CONSUMERS' ATTITUDES TOWARDS MOBILE MARKETING AND MOBILE COMMERCE IN CONSUMER MARKETS[*]

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ABSTRACT

Advances in information and communication technologies are not only offering new marketing channels to companies but also significantly influencing the ways in which companies conduct their businesses and marketing activities. This paper analyses the possible significant impacts of mobile phone technology developments on marketing, and offers insights into mobile commerce and mobile marketing, which have not previously been investigated in Turkey. In the survey, mobile phone users' attitudes towards mobile commerce and mobile marketing and their intentions to benefit from mobile phones are searched. The empirical results show that the mobile phone users' adoption of mobile shopping is low, and apart from mobile shopping, mobile phone users have positive attitudes towards mobile advertising, entertainment, discount coupons and mobile marketing. Moreover, the demographics characteristics (age, income, occupation and employment) of mobile phone users who have more positive attitudes towards mobile marketing tools are determined and managerial implications and recommendations are also given to increase mobile commerce and marketing adoption rates.

Keywords: Mobile Commerce, Mobile Marketing, Consumer Behavior

1. INTRODUCTION

Information technology affects everything from daily life to business in the 21st century. In business environment, it shapes not only commerce but also the way in which companies implement their marketing strategies. Offering new marketing channels to interact with customers is crucial to increase sales for company. Thus, the successful application of information technology to connect

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marketing applications is highly prominent. One of the advances in information technology is wireless mobile communication technology that makes the "anytime-to-anyplace" communication possible. This technology system allows increased mobility and extended services even to remote areas. Due to wireless communication system, mobile phone users are able to access their e-mails, search, order and buy products and services from everywhere without computers (Yen and Chou, 2000; Aungst and Wilson, 2005). Besides the Internet and personal computers, the mobile phone is the key to marketers because it is extremely popular and offers people the opportunity of mobility now. Through the introduction of data services, Short Message Services (SMS), Multimedia Message Service (MMS), Mobile Internet, etc., the mobile phone is rapidly becoming a viable commercial marketing channel.

Even though companies are investing heavily in mobile commerce and mobile marketing, the nature and implications of this channel have yet to be fully understood and studies need to be performed to gain an insight into how to utilize it best (Bauer et al., 2005). Nowadays, mobile marketing adoption and acceptance is on the rise, but marketers would have little ability to consistently generate profits without a clear understanding of the elements driving consumer acceptance (Becker, 2005).

The main objective of this study is to draw Global System for Mobile Communications (GSM) operators' and entrepreneurs' attention to new opportunities in mobile commerce and mobile marketing. Therefore, in this study, mobile commerce and mobile marketing concepts, the importance and benefits of mobile commerce and mobile marketing, how mobile phone influences marketing and business activities and the success factors and barriers of mobile commerce in consumer markets are explained and analyzed. The results of the survey conducted on 389 mobile phone users to determine consumers' attitudes towards mobile marketing tools are provided.

2. CONCEPTUAL FRAMEWORK

2.1. Mobile Phone, Mobile Marketing and Mobile Commerce

One of the marketers' demands is to be able to communicate with potential customers and to contact them anywhere and anytime. Mobile phone made a revolutionary contribution to fulfilling the anywhere and anytime connectivity marketers' wishes. Yuan and Cheng (2004) emphasize that mobile marketing is getting increasingly popular because mobile phone is a personal device used in marketing. Scharl et al., (2005) define mobile marketing as using a wireless medium to provide consumers with time- and location-sensitive, personalized information that promotes products, services and ideas, thereby benefiting all stakeholders. Shortly, mobile marketing refers to marketing activities and programs performed via mobile phone in mobile commerce.

The rapid growth of mobile phone has also come up with a new term: mobile commerce. It has a strong impact on industries like e-commerce in general (E-Business Report, 2000) and transformed mobile commerce into a major driving force for the next wave of e-commerce (Liang and Wei, 2004). The growth and use of mobile commerce as an emerging technology has the potential to dramatically change the way consumers make business. Mobile commerce driven by wireless communication technology is also generating interest from marketers (Aungst and Wilson, 2005). Therefore, the penetration of this new technology has evoked changes in advertising, retailing and shopping in marketing, and companies wishing to make business in mobile markets should be ready for mobile marketing and mobile commerce.

In the literature, all mobile commerce definitions are very similar. In principle, any transaction with a monetary value conducted via mobile communication networks can be considered mobile commerce (E-Business Report, 2000). As regards this definition, Siau et al., (2001) define mobile commerce as a new type of e-commerce transaction conducted through mobile devices using wireless telecommunication networks and other wired e-commerce technologies. Dholakia and Dholakia (2004) describe mobile commerce as electronic commerce transactions carried out via mobile phones and wireless terminals. Bai et al., (2005) simply identify as the transaction conducted over a wireless telecommunication network, either directly or indirectly. Briefly, mobile commerce can be understood as a business model that allows a consumer to complete all steps of a commercial transaction using a mobile phone (DSTI/CP, 2006).
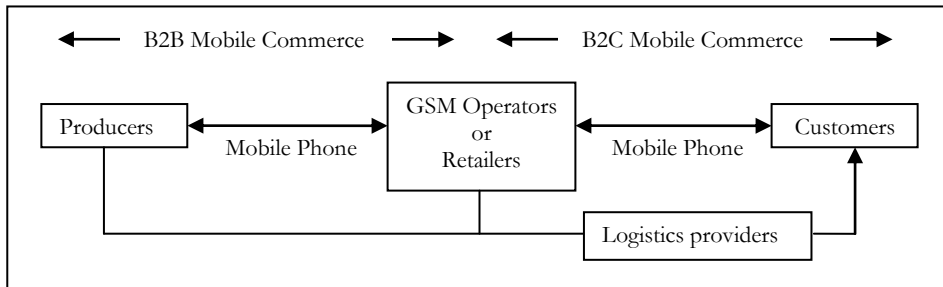
In mobile commerce, mobile marketing is increasingly prevailing and appealing to marketing for many reasons. For example, consumers carry them every day, everywhere, and mobile phones are almost always on (Yuan and Cheng, 2004). The forces underpinning the emergence of mobile commerce can be summarized as (1) proliferation of mobile devices, (2) convergence of mobile telecommunication networks and Internet, (3) transition to 3G (Third Generation Mobile System), and (4) the emergence of broad set of highly personalized location applications and services (Sadeh, 2002). Therefore, mobile commerce has attracted growing attention over the last few years and continued to revolutionize marketplaces by introducing new business models as well as offering some advantages to customers, retailers and GSM operators. Even though Barnes (2002) put forward that the diffusion of mobile commerce services are very poor so far due to high cost, slow transmission rates, high power consumption of devices and inadequate mobile interfaces, mobile commerce come true these days because of the wireless mobile technology developments and 3G phones.

2.2. Mobile Commerce Businesses and Services

In addition to e-commerce, mobile commerce creates new marketplaces among producers, distributors, retailers and customers anywhere and at any time. As

seen in Figure 1, mobile commerce models are divided into B2B (business to business) and B2C (business to customer) perspectives.

**Figure 1: The parts of mobile commerce and mobile marketing**

Source: Barutçu, S. (2007) Information Technology, Mobile Marketing and Mobile Commerce in Consumer Markets, 3rd International Conference on Business, Management and Economics, June 13-17, Yaşar University, İzmir

B2C mobile commerce is composed of three parts: GSM operators or retailers, customers and logistics providers. GSM operators or retailers adopt pull promotion strategy over customers who have mobile phones in order to market and sell products and services. Customers can order products and services via mobile phone and purchase them. Logistics providers carry them from warehouse or store to customers. B2C perspective is just one example where this kind of powerful information could be aggregated by a carrier or a service provider for marketing purposes (Casal et al., 2004). B2C mobile commerce also requires a strong relationship among customers, retailers, GSM operators, logistic providers and banks etc. (Barutçu, 2007).

Basically, mobile commerce is a service-based business, and many business opportunities are offered in mobile commerce. Various classification attempts have been made in the literature to classify existing and possible mobile commerce services like commerce, shopping, entertaining, advertising, information service and personal interaction (Schnicke, 2002). According to Leem et al., (2004), the B2C mobile commerce is subdivided into commerce, intermediary and information models, and subcategories of B2C models represent the current outstanding mobile businesses in Figure 2. Funk (2005) analyzed the potential mobile service applications and explained how mobile phone affects the business, marketing and entertainment as seven applications; (1) multi-media mail, (2) mobile phones as portable entertainment players, (3) mobile marketing, (4) mobile shopping, (5) navigation, (6) use in lieu of tickets and money, and (7) mobile intranet applications.

Figure 2: Mobile B2C business, marketing areas and its examples
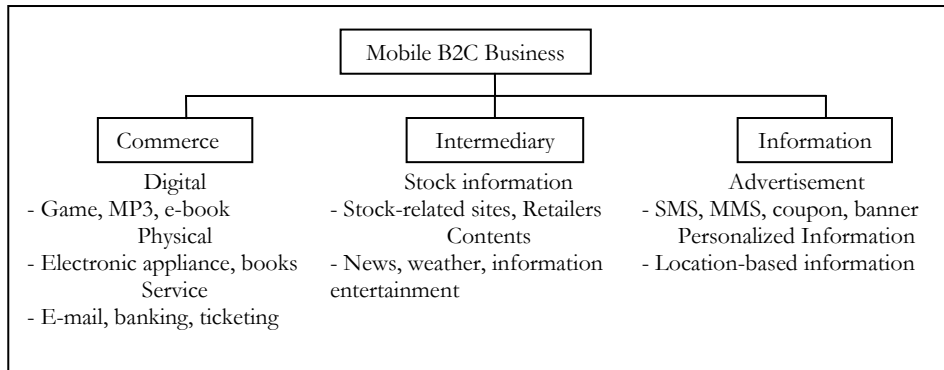
Source: Adapted from Leem, C. S., Suh, H. S., Kim, D. S. (2004) A classification of mobile business models and its applications, Industrial Man. & Data Systems, Vol. 104 (1), p.81

Location-based mobile information and service play a significant part in B2C mobile commerce. The vast majority of uses for location-based mobile services are likely to be commercial, involving the provision of specific services adapted to individual profiles and their location (Casal et al., 2004). Using the information on the users identity, position, access time, and profiles, GSM operators or retailers can offer the users optimal information or services, which are contextually relevant to them at the point of need (Liang et al., 2004) and the resulting customers' location data can be used for direct marketing (Casal et al., 2004). To this date, GSM operators have been most interested in the use of location information for providing innovative location-based mobile services. These services have gained attention as companies are facing new opportunities in offering more customized services. The ability to identify the customer's location at a certain time is one of the most promising applications of mobile commerce (Barnes, 2003; Pura, 2005).

By using new browsers and other mobile applications, the new range of mobile technology offers the Internet 'in user pocket' for which the users possibilities are endless, including banking, booking or buying tickets, shopping and real-time news (Barnes, 2002). When using the mobile Internet, mobile phone users reach all web pages via 3G mobile phone without computer. Therefore, Funk (2004) described the key technological trajectories and their potential effect on the expansion of mobile Internet applications. The advanced mobile Internet technologies make the phone a portable entertainment player, a new marketing tool for retailers and manufacturers, a multi-channel shopping device, a navigation tool, a new type of ticket and money, and a new mobile intranet device.

2.3. Mobile Marketing Tools

Mobile advertising, mobile sales promotion, mobile entertainment and mobile shopping stand out as the critical elements in mobile marketing and mobile commerce.

(i) Mobile Advertising: A key component of mobile marketing communication is advertising, either in a push or pull mode. After obtaining the consumer's permission, push advertising sends relevant but not explicitly requested text and video messages. Quah and Lim (2002) argue that the push model will dominate mobile advertising since it saves consumers' time and money compared to browsing content. SMS and MMS messages are main mobile advertising systems. SMS has become a technological buzzword in transmitting B2C messages to such wireless devices as mobile phones. Many brands and media companies include text message numbers in their advertisements to enable interested consumers to obtain more information. This mode of advertising takes advantage of valuable channels of wireless communication to enhance customer relationships, and to carry out direct marketing and promotional activities (Frolick and Chen, 2004). Moreover, MMS has provided more visual and active messages. Marketers can benefit from the use of photos, music, logos and animation, videos by advertising to consumers' mobile phones. SMS and MMS advertising are expected to achieve higher response rates than that of e-mail or television because all advertisements can be sent personally.

(ii) Mobile Sales Promotion: Sales promotion is one of the promotional mix including coupons, discounts, rebates, free samples, gifts and incentive items in order to observe an immediate effect on sales. Mobile coupons in sales promotion play a vital role, and marketers can predict a higher usage of mobile compared to their paper-based equivalents. Mobile coupons boast at least three advantages: (1) targeting based on mobile phone numbers, (2) time sensitivity, and (3) efficient handling by scanning the coupon's bar code at the point of sale (Scharl et al., 2005). Thousands of Japanese retailers, restaurants, manufacturers, and other companies employ the mobile Internet to send discount coupons, conduct surveys, and offer free samples to registered users via mobile mail. For example, many restaurants use these mobile-based coupons to offer temporary discounts on slow nights, thus creating a form of dynamic pricing (Funk 2005).

(iii) Mobile Entertainment: The mobile phone has become an important media and entertainment platform. In the mobile entertainment industry, there are lots of entertainment services like listening music, playing games, gambling, watching television, video and sport matches etc., which have set a stage for an explosion of mobile entertainment industry.

(iv) Mobile Shopping: Mobile phone is an exciting tool to expand customers' shopping options after the Internet. At first, mobile phone can seem like a scary place to shop; however, mobile phone users can go online to buy just about

anything their need or want. Used properly, mobile shopping is a new easy, practical, and economical shopping tool. The sudden growth of mobile shopping has placed mobile retailers at consumers' fingertips, and allowed mobile phone users to purchase nearly anything they desire without ever leaving their houses and offices.

## 2.4. Success Factors and Barriers of Mobile Commerce and Mobile Marketing

There seem to be a good many issues that require attention from both the practitioner and academic worlds in mobile commerce and mobile marketing. Researchers from several countries gathered at the Fourth International Conference on Telecommunications and Information Markets to discuss some of the issues regarding e-commerce and mobile commerce in July 2001 (Dholakia, 2004). The fact that mobile commerce is not mature brings many challenges to mobile commerce adopters. Integrating content, software and hardware design and reconfiguring an effective business model to implement mobile commerce requires careful study and decision making (Wu and Hisa, 2004). Therefore, developing a successful mobile commerce system needs to meet a variety of success factors, including process supports, functional capability, implementation, marketing (Bai et al., 2005) and improving trust.

Major barriers to mobile commerce and mobile marketing are the mobile web browsers, technological skills, perception of risks and traditional shopping culture, lack of awareness and understanding of the benefits provided by them. While it is possible to use the mobile phone itself to purchase products, the small screens and keyboards make it difficult to search for products. Because the small screen and keyboard make it demanding to search for products via a search engine, a large number of the products purchased with a mobile phone are selected from personalized mail services that provide information on a specific type of product, which the user has registered for (Funk 2005) On the other hand, security, tangibility, and the lack of experience are also main barriers of mobile commerce (Fenech, 2002). Therefore, Yuan and Cheng (2004) and Bai et al., (2005) suggested that special software like recommender system or intelligent on-line purchasing advisors should be developed in order to recommend or advice products and services on a one-to-one basis. Recommender systems of automated product recommendation acquire customers' preferences and recommend products accordingly on a one-to-one basis in real time at a lower cost (Yuan and Cheng, 2004). Intelligent online purchasing advisors will assist buyers in specifying their product requirements, searching for product information and selecting the best supplier (Bai et al., 2005).

2.5. Mobile Marketing Strategy

Mobile marketing strategies and tools are directed at the mobile target market/markets to enhance or change their buying behaviors and overcome barriers of mobile commerce. In order to successfully market products and services via mobile phone, marketers and retailers should gain an insight into mobile phone users' attitudes, perceptions, characteristics, and shopping patterns. For example, Tsang et al., (2004) investigated consumer attitudes toward mobile advertising and the relationship between attitude and behavior. The results of their survey indicate that consumers generally have negative attitudes toward mobile advertising unless they have specifically consented to receive the advertising messages. Therefore, in order to develop mobile advertising messages and mobile marketing mix (product, price, promotion place) mobile marketers should ask and answers some questions as seen in Figure 3 (Bourke, 2006).

Figure 3: Stages of Mobile Marketing Strategy
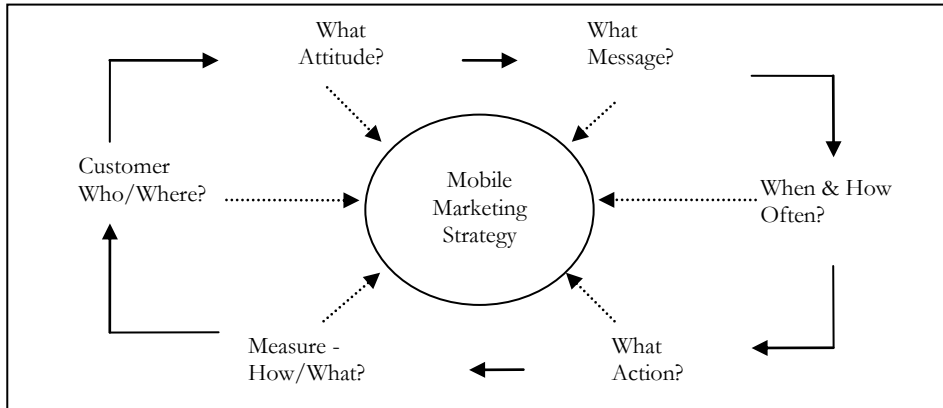
Source: Bourke, C. (2006) "How to Develop a Mobile Marketing Strategy", retrieved on July 10, 2007 from http://www.aerodeon.com/whitepapers/AerodeonMobileStrategy_ v100.pdf, p.10

Briefly, mobile marketing managers should determine target customers and understand their demographics characteristics to develop successful mobile marketing programs and strategies.

3. MOBILE PHONE USERS' ATTITUDES TOWARDS MOBILE COMMERCE AND MARKETING

The mobile communications market has enjoyed rapid growth since 1994 in terms of the numbers of GSM operators and subscribers in Turkey. By the end of 2004, 50% of the population had adopted mobile phones. The number of mobile phone subscribers in Turkey had exceeded 34 million (34,707,549) by

2004, an increase of over 27 million (27,887,535) since 2003 (Turkish Statistical Institute, 2007). In June 2007, the number of mobile phone subscribers exceeded 58 million (58,055,434) (Telecommunication Authority, 2007). However, the number of Internet subscribers in Turkey was 229,885 in 1998 and 1,474,590 in 2004 (Turkish Statistical Institute, 2007). In 2007, the number of Internet subscribers and users were 3,2 million and 15 million respectively (Bilisimedia.com, 2007). Therefore, these numbers present more favorable mobile marketing and shopping environment than Internet marketing in Turkey. Investigating Turkish mobile phone users' attitudes towards mobile commerce and mobile marketing takes up a significant part within this study's framework.

3.1. Research Methodology

The objectives of the research are to investigate the mobile phone users' attitudes towards mobile marketing tools and the demographic characteristics of mobile phone users who are the most positive attitudes towards mobile marketing and mobile commerce services.

3.3.1. Hypotheses Development and Research Framework

In the light of these objectives, research questions and hypotheses are formulated to shed light on mobile phone users' attitudes towards mobile commerce and marketing. As seen in Figure 4, all of these research questions lead to propose the following alternative hypotheses and research framework.

Figure 4: Research framework for consumers' attitudes towards mobile marketing tools

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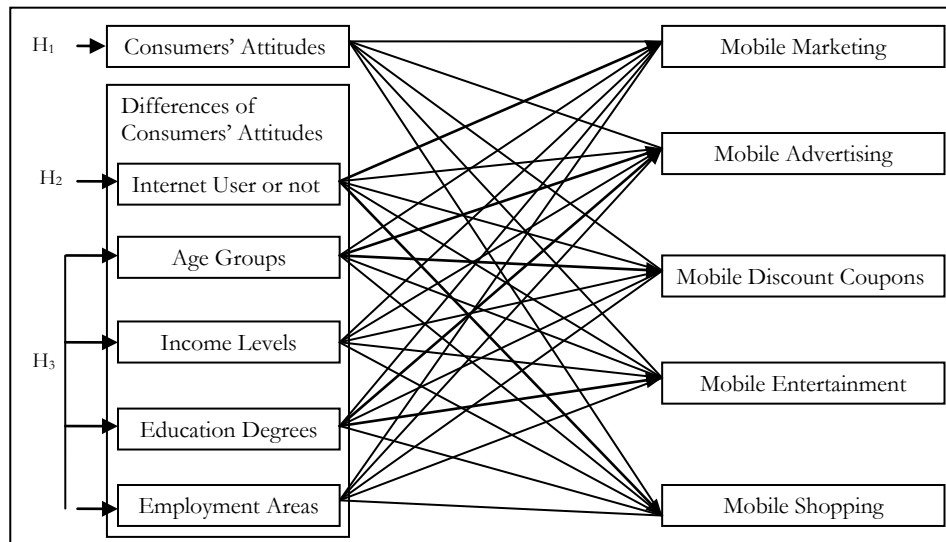
H1: Mobile phone users have positive attitudes towards mobile marketing tools.

H2: There are differences between non-Internet users' and Internet users' attitudes towards mobile marketing tools.

H3: The attitudes towards mobile marketing tools differ with respect to demographic characteristics.

All these hypotheses are based on a combination of four sub-hypotheses. For example, in hypothesis H1, they have positive attitudes towards mobile advertising (H1a), mobile coupons and discounts (H1b), mobile entertainment (H1c), and mobile shopping (H1d). In hypothesis H2, there are differences between Internet users' and non-Internet users' attitudes towards mobile advertising (H2a), mobile coupons and discounts (H2b), mobile entertainment (H2c), and mobile shopping (H2d). In hypothesis H3, the attitudes towards mobile advertising (H3a), mobile coupons and discounts (H3b), mobile entertainment (H3c), and mobile shopping (H3d) differ with respect to demographic characteristics (age, income, education and employment). These alternative hypotheses and sub-hypotheses are tested below.

3.1.2. Research Instrument

Data for this research was collected through questionnaire survey. The questionnaire and attitude statements were developed from the existing literature (Shimp and Kavas, 1984; Bauer et al., 2005) and self-created. In the questionnaire, 5-point Likert scale (1 strongly disagree; 2 disagree; 3 neither disagree nor agree; 4 agree; 5 strongly agree) was employed to measure customer attitudes towards mobile commerce and marketing. The survey questionnaire consisted of eighteen questions. The first five questions were related to the demographic characteristics of the respondents, one question was related to categorize the respondents in two groups (Internet user or non-Internet user) and the last twelve questions were intended to investigate mobile phone users' attitudes. Before the questionnaire was conducted, it was pretested on ten mobile phone users in order to measure the construct the validity of the attitude measurement.

3.1.3. Sampling

In the sampling stage, systematic random sampling, one of the probability sampling methods, is implemented. 500 questionnaires were distributed randomly every 10th consumer who use mobile phone in the three shopping centers and many stores in different shopping areas in Denizli. 428 questionnaires were returned. Among them, 39 questionnaires were not used due to incompleteness and some missing answers. The remaining 389 questionnaires were included in the final data analysis, thereby yielding a usable response rate of 77,8%.

3.1.4. Data Analysis

SPSS 11.5 for Windows were used to analyze data. The reliability of the valid questionnaires was assessed by the Cronbach alpha reliability coefficient. Reliability value was calculated as 0,8326 (just for twelve attitude statements) and exceeded the suggested value of 0,70. The result demonstrated that survey results have high reliability and ensure a proper ground for further analysis. In data analysis, mean and standard deviations of questions used in Likert scale were calculated, and one sample t-test, independent-samples t-test and a one-way ANOVA were used for hypotheses testing.

3.2. Research Results

As seen in Table 1, among the 389 respondents, 32,1% are females and 67,9% are males. In terms of the respondents' employment and occupation, 39,8% work as officers in public institutions, 32,1% work in private companies, 6,2% have different occupations and 2,6% are students who were included in others. 39,1% of the respondents have high school degree, 34,7% have primary school degree and 22,4% have undergraduate degree. 45% of the respondents' monthly salary is $251-500 and 32,1% is up to $250. Of all the 389 respondents, 31,1% connect the Internet from their home, business or office and %68,9 do not have any access to the Internet. Currently, 268 respondents are non-Internet users.

Table 1: Respondents' profiles

Variable	Frequency	(%)	Variable	Frequency	(%)
Gender			Employment		
Female	125	32,1	Official (Public)	155	39,8
Male	264	67,9	Worker (Private)	125	32,1
Age			Self-employed	85	21,9
≤ 20	39	10,0	Others	24	6,2
21-30	129	33,2	Monthly income		
31-40	181	46,5	≤$250	125	32,1
41-50	40	10,3	$251-500	175	45,0
≥ 51	-	-	$501-1000	67	17,2
Education			$1001-2000	22	5,7
Primary School	135	34,7	≥ $2001	-	-
High School	152	39,1	Internet Usage		
Undergraduate	87	22,4	Non-Internet user	268	68,9
Graduate	15	3,9	Internet user	121	31,1

Table 2 shows means and standard deviations of responses to the twelve attitude statements. Overall, the results suggest that respondents have positive attitudes mobile advertising, discount coupons and entertainment services although mobile phone users have negative attitudes towards mobile shopping. They do not find mobile shopping suitable. Provided that they have enough

time, they prefer traditional shopping. Moreover, the respondents are of the opinion that mobile shopping poses some security problems.

Table 2: Descriptive statistics of survey questions

Attitude Statements	Mean	SD
I find receiving advertisements via the mobile phone positive	4,20	1,107
I find SMS and MMS mobile advertising messages useful	4,24	1,057
I find mobile coupons for being offered discounts positive	4,28	1,006
I find mobile entertainment services (video, game etc.) positive	3,82	,816
If the prices of products and services in mobile shopping are lower than in traditional shopping, I prefer mobile shopping	4,35	1,004
There are security problems in mobile shopping	3,07	1,446
I find mobile shopping suitable	2,80	1,181
My general intention to shop via mobile phone is very high	4,04	,905
I find mobile shopping more entertaining than traditional shopping	2,56	,900
I prefer mobile shopping when I have enough time	3,49	1,393
I find shopping via mobile phone positive	3,11	1,422
I will shop via mobile phone in the future	4,03	1,375

Scale: A five-point Likert scale from 1 strongly disagree to 5 strongly agree

Another finding is the fact that respondents have price sensitivity. To sum up, results have shown that mobile phone users have positive attitudes towards mobile advertising, entertaining and discount coupons, while having a low intention to mobile shopping.

3.3. Hypotheses Testing

The following hypotheses are empirically tested by one sample t-tests, independent-samples t-tests and one-way analysis of variance (ANOVA). Table 3, Table 4 and Table 5 summarize the results of these tests.

H1: Mobile phone users have positive attitudes towards mobile marketing tools.

In testing H1, H1a, H1b, H1c, and H1d are separately tested. Because mobile advertising and shopping attitudes are measured in several questions, the average scores of the attitude statements for mobile marketing tools are calculated for hypotheses testing. According to one sample t-tests, respondents have positive attitudes towards mobile advertising (t=10,404, p<0,05), mobile discount coupons (t=12,163, p<0,05), mobile entertainment (t=3,866, p<0,05). Nevertheless, they have negative attitudes towards mobile shopping (t=-1,413, p<0,05). If all mobile marketing activities are evaluated, they seem to have positive attitude towards mobile marketing tools (t=2,487, p<0,05) except for mobile shopping. Therefore, H1, H1a, H1b, and H1c are accepted, and H1d is rejected (Table 3).

Table 3: One sample t-tests for mobile phone users' attitudes towards mobile marketing tools

Variables	Test Value = 3,66			Alternative Hypotheses
	Mean	t	p (Sig. 2-tailed)	
Mobile advertising	4,2185	10,404	,000 *	H1a (Accept)
Mobile discount coupons	4,28	12,163	,000 *	H1b(Accept)
Mobile entertainment	3,82	3,866	,001 *	H1c (Accept)
Mobile shopping	2,8843	-1,413	,145	H1d (Reject)
Mobile marketing	3,8026	2,487	,021 *	H1 (Accept)

*p<0,05

H2: There are differences between non-Internet users' and Internet users' attitudes towards mobile marketing tools.

In testing H2, to compare mobile phone users' attitudes who have Internet connection and those who do not, independent-samples samples T-tests were performed to determine the differences between them. The results of testing the mean differences of the Internet users and non-Internet users, referred as T-tests, are given in Table 4. Statistics-wise, Internet users and non-Internet users' attitudes towards mobile tools appear to display notable changes, except for mobile discount coupons. Table 4 reveals the summary of the T-tests results. Non-Internet users have more positive attitudes towards mobile advertising (t=4,715, p<0,05), mobile entertainment (t=4,326, p<0,05), mobile shopping (t=6,413, p<0,05) and overall mobile marketing tools (t=4,817, p<0,05), while showing much the same attitudes toward mobile discount coupons (t=0,513, p>0,05). As a result, H2, H2a, H2c and H2d are accepted and H2b is rejected (Table 4).

Table 4: Results of independent-samples t-tests between non-internet users and internet users

Variables	Mean		t*	p**	Alternative Hypotheses
	Non-Internet User	Internet User			
Mobile advertising	4,3764	3,8689	4,715	,001**	H2a (Accept)
Mobile discount	4,33	4,19	0,663	,513	H2b (Reject)
Mobile entertainment	3,98	3,47	4,326	,006**	H2c (Accept)
Mobile shopping	3,1288	2,3428	6,413	,000**	H2d (Accept)
Mobile marketing	3,9538	3,4679	4,817	,001**	H2 (Accept)

* Equal variance assumed
** p <0,05

Consequently, as the statistics makes it clear, non-Internet users and Internet users differ considerably in terms of their attitude towards mobile advertising, entertainment, shopping and overall mobile marketing tools. As seen in Table 4, although non-Internet users and Internet users have similar attitudes toward mobile discount coupons, respondents who do not have an access to the Internet tend to have more positive attitudes towards marketing tools than those who have it.

H3: The attitudes towards mobile marketing tools differ with respect to demographic characteristics.

In order to test H3, a one-way ANOVA was used. Each demographic characteristic (age, income, education background and employment) was analyzed separately by using one-way ANOVA for each of the dependent variables. Finally, the results of one-way ANOVA tests are illustrated in Table 5.

Table 5: Results of one-way ANOVA between demographics characteristics of respondents and their attitudes towards mobile marketing tools

Demographics characteristics	Age		Income		Education		Employment	
Variables	F	p	F	p	F	p	F	p
H3a Mobile advertising	1,854	,137	,103	,958	1,368	,252	1,103	,347
H3b Mobile discount	,491	,549	1,715	,163	,924	,429	,593	,620
H3c Mobile entertainment	7,636	,000*	8,127	,000*	3,679	,012*	4,634	,003*
H3d Mobile shopping	4,107	,026*	5,093	,002*	3,054	,028*	4,102	,007*
H3 Mobile marketing	2,938	,033*	3,467	,024*	5,307	,006*	3,011	,030*

* $p < 0,05$

The results showed no significant differences between respondents' age, income, education and employment groups and their attitudes toward mobile advertising and mobile discount coupons ($p>0,05$), thereby rejecting hypotheses H3a and H3b. Nonetheless, there are statistically significant differences in mobile entertainment services, mobile shopping and mobile marketing. In other words, the mean value of attitudes toward mobile entertainment services, mobile shopping and mobile marketing was significantly different ($p<0,05$) in some age, income, employment and education groups, thereby accepting hypotheses H3c, H3d and H3 (Table 5). LSD was used to further identify which group or groups in fact differed from the others. The results of the LSD showed exactly which groups were significantly different. Respondents, who are under 30 years old, receive $500 or more monthly income, work as officials in public institutions, and have undergraduate degrees have more positive attitudes towards mobile entertainment services. Respondents, who are 30 years old and older, earn the lowest monthly income (up to $ 250), have primary and high school degrees, and are having their own business have more negative attitudes towards mobile shopping. Respondents who are 21-30 years old, receive $1001-2000 monthly income, are educated and work as officials in public institutions have the highest positive attitudes towards mobile marketing tools. These results imply that mobile phone users who are young and middle-aged, have high income, work as officials in public institutions, have graduate and undergraduate degrees, and are non-Internet users stand out as by far the most important target customers for mobile commerce and marketing.

4. MANAGERIAL IMPLICATIONS

Independent-samples t-test and one-way ANOVA were used to determine the target mobile customers who have the most positive attitudes toward each

mobile marketing tool. As the results make it obvious, mobile phone users who are young and middle-aged, receive high income, work as officials in public institutions and have graduate and undergraduate degrees are the most important target customers for mobile commerce and marketing. Particularly, a sharp contrast is drawn between current non-Internet users and Internet users. Mobile phone users with no Internet connection turn out more enthusiastic to use mobile marketing tools than Internet users, implying mobile commerce companies should target mobile phone users who have these demographic characteristics. Given that GSM operators have their subscribers' information, the managers of mobile stores should segment the market and send messages of order to target customers who are likely to purchase via mobile phones by making use of this information. Moreover, customers' negative attitudes toward mobile shopping can be changed by offering lower price and important discount coupons in mobile shopping than in traditional shopping.

5. CONCLUSION

Mobile phone is a new direct marketing device that provides direct access to consumers and interacts with them in a very personal way. All GSM operators announce the launch of new mobile services, and the B2C mobile commerce and mobile marketing will be obviously becoming more popular in Turkey. The mobile advertising, mobile Internet, mobile banking and mobile entertainment services are growing in the world and in Turkey, GSM operators and retailers expect to benefit from these mobile marketing tools.

According to literature survey about consumers' attitudes toward mobile marketing, Tsang et al., (2004) found that consumers generally had negative attitudes toward mobile advertising unless they have specifically consented to receive the mobile advertising messages. Bauer et al., (2005) found that consumers developed a positive attitude toward mobile marketing if mobile marketing messages were creatively designed, entertained and proved a high information value. Becker (2005) indicated that mobile marketing adoption and acceptance was on the rise. Even though it is too early to say whether mobile commerce and mobile marketing services are accepted or not in Turkey, the findings of the research conducted Turkish mobile phone users suggest that mobile phone users have positive attitudes towards mobile marketing tools except for mobile shopping.

To come to the point, the mobile phone is rapidly becoming a practical direct marketing channel. There are some factors playing a role in improving and increasing mobile commerce. Besides mobile service quality, Bauer et al., (2005) emphasizes that entertainment value, information value and advertising content communication are some of the strongest drivers of the acceptance of the mobile phone as a marketing tool. Moreover, one of the ways to convince mobile phone users of the benefits of mobile commerce is the price of products and services. One of the implications of this survey suggests that potential mobile commerce users have price sensitivity, and that the lower price turns out

to be the most critical factor that motivates mobile phone users' adoption of mobile commerce. Furthermore, GSM operators and retailers ought to (1) get ready the mobile revolution in commerce, (2) develop healthy mobile commerce market, (3) create a favorable mobile shopping environment, (4) increase mobile phones' operational efficiency and customer interaction, and (5) develop effective the mobile marketing mix, programs and strategies. As long as these requirements are carried out, mobile commerce adoption level will be increased. In further research, target mobile phone users, their demographic characteristics, why mobile phone users have negative attitudes toward mobile shopping, how mobile marketers change the negative attitudes, and which products and services are preferred for mobile shopping should be identified in different areas, cities and countries. Moreover, the strategies and programs for implementing mobile commerce and mobile marketing should be analyzed as well.

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