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Factors Affecting Mobile Tagging Awareness; A Research on Social Media Consumers

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Abstract. *The purpose of the study is to identify the factors affecting awareness of mobile tagging on social media. The study assumes that the mobile tagging awareness levels of social media consumers are high. As a result of the literature review made in the scope of the purpose and assumption of the study, it was identified that the variables used in the measurement of brand awareness levels are recognition, remembering, being first in remembering, brand dominance, brand knowledge and brand opinion. A conceptual model showing the relation between these variables and mobile tagging awareness levels of social media consumers and hypotheses connected to this model were developed and a survey form, loyal to the relevant literature, was prepared in order to obtain the data necessary for the analyses. The universe of the study covers the consumers who are members of social media sites Facebook, Twitter and Linked In. For the analysis of the data obtained as a result of the survey conducted, descriptive statistics containing percentages and frequencies, factor analysis and Pearson's Correlation Coefficient was used in the analysis of the hypotheses.*

Keywords: Mobile marketing, mobile tagging, social media, brand awareness.

JEL Classification: M31

Introduction

Together with the technological developments taking place in our day, many competitive applications are seen which create opportunities in the field of marketing. Thanks to the innovative developments in mobile telephone technology, marketers are able to reach prospective customers through new communication channels (Muk, 2007). Television is the first screen through which consumers could get information from the marketers. The internet is the second screen through which the consumers can get

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necessary information about the products and services. The emergence of e-commerce introduced a new marketing channel known as mobile marketing or the third screen of communication. According to Leppaniemi, Sinisalo and Karjaluoto (2006), mobile marketing is the use of mobile environment as a marketing communication tool. The keywords in this definition can be expressed as mobile tool (such as mobile phone) and marketing communication (information, promotions, competitions, etc). Enterprises are constantly in search of new ways and methods to retain and expand their market shares. According to Pousttchi (2006), marketing experts see mobile devices as an extremely promising marketing tool to overcome an important challenge as attracting times and attentions of the consumers. The mobile device at the same time provides the opportunity to transmit target messages to consumers with more effective methods than mass media (Barwise and Strong, 2002). The marketers have absolutely recognised the importance of the mobile phones of the end users. Such that, mobile phones are a communication channel with great potential (Kavassalis et al., 2003; Norris, 2007; Nysveen et al., 2005). The purpose of the study is to identify the characteristics and the areas of use of mobile tagging, a mobile marketing application as a new generation marketing tool and to assess mobile tagging awareness of social media consumers. It is assumed that the mobile tagging awareness levels of social media consumers are high. In the following sections, social media, brand awareness and mobile tagging concepts are studied in detail in accordance with the purpose of the study and the model established.

1. Social Media

In the process that started with the telegram and continued with the inclusion of film, telephone, radio and television in the world of communication, communication gained a new dimension and a simultaneous character. The developments that came along with the joining of the internet in the communication process removed the borders and made knowledge, reason and technology indispensable elements of life. In the light of all these developments experienced, the concept of media that oriented the lives of the people underwent change and the conventional media was replaced by a new communication environment, the social media, to a great extent (Özgen and Kara, 2012: 4).

The social media is expressed as “a group of internet-based applications enabling creation and circulation of user-created content, established on the foundations of web 2.0 design and technology” (Kaplan and Haenlein, 2010: 61). Social media can be defined as the internet sites established for the purposes of meeting of internet users, sharing of content, making contacts, creating an environment for discussion, establishing groups according to common areas of interest (Kurumsalhaberler, n.d.). Setting off from the definitions for the concept of social media, it is possible to state that the social media is linked with the content created by the user. According to OECD (Organisation for Economic Co-operation and Development), for the contents in the virtual world to be considered as user resources, they have to have three characteristics. These characteristics are listed as:

- 1- The content must be on the internet and accessible by everyone,
- 2- Users must be content creators,
- 3- To have content created out of professional routines and applications (OECD, 2007).

Social media, compared to conventional media, is in an advantageous position thanks to its many characteristics. The leading characteristics that make the social media strong are being fast and having low costs. It is possible to list the strong points of the social media that ensure that it is preferred by the



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enterprises and individuals as being fast and up-to-date, cost, sincerity, knowing the target group, measurability, closeness and reliability (Kaya,2011:33; Zafarmand,2010:20, Bostancı:2010,45).

Considering the social media environments based on their functions; we can divide them into three main groups as communication focused social media environments (blogs, micro blogging, social network services), social media environments ensuring cooperation and sharing of information (Wiki sites, social bookmarking sites) and social media environments where content is shared (photograph and arts works sharing sites, video music audio files sharing sites, presentation sharing sites, virtual reality sites) (Erdem,2011: 110). In this study, Facebook, Twitter and LinkedIn social media sites were preferred on the grounds that they are intensively used, they have great numbers of users and they work with membership systems. As identifying the mobile tagging awareness levels of social media consumers is the main purpose of the study, the concept of brand awareness is addressed in detail in the next section.

2. Brand Awareness

The word “awareness” derived from being aware expresses being aware of the existence of a situation, fact or object through the information acquired in the brain and the mind. Awareness is a situation that can be told within mental processes where virtual or abstract thinking is necessary (Yıldırım, 2010: 98). There are a great variety of definitions in the literature of brand awareness. Brand awareness is defined as the prospective customers knowing and remembering a brand in a certain product category (İslamoğlu and Fırat, 2011:58). According to another definition, it is the power of the existence of a brand in the minds of the consumers (Erdil and Uzun, 2010: 221). According to another definition, brand awareness is expressed as “being aware of the brand, the place of the brand in the memory of the consumer comparative to the competitors” (Uztuğ, 2003: 8).

Creating brand awareness is one of the most important stages of the activities undertaken for the brand. The main purpose in brand awareness is, as mentioned before, to reach the highest level of perception at the highest step of the awareness pyramid. By identifying at what level an existing brand is in the awareness pyramid, it is aimed to reach the highest level of the pyramid. If the product is new, the first thing to do is to create awareness. There are four main elements of creating awareness. These elements can be listed as link with other corporate facts, familiarity-affection, and reflection of the essence-commitment and thinking of the brand. (Elitok, 2003: 105).

The concept of brand awareness is concerned with whether there is information about the brand in the consumer's memory or how strong this information is and basically includes brand recognition and brand remembrance. Besides, for the consumers to have an opinion about the brand, awareness has to be created. In studies made on awareness, various awareness levels have been put forward and awareness was tried to be measured. These awareness levels used in the measurement of awareness levels are listed as recognition; remembering, being first in remembering, brand dominance, brand knowledge and brand opinion (Uztuğ, 2003: 29-30). In the next section of the study, mobile tagging concept, one of the mobile marketing practices, the awareness level of which is desired to the identified, is described in detail.



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3. Mobile Marketing And Mobile Tagging

Mobile marketing, a new concept in marketing, is used to describe all marketing activities associated with a mobile device. The fact that mobile phones have become a tool which people cannot be without in their daily lives has made mobile phones an opportunity to be used by marketers. Mobile Marketing is generally known as the use of written messages through the mobile phones in marketing communication (Mozat, n.d.). According to another definition, Mobile Marketing can be expressed as the performance of various communication and promotion activities through mobile phones (Pazarlamadunyasi, n.d.). According to another definition, Mobile Marketing is the process of performing all marketing campaigns through mobile devices (İşgüder, 2007:57). In this sense, we can define Mobile Marketing as a marketing practice in which the promotion process of ideas, goods and services is performed through wireless interactive tools to benefit all interest groups of the enterprise via mobile telephones (Karaca and Gülmez, 2010: 71). With the advance of mobile technologies, enterprises have started including mobile devices in marketing practices. Among new marketing practices where mobile technologies are used, we can count mobile coupons, SMS polls, quiz-contests, MMS applications mobile tags, Bluetooth-RFID applications and mobile games (Alkaya, 2007: 70-76; Karaca and Gülmez, 2010: 75-77; Arslan and Arslan, 2012:109-113; Şenyuva, 2009: 2-7). Mobile tags, which are among mobile marketing practices, are read by users through smart phones and serve as a bridge between printed environments and digital media.

Mobile tags are a new and powerful barcoding technology that helps utilisation of mobile devices at the highest level to create a bridge between conventional environments and the digital world. As mobile tags can be loaded information both horizontally and vertically, they are also named as two dimensional (2D) barcodes. Furthermore, they are also called as new generation barcodes as they replaced line barcodes and have more data storage capacity. They are also known as square codes as the tags are generally in square form. At the same time, they are also referred to as QR code, which is the most commonly use mobile tag type (Mobilkod, 2010).

Mobile tagging is a way to increase the value of printed environments by providing more interactive and interesting information to the user. These new generation tag is a call for action that can be printed anywhere and gives the print an interactive quality. Many reasons affect the use of mobile tags by the users such as to have more information about a product or service, to watch a video, to earn coupons or discounts (Okarimobile, n.d.).

There are more than 100 types of barcodes, however approximately 10 of these are used for mobile tagging (Schmimayer, 2008). Data matrix, QR code, Aztec code, bee tag and microsoft-tag can be given as examples of two dimensional barcodes used for mobile tagging (Kato and Tan, 2005). With the increase of the use of smart phones, there is now more usage space for mobile tags. With the increasing popularity of mobile internet, mobile tags are seen in many places in daily life (Qrcode, n.d.). For reading of a mobile tag, mobile devices have to have camera, mobile tag reader software and internet access (J-Quin, n.d.).

Mobile tags have unlimited digital application areas with different methods in different sectors. Retail, publishing, transport and health sectors are examples of application areas of mobile tags (Mobilkod, 2012). It is recognised that mobile tags are an innovative way for consumers and companies. There are numerous benefits of mobile tagging, which is qualified as a new generation marketing tool, provided to consumers and companies. It is possible to list the advantages of mobile tagging as being free, providing the opportunity for instant communication, providing more information and benefits that printed environments, being able to update information, giving correct information about customers and positive



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contribution to the images of the enterprises, etc. (Neomedia, 2011; Pindarcreative, n.d; Dijital Printing Reports, n.d.).

In the next section of the study, the analysis results of the data obtained through the survey conducted to social media consumers to identify mobile tagging practices awareness of consumers can be found.

4. Methodology

The purpose of the study is to identify mobile tagging awareness in social media. Also in the study, it is studied whether there are significant differences between mobile tagging awareness's of social media consumers based on consumers' demographic and personal characteristics and social media usage levels. In the study, it is assumed that mobile tagging awareness levels of social media consumers are high. The universe of the study covers consumers who are members of Facebook, Twitter and Linked In social media sites. Facebook has 30 million, Twitter has 6 million and Linked In has 750.000 active members. The universe of the study is the 36.750.000 active social media members of the survey. Universe variance cannot be estimated. The study's sample size was calculated with the $n = \pi (1-\pi) / (e/Z)^2$ formula with 0.05 error level and 95% confidence interval. As the variance of the universe cannot be estimated in the formula, maximum variance π has been accepted as 0.5. According to this data, the sample size of the study has been calculated as $n = 0.5 \times 0.5 / (0.05 / 1.96)^2 = 369$. As the condition $n/N = 1.004 < 0.05$ is not met $N - n / N - 1$ correction factor was multiplied with the sample size giving the corrected sample size; $36.750.000 - 369 / 36.750.000 - 1 = 0.995 \times 369 = 367$. Considering that there may be erroneous surveys, 444 valid surveys out of 500 conducted were assessed. Surveys were conducted to individuals 18 years old or older.

The data used in the study was obtained using online survey technique. Surveys were published as a link on Facebook, Twitter and Linked In social media sites. Information about the concept of mobile tagging was given in the survey. In the survey preparation process, brand awareness, recognition, remembering, being first in remembering, dominance, knowledge and opinion criteria were taken into account. Mobile tagging, consumers' personal and demographic characteristics are the other concepts included in the survey.

The survey form used to reach primary data in this study made to identify mobile tagging awareness in social media and the factors that affect mobile tagging awareness consists of 4 parts. The first part consists of 18 statements prepared to identify the mobile tagging awareness level of the participant listed according to 5-point Likert scale varying between "Totally disagree" and "Totally agree". Studies made by Uztuğ (2003), Tosun (2010), Franzen (1999) and Aaker (2007) were utilised in the identification of these statements. The second part consists of 6 multiple choice questions about interaction levels with mobile tags. The third part consists of 10 statements listed according to 5-point Likert scale varying between "Totally disagree" and "Totally agree" to identify personal characteristics of the participants. Studies made by Kim (2010), Bostancı (2010) and Erdem (2011) were utilised in the identification of these statements. The fourth part consists of 6 multiple choice questions to identify demographic characteristics of the participants.

Alpha coefficient (Cronbach's Alpha) was used to identify whether there is a correlation between the elements of the survey form assessed with the Likert scale consisting of 4 parts and 40 subheadings in total, which information is given about the outlines of. At the end of the analysis, the value of the alpha coefficient must be more than 60% to be able to tell that the scale is reliable (Nakip, 2006). In line with this,



the reliability analysis of the scale used in the research was made and the relevant coefficient was calculated as 92.3%. According to this result, it can be said that the survey form is reliable.

5.1. The Model of the Study

The purpose of the study is to identify mobile tagging awareness in social media. The main assumption of the study is that the mobile tagging awareness level of social media consumers is high. The study model developed at the end of the literature review made in the scope of the purpose and the main assumption of the study is as follows:

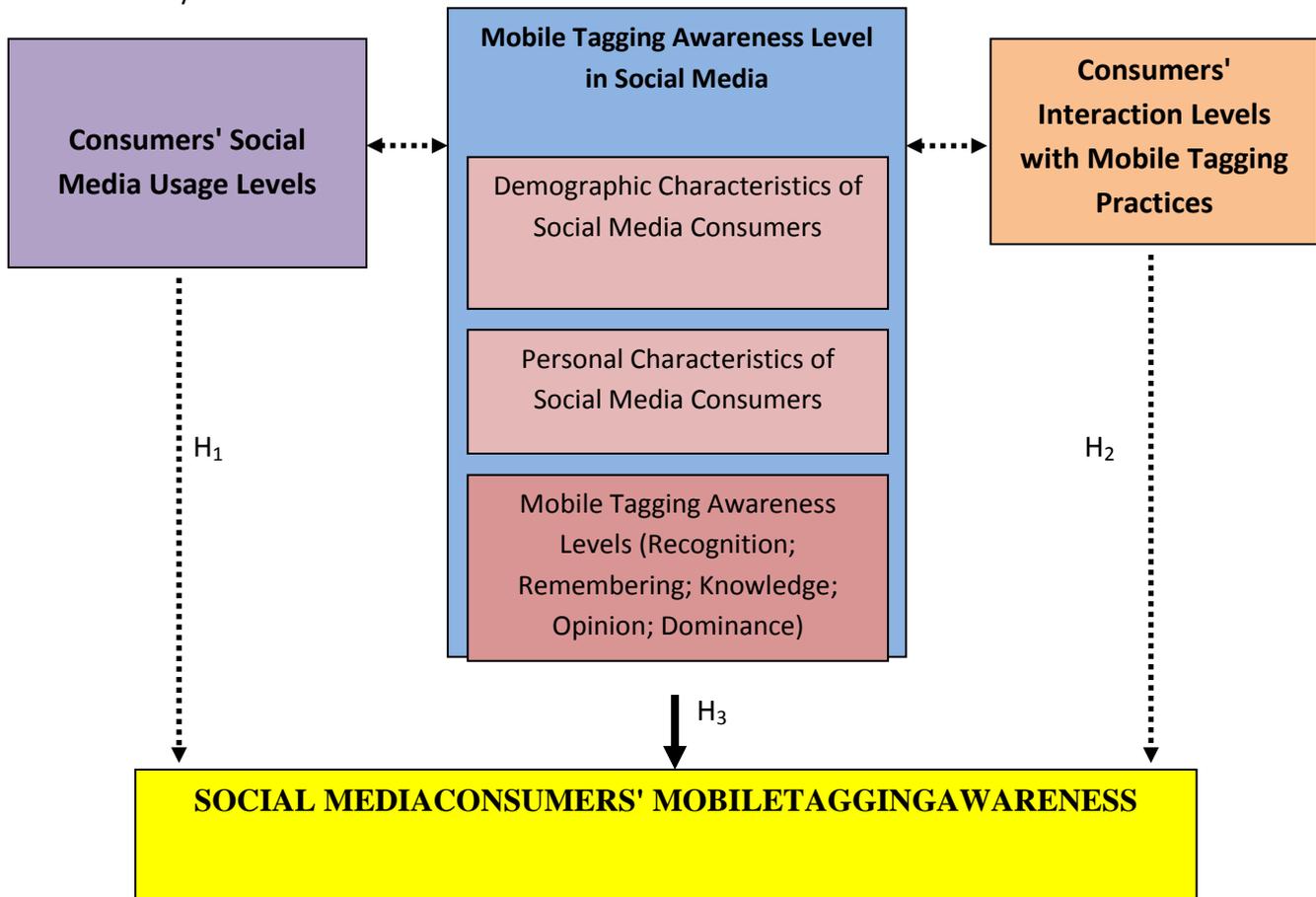


Fig 1: Conceptual Model on Mobile Tagging Awareness of Social Media Consumers

The model examined, it is seen that three variables affect the Mobile Tagging Awarenesses of Social Media Consumers. These can be listed as the Consumers' Social Media Usage Levels; Mobile Tagging Awareness Level in Social Media; Consumers' Interaction Levels with Mobile Tagging Practices. According to the model, the Consumers' Social Media Usage Levels and Consumers' Interaction Levels with Mobile Tagging Practices affects Mobile Tagging Awareness Level in Social Media and therefore Social Media Consumers' Mobile Tagging Awarenesses. Mobile Tagging Awareness Level in Social Media, on the other hand, is determined by Social Media Consumers' Personal and Demographic Characteristics and mobile



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tagging awareness levels. Therefore, social media consumers' mobile tagging awarenesses are directly affected by mobile tagging awareness level in social media and indirectly by the consumers' social media usage levels and consumers' interaction levels with mobile practices. According to the model, the research hypotheses can be developed as follows:

H₁: Consumers' Social Media Usage Levels affect Mobile Tagging Awareness of Social Media Consumers.

H₂: Consumers' Interaction Levels with Mobile Tagging Practices affect Social Media Consumers' Mobile Tagging Awareness.

H₃: Mobile Tagging Awareness Levels in Social Media affect Social Media Consumers' Mobile Tagging Awareness.

H_{3a}: Social Media Consumers' Personal Characteristics affect Social Media Consumers' Mobile Tagging Awareness.

H_{3b}: Social Media Consumers' Demographic Characteristics affect Social Media Consumers' Mobile Tagging Awareness.

H_{3b1}: Gender as one of the Social Media Consumers' Demographic Characteristics affects Social Media Consumers' Mobile Tagging Awareness.

H_{3b2}: Age as one of the Social Media Consumers' Demographic Characteristics affects Social Media Consumers' Mobile Tagging Awareness.

H_{3b3}: Geographical Region as one of the Social Media Consumers' Demographic Characteristics affects Social Media Consumers' Mobile Tagging Awareness.

H_{3b4}: Income as one of the Social Media Consumers' Demographic Characteristics affects Social Media Consumers' Mobile Tagging Awareness.

H_{3b5}: Level of Education as one of the Social Media Consumers' Demographic Characteristics affects Social Media Consumers' Mobile Tagging Awareness.

H_{3c}: Social Media Consumers' Mobile Tagging Awareness Levels affect Social Media Consumers' Mobile Tagging Awareness.

5.2. Scope and Limitations of the Study

The study covers social media users. The sampling frame consists of consumers who are members of commonly used Facebook, Twitter and Linked In social media sites. These sites have a total of 36.750.000 active users. The findings obtained in the study are limited to the perceptions of the individuals who participated to the survey of the survey questions. The survey was conducted to individuals 18 years old or older.

6. Analysis of Data and Findings

Raw data obtained as a result of the survey technique was assessed with SPSS 16.0 package programme. Descriptive statistics showing percentages and frequencies were used in the analysis of data. Hypotheses developed in accordance with the model of the study were tested with Pearson Correlation Analysis. In order to identify mobile tagging awareness in social media, the factors affecting mobile tagging awareness of participants were identified using Factor Analysis. The analysis results are given in detail below.



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6.1. Descriptive Statistics Concerning the Model of the Study

When we study the percentage and frequency distributions of the descriptive statistical measures of the variables concerning demographic characteristics of the survey respondents, it is seen that 55.2% of the respondents are women, 44.8% are men, 78.8% are between the ages 18 and 35 and 70.5% have an income of 1.000 TL or above. 90% of the participants have minimum bachelor's degree. 22.3% live in Marmara Region, 10.6% in Aegean Region, 7.4% in Mediterranean Region, 23.4% in Black Sea Region, 2.4% in Eastern Anatolia Region and 2% in Southeast Anatolia Region.

When we study the percentage and frequency values of the variables concerning personal characteristics of the survey respondents, the most frequent statements about the personal characteristics of the social media consumers taking the survey are 'I am open to innovation' (87.3%), 'When I come across different and new things, I want to know what it is and apply it' (83.9%) and 'I have an inquisitive personality' (79.5%), respectively. Out of 444 social media consumers who participated in the study, 344 responded as 'Agree' and 'Totally agree' to the first statement, 373 responded as 'Agree' and 'Totally agree' to the second statement and 359 responded as 'Agree' and 'Totally agree' to the third statement. Therefore, it can be said that a great part of the social media consumers taking the survey have innovative personal characteristics. Innovative consumers are individuals who notice new developments first. This finding supports the assumption of the study that "Social media users' mobile tagging awareness levels are high".

The social media sites most commonly used by the social media consumers taking the survey are Facebook (71.8%), Twitter (14.9%) and MSN (4.1%), respectively. Out of 444 social media consumers who participated to the study, 319 stated that they use Facebook most, 66 stated that they use Twitter most, and 18 stated that they use MSN most.

When we study the percentage and frequency values of the variables concerning mobile tagging interaction levels of the social media consumers taking the survey; it is seen that 31.5% of the social media consumers who took the survey have not seen mobile tags before, and 69.5% saw at least once. The social media consumers who took the survey indicated that they saw mobile tags on medication boxes, magazines and newspapers most. 32.9% of the participants describe mobile tags as technological, and 20.2% as informative. 55.4% of the participants have smart phone technology, 65.1% use mobile internet, but 71.2% do not use mobile tag scanner application.

When we study the percentage and frequency values of the variables concerning mobile tagging awareness levels of the participants who took the survey, it is seen that 51.6% of the participants responded 'Agree' and 'Totally agree' to mobile tagging recognition statements (I have heard mobile tags before, I know what mobile tags look like). 52.8% of the social media consumers who took the survey responded 'Agree' and 'Totally agree' to mobile tagging remembering statements (I have seen mobile tags before. I know mobile tags when I see them). 66.7% of the participants responded 'Agree' and 'Totally agree' to Mobile Tagging dominance statements (I prefer mobile tags to other practices to get detailed information about products and services. Now, when someone says tag, mobile tags come first to my mind). 48.6% of the participants responded 'Disagree' and 'Totally disagree' to mobile tagging opinion statements (I am thinking to scan mobile tag in the future. I am aware of the advantages offered by mobile tags. I think reading mobile tag is easy. I share what I know about mobile tag with my immediate environment.). Therefore, it is seen that a great majority of the participants do not have a mobile tagging opinion. 50% of the participants responded 'Disagree' and 'Totally disagree' to statements about the



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knowledge of the social media consumers about mobile tagging (I have knowledge of mobile tags. I know what mobile tags are for. I know how mobile tags are used. I scanned mobile tag with my smart phone before. I use mobile tags to get information. When I see a mobile tag, I am curious about the data inside.). In the scope these findings obtained, it can be said that, from among mobile tagging awareness levels, recognition and remembering levels are high and dominance, knowledge and opinion levels are high, of the social media consumers who took the survey. Therefore, 52.5% of the social media consumers who took the survey recognise and remember mobile tags, but do not use the mobile tagging application actively. It can be said that although social media consumers' mobile tagging awareness is high, their usage levels are low.

6.2. Findings about the Factors Affecting Social Media Consumers' Mobile Tagging Awareness Levels

In this section, there are assessments about the reliability and factor analyses made to identify factors affecting mobile tagging awareness of the social media consumers who took the survey. Reliability is a concept showing all variables' interconsistency and internal harmony in a scale. Cronbach alpha coefficient is found by proportioning of the variances of all variables in the scale to the general scale total variance. Cronbach alpha coefficient varies between 0 and 1 values. Variables that decrease scale reliability can be taken out of the scale if necessary. Cronbach alpha value is desired to be 70% (Kurtuluş, 2010:184). In this framework, first the reliability of the variables was checked on factor basis, and then, the reliability of the whole scale was tested.

Factors affecting mobile tagging awareness of social media consumers are the factors in the study model. These factors were identified as the personal characteristics of the consumers and mobile tagging awareness levels. Of these factors, the scale average of 26 questions identified to share the common value out of 28 questions constituting the subscale was calculated as 83.57 and the standard deviation as 23.368. The general average of the questions is 3.21 and the average variance is 1.871. The range of the averages of the 26 questions is 2.270 and the range of the variances is 2.240. The general average of the correlations between the questions (inter-item correlations) is 0.391, whereas the minimum correlation between the questions was calculated as 0.019 and the maximum correlation as 0.931.

In the study, the Item-Total correlations were obtained as high values varying between 0.344 and 0.859. For the sake of the additivity of the scale, the correlation coefficients between the Item and the Total are expected to be non-negative and bigger than 0.25 value. Before deciding on taking out of a question from the scale, the importance of the relevant question in the scale must be assessed checking the reliability coefficient Alpha calculated after the relevant question is taken out and change of average and variance calculated after the relevant question is taken out. With the reliability analysis made in the scale with 28 questions, the general reliability coefficient Alpha was calculated as 0.923. With the reliability analysis made with remaining 26 questions after taking out 2 questions which do not share the common value, the general reliability coefficient Alpha was calculated as 0.947. The internal reliabilities of the personal characteristics and mobile tagging awareness levels identified taking the model of the study as basis were calculated as 88.0% for personal characteristics, 89.2% for recognition, 95.2% for remembering, 93.4% for knowledge, 64.9% for dominance and 70.3% for opinion, respectively.

After making of the reliability analysis, the factor analysis was utilised to quantitatively verify the factor structure affecting mobile tagging awareness of social media consumers. Factor analysis is a multi-



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variable statistical analysis type ensuring presentation of data more meaningfully and in summary based on the relations between the data (Kurtuluş, 2010:189). To assess whether the data set is suitable for factor analysis, first the suitability of the variables in the data set to normal distribution must be checked. Central tendency criteria for the variables concerning the data set are given in Table 5.6.

Table 1: Values of Central Tendency for the Factor Analysis Variables

	Mean	Median	Mod
I have heard mobile tags before	3.15	4.0	5.0
I know what mobile tags look like	3.20	4.0	5.0
I have seen mobile tags before	3.21	4.0	5.0
I know mobile tags when I see them.	3.06	3.0	5.0
I have knowledge of mobile tags	2.78	3.0	3.0
I know what mobile tags are for.	2.92	3.0	3.0
I know how mobile tags are used	2.81	3.0	3.0
I scanned mobile tag with my smart phone before.	2.23	3.0	3.0
I am thinking to scan mobile tag in the future	2.81	3.0	3.0
I am aware of the advantages offered by mobile tags	2.70	3.0	3.0
I use mobile tags to get information	2.62	2.5	3.0
When I see a mobile tag, I am curious about the data inside	3.0	3.0	3.0
I think scanning mobile tags is easy	3.02	3.0	3.0
I prefer mobile tags to other practices to get detailed information about products and services	2.23	2.0	2.0
I share what I know about mobile tag with my immediate environment	2.62	3.0	3.0
Now, when someone says tag, mobile tags come first to my mind	2.02	2.0	2.0
I have an inquisitive personality'	4.08	4.0	5.0
I am open to innovation	4.28	4.0	5.0
When I come across different and new things, I want to know what it is and apply it	4.23	4.0	5.0
I follow technology closely.	3.85	4.0	4.0
I read technology news in the newspapers and magazines.	3.66	4.0	4.0
I follow social media closely.	3.97	4.0	4.0
I share something about technological innovations on social media.	3.13	3.0	3.0
I search product packace when shopping.	3.86	4.0	4.0
The logos on product package is draw my attention.	3.75	4.0	4.0
I follow mobile phone applications.	3.26	3.0	5.0

When we study Table 1, it is seen that the data set has a normal distribution and is suitable for factor analysis.

Along with identifying suitability of the data set to normal distribution, the correlation matrix has to be created and Barlett test and Kaiser-Meyer-Olkin (KMO) sampling sufficiency tests must be made to check suitability of the data set to factor analysis. Barlett test tests the probability of high rate correlations between at least a part of the variables in the correlation matrix. This test shows that the data set is suitable for factor analysis. KMO test, on the other hand, is an index comparing the size of the observed correlation coefficients and the size of the partial correlation coefficients. The KMO rate must be above 0.5.



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The higher the rate, it can be said that, the better the data set is to make a factor analysis. The data of the Barlett test and KMO test values are given in the below table.

Table 2: Barlett and KMO Test Results

KMO Value		0.941
Barlett Test Value	chi-square	9.888E3
Df.	df.	325
	Sig.	.000

KMO value was calculated as 94.1%. The fact that the KMO sampling sufficiency measure is above 60% shows that the variables in the scale are suitable for factor analysis. The Barlett Test was found to be Sig. 0.000 < 0.05 significant with 9.888E3 chi-square and 325 degrees of freedom. Therefore, there is correlation between the variables and the data set is suitable for factor analysis according to the result of the Barlett Test. Factor analysis results are shown in Table 3.

Table 3: Factors Affecting Social Media Consumers' Mobile Tagging Awareness

	Factor 1 Remembering $\alpha=95.2$	Factor 2 Knowledge $\alpha=93.4$	Factor 3 Recognition $\alpha=89.2$	Factor 4 Personal Characteristics $\alpha=88.0$	Factor 5 Dominance $\alpha=64.9$	Factor 6 Opinion $\alpha=70.3$
S5	0.916					
S4	0.910					
S8		0.901				
S7		0.900				
S6		0.886				
S9		0.666				
S12		0.652				
S13		0.575				
S3			0.896			
S2			0.838			
S26				0.886		
S27				0.866		
S32				0.818		
S25				0.797		
S33				0.776		
S28				0.643		
S29				0.606		
S30				0.469		
S31				0.451		
S34				0.449		
S18					0.778	
S16					0.673	
S17						0.772
S11						0.741
S14						0.662
S10						0.547



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Factors affecting mobile tagging awareness of social media consumers were identified as the consumers' personal characteristics and mobile tagging awareness levels (recognition, remembering, knowledge, opinion, dominance). Factor 1, which is remembering, explains 32.97% of the total variance; Factor 2, which is Knowledge, 14.55%; Factor 3, which is Recognition, 11.64%; Factor 4, which is Personal Characteristics, 9.32%; Factor 5, which is Dominance, 3.02%; Factor 6, which is Opinion, 2.42%. These six factors listed explain 73.94% of the total variance. Therefore, it can be said that these six factors listed affect social media consumers' mobile tagging awareness. The most effective among the factors is remembering which explains 32.97% of the total variance. Therefore, it can be stated that the most important factor determining awareness of mobile tags is the remembering of the mobile tags. This finding is supported by the previous findings of the study (that the participants responded 'Agree' and 'Totally agree' to the statements on recognition and remembering levels of the mobile tagging awareness levels). In the following section, analyses on the hypotheses developed in accordance with the study model are given.

6.3. Hypothesis Tests of the Study

The purpose of the study is to identify mobile tagging awareness of social media consumers. According to the model developed in the scope of the purpose of the study, social media consumers' mobile tagging awareness is affected by the consumers' social media usage levels, interaction levels of the consumers with the mobile tagging practices and mobile tagging awareness level in social media. 3 main hypotheses developed based on the study model developed in the scope of the purpose and the main assumption of the study were analysed with Chi-Square and Pearson Correlation coefficient. Chi-Square is a non-parametric test (Kalaycı, 2010:85). The data to be used in the testing of the first and second hypotheses developed in the scope of the study model contains nominal scaled data. Therefore, the analysis of this data was made according to the Chi-Square test. Interval scale was used in the measurement of data to be used in the testing of the third hypothesis developed according to the study model. Therefore, the data is suitable for analysis with Pearson Correlation coefficient. Pearson Correlation Coefficient is used in the measurement of the degree of the linear relationship of two continuous variables. It is an analysis defining whether there is a significant relationship between two variables (Kalaycı, 2010:116). The analysis results are given in the below tables:

Table 4: Hypothesis Test Results

Chi-Square Tests

H ₁ : Consumers' Social Media Usage Levels affect Mobile Tagging Awareness of Social Media Consumers.	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	50.559 ^a	32	.020
Likelihood Ratio	55.324	32	.006
N of Valid Cases	444		

a. 32 cells (71,1%) have expected count less than 5. The minimum expected count is ,08.

When we study Table 4, it is determined that there is a significant relationship between the consumers' social media usage levels and mobile tagging awareness of social media consumers with $0.020 < 0.05$ significance level and (50.559) chi-square value. According to chi-squared correlation coefficient value



(55,324), there is a medium level relationship between them. H_1 hypothesis is accepted according to this data.

Table 5: Hypothesis Test Results

Chi-Square Tests			
H ₂ : Consumers' Interaction Levels with Mobile Tagging Practices affect Social Media Consumers' Mobile Tagging Awareness.	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.743E2 ^a	48	.000
Likelihood Ratio	303.790	48	.000
N of Valid Cases	444		

a. 39 cells (60,0%) have expected count less than 5. The minimum expected count is ,08.

According to Table 5, there is a relationship between the consumers' interaction levels with mobile tagging practices and mobile tagging awareness of social media consumers with 48 degrees of freedom, 2.743E2 chi-square value and $0,000 < 0,05$ significance level. H_2 hypothesis was accepted.

Table 6: Hypothesis Test Results

H ₃ : Mobile Tagging Awareness Levels in Social Media affect Social Media Consumers' Mobile Tagging Awareness.	S4	S5	S6	S7	S8	S9	S10
Pearson Correlation	.883	.888	.809	.825	.821	.559	.492
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	S11	S12	S13	S14	S16	S17	S18
Pearson Correlation	.659	.576	.562	.617	.429	.312	.220
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000

Question 4 and Question 18 are statements about mobile tagging awareness level.

When we study Table 6, it is seen that there is a relationship between social media consumers' mobile tagging awareness levels and social media consumers' mobile tagging awareness with sig. $0.000 < 0.05$ significance level. H_{3a} hypothesis was accepted. According to this data, it can be said that social media consumers' mobile tagging awareness will increase as their mobile tagging awareness levels increase.

Table 7: Hypothesis Test Results

H _{3a} : Social Media Consumers' Personal Characteristics affect Social Media Consumers' Mobile Tagging Awareness.	S25	S26	S27	S28	S29
Pearson Correlation	.263	.225	.237	.328	.347
Sig. (2-tailed)	.000	.000	.000	.000	.000
	S30	S31	S31	S33	S34



Pearson Correlation	.157	.165	.211	.291	.342
Sig. (2-tailed)	.000	.000	.000	.000	.000

Question 25 and Question 34 are statements about personal characteristics of consumers.

When we study Table 7, it is seen that there is a relationship between social media consumers' personal characteristics and social media consumers' mobile tagging awarenesses with sig. $0.000 < 0.05$ significance level. H_{3b} hypothesis was accepted. In this sense, it can be said that there is a significant relationship between social media consumers' personal characteristics and social media consumers' mobile tagging awareness.

Table 8: Hypothesis Test Results

Chi-Square Tests

H_{3b1} : Gender as one of the Social Media Consumers' Demographic Characteristics affects Social Media Consumers' Mobile Tagging Awareness.			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.815 ^a	4	.066
Likelihood Ratio	8.850	4	.065
N of Valid Cases	444		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 13,45.

Table 9: Hypothesis Test Results

Chi-Square Tests

H_{3b2} : Age as one of the Social Media Consumers' Demographic Characteristics affects Social Media Consumers' Mobile Tagging Awareness.			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	50.331 ^a	28	.006
Likelihood Ratio	50.155	28	.006
N of Valid Cases	444		

a. 23 cells (57,5%) have expected count less than 5. The minimum expected count is ,07.

Table 10: Hypothesis Test Results

Chi-Square Tests

H_{3b3} : Geographical Region as one of the Social Media Consumers' Demographic Characteristics affects Social Media Consumers' Mobile Tagging Awareness.			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	29.578 ^a	24	.199



Likelihood Ratio	31.998	24	.127
N of Valid Cases	444		

a. 13 cells (37,1%) have expected count less than 5. The minimum expected count is ,61.

Table 11: Hypothesis Test Results

Chi-Square Tests

H _{3b4} : Income as one of the Social Media Consumers' Demographic Characteristics affect Social Media Consumers' Mobile Tagging Awareness.	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	48.684 ^a	24	.002
Likelihood Ratio	55.176	24	.000
N of Valid Cases	444		

a. 11 cells (31,4%) have expected count less than 5. The minimum expected count is ,57.

Table 12: Hypothesis Test Results

Chi-Square Tests

H _{3b5} : Level of Education as one of the Social Media Consumers' Demographic Characteristics affects Social Media Consumers' Mobile Tagging Awareness.	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.966 ^a	16	.010
Lindigjinde kelihood Ratio	34.047	16	.005
N of Valid Cases	444		

a. 9 cells (36,0%) have expected count less than 5. The minimum expected count is ,14.

When we study Tables 8, 9 and 10, we see that there is a relationship between social media consumers' demographic characteristics age, income and education level and social media consumers' mobile tagging awareness with $p < 0.05$ significance level. Along with this, according to Table 11 and 12, there is not a significant relationship between social media consumers' demographic characteristics gender and geographical region and social media consumers' mobile tagging awareness with $p < 0.05$ significance level. According to the findings obtained, it can be said that age, income and education level play a determining role on social media consumers' mobile tagging awareness. When we study the previous findings of the study, it can be said that approximately 79% of the social media consumers who took the survey are younger than 35, 71% have an income of 1.000 TL and above and 90% are minimum high school graduates. It is seen that the findings of the study support each other.



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Conclusion

Growth and expansion are observed in the promotion mix elements of marketing in parallel with the technological developments. Particularly, given the presence of a generation growing and developing with technology, effective and proper use of promotion tools, transmission of the messages to the right persons become more important in a market structure with abundant alternatives. Mobile communication tools have become one of the important promotion tools of our day with their content, dynamic and social structure and that they provide a communication environment which is not boring instead of a formal message structure. With the advance of technology and starting of the common use of smart phones by the consumers, mobile tags have become one of the fields of application of mobile marketing.

The purpose of the study is to identify mobile tagging awareness of social media consumers. According to the conceptual model developed in the scope of the purpose and the assumption of the study, the consumers' social media usage levels and the consumers' interaction levels with mobile tagging practices affect mobile tagging awareness level in social media and therefore the social media consumers' mobile tagging awareness. Mobile tagging awareness level in social media, on the other hand, is determined by social media consumers' personal and demographic characteristics and mobile tagging awareness levels. The factors affecting social media consumers' mobile tagging awareness were determined as the consumers' personal characteristics and mobile tagging awareness levels (recognition, remembering, knowledge, opinion, dominance). Factor analysis was made to identify to what degree the independent variables affect the dependent variable. The six factors identified explain 73.94% of the total variance. Therefore, it can be said that these six factors listed affect social media consumers' mobile tagging awareness. The most effective factor among those is Remembering, which explains 32.97% of the total variance.

In the study, the hypotheses developed based on the conceptual model were analysed with Pearson's Correlation Coefficient. At the end of the analysis, hypotheses H_{1} , H_{2} , H_{3b2} , H_{3b4} and H_{3b5} were accepted and hypotheses H_{3b1} and H_{3b3} were rejected. Therefore, according to the results of the hypothesis test, it can be said that there is a linear relationship between the consumers' social media usage levels, consumers' interaction levels with mobile tagging practices, social media consumers' personal characteristics and social media consumers' demographic characteristics age, income level and level of education and social media consumers' mobile tagging awareness while there is not a linear relationship between social media consumers' demographic characteristics gender and geographical region and social media consumers' mobile tagging awareness.

The study covers the consumers in the social media. Therefore, the findings obtained include the personal and demographic characteristics of the social media consumers. The study has an original value in that it studies social media consumers' social media usage levels, consumers' interaction levels with mobile tagging practices and mobile tagging awareness level in social media in identifying social media consumers' mobile tagging awareness.



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