advertisement may be for a product or service sold on another website” (Gironda, 2014).

On the other hand, social media usage is rapidly increasing day by day. So, the use of social media advertising increases as well. And thanks to the capabilities regarding relevant targeting techniques on these platforms, they are quite useful to advertisers. When people are starting to use these social media platforms, they provide their personal and demographic information, such as their age, gender, marital status, their habits, likes, interest, sports they are into and much more. These social media platforms have the great ability to combine this personal and demographic information with the data they gather from cookies. Advertisers can customize the advertisements to the consumer on and off-platform and on websites.

“As the strategies and techniques for collecting consumer information have evolved, a much wider range of consumer information, particularly individual-specific information, has become available for advertisers” (Kim & Huh, 2017). Nowadays, the information from a little transaction to the device a consumer use is available data to the advertisers.

Cookies are small files stored in consumers’ computers that record information about websites visits. They are used for targeted advertising. “The Ad Exchanges in the RTB process use cookie matching, which enables advertisers to acquire knowledge about whether or not they have previously interacted with this consumer, such as through the website or an advertisement.” (Högström & Wallin, 2017). The decision of to bid or not in the auction is in advertisers’ hands. (Ghosh, Mahdian, McAfee, & Vassilvitskii, 2015) Today, cookies are used in people’s search activates, shopping processes, and other internet behaviours. They also remember the consumer preferences. Cookies can also track people on mobile devices and apps. However, mobile device targeting is not made with cookies, rather with operating system identifiers used by Apple and Google/Android. Hence, everyone’s mobile device is personal to them, individual advertising, targeting, and retargeting can be conducted easier with these identifiers. Mobile device advertising can also use locations. People tend to take their mobile devices wherever they go, so, use of location in mobile advertising is a great opportunity. Advertisers can connect with the consumer while moving.

The targeting process can be supported by the DMPs as mentioned before or third-party data suppliers. This third-party targeting data can be rented or bought from a data vendors which are connected to a DSP, most of the time. “In contrast, first-party data are collected by advertisers themselves on e.g. websites or apps and may

contain names, addresses, and numbers, device ids, or site interactions of consumers.” (Högström & Wallin, 2017). First-party data is stored on advertisers with customer relations management systems, CRMs. This data is considered quite valuable, because it allows interacting directly with consumers and can be used easily. Third-party vendors have valuable and important data as well. They allow describing, targeting, and tracking consumers across all devices and channels to verify the suitability of specific consumer profiles to ad impressions (Martinez-Martinez et al., 2017).

Retargeting has emerged in need of more effective advertising. Advertisers needed to show previously searched or seen products and services to people to increase profitability. So, retargeting is essential, showing the previously seen content to the people. As an example, when someone viewed a dress on a website, they can see the same dress on other websites and platforms. Thus, retargeting can be used for search, social, and email marketing as well. We cannot simplify the retargeting process as just showing what people looked on a website. When people browse products and services on search engines they leave their search data to these search engines. This data tells advertisers that they are interested in that product or service. Advertisers can use it to their advantage and turn these interests into valuable actions, such as a purchase. Moreover, these cookies and matching them is essential for ad retargeting. To use retargeting in DSPs, the DSP must know beforehand what specific products and services of the specific website were browsed or looked and also be able to identify this information during an auction. The setup process is crucial.

Zarouali, Ponnet, Walvare, and Poels (2017), found that from their research that, with retargeting there is higher intention of purchase compared to the non-retargeted advertising. However, we should take it into consideration that retargeting ads mostly have availability, price, and more informative components and non-

retargeting ads. Seeing a product or service again may cause the interest stage of the consumer to an actionable stage which can cause purchase intent. Retargeting also causes some degree of personalization. Advertisers show consumers the ads of products or services which they have already viewed. A retargeted ad that features products that a consumer previously placed in a shopping cart reflects the consumer's interest better than an ad that features products the consumer only reviewed without further purchase intentions. (Högström & Wallin, 2017).

2.3. Benefits of Programmatic Advertising

Businesses and advertisers want to constantly communicate with potential consumers. Doing that with digital marketing is certainly cheaper than using traditional marketing practices. Advertising on digital marketing platforms is more effective and cheaper than traditional marketing. Advertising on digital platforms is three times more effective than the traditional marketing channels (Çalık, 2014).

With traditional marketing practices, such as advertising on TV, advertisers and businesses cannot know for certain how many people watch their ads, how many of them act on regarding this ad, how many made a purchase because of that and many more questions are not answered. However, in digital and programmatic marketing, advertisers and businesses can be sure how many people see the ads, how many of them click on them, how many of them made a purchase or alike action, and many more. Most of the actions are measurable.

Regards to benefits and advantages of programmatic advertising, we can start with the costs. Instead of working with agencies, with programmatic advertising, advertisers or companies can purchase from the source. Meaning no agency fees. Additionally, without agencies, businesses and advertisers save time by not being

involved with sales representatives. This leads to another advantage of programmatic advertising, the automated process of choosing the best platform and website. By courtesy of algorithms and powerful AI, the placements are more accurate and faster.

Another great benefit of programmatic advertising is better audience targeting. The enormous size of the potential consumer data behind all these programmatic advertising makes it easier for businesses and advertisers to target relevant people. Locations, demographics, incomes, interests, behaviors, devices, and much more information are available for programmatic media buying. Contextual targeting is another advantage of programmatic advertising which helps increasing the ad relevancy. Also, thanks to these audience data and algorithms, the retargeting process is faster and more certain.

Real-time results are an important benefit as well. Programmatic ads offer real-time performance results of the ads which give advertisers or businesses more chance to act on the performance of the ads sooner and help their decision-making. With faster optimizations, the ads would perform better and outcomes, therefore profits would be higher.

2.4. Challenges of Programmatic Advertising

As of general digital marketing concerns, the first challenge is just seeing the products or getting information about the service and cannot experience real things as if the potential consumer is in a store and trying out outfits. On the other hand, some people do not trust digital platforms and digital payment services enough to use them. Therefore, it limits the reachability of digital marketing practices.

For programmatic advertising, the biggest challenge is ad fraud. Ad fraud is impressions clicks provided by bots rather than real human beings. It damages the ad

budget, the reach, the number of clicks and impressions, and many more. The most important thing here is a wasted budget on the ads because of non-human impressions and clicks. However, with machine learning and some implementations, non-human traffic to the websites can be prevented.

Inventory quality is another challenge in programmatic advertising. There are billions of websites and platforms where programmatic ads can be shown. However, where the relevant ads shown is essential with these ads. Advertisers and businesses can choose the best possible options for their ads but the algorithm and AI would act otherwise. Although, thanks to real-time reports, advertisers and businesses can optimize the ads as fast as they could to work these placements in their favor.

Numerous options, new technologies, and new terminology regarding programmatic advertising often confuse people. Programmatic advertising like digital marketing is rapidly growing and expanding. So, there is always a new word, a new technology, and a new platform. This much information and option can be quite confusing. With a variety of platforms and buying options, it is quite challenging to choose the best one for the brand, for the campaign, and for the ads because everybody platform, every buying option is a world of its own.

Safety is another issue in programmatic advertising. Some platforms or websites can put the ads with unwanted, harmful, negative, controversial, violent, etc. content which could lead to damaging the brand of the ad. Additionally, social media platforms rely on user-generated content and this content can sometimes be unrelated to the ads. Regardless, with the detailed report on programmatic advertising platforms, unwanted websites can be avoided.

2.5. Attitudes Towards Online Advertising

People have attitudes towards what they see and online adverts are one of them. There are different attitudes, some like and others may not. There are different findings regarding this subject. Advertisers use different tactics, ad placements, and ad types to grab the potential consumers' attention. The main purpose is to deliver the marketing message.

However, customers' expectations for relevant messaging are evolving; they seek customized communication designed to fulfill their specific needs (Kumar & Gupta, 2016). The improvements and technological changes have affected the communication technics of advertisers. They use more personalized communication and messaging instead of mass communication. This personalized communication increases the potential consumers' decision-making and purchase decisions. Businesses or companies can create profiles with likely preferences and make their advertising more personal. Potential consumers find this kind of communication more relevant. Kumar & Gupta (2016) says, with detailed data on customers becoming increasingly available, the future of advertising is expected to see more such personalized communication across industries and markets. Therefore the personal communication affects the attitudes of potential consumers regarding online advertising.

Also, relevant messaging is important, as stated before. Across most product categories, a plethora of brands are vying for consumers' and prospects' attention. In addition, these brands tend to jump at any given opportunity to broadcast their message to consumers, in hopes that the consumer will not only notice them but also proceed to purchase whatever it is the brand is selling via that message (Kumar & Gupta, 2016). On the contrary, that is not how potential consumers conduct their

intent. They use multiple devices and platforms. The advertising would be more effective if it matches the consumers' search or related to the content they have been looking for or consuming in the advertising message. With the improved technology, businesses and companies can share their message where the demand is and if it is online or offline. The higher the relevancy of the advertising message the higher attention advertisers may get.

Another important topic about attitudes is trust. For advertising, Kumar & Gupta (2016), define contextual trust as consumers' placing their trust in advertisements influenced by the credibility of the context, such as celebrities endorsing the product.

The endorsers create this trust for the brand. When potential consumers trust these endorsers, they trust the brand as well. Therefore, it affects the attitude toward online advertising. Additionally, businesses and companies try to earn people's trust. However, there is a consistent tendency among consumers to distrust advertising (Kumar & Gupta, 2016). Soh, Reid, and King. (2007) studied on trust regarding commercials show us that regardless of customers and message, general public likes them more than they hate them. They also find them informative, favourable, useful, and etc. However, the least trustworthy advertisement channel was internet on regard of their study. As a result, understanding consumers in a large market is quite difficult and challenging. So, it is hard for advertisers to create strategies in regard to trust. Trust changes the attitudes on online advertising.

Lastly, consumers' privacy is quite important. To ensure that, businesses, companies, and advertisers use permissions from consumers in different forms which is called permission marketing. For websites, they can be simple as clicking a button

to accept the cookies. Consumers can read the privacy notices on businesses' websites and trust the business or not, according to the notice. So, creating this notice is quite crucial for businesses but it also helps to create value. When the consumers read, understand, and allow this privacy notice, they say that have the consent of receiving advertising materials. These permissions can be cross platforms by managing businesses or companies' media channels such as social media, mobile, websites, and e-mail marketing. These permissions also allow businesses and companies to cross-advertise, track consumers' behavior and share special offers with them. The main goal of permission marketing is to have authentic interactions with customers without intruding on their privacy. (Kumar & Gupta, 2016). With privacy notices, businesses and companies can get consumers' attention. Since attention creates value and therefore, important.

2.5.1. Frequency Irritation

Advertisers use frequently exposed ads to constantly remind potential customers about the product or service. Therefore, these potential consumers can understand the message and take an action. Park and Salvendy (2008), also found a link between repetition and attitudes. They discovered, that advertising repetition has a negative impact on customers' attitudes, lowering the advertising effectiveness at the end. The impact of advertising initially rose with repetition; but, if the advertisement was repeated too frequently, the effect became saturated and reduced.

Ducoffe (1995), claimed the same thing but also stated that it would cause irritation as well. The irritation was there long before online advertising. In traditional advertising, there is a relation between frequency and irritation. Irritation is a significant component that can contribute to negative views about advertisements, as well as a reduction in the value derived from them. (Ducoffe, 1995).

Tang, Zhang, and Wu (2015) found that negatively perceived advertising were more closely linked to ad repetition and timing than favourably perceived ads. When the time between advertising is short, consumers are exposed to the ad sooner than when the time between exposures is greater. If advertising is repeated without a pause between repetitions, it may result in negative impacts such as boredom and irritation. From the study, findings suggested that ad repetition usually leaves a negative impression, but low frequency leaves a positive one. They also claimed that frequency, onset duration, and irritation are all ad action judgments that are similar to avoidance behaviors.

2.5.2. Likability of Relevance

Malheiros et al., (2012) state that attraction of an ad is increased with the relevancy of it to the consumer. In the study of Campbell & Wright (2008), advertisement relevance is defined as advertising that contributes to or meets the aims and wants of customers in a self-related or collateral way. As a result, the advertisement relevance has a lot of promise for matching advertising content to the interests of internet users.

With new technologies in the field of online advertising, the targeting options are more detailed nowadays. Therefore, businesses, companies, and advertisers use these detailed targeting options when creating campaigns. When the ad is more relevant, because of the targeted campaigns, the consumer attention is much higher. So, the relevance increases the interactions of consumers with the adverts. Campbell & Wright (2008), claim that the personal relevance of online advertising is an important component to consider in repeating internet advertising in order to enhance a consumer's interest in online interaction.

2.5.3. Recognition

Most people can associate with the things they see before as they recognize them. With online advertising, seeing the brands, products, services, and etc. in different placements affect people's attitudes. And when we add repeated exposure which recipient gets, this impact creates a sense of familiarity with the advertisement, making the product or service more familiar to the customer. (McCoy, Everard, Galletta, & Moddy, 2017). Seeing the ads from the same brand with different placements also affects that. McCoy et. al, (2017), it is also possible that a more familiar object is liked more than a less familiar object. This recognition can create a positive attitude toward the brand, product, or service.

Kjærbøll (2015), says that most banners and other online ads are only viewed by the consumer for a short period of time. This short period can be enough. Because regarding the Internet, consumers' attention span is quite short and advertisers are trying to catch their attention in this short period of time. In the case of online commercials, it has been discovered that the mere exposure effect can build positive associations, which alter attitudes about the ads, due to the regular short fixation time. (Kjærbøll, 2015). Even though there are others elements on websites, consumers would likely to see the ad if they recognize it. There are different ad types other than banners. When consumers see the recognized ads on these types as well, their attitude does not change. They recognize it and there is still positive relation. The recognition creates familiarity. Therefore, this supports the usage of retargeting because it can improve consumer perceptions toward advertisements. (Kjærbøll, 2015). Retargeting increases the familiarity of the product and services which was viewed by the consumers before. So, consumers return the website to complete an action. This

makes retargeting a powerful online marketing tool. Advertising repetition can be a solution to increase the recall.

2.5.4. Invasiveness

Invasiveness is related to information privacy. Fundamentally, it is the perception of invasion of privacy to consumers. Girona (2014), invasiveness is defined as an individual's impression that some entity or practice is breaching his or her privacy. With ever-growing online advertisement technologies, data collection and marketing methods related to that have been increased. Christiansen, (2011), states that as the online data collecting methods has increased, personal privacy has become a concern. Most people nowadays are just not aware of the data collection process. Even all the social media platforms use consumers' data one way or another. Furthermore, they are considerably less aware of commercial applications of their personal information; yet, public awareness of invasive approaches is growing (Christiansen, 2011). When consumers see more and more personally targeted ads, they become more aware of the advertisers who use their personal information and data. Kim & Huh (2017) suggest that behaviorally focused ads may raise consumer awareness of advertisers' tracking and sharing of online activity data, and so be seen as intrusive and invasive.

There are different researches regarding invasiveness and online advertisement. One of them is Girona (2014) found out that Invasiveness has a significant and unfavorable impact on attitudes about targeted advertising, as well as advertising click intents and buy intentions, according to the research. The studies on this topic suggest that targeted advertisements can cause invasiveness.

2.5.5. Privacy Concern

Privacy concern is another important variable subject regarding attitudes toward online advertising. There are lots of definitions of privacy concern, Westin (1968), defines it as individuals, groups, or institutions claim the right to decide when, how, and to what extent information about them is shared with others. It is “An important issue that advertisers may face when targeting advertising to consumers' online preferences and personal data is an informational privacy concern” (Zarouli et al, 2017). Generally, consumers are not aware or have insufficient understanding about their privacy online. Their data can be collected and used without their knowledge. Sooner or later, they are exposed to the targeted advertisement and their privacy concern increases accordingly. Consumers are more likely to undertake privacy-protecting behavior if they have substantial worries about marketers' data collection activities. (Youn, 2009).

There can be different attitudes for privacy concerns and how consumers try to avoid the websites and social media platforms regarding it. Youn, (2009) study findings already revealed that adolescents with heightened privacy concerns engage in a variety of privacy-protecting behaviors, including seeking out interpersonal guidance, avoiding websites that request personal information, and fabricating or supplying incomplete personal information. For social media platforms, the case can be similar. People may delete the comments, tags, remove their photos and content, change the setting, and can even delete their account if necessary. There are empirical findings that support the negative influence of privacy concern of targeted advertising which leads to in response to a direct marketing material, consumers have a negative attitude and reduced purchasing intention. (Phelps, D’Souza, & Nowak, 2001).

Consumers who are more concerned about their privacy are likewise less tolerant of

tailored advertising messages (White, Zahay, Thornbjornsen, & Shavitt, 2008). These researches show us that consumers tend to protect themselves and their information.

We can assume people with high privacy concerns would more likely to take protective methods with targeted online advertisements.

2.5.6. Personalization

Personalization is a great method to communicate with consumers for advertisers. Advertisers can deliver the best-tailored message to the right audience with personalization. It allows advertisers to narrow down the audience. White et al (2008) and Baek and Morimoto (2012), explain personalization in digital advertising as a strategy or message designed according to one's preferences, personal information, habits, likes, dislikes, and many more details.

New technologies in the field of online advertising, provided methods to collect more detailed data for advertising. Nowadays, advertisers can gather consumer information data that can include interest, online preferences, demographics, locations, devices, past purchases, and so on. Therefore, advertisers can identify their audience and their interests, behaviors, and shopping habits to create personalized campaigns. People can sometimes notice the campaigns that are made for them from their own behaviour over the internet and history since advertisers are using retargeting as one of the online advertising methods. Unlike traditionally tailored ad messages, which are usually based on consumer profile data gathered from the characteristics of various customer segments, these new personalized ad messages are not just based on consumer profile data but more (Baek and Morimoto 2012). With retargeting, there is a higher level of personalization.

Personalization and personalized advertising can be perceived as a threat to consumers and their information. Consumers feel in control when they can choose to get advertising options, such as newsletters. When they allow it they feel like they are gaining control over their personal information and it increases the likelihood of that business, website, or company. “We suggest that consumers’ reactions to personalized messages are similarly influenced by whether the perceived utility (or “benefits”) of the advertised goods or services offsets the psychological “costs” of receiving inappropriately personal messages” (White et al. 2008).

Perceived personalization is critical for creating advertising messages that are tailored to the interests and preferences of consumers (Baek and Morimoto 2012). Perceived personalization would likely be higher when the message contains useful and related information, shortly it should be related to the audience. Then it becomes valuable. So, if the online advertisement is useful and valuable to the audience, they would be more interested in the ad and avoidance would be lower. Consequently, personalization can affect consumers differently.

2.6. Theoretical Framework

From ever-growing internet usage and social media usage, the increasing number of potential consumers has risen. Hence the advances of processing data with the ever-growing consumer data led to better targeting and personalized advertisement options. The efficiency of programmatic advertising, combined with these personalized targeting options gave unique opportunities to advertisers. On the other hand, recipients of these programmatic ads can develop different attitudes towards these ads, such as irritation, likeability, invasiveness, and many more as we have stated above. These attitudes have been discussed in many types of research before, such as Programmatic Advertising: A Quantitative Study of Consumer Attitudes

Towards Highly Frequent Online Ads from Julia Högström & Ellen Wallin or Perceived Relevance and Privacy Concern Regarding Online Behavioral Advertising (OBA) and Their Role in Consumer Responses from Hyejin Kim & Jisu Huh or many alike. On the other hand, there are emotional attitudes of these recipients, potential consumers, such as usefulness, favourability, relativity, and etc. from these ads. Regarding these emotional attitudes, How Consumers Assess the Value of Advertising from Ducoffe or Tailored vs. Invasive Advertising: An Empirical Examination of Antecedents and Outcomes of Consumers' Attitudes Toward Personalized Advertising From John Girona or similar works are great examples. We include these emotional attitudes as well in our thesis. But ultimately, the question is that if these potential consumers would likely click these ads. Hence the model emerged.

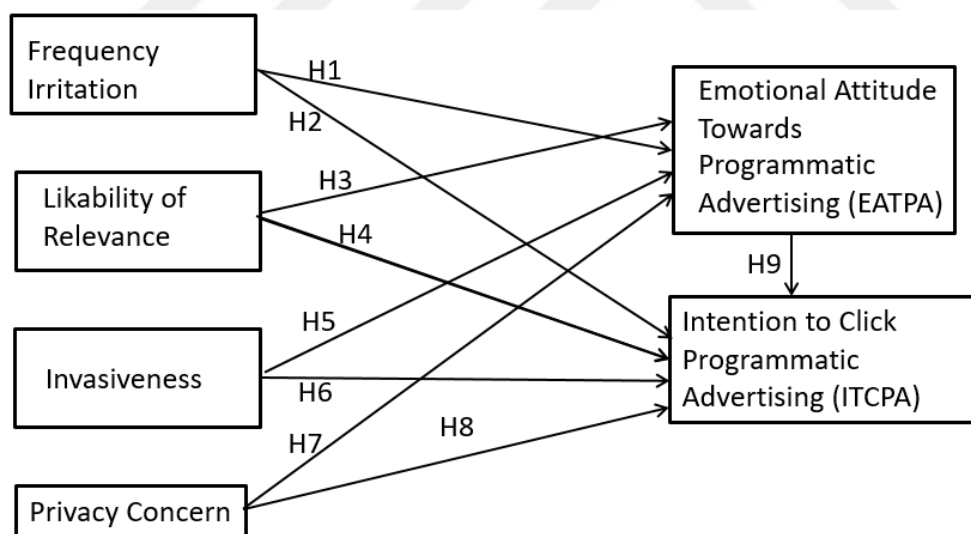


Figure 1. Proposed Hypotheses Model

H1: Frequency Irritation has a relation with EATPA

H2: Frequency Irritation has a relation with ITCPA

H3: Likeability of Relevance has a relation with EATPA

H4: Likeability of Relevance has a relation with ITCPA

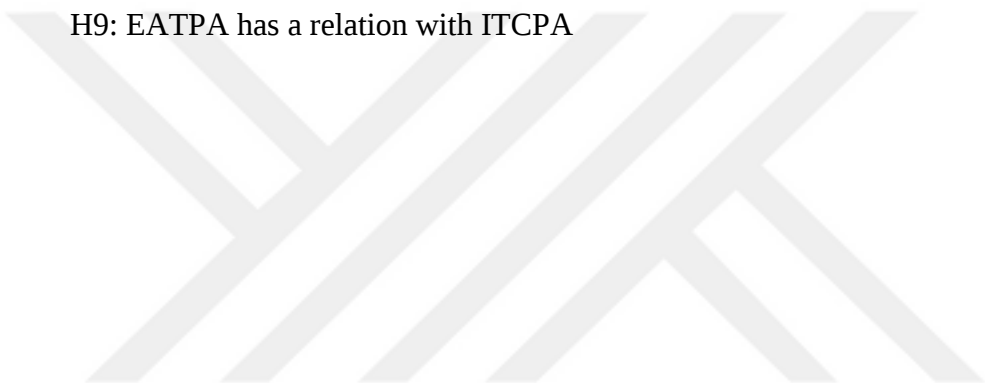
H5: Invasiveness of Relevance has a relation with EATPA

H6: Invasiveness of Relevance has a relation with ITCPA

H7: Privacy Concern has a relation with EATPA

H8: Privacy Concern has a relation with ITCPA

H9: EATPA has a relation with ITCPA



3. METHODOLOGY

In the methodology part, data collection instrument, sampling and data collection procedure are presented.

3.1. Data Collection Instrument

We have designed a questionnaire to collect data for our research. The respondents were anonymous when completing the questionnaire. Since the sampling size was quite large, a self-administrated questionnaire was more suitable. As other questionnaires related to digital advertising were also mostly self-administrated questionnaires.

We have used closed questions for our questionnaire since the open-ended questions would be hard to analyze and closed questions have higher response rates. However, there is one open-ended question regarding the respondents' age in the demographics part of the questionnaire. On the rest of the demographics questions, we have asked their gender, education level, their income, marital status, if they have children or not, are they working, frequency of internet usage daily, frequency of their internet shopping, and if they made a purchase by clicking an ad. Aside the demographics related questions, we used the ranking questions to get opinions from respondents. So, rating scale questions would be the best choice which we used a five-point Likert-style rating scale. This gives the respondent the option of determining how strongly he or she agrees with a statement.

We created a summary of our main objectives and the purpose of our research to introduce our questionnaire and to briefly and clearly explain why we wanted respondents to complete it. We have asked our respondents, digital advertising-related

questions first and left the demographic questions to the last part. The questionnaire was conducted in Turkish as it was aimed at Turkish consumers.

Table 1

Variables and Resources

Variables	Resources	Questions
Frequency Irritation	Tang et al (2015), Schmidt and Eisend (2015), and McCoy et al (2017)	3
Likability of Relevance	Malheiros et al (2012), Campbell and Wright (2008), and Kronrod and Huber (2015)	2
Invasiveness	Zweig and Webster (2002), Christiansen (2011), Kim and Huh (2017), and, Van Doorn & Hoekstra (2013)	2
Privacy Concern	Malhotra, Kim, and Agarwal (2004), Turow, Hennessy, Draper (2015), Zarouali, Ponnet, Walrave, Poels (2017), Okazaki, Li and Hirose (2009), Goldfarb and Tucker (2011)	7
Emotional Attitudes Towards Programmatic Advertising	Gironda (2014), Davis (1989), Wolin, Korgaonkar, and Lund (2003), and Venkatesh, Morris, Davis, and Davis (2003)	7
Intention to Click		2

3.2. Sampling and Data Collection Procedure

The sampling should be selected among the people who use the internet regularly. When we go over the number of internet users in Turkey in 2019 which is 59.360.000 people according to TÜİK. But we cannot assume all internet users have encountered programmatic advertising models. Therefore we wanted to choose our sampling only from the Facebook users since 100 % of Facebook's total revenue was programmatic as of 2014 (Dawson & Lamb, 2016). There are 43 million Facebook users in Turkey in 2019 according to the We Are Social Türkiye 2019 Report. Additionally, the ad-blocking software usage in Turkey in 2016 is 31% according to Webrazzi. However this percentage keeps rising every year, so we can assume the

percentage would be %40 in 2019. Therefore, we cannot include this percentage in our sample size.

With the help of calculator.net, we have calculated that our required sample size is at least 133 with a 5% margin error and 75% confidence level since the questionnaire answers were gathered with the snowball sampling method. Because sampling individuals are internet users, the prepared questionnaire was transferred to the internet environment to reach more people faster. The questionnaire was made with the forms tool in Google Docs. In total, 318 questionnaires have been submitted. The Snowball sampling method was used in the research. The link of the questionnaire was conveyed by the researcher to the researcher's environment using e-mail, social media, and instant messaging tools, and these people were asked to convey it to the environment. The online survey was made available from 1 June 2019 - 1 December 2020. When the desired sample size was reached, access to the survey was turned off.

4. FINDINGS

In this section, we will examine the findings of our research.

4.1. Profile of the Respondents

As mentioned in the section before, there are 30 questions in total which 7 of them are related to the demographic data. We have found that from these 7 demographic questions that 43% of them are women, 56.4% of them are men and 0.6% of them did not want to disclose this information. 2.5% of them are 20 years or younger, 24.6% of them are the ages 21-30, 7.8% of them are between 31-40 years old, 3.1% of them are at age 41-50, and lastly, 62% of them are 51 years old or older. The vast majority of the respondents are university graduates which 78.5% of the respondents. 16.5% of them are university students at the moment, with 74.1.3% have graduate degrees or above, 4.4% of them are 2-year college graduates, 4% of them are high school graduates, and elementary school graduates are 0.9%. A large majority of the responders earn more than 10.001 TL. There are more single participants than married or divorced. 25.9% of the participants use the internet more than 8 hours a day and 37.4% of them use the internet between 2-4 hours a day. Most of them used internet shopping and the majority of them use internet shopping once a month.

Table 2

Demographic Characteristics

Demographic Characteristics		Full Sample	
		n	%
Gender	Male	180	56.4
	Female	136	43.0
	No Answer	2	0.6
Age	20 and younger	8	2.5
	21-30	78	24.6
	31-40	25	7.8
	41-50	10	3.1

51 and older		197	62.0
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Demographic Characteristics		Full Sample	
		n	%
Education			
	Elementary Degree	3	0.9
	High School Degree	13	4.0
	Studying at university	53	16.5
	Associate Degree	14	4.4
	Bachelors Degree	137	43.3
	Masters / PhD Degree	98	30.8
Monthly Income			
	2.000 TL and lower	54	17.1
	2.001 TL - 4.000 TL	34	10.6
	4.001 TL - 6.000 TL	50	15.6
	6.001 TL - 8.000 TL	35	10.9
	8.001 TL - 10.000 TL	44	14.0
	10.001 TL and higher	101	31.8
Marital Status			
	Single	181	56.7
	Married	111	34.9
	Divorced	26	8.4
Employment Status			
	Unemployed	153	48.3
	Part-Time	38	11.8
	Full-Time	127	39.9
Daily Internet Usage Rate			
	Less than 2 hours/day	11	3.7
	0-2 hours/day	22	7.2
	2-4 hours/day	119	37.4
	4-8 hours/day	83	25.9
	More than 8 hours/day	83	25.9
Internet Shopping Through Online Ads			
	Yes	211	66.4
	No	107	33.6
Frequency of Internet Shopping			
	Non	18	5.6
	Once a year	31	9.7
	Once in several months	85	26.8
	Once a month	105	33.0
	Once a week	74	23.4
	Once a day	5	1.6

4.2. Descriptive Statistics

The questionnaire was conducted on 318 respondents as stated before. Likert scale was chosen for the overall study which consists 30 questions (including the characteristics questions of the participants). For ensuring the normality of the data, descriptive statistics is conducted. The highest mean observed in “It's irritating to see same online ad in short span of time.” (Frequency of Irritation) which is 4.68 whereas the lowest are calculated 2.60 in “Likelihood that you will click on a personalized advertisement in the near future.” (Intention to Click). For standard deviations, the greatest value observed in “Personalized ads fit their purpose.” (Personalization Attitudes) with 1.237 and the weakest value is experienced in “It's irritating to see same online ad in short span of time.” (Frequency Irritations) as 0.769. For skewness and kurtosis testing, all responds' values are between -2 and +2 which is in the acceptable range generally and provides the lack of outliers (George & Mallery, 2011). It can be said that this study mostly fulfilled the acceptable range and the values are normally distributed with just the exception of the three. However, to keep the study intact, we have to use these values. These values can be examined from the table below.

Table 3

Descriptive Statistics

	Mini mum	Maxi mum	Me an	Std. Devia tion	Skew ness	Kurt osis
Frequency Irritation						
Frequent online ads make me annoyed.	1	5	4.3 3	0.966	- 1.349	1.13 9
Seeing the same online ads frequently is irritating.	1	5	4.6 1	0.821	- 2.323	5.24 6
It's irritating to see same online ad in short span of time.	1	5	4.6 8	0.769	- 2.861	8.42 8

Likeability of Relevance

Seeing the online ads of products/services I looked for are more likeable.	1	5	3.27	1.163	-0.251	-0.560
--	---	---	------	-------	--------	--------

Online ads which match my preferences/interests are more likeable.	1	5	3.76	1.228	-0.855	-0.182
--	---	---	------	-------	--------	--------

Invasiveness

I feel that personalized advertising is an invasion of my privacy.	1	5	3.93	1.250	-0.907	-0.313
--	---	---	------	-------	--------	--------

To what extent do you feel that personalized advertising results in an invasion of your privacy?	1	5	3.83	1.199	-0.780	-0.291
--	---	---	------	-------	--------	--------

Privacy Concern

All things considered, the Internet would cause serious privacy problems.	1	5	4.07	1.044	-0.916	0.025
---	---	---	------	-------	--------	-------

Compared to others, I am more sensitive about the way online companies handle my personal information.	1	5	4.23	1.029	-1.252	0.827
--	---	---	------	-------	--------	-------

To me, it is the most important thing to keep my privacy intact from online companies.	1	5	4.39	0.946	-1.653	2.307
--	---	---	------	-------	--------	-------

Compared with other subjects on my mind, personal privacy is very important.	1	5	4.20	0.988	-1.169	0.796
--	---	---	------	-------	--------	-------

I am concerned about threats to my personal privacy today.	1	5	3.97	1.135	-0.934	0.033
--	---	---	------	-------	--------	-------

Emotional Attitudes

Personalized ads are useful for me.	1	5	2.92	1.190	-0.027	-0.707
-------------------------------------	---	---	------	-------	--------	--------

Personalized ads are relevant to me.	1	5	3.00	1.187	-0.153	-0.755
--------------------------------------	---	---	------	-------	--------	--------

Personalized ads are worthwhile for me.	1	5	2.70	1.168	0.158	-0.713
---	---	---	------	-------	-------	--------

Personalized ads are good in general.	1	5	2.71	1.137	-0.068	-0.844
---------------------------------------	---	---	------	-------	--------	--------

Personalized ads are favourable.	1	5	2.74	1.149	-0.097	-0.871
----------------------------------	---	---	------	-------	--------	--------

Personalized ads have positive effects.	1	5	2.77	1.168	0.001	-0.788
---	---	---	------	-------	-------	--------

Personalized ads fit their purpose.	1	5	3.02	1.237	-0.141	-0.889
-------------------------------------	---	---	------	-------	--------	--------

Intention to Click

I intend to click on personalized advertisements in the near future.	1	5	2.4 9	1.209	0.392	- 0.71 7
Likelihood that you will click on a personalized advertisement in the near future.	1	5	2.6 0	1.236	0.198	- 1.03 8

The first three questions of the questionnaire were asked to find out what participants think about the frequency of ads. The first question was about the frequency of the ads if they are bothered and/or irritated with this frequency of ads. Most of the participants stated that they are irritated with the frequent digital ads. The second question was about the frequency of the same ads over time. And the respondents thought that seeing the same digital ads over and over bothers them. The third question was about seeing the same ad in a short period. Participants also stated that seeing the same ad in a short period also bothers them.

The next two questions are about likeability of relevance. If the participants would like to see the ads of their past searches or information about a product, the things they are interested in, the brands and services they know about, and so on.

The next eight questions are about invasiveness of personalized advertising and the privacy concerns of the consumers regarding the companies and everyday life.

The rest of the questions are about the personalization attitudes towards personalized ads, including helpfulness, relevancy, relatability, etc. and intention to click.

4.3. Data Analysis

Thanks to the form tool in Google, we were able to extract the data to Microsoft Excel. Then transferred it into a data file in the SPSS. Cronbach's Alpha reliability test was applied to the questions with Likert scale in the SPSS program. It was coded in regard of a 1-5 scale, 1 as strongly disagree and 5 as strongly agree, except the demographic questions. For validity reasons, each construct should have at least a value of 0.7 or close to that. We have chosen not to provide all calculations and models in our paper; nevertheless, if you need further calculations, please contact us.

4.3.1. Factor & Reliability Analysis

We do factor analysis to obtain scalable dimensions by minimizing objects for regression models. For this study, we have conducted the KMO and Barlett Test, communalities, and explained variance. For all the variables, The Principal Components method of extraction is selected and Eigenvalue was selected as 1. Results of factor analysis are shown below; the score of $p=0,000<0.05$ is accepted as stated and results demonstrated an excellent example as all of them are and higher than $KMO=.500$. It can be said the collected study is appropriate for factor analysis. The KMO analysis is further carried forward by the Cronbach alpha test to test the reliability factor. The results are calculated below. Considering reliability analyses per dimension, alpha coefficients are also quite high in each dimension, so there is no repetition need for factor analysis.

Table 4

Factor and Reliability Analysis

VARIABLE	ITEM STATEMENTS	FACTOR LOADING	KMO VALUE	EXPLAINED VARIANCE	RELIABILITY SCORE
Frequency Irritation	Frequent online ads make me annoyed	0.696	0.706	%74.22	0.81

Likeability of Relevance	Seeing the same online ads frequently is irritating.	0.795	0.500	%82.10	0.78
	It's irritating to see same online ad in short span of time.	0.735			
	Seeing the online ads of products/services I looked for are more likeable.	0.821			
	Online ads which match my preferences/interests are more likeable.	0.821			
Invasiveness	I feel that personalized advertising is an invasion of my privacy.	0.877	0.500	%87.71	0.85
	To what extent do you feel that personalized advertising results in an invasion of your privacy?	0.877			
	All things considered, the Internet would cause serious privacy problems.	0.426			
	Compared to others, I am more sensitive about the way online companies handle my personal information.	0.726			
Privacy Concern	To me, it is the most important thing to keep my privacy intact from online companies.	0.693	0.842	%61.63	0.84
	Compared with other subjects on my mind, personal privacy is very important.	0.583			
	I am concerned about threats to my personal privacy today.	0.653			
	Personalized ads are useful for me.	0.705			
Emotional Attitudes Towards Programmatic Advertising (EATPA)	Personalized ads are relevant to me.	0.596	0.915	%73.70	0.91
	Personalized ads are worthwhile for	0.778			

	me.				
	Personalized ads are good in general.	0.835			
	Personalized ads are favourable.	0.855			
	Personalized ads have positive effects.	0.752			
	Personalized ads fit their purpose.	0.683			
	I intend to click on personalized advertisements in the near future.	0.904			
Intention to Click	Likelihood that you will click on a personalized advertisement in the near future.	0.904	0.500	%90.43	0.89

Table 5*Cronbach's Alpha Calculations*

	Mean	Standard Deviation	Cronbach's Alpha
Frequency Irritation	4.4858	0.87669	0.783
Likeability of Relevance	3.7353	1.13623	0.691
Invasiveness	3.8627	1.17118	0.837
Privacy Concern	3.8922	1.08592	0.648
Emotional Attitudes	2.9593	1.15939	0.998

The model was structured as below.

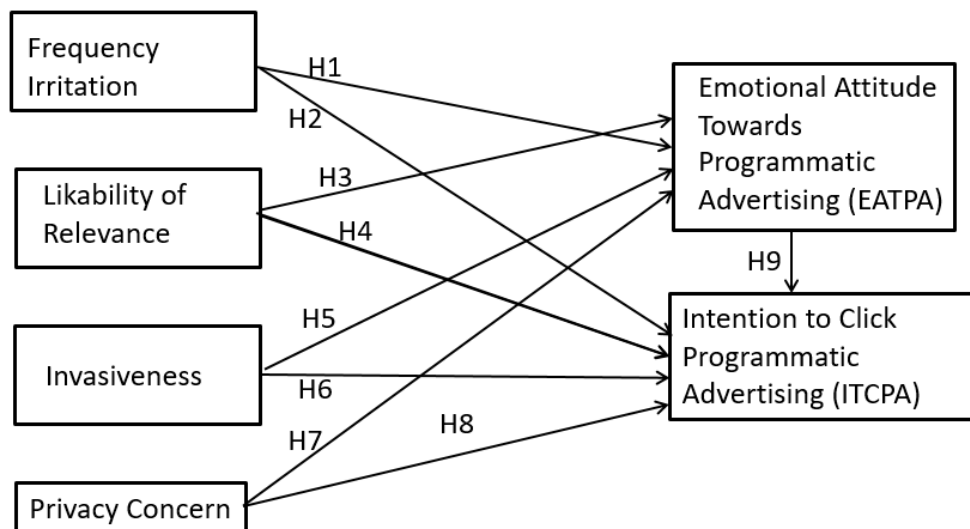


Figure 2. Proposed Hypotheses Model

H1: Frequency Irritation has a relation with EATPA

H2: Frequency Irritation has a relation with ITCPA

H3: Likeability of Relevance has a relation with EATPA

H4: Likeability of Relevance has a relation with ITCPA

H5: Invasiveness of Relevance has a relation with EATPA

H6: Invasiveness of Relevance has a relation with ITCPA

H7: Privacy Concern has a relation with EATPA

H8: Privacy Concern has a relation with ITCPA

H9: EATPA has a relation with ITCPA

4.3.2. Correlation Analysis

The correlational analysis is being conducted to measure the relevancy of the data along with measuring the strength of the relationship among the variables that

had been considered for the process of analysis. Correlation coefficient analysis had been conducted to show a linear relationship among the dependent and independent variables.

Correlation coefficients between variables mostly vary. Some above .400 signifies a strong positive correlation, some are negative which represents a negative correlation between variables. It can be expressed all significance values for variables are $p < 0.05$ for a two-tailed test which can be considered this study is statistically significant. On contrary, with some examinations between independent variables, correlation coefficient values vary .797 which may direct to multi-collinearity risk. A certain level of multi-collinearity may exist if the correlation coefficient is above .700 (Reinmuth, 1974). However; the variance inflation factor is also used for multi-collinearity analysis and Hair, Anderson, Tathan, and Black (1995) specifies a VIF value below 10 is still acceptable. Hence, the VIF score needs to be checked in the regression analyses.

Table 6

Correlation Analysis

Correlations		Frequency_Irritation_Mean	Likeability_of_Relevance_Mean	Invasiveness_Mean	Privacy_Concern_Mean	Emotional_Attitude_Mean	Intention_to_Click_Mean
Frequency_Irritation_Mean	Pearson Correlation	1	-.170**	.285**	.195**	-.191**	-.256**
	Sig. (2-tailed)		0.002	0.000	0.000	0.001	0.000
	N	318	318	318	318	318	318
Likeability_of_Relevance_Mean	Pearson Correlation	-.170**	1	-.214**	-.156**	.461**	.433**
	Sig. (2-tailed)	0.002		0.000	0.005	0.000	0.000

	N	318	318	318	318	318	318
	Pearson Correlation	.285**	-.214**	1	.589**	-.337**	-.317**
Invasiveness_Mean	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000
	N	318	318	318	318	318	318
	Pearson Correlation	.195**	-.156**	.589**	1	-.312**	-.285**
Privacy_Concern_Mean	Sig. (2-tailed)	0.000	0.005	0.000		0.000	0.000
	N	318	318	318	318	318	318
	Pearson Correlation	-.191**	.461**	-.337**	-.312**	1	.797**
Emotional_Attitude_Mean	Sig. (2-tailed)	0.001	0.000	0.000	0.000		0.000
	N	318	318	318	318	318	318
	Pearson Correlation	-.256**	.433**	-.317**	-.285**	.797**	1
Intention_to_Click_Mean	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	318	318	318	318	318	318

** . Correlation is significant at the 0.01 level (2-tailed).

4.3.3. Hypothesis Testing

The next phase of the analysis process constitutes the stepwise regression analysis process, which reveals the most relevant hypothesis. The regression analysis was conducted using dependent variables and predictive variables. The independent variables that have been considered for this process are the Frequency Irritation, Likeability of Relevance, Invasiveness, and Privacy Concern factors. Emotional Attitude Towards Programmatic Advertising will be used both as the independent and dependent variables. The dependent is Intention to Click.

4.3.3.1. Determinants of emotional attitude towards programmatic advertising

Frequency Irritation, Likeability of Relevance, Invasiveness, and Privacy Concern is being used as determinants, meaning independent variables, whereas the dependent variable is Emotional Attitude Towards Programmatic Advertising.

Table 7

Determinants of Emotional Attitude Towards Programmatic Advertising Model

Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.539 ^a	0.291	0.282	0.85378
a. Predictors: (Constant), Privacy_Concern_Mean, Likeability_of_Relevance_Mean, Frequency_Irritation_Mean, Invasiveness_Mean				

Table 8

Determinants of Emotional Attitude Towards Programmatic Advertising ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	93.451	4	23.363	32.051	.000^b
1	Residual	228.156	313	0.729		
	Total	321.607	317			

a. Dependent Variable: Emotional_Attitude_Mean

b. Predictors: (Constant), Privacy_Concern_Mean, Likeability_of_Relevance_Mean, Frequency_Irritation_Mean, Invasiveness_Mean

Table 9

Determinants of Emotional Attitude Towards Programmatic Advertising Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	3.163	0.428		7.382	0.000		
Frequency_Irritation_Mean	-.071	0.069	-0.052	1.036	0.301	0.905	1.105
Likeability_of_Relevance_Mean	0.369	0.046	0.397	8.087	0.000	0.940	1.063
Invasiveness_Mean	-.130	0.053	-0.148	2.430	0.016	0.613	1.630
Privacy_Concern_Mean	-.191	0.074	-0.153	2.592	0.010	0.652	1.534

From the table above, these variables explain 28.2% of Emotional Attitude Towards Programmatic Advertising as we can see from the Adjusted R Square value. Also, we can state that the model is significant since the sig. value sig 0,000 suggests from the ANOVA test. Additionally, as we can see from the table above, the Likeability of Relevance, Invasiveness, and Privacy Concern has significance since the significance levels are lower than 0,05. Besides, we cannot state any multi-collinearity since the VIF values below 10 are still acceptable.

4.3.3.2. Determinants of intention to click

Frequency Irritation, Likeability of Relevance, Invasiveness, and Privacy Concern are being used as determinants, meaning independent variables, whereas the dependent variable is Intention to Click.

Table 10*Determinants of Intention to Click Model Summary*

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.518 ^a	0.268	0.259	1.00116
a. Predictors: (Constant), Privacy_Concern_Mean, Likeability_of_Relevance_Mean, Frequency_Irritation_Mean, Invasiveness_Mean				

Table 11*Determinants of Intention to Click ANOVA*

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	114.860	4	28.715	28.648	.000^b
1	Residual	313.728	313	1.002		
	Total	428.589	317			

a. Dependent Variable: Intention_to_Click_Mean

b. Predictors: (Constant), Privacy_Concern_Mean, Likeability_of_Relevance_Mean, Frequency_Irritation_Mean, Invasiveness_Mean

Table 12*Determinants of Intention to Click Regression Analysis*

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.397	0.502		6.761	0.000

Frequency_Irritation_Mean	-0.211	0.081	-0.133	-2.617	0.009	0.905	1.105
Likeability_of_Relevance_Mean	0.390	0.054	0.364	7.295	0.000	0.940	1.063
Invasiveness_Mean	-0.128	0.063	-0.126	-2.042	0.042	0.613	1.630
Privacy_Concern_Mean	-0.185	0.087	-0.128	-2.134	0.034	0.652	1.534

a. Dependent Variable: Intention_to_Click_Mean

From the table above, these variables explain 25.9% of Intention to Click Programmatic Advertising as we can see from the Adjusted R Square value. Also, we can state that the model is significant since the sig. value sig 0,000 suggests from the ANOVA test. Additionally, as we can see from the table above, Frequency Irritation, Likeability of Relevance, Invasiveness, and Privacy Concern have significance since the significance levels are lower than 0,05. Besides, we cannot state any multicollinearity since the VIF values below 10 are still acceptable.

4.3.3.3 Relationship between emotional attitude and intention to click

Emotional Attitude Towards Programmatic Advertising has been used as an independent variable, whereas the dependent variable is Intention to Click.

Table 13

Relationship between Emotional Attitude and Intention to Click Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.797 ^a	0.635	0.633	0.70404

a. Predictors: (Constant), Emotional_Attitude_Mean

Table 14*Relationship between Emotional Attitude and Intention to Click ANOVA*

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	271.956	1	271.956	548.657	.000^b
1 Residual	156.633	316	0.496		
Total	428.589	317			

a. Dependent Variable: Intention_to_Click_Mean

b. Predictors: (Constant), Emotional_Attitude_Mean

Table 15*Relationship between Emotional Attitude and Intention to Click Regression Analysis*

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-0.062	0.118		-0.524	0.600		
1 Emotional_Attitude_Mean	0.920	0.039	0.797	23.423	0.000	1.000	1.000

From the table above, these variables explain 63.3% of Intention to Click Programmatic Advertising as we can see from the Adjusted R Square value. Also, we can state that the model is significant since the sig. value sig 0,000 suggests from the ANOVA test. Additionally, as we can see from the table above, Emotional Attitude Towards Programmatic has significance since the significance levels are lower than

0,05. Besides, we cannot state any multi-collinearity since the VIF values below 10 are still acceptable.

4.3.4. Tests for Differences

In this section, we will examine differences between gender, income level, and more.

4.3.4.1. Does dependent variables differ with respect to gender?

To test this, we have applied T-Test, because there are just two groups regarding gender.

Table 16

Group Statistics of Gender Difference

Group Statistics					
Age		N	Mean	Std. Deviation	Std. Error Mean
Emotional_Attitude_Mean	Male	180	2.9540	0.95404	0.07111
	Female	136	2.6597	1.04893	0.08994
Intention_to_Click_Mean	Male	180	2.6722	1.13763	0.08479
	Female	136	2.3603	1.17488	0.10074

Table 17

Independent Sample Test of Gender Difference

Independent Samples Test								
				Levene's Test for Equality of Variances	t-test for Equality of Means			
F	Sig.	t	df		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference

									Lower	Upper
Emotional_Attitude_Mean	Equal variances assumed	4.882	0.028	2.601	314	0.010	0.29430	0.11315	0.07167	0.51694
	Equal variances not assumed			2.567	275.368	0.011	0.29430	0.11466	0.06858	0.52002
	Equal variances assumed	1.267	0.261	2.380	314	0.018	0.31193	0.13109	0.05401	0.56985
Intention_to_Click_Mean	Equal variances not assumed			2.369	285.834	0.019	0.31193	0.13168	0.05274	0.57111
	Equal variances assumed									

For Emotional Attitude Towards Programmatic Advertising, we can see that sig.=0.028 which is less than 0.05. Therefore, we should take consider the equal variances not assumed. The sig. (2-tailed) value here is 0.011 which is also less than 0.05, meaning Emotional Attitude Towards Programmatic Advertising differs significantly with respect to gender.

For Intention to Click, we can see that sig.=0.261 which is more than 0.05. Therefore, we should take consider the equal variances assumed. The sig. (2-tailed) value here is 0.018 which is also less than 0.05, meaning Intention to Click differs significantly with respect to gender.

4.3.4.2. Does dependent variables differ with respect to income level?

To test this, we have applied One Way ANOVA, because there are more than two groups regarding income level. All six included below respectively;

Table 18*Income Level Groups*

-
- (1) Less than 2.000 TL
- (2) Between 2.001 TL - 4.000 TL
- (3) Between 4.001 TL - 6.000 TL
- (4) Between 6.001 TL - 8.000 TL
- (5) Between 8.001 TL - 10.000 TL
- (6) More than 10.001 TL
-

Table 19*Descriptive Statistics of Income Level*

Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Emotional_Attitude_Mean	1	55	2.7221	0.99028	0.13353	2.4544	2.9898	1.00	4.86
	2	34	2.4622	1.17280	0.20113	2.0530	2.8714	1.00	4.86
	3	48	2.8006	0.98435	0.14208	2.5148	3.0864	1.00	5.00
	4	34	3.0126	1.03397	0.17732	2.6518	3.3734	1.00	5.00
	5	45	2.8603	0.99930	0.14897	2.5601	3.1605	1.00	5.00
	6	102	2.9678	0.94460	0.09353	2.7823	3.1533	1.00	5.00
	Total	318	2.8356	1.00724	0.05648	2.7245	2.9467	1.00	5.00
Intention_to_Click_Mean	1	55	2.3727	1.16356	0.15689	2.0582	2.6873	1.00	5.00
	2	34	2.1765	1.11384	0.19102	1.7878	2.5651	1.00	5.00

3	48	2.5625	1.11386	0.16077	2.2391	2.8859	1.00	5.00
4	34	2.4853	1.28797	0.22089	2.0359	2.9347	1.00	5.00
5	45	2.5556	1.25780	0.18750	2.1777	2.9334	1.00	5.00
6	102	2.7696	1.09153	0.10808	2.5552	2.9840	1.00	5.00
Total	318	2.5456	1.16276	0.06520	2.4173	2.6739	1.00	5.00

Table 20

Test of Homogeneity of Variances of Income Level

Test of Homogeneity of Variances						
			Levene Statistic	df1	df2	Sig.
Emotional_Attitude_Mean	Based on Mean		0.957	5	312	0.444
	Based on Median		0.944	5	312	0.453
	Based on Median and with adjusted df		0.944	5	308.491	0.453
	Based on trimmed mean		0.932	5	312	0.460
	Based on Mean		0.889	5	312	0.489
Intention_to_Click_Mean	Based on Median		0.691	5	312	0.631
	Based on Median and with adjusted df		0.691	5	300.526	0.631
	Based on trimmed mean		0.839	5	312	0.523

Table 21

Income Level Difference ANOVA

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.

Emotional_Attitude_Mean	Between Groups	8.384	5	1.677	1.670	0.141
	Within Groups	313.224	312	1.004		
	Total	321.607	317			
Intention_to_Click_Mean	Between Groups	11.537	5	2.307	1.726	0.128
	Within Groups	417.052	312	1.337		
	Total	428.589	317			

The sig. values for homogeneity and ANOVA are all greater than 0.05, therefore the homogeneity test was successful. For Emotional Attitude Towards Programmatic Advertising, it is 0.141, and for Intention to Click it is 0.128, meaning Emotional Attitude Towards Programmatic Advertising and Intention to Click do not differ with respect to income levels.

4.3.4.3. Does dependent variables differ with respect to frequency of internet usage?

To test this, we have applied a T-Test. Despite having more than two groups (five groups listed below), we have decided to reduce it two to less than 4 hours a day and more than 4 hours a day for more accurate results and better testing.

Table 22

Frequency of Internet Usage Groups

Not frequent

Less than 2 hours a day

Between 2-4 hours

Between 4-8 hours

More than 8 hours

Table 23*Frequency of Internet Usage Statistics*

Group Statistics					
Internet_Usage_Frequency		N	Mean	Std. Deviation	Std. Error Mean
Emotional_Attitude_Mean	Less than 4	154	2.8720	1.00422	0.08092
	More than 4	164	2.8014	1.01195	0.07902
Intention_to_Click_Mean	Less than 4	154	2.6169	1.10227	0.08882
	More than 4	164	2.4787	1.21639	0.09498

Table 24*Frequency of Internet Usage Independent Samples Test*

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Emotional_Attitude_	Equal variances assumed	0.006	0.936	0.624	316	0.533	0.07059	0.11313	-0.15199	0.29318
	Equal variances not assumed			0.624	315.031	0.533	0.07059	0.11310	-0.15194	0.29313
Intention_to_Click_Mean	Equal variances assumed	2.819	0.094	1.060	316	0.290	0.13822	0.13045	-0.11843	0.39488
	Equal variances			1.063	315.06	0.289	0.13822	0.13004	-0.11764	0.39409

not
assum
ed

For Emotional Attitude Towards Programmatic Advertising, we can see that sig.=0.936 which is more than 0.05. Therefore, we should take consider the equal variances assumed. The sig. (2-tailed) value here is 0.533 which is more than 0.05, meaning Emotional Attitude Towards Programmatic Advertising doesn't differ significantly with respect to frequency of internet usage. For Intention to Click, we can see that sig.=0.094 which is more than 0.05. Therefore, we should take consider the equal variances assumed. The sig. (2-tailed) value here is 0.290 which is more than 0.05, meaning Intention to Click doesn't differ significantly with respect to frequency of internet usage.

4.3.4.4. Does dependent variables differ with respect to online shopping through ads?

To test this, we have applied T-Test, because there are just two groups regarding online shopping through ads.

Table 25

Online Shopping Through Ads Group Statistics

Group Statistics					
Online_Shopping_Through_Ads		N	Mean	Std. Deviation	Std. Error Mean
Emotional_Attitude_Mean	Yes	211	2.8389	0.98638	0.06790
	No	107	2.8291	1.05188	0.10169
Intention_to_Click_Mean	Yes	211	2.5355	1.17003	0.08055
	No	107	2.5654	1.15351	0.11151

Table 26*Online Shopping Through Ads Independent Samples Tests*

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Emotional_Attitude_Mean	Equal variances assumed	2.519	0.113	0.081	316	0.935	0.00976	0.11973	-0.22581	0.24532
	Equal variances not assumed			0.080	201.398	0.936	0.00976	0.12228	-0.23135	0.25086
Intention_to_Click_Mean	Equal variances assumed	0.080	0.778	-0.216	316	0.829	-0.02988	0.13821	-0.30179	0.24204
	Equal variances not assumed			-0.217	215.810	0.828	-0.02988	0.13756	-0.30101	0.24126

For Emotional Attitude Towards Programmatic Advertising, we can see that sig.=0.113 which is more than 0.05. Therefore, we should take consider the equal variances assumed. The sig. (2-tailed) value here is 0.935 which is more than 0.05, meaning Emotional Attitude Towards Programmatic Advertising doesn't differ significantly with respect to Online Shopping Through Ads. For Intention to Click, we can see that sig.=0.778 which is more than 0.05. Therefore, we should take consider the equal variances assumed. The sig. (2-tailed) value here is 0.829 which is more

than 0.05, meaning Intention to Click doesn't differ significantly with respect to Online Shopping Through Ads.

4.4. Hypothesis Testing

The results of the hypothesis are shown below.

Table 27

Hypotheses Testing Results

	Hypothesis	Result
H1	Frequency Irritation has a relation with EATPA	Rejected
H2	Frequency Irritation has a relation Intention with ITCPA	Not Rejected
H3	Likeability of Relevance has a relation with EATPA	Not Rejected
H4	Likeability of Relevance has a relation with ITCPA	Not Rejected
H5	Invasiveness of Relevance has a relation with EATPA	Not Rejected
H6	Invasiveness of Relevance has a relation with ITCPA	Not Rejected
H7	Privacy Concern has a relation with EATPA	Not Rejected
H8	Privacy Concern has a relation with ITCPA	Not Rejected
H9	EATPA has a relation with ITCPA	Not Rejected

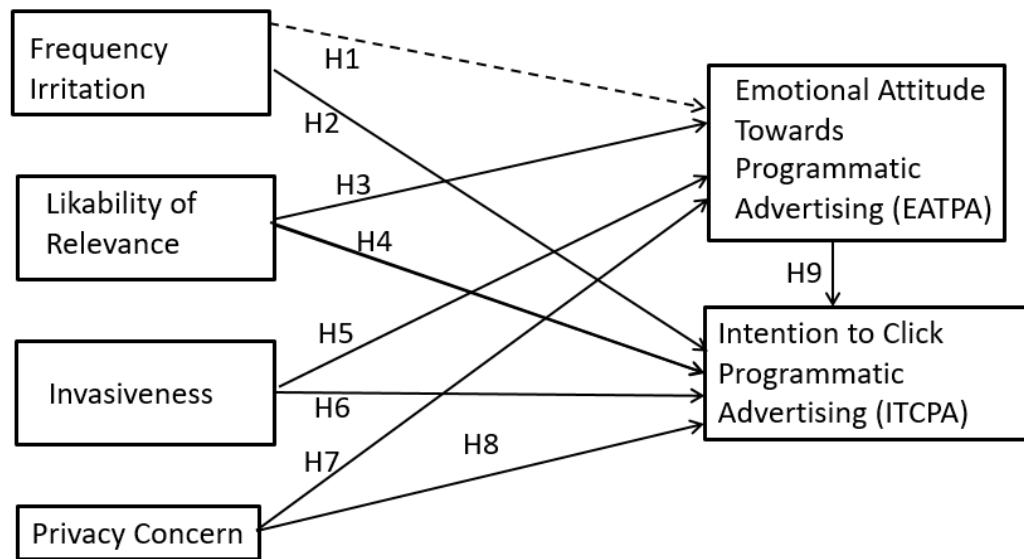


Figure 3. Hypotheses Testing Results

5. DISCUSSION & CONCLUSION

With this study, frequency irritation, the likeability of relevance, invasiveness, and privacy concerns were examined regarding emotional attitude towards programmatic advertising and intention to click to these programmatic advertising. With enough contributors to the questionnaire related to the study has been conducted.

Ever-growing digital environments, technologies and the ways of how we interact with media and many more changes have affected the way of advertising and how businesses interact with consumers. From the start of advertising on communal spaces to newspapers and magazines, then to television and websites, nowadays ads – especially digital ones- are all over the world. Digital advertising started with reservations on websites and became huge with new technologies and programmatic advertising.

Also, the emerging social media platform has undeniable contributions to digital marketing as well. Social media platforms gave businesses different ways of communication with consumers. As Godey et al (2016) say that brands should spend more attention on content that is entertaining and interacting that stimulates engagement. On the other hand, with the ever-developing smartphone industry, the software, programs, and apps keep getting more appropriate and useful for digital advertising. Nowadays, consumers can be targeted at any time and anywhere. The ever-getting bigger screen sizes help the advertisers with more visible and interactive ads. Thanks to these social media platforms, a new kind of word-of-mouth marketing has risen. Standing, Holzweber, and Mattsson (2016), said that people are disseminating their opinions through posting content and referrals through online social networks which help to encourage e-word-of-mouth which leads to emotional

responses. Nowadays, consumers tend to put what they purchased or used to social media platforms and other potential consumers can learn about these brands, search for them, and became more targetable.

Besides these social media platforms, nowadays websites can track their visitors in more detail. They can see which web pages they visited, how long they have stayed there, which product or service group they are interested in, even their mouse moves, and many more. These kinds of developments related to targeting and digital advertising help more personalization options to these businesses and the advertisers. As an example, a potential consumer's journey starts with loading the web page. Then most of their movements are monitored through pixels or codes. If they go to a specific product group or service, or another section of the brand like contact or return policy and such. If this consumer visited specific products, services, or groups of them the pixels and/or codes on the website know the products that should come upon other websites, apps, and social media platforms if the necessary connections are made. This is how simple retargeting works. At the same time, like this consumer and alike can be stored for a period to be used for advertisers.

As stated just above, the stored potential consumers' data can be useful for advertisers (Inmaculada J. Martínez-Martínez, 2017) and social media platforms as well. Because targeting options and capabilities are essential for companies like Google, Facebook, some SSPs, and more. With these kinds of data storage and options, those advertisers and advertising companies can sell these potential consumers' data to advertisers and the businesses which want to use these kinds of digital advertising options. Therefore, this is how most of the programmatic advertising data or potential consumer data is created and used. Some social media

platforms also use liked pages, groups, and such for expanding these data sources which could be quite useful for advertisers.

In this study, we have examined how and if everyday consumers have different reactions with frequency irritation, the likeability of relevance, invasiveness, and their privacy concern related to these ads affect their emotional attitude towards these programmatic advertising and their intention to click to these programmatic ads. Additionally, we have tested if dependent variables differ for gender, income level, frequency of internet usage, and online shopping through ads to give some perspective to different areas and help future researchers related to this area.

Frequency irritation is a way of frequent exposure of the ads to the same target and after a while, that frequency exposure can irritate some level to the targets. However, that frequency may help targeted individuals to remember the advertised product or service more. When we tested this on emotional attitude towards programmatic advertising, we have found out that this frequency irritation doesn't have a relation with that. Even, we have found out that it has a negative effect on the intention to click on these kinds of ads. In conclusion, we can state that frequent ads can cause irritation and negative effect to click the ads.

Likeability of relevance was our other variable regarding emotional attitude towards programmatic advertising and intention to click. Most people tend to like something if what they have seen or heard is relevant to them. Therefore, an ad from a brand or service they used or heard before would more likely be liked by the target. That was kind of the reason behind remarketing and retargeting. Businesses thought that showing what potential consumers looked around or were interested in could lead them to more sales. Our hypothesis testing proved that. Both emotional attitudes

towards programmatic advertising and intention to click on these ads are positively affected by the likeability of relevance as we have seen from the Unstandardized Coefficients Beta values. For our study, we can say that relevance has a positive relation.

Invasiveness is about how people feel unsafe or violated regarding themselves and their information related to security and privacy. When consumers feel the invasion of their privacy or security, the higher they feel the invasiveness is. With new data collection methods, people felt threatened. A lot of regulations regarding websites, social media platforms, mobile devices, and many more have changed to make people safer while they use them. So, we had to examine if this affected the emotional attitude towards programmatic advertising and intention to click programmatic ads. As it turns out, invasiveness has effects both on emotional attitude towards programmatic advertising and people's intention to click programmatic ads negatively as we can see from the Unstandardized Coefficients Beta values.

On the other hand, there is a privacy concern. It is more about how their information is used throughout the internet, unlike invasiveness in which they feel their information is violated and so. Because of privacy concerns, some people tend to not use specific web pages, social media platforms, apps, programs, and even some software. So, we wanted to see if privacy concern affects the emotional attitude towards programmatic ads and people's intention to click these ads and the answer is yes but a negative way.

Emotional attitude towards programmatic ads was about how people perceive these ads like usability, purposefulness, likeability, and so on and with the intention to click we wanted to see how people react to them as if they would like to click on these

ads and use them. Therefore, both emotional attitude towards programmatic advertising and intention to click are used as dependent variables, we also wanted to test if these emotional attitudes towards programmatic ads effects intention to click on those ads. For example, if people find these ads useful, would they click them or if they like these ads would they click, it, etc. As a result, we have found out that emotional attitude towards programmatic ads indeed affects to intention to click programmatic ads positively.



6. LIMITATIONS & IMPLICATIONS FOR FURTHER RESEARCH

The conducted study would have some reasonable limitations on its own. Ever growing and changing digital marketing environment keeps introducing new technologies, new tools, new ways of marketing, and more. On top of that, new cookie policies, sign-up, and usage agreements keep updating every day to ease people's privacy concerns related to websites, apps, etc. Also, because of some limitations of time, availability, and practical study the sample size was on the smaller side and could have been bigger.

This study provides some information regarding the effects of frequency irritation, the likeability of relevance, invasiveness, and privacy concerns over digital, programmatic, and personalized ads it is not without its limitations. Even though most of the hypotheses we have tested have significant relations, they don't go into details of these tests. We were only able to test if they have positive or negative effects on dependent variables' emotional attitude towards programmatic ads and intention to click programmatic ads. For emotional attitude towards programmatic ads, frequency irritation is not even significant. However, in reality, it is an established problem that has been overlooked by researchers and practisers. Even with some digital marketing platforms, you can adjust the frequency of ads. Also, some businesses and advertisers would suggest limiting the shown ad to a target three times at maximum. On the other hand, for invasiveness, questions like to what extent participants felt invaded or regarding which of their actions caused these kinds of invasiveness and alike questions. As well as privacy concerns, we have found out that it has a negative effect on our dependent variables but there are questions like how they felt this concern or like in which platform they felt this concern and many more unanswered questions. Besides these, we have generalized the emotional attitude towards programmatic ads

but could there be more attitudes towards these kinds of ads is another question to be answered. Additionally, there is more than clicking these ads, like completing a purchase, a sign-up, maybe a trial and many more actions after testing if people would click these programmatic ads are questions to be answered.

Furthermore, the participants of this study are not that large and the sample size can be increased by some national research companies or such, the generalization would be increased and utilized better. Moreover, this study only samples Turkish people and we cannot generalize our findings outside of Turkey. Future research may explore other countries as well.

Finally, this research was conducted to assess the importance of programmatic advertising and how people would react to different aspects of that. This study should be able to help future researchers regarding the matter of how certain variables affect the attitudes and intentions of consumers.

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APPENDIX A: Questionnaire

Turkish

Yeditepe Üniversitesi, Sosyal Bilimler Enstitüsü İşletme Ana bilim dalında Yüksek Lisans tezi için yapılmakta olan bir araştırma projesinin parçası olan bu anket "Programatik Reklam Özelliklerinin Müşteri Davranışları ve Tıklama Niyetleri Üzerine Etkileri." hakkında bir çalışma yapmayı hedeflemektedir. Bu bağlamda Programatik Reklamcılık, medya satın alımının ortak bir alanda, gerçek zamanlı ve dijital ortamda kolay erişilebilen verilerle yapılması demektir ve bu sürecin daha düşük maliyetli, daha başarılı hedeflemeler gerçekleştirilmesine yarar.

Araştırma bilimsel amaçlı olup, sadece akademik çalışma olarak değerlendirilecektir. Bu araştırmaya katkıda bulunmayı tercih ederseniz, yer alan soruları içtenlikle ve eksiksiz olarak cevaplamanızı rica ederim.

Zaman ayırarak çalışmamaya katıldığınız için şimdiden çok teşekkür ederim.

Saygılarımla,

Çağkan Öner

	Kesinlik le Katılmıy orum	Katıl mıyo rum	Ne katılıyorum ne katılmıyoru m	Katı lıyor um	Kesinlik le Katılıyor um
Online reklamların sık sık karşıma çıkması beni rahatsız eder.	☐	☐	☐	☐	☐
Sürekli aynı online reklamları görmek beni rahatsız eder.	☐	☐	☐	☐	☐
Kısa süre içerisinde aynı online reklamı görmek beni rahatsız eder.	☐	☐	☐	☐	☐
Önceden araştırdığım ürünlerin/servislerin online reklamlarını görmekten daha çok hoşlanırım.	☐	☐	☐	☐	☐
İlgilendiğim alanlarla alakalı online reklamları daha çok tercih ederim.	☐	☐	☐	☐	☐

Kişiselleştirilmiş online reklamların özel hayatın gizliliğini ihlal ettiğini düşünüyorum.	O	O	O	O	O
Sizce kişiselleştirilmiş online reklamlar özel hayatının gizliliğini ne kadar ihlal ediyor?	O	O	O	O	O
Her şey düşünüldüğünde İnternet, özel yaşamın gizlilik ihlaline dair ciddi sorunlar yaratıyor.	O	O	O	O	O
Diğer şeylerle karşılaştırdığımda, firmaların özel bilgilerimi İnternet ortamında nasıl kullandığı konusunda çok hassasım.	O	O	O	O	O
Benim için en önemlisi, firmalardan özel hayatımın gizliliğini İnternet ortamında koruyabilmemdir.	O	O	O	O	O
Aklımdaki diğer konularla karşılaştırdığımda, özel hayatımın gizliliği çok daha önemlidir.	O	O	O	O	O
Bugün özel hayatımın gizliliğine yönelik tehditlerden endişe duyuyorum.	O	O	O	O	O
Kişiselleştirilmiş reklamlar benim için yararlıdır.	O	O	O	O	O
Kişiselleştirilmiş reklamlar benimle alakalıdır.	O	O	O	O	O
Kişiselleştirilmiş reklamları değerli buluyorum.	O	O	O	O	O
Kişiselleştirilmiş reklamlar iyidir.	O	O	O	O	O
Kişiselleştirilmiş reklamlar benim için elverişlidir.	O	O	O	O	O
Kişiselleştirilmiş reklamlar pozitif bir etki yaratır.	O	O	O	O	O
Kişiselleştirilmiş reklamlar amacına uygundur.	O	O	O	O	O
Yakın gelecekte bu tür reklamlara tıklamayı düşünüyorum.	O	O	O	O	O
Kişiselleştirilmiş Reklama Tıklama İhtimalim...	O	O	O	O	O

Soru	Cevap 1	Cevap 2	Cevap 3	Cevap 4	Cevap 5	Cevap 6
Cinsiyetiniz?	Erkek	Kadın	Belirtmek istemiyorum			
Yaşınız?	20 ve altı	21 - 30	31 - 40	41 - 50	51 ve üzeri	
Eğitim durumunuz ?	İlkokul mezunuyum	Lise mezunuyum	Üniversite Okuyorum	İki yıllık yüksek okul mezunuyum	Üniversite Mezunuyum	Yüksek Lisans / Doktora Mezunuyum
Ortalama Aylık Geliriniz?	2.000 TL ve altı	2.001 TL - 4.000 TL	4.001 TL - 6.000 TL	6.001 TL - 8.000 TL	8.001 TL - 10.000 TL	10.001 TL ve üstü

Medeni Durumunuz?	Evli	Bekar	Boşanmış			
Çalışma Durumunuz?	Çalışmıyor	Tam zamanlı	Yarı zamanlı			
İnternet Kullanım Sıklığınız?	2 saat/günde az	0-2 saat/günde	2-4 saat/günde	4-8 saat/günde	günde 8 saatten fazla	
İnternette Alışveriş Yaptınız mı?	Evet	Hayır				
İnternet Alışveriş Sıklığınız	Hiç	Yılda 1 kez	Birkaç ayda bir kez	Ayda bir kez	Haftada bir kez	Günde bir kez

English

This survey, which is a part of an ongoing research project for the Master's thesis in the Department of Business Administration at Yeditepe University, Institute of Social Sciences, aims to determine the "The Effects of Programmatic Advertising Characteristics on Consumer Attitude and Intention to Click." In this context, Programmatic Advertising means that media buying is done in a common area, with real-time and easily accessible data in the digital environment, and this process helps to achieve lower cost and more successful targeting.

The research is for scientific purposes and will only be considered as an academic study. If you choose to contribute to this research, I kindly request you to answer the questions sincerely and completely.

Thank you very much in advance for taking the time to participate in my study.

Regards,

Çağkan Öner

	Strongly Disagree	Disa gree	Ne utra l	Ag ree	Strongl y Agree
Frequent online ads make me annoyed.	☐	☐	☐	☐	☐
Seeing the same online ads frequently is irritating.	☐	☐	☐	☐	☐
It's irritating to see same online ad in short span of time.	☐	☐	☐	☐	☐
Seeing the online ads of products/services I looked for are more likeable.	☐	☐	☐	☐	☐
Online ads which match my preferences/interests are more likeable.	☐	☐	☐	☐	☐
I feel that personalized advertising is an invasion of my privacy.	☐	☐	☐	☐	☐
To what extent do you feel that personalized advertising results in an invasion of your privacy?	☐	☐	☐	☐	☐
All things considered, the Internet would cause serious privacy problems.	☐	☐	☐	☐	☐
Compared to others, I am more sensitive about the way online companies handle my personal information.	☐	☐	☐	☐	☐
To me, it is the most important thing to keep my privacy intact from online companies.	☐	☐	☐	☐	☐
Compared with other subjects on my mind, personal privacy is very important.	☐	☐	☐	☐	☐
I am concerned about threats to my personal privacy today.	☐	☐	☐	☐	☐
Personalized ads are useful for me.	☐	☐	☐	☐	☐
Personalized ads are relevant to me.	☐	☐	☐	☐	☐
Personalized ads are worthwhile for me.	☐	☐	☐	☐	☐
Personalized ads are good in general.	☐	☐	☐	☐	☐
Personalized ads are favourable.	☐	☐	☐	☐	☐
Personalized ads have positive effects.	☐	☐	☐	☐	☐
Personalized ads fit their purpose.	☐	☐	☐	☐	☐
I intend to click on personalized advertisements in the near future.	☐	☐	☐	☐	☐
Likelihood that you will click on a personalized advertisement in the near future.	☐	☐	☐	☐	☐

Question	Answer 1	Answer2	Answer 3	Answer 4	Answer 5	Answer 6
Gender(Sex)	Male	Female	N/A			
Age	Below 20 or 20	21 - 30	31 - 40	41 - 50	51 or older	
Education	Elementary School Graduate	High School Graduate	Studying in University	Associate Degree	Bachelor's Degree	Graduate /PHD
Monthly Income	2.000 TL or less	2.001 TL - 4.000 TL	4.001 TL - 6.000 TL	6.001 TL - 8.000 TL	8.001 TL - 10.000 TL	10.001 TL or more
Marital Status	Married	Single	Divorced			
Employment Status	Not Working	Full Time	Part Time			
Frequency of Internet Usage	Less than 2 hours/day	0-2 hours/day	2-4 hours/day	4-8 hours/day	More than 8 hours/day	
Did You Used Internet Shopping?	Yes	No				
Frequency of Internet Shopping	Never	Once a year	Once in several months	Once a month	Once a week	Once a day