

Designing the Attitude toward Advertising Model through Mobile Social Networks

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Abstract: The aim of this research is to help advance a better understanding of digital advertising innovation adoption, consumer acceptance of customized advertising, and the influence of customized advertising on product purchase intent via a mobile social network. To this end, two types of questionnaires, including an open questionnaire filled up by 16 experts and university professors was designed to identify the indicators and sub-indicators of advertising acceptance determinants through mobile-based cyberspace networks. The other questionnaire was a 5-point Likert questionnaire designed based on the identified indicators of the open questionnaire, which was filled by 234 cyber-space users who were chosen using simple random sampling method in order to verify the identified factors. The results of the study led to the identification of seven main indicators namely revenue generating,

legalization, Awareness at social levels, Family and friends, Advertiser owners, monitoring and Advertising quality and the identification of 44 sub-indicators for seven three main determinants.

Keywords: Mobile Social Networking; Economic Advantage; Advertising Effectiveness

1. Introduction

The ever increasing expansion of the Internet and World Wide Web and its global popularity in different countries all over the world, as well as the dependence of many social factors including business and economics on the Internet have led some people to take initiatives in the form of large and small companies in order to increase the attractiveness of such an emerging phenomenon. Online social networks are of the most promising tools in the digital advertising environment (Brettel et al, 2015). In particular, the sponsored advertising section on Face book has provided an important pathway for marketing message dissemination through setting up direct connections among advertising consumers, producers and brands (Dehghani & Tumer, 2015). Most Internet users are acutely aware that their digital activities leave many kinds of information behind, and data may be used and shared in ways they know nothing about. Many consumers in Western Europe are specifically sensitive about data derived from mobile devices, including details of their location (E-Marketer 2016). Information and Communication Technologies have affected various dimensions of modern societies, modifying even economic, politics, social and cultural structures (Bran et al. 2017). Internet of Things a trend of future networks, is immersing into many aspects of our personal and working life, it also provides more comprehensive intelligent services. Social networks used widely in cell-phones employ Mobile Social Networks (MSNs), and MSN users not only can acquire their own location information and sign in a location but also find nearby friends, access to Location-Based Services (LBS) such as finding the nearest hotel, finding directions, sharing action tracks, and so on (T. Song, et al. (2017) and R. Li, et al. (2017) and X. Zheng, et al (2018). The advertising effectiveness constantly is one of the main concerns of e-commerce and advertising activists. Advertisers always try

to measure the effectiveness of various types of media in order to maximize the profitability of their customers. One of the ways to increase this impact is to attract the user's confidence. Hence, recognizing different ways to increase consumers' trust and reliability have long been one of the main concerns of advertising companies and they have always made huge investments to find new ways of increasing customer confidence. In this regard, a research gap seems to be in Iran so that we continuously observe massive advertising with a very high cost but the least effect on the customers. This viewpoint led to different reactions to advertising through mobile-based social networks.

2. Literature review

"Mobile Advertising" is usually defined as the distribution of advertising messages for the sending and receiving mobile devices of the target community in the form of music, writing or audio in order to achieve advertising objectives and also the collection of consumer feedback (Lee et al., 2011). It is possible that mobile phone users, especially among the younger generations, have become highly accustomed to making purchases online as well as paying for retail purchases with the use of their mobile phones as such shopping has been facilitated by a variety of mobile apps (Okazaki et al, 2012; Shankar, Venkatesh, Hofacker, & Naik, 2010). One of the most important features of mobile advertising is that it can be considered an interactive and personal process. In mobile advertising, rapid, easy, cheap and effective interactions between customers and the company are created, and personal messages can be transmitted to target audiences, regardless of time and space. As a result, companies have embraced mobile advertising as part of an integrated marketing communications strategy. Currently, most leading companies in the world such as Procter & Gamble, Microsoft, Disney, Coca-Cola, Sony Pictures and McDonald have accepted mobile advertising, and each year they consider it as a part of their marketing budget (Yonal et al., 2011). The Mobile Advertising communicates with target audiences via a handset. There are many types of mobile advertising. The popularity of such forms has changed over time. According to Haghirian and Inoue (2007), the world's leading information technology research and advisory applications including

mobile web display, in-app display, and search/maps are the three types of mobile advertising which provide the highest revenue. In addition, Mobithinking (2013) predicts that the revenue of these types will continue to grow in the future. Due to insufficient time and resources, this study will only focus on advertising on mobile websites in mobile applications, which are common types of recent mobile advertising (Tsang et al., 2004). As advertising provides information about products and services, it can reduce the cost of the customer's search. In an informative advertising show, the quantity demand is affected by increasing information. As a result, advertised products tend to have a more elastic demand which leads to lower prices of a product. This effect will be greater when the production process is conducted on an economical scale. Advertising facilitates the process of entering the market because it provides the customers with price and quality information (Belch et al, 2014). Generally, practical use of national resources increases the average standard of living, as Munusamy and Wong (2007) demonstrated. Ozga (1960) developed the foundation for the informative view. In the informative view of advertising, advertising affects demands by transmitting information. As a result, the advertised product faces a more elastic demand. The elasticity consequence proposes that advertising causes lower prices, an influence, which is reinforced when the production scale of economies are present. The informative view embraces further that established firms do not use advertising to deter entry. On the contrary, advertising eases entry, since it is important to approach entrant to provide price and quality information to consumers. One of the most important ways to be informed of perceptions and acceptance of advertising messages is to study users' attitudes. Attitude is one of the most important concepts in information systems and marketing research (Patet, 2011). Attitude is a lasting, general evaluation of people (including oneself), objects, advertisements or issues (Solomon, 2013), and is a mental state used by individuals to structure the way they perceive their environment and guide the way they respond to such an environment (Tsang et al., 2004). While studying advertising phenomenon, many researchers use the attitude toward mobile-based ads as a basis for measuring the reactions of users to commercial advertisements (Mehta and Scott, 2012). Several

definitions are proposed for the attitude towards mobile-based ads, some of these definitions are as follows:

- a) The attitude towards mobile-based advertising is the field for responding to a particular promotional stimulus in a desirable or undesirable way during a special presentation (Behhal et al., 2014).
- b) The attitude towards mobile-based advertising is an emotional structure that reflects mental evaluations from promotional stimuli (Hopkins et al., 2011).
- c) The attitude towards mobile-based advertising is a combination of the weighted evaluation of perceived characteristics and consequences of product (Wang et al., 2014).

Due to the short life span of mobile-based advertising, consumers' beliefs and their attitude toward mobile-based ads are changing continuously. Therefore, better and more accurate understanding of the relationship between attitudes towards mobile-based ads and user behavior responses facilitates a more accurate evaluation of Internet businesses through Internet marketing programs (Wang et al., 2014). There were also studies related to the attitude towards general advertising and mobile advertising on the behavioral intention to use mobile marketing services (Bauer, et al., 2005). Findings depicted that the attitude towards advertising in general and the attitude towards mobile marketing strongly determined the consumers' intention to participate in mobile marketing services (Bauer, et al., 2005; Radder, et al., 2010). Muk and Babin (2006) studied the attitude towards accepting wireless advertisements and their intention to adopt SMS advertisement. The result signified that the attitude towards accepting the wireless advertisements turned out to be significant predictors on the intention to opt-in to SMS advertising (Muk & Babin, 2006). The term "social networking" was known before the Internet creation, but its popularity owes to the development of programs such as Facebook, My Space, and LinkedIn. Social networks include people who connect with each other through meaningful social relationships such as work, friendship, or information exchange (Yang et al., 2011). Lenhart et al. (2007) introduce mobile-based social networks as a place where users can put their personal information and communicate with others to eventually create

personal networks. Marketing professionals have found that utilization of such a growing and expanding communications media is needed to promote their products and services and create long-term relationships with their customers (Chitu et al., 2012). Similarly, the online customer review system which can play a critical role in influencing consumer referrals for online shopping malls is also valued more highly by users who have perceived the review system to be more useful and easier to use (Rese, Schreiber & Baier, 2014). Due to the advantages of social media in connecting businesses to end-consumers directly, in a timely manner at a low cost (Kaplan and Haenlein, 2010), social media has become the center of attention in many industries by facilitating various areas of marketing, such as promotions, marketing intelligence, sentiment research, public relations, marketing communications as well as product and customer management (Akar and Topcu, 2011). The quick growth in the usage of social media throughout the world shows that businesses can utilize it to increase their product or service interest in consumers' mind. Farzana et al. (2014) argue that social networks will play a key role in the future of marketing; externally they can replace customer annoyance with engagement, and, internally, they help to transform the traditional focus on control with an open and collaborative approach that is more conducive to success in the modern business environment. Hence, advertisers have promptly adopted social media as a means to build lasting relationships with young consumers. They target social network users based on profile data and engage them with advertisements relevant to their interests. Many marketers send advertisements only to users without paying attention to the customs of the audience regarding acceptance of the advertisements and therefore, they may provide the audience with distress and annoyance. Another study reveals that consumers have less negative attitudes toward targeted online advertising, even though privacy is a concern when websites are perceived to provide considerable utility (Schumann, von Wangenheim & Groene, 2014). Creating a positive attitude towards mobile advertising is one of the most important steps for accepting the advertisement among the audiences, but this alone is not enough, and the shift in tendency of customers from use of mobile advertising to acceptance and adoption of mobile advertising and appropriate

formation users is considered as a very important and necessary process (Charles, Dickinger And Murphy, 2015). In the context of achieving to the objectives of the study and in line with the conceptual model of research having enough information about the factors affecting the attitude towards mobile advertising, social networks, economic advantage, and ultimately acceptance and purchase of the goods and services as the result of mobile-based advertising seem to be very important. Netarjans et al., (2017), using the Technology Acceptance Model and Theory of Innovative Dissemination perceived risk and individual innovation to the original model to understand people's needs on use of mobile business applications for shopping and added perceived pleasure; then, using online surveys, they collected data from 675 e-commerce users. Their research results, based on structural equation modeling, show that individual innovation and perceived risk play a key role in the intention to use mobile app purchases, and users with a high degree of intent to use mobile shopping apps are less sensitive to the price. Ha, et al., (2016) investigated the effects of time on the acquisition of information from social networks in terms of the emotional and cognitive trust. They argue that the impact on emotional trust is greater than cognitive trust over time. Brahim (2016), in his research on the validity and value of online advertising, has been shown to affect the attitudes of consumers about this type of advertising. Finally, the attitude of advertising has a mediating role between the perceived value of advertising and buying intent. In research based on Information Diffusion Model (the model for the publication of the quadrant) for Viral Marketing in Business by AlSuwaidan, L., and Ykhlef, M. (2016), the marketing content of is introduced by the business owners towards the customer as the first and foremost audiences. They examined the growth of advertising in social networks and then identified the effective members. In this cycle, a strategy is proposed to improve the level of advertising and marketing in social networks and to provide assistance to managers and business owners. The analytical model of this research is based on clustering. Mack and Chang (2015) studied the factors influencing the acceptance of SMS advertising by customers. The data collected from both the United States and Korea was used to test the conceptual model and intercultural validation of the scales. The findings

confirmed the validity of this scale of measurement in the national context of mentioned countries. The design of the two countries in creating favorable attitudes for consumers towards the adoption of important SMS advertising was evaluated. Korean young consumers had a more positive attitude toward SMS in comparison with Americans. Although the impact of the community on the attitude of Korean consumers towards acceptance of mobile-based advertising was ineffective, it was positively correlated with the attitude of American consumers. According to Filo et al (2015), customers interact on social media as part of their decision- making process. Twitter, Instagram, and Facebook seem appealing to customers since they facilitate purchasing decisions about certain products or services, information search, and post-purchase evaluation. Mansour (2012) investigated the factors affecting consumers' intention to adopt mobile ads in Sudan and concluded that generally the attitude towards advertising has a positive effect on the attitude and tendency to use mobile advertising, and social permeability had a positive effect on the tendency to use mobile advertising, as well. Nawid Khan and Elile (2010) studied the determinants of acceptance of mobile-based advertising and compared them between India and Syria. They considered variables such as the perceived value and perceived mobile advertising, adaptability, level of individual innovation, control, attitude to mass media and awareness of the mass media as factors affecting consumers' willingness to accept mobile-based advertising. Van et al., (2009) examined five major factors influencing Chinese customer attitudes toward online advertising including entertainment, information seeking, credibility, predictive economics and value distortion among which the first four ones showed a positive effect on the attitudes toward internet advertising while there was a negative relationship between value distortion and mobile-based advertising. Lee Panny and Karjaletto (2008) investigated the determinants of consumers' tendency toward the acceptance of mobile-based advertising and found that such factors as providing related information to the users, rewards and incentives and control of the message by the audiences can increase the attractiveness of the mobile media in providing mobile advertising. The conceptual model used in this study can be seen in Fig. 1.

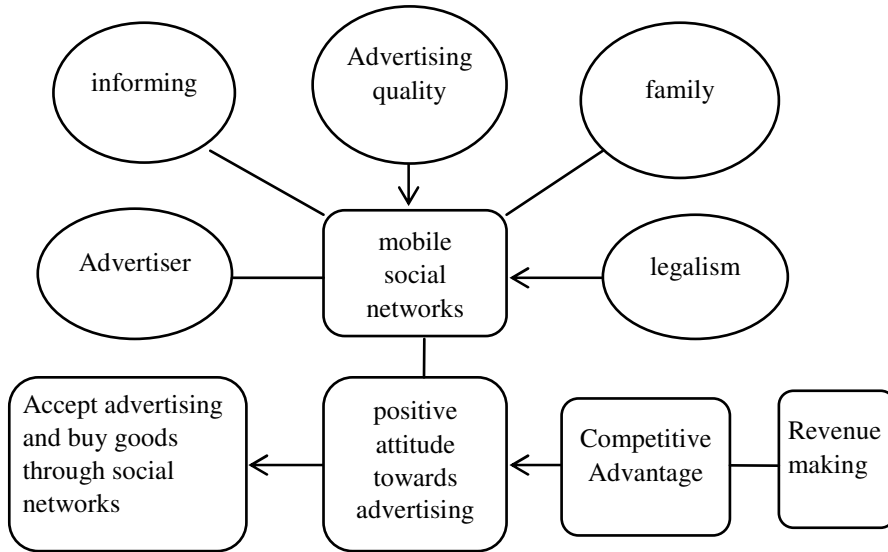


Fig. 1. The conceptual model

According to research literature the research hypotheses are as follows:

The competitive Advantage one of the most important variables affecting advertising through a mobile-based social network to increase the Tend to buy. Advertising quality one of the most important variables affecting advertising through a mobile-based social network to increase the Tend to buy. The legalism one of the most important variables affecting advertising through a mobile-based social network to increase the Tend to buy. The family one of the most important variables affecting advertising through a mobile-based social network to increase the Tend to buy. The informing one of the most important variables affecting advertising through a mobile-based social network to increase the Tend to buy. Revenue making one of the most important variables affecting advertising through a mobile-based social network to increase the Tend to buy. The Advertiser one of the most important variables affecting advertising through a mobile-based social network to increase the Tend to buy.

3. Method

This study used two library and field methods to collect information. The former was used to investigate the literature review. Also, the latter was used to select panel members for the first society using the Delphi approach. Then, according to previous studies, a questionnaire was set up and after coordination with panel members and obtaining their consent to collaborate with the project, they were invited and interviewed. Next, based on the statements, expressed experiences, and the expert and scientific comments, the second questionnaire was set and the second step of the Delphi method began. The second questionnaire was then sent to panel members and was scored by them. Data were analyzed by using IBM SPSS 24 and AMOS software. First, reliability alpha values were computed to confirm the internal consistency of items in each domain. Then, confirmatory factor analysis (CFA) was used to examine the quality of the items in the proposed measurement model (Hair, Black, Babin, & Anderson, 2010). Structural Equation Modeling (SEM) was then employed to determine how well the data fit the proposed model

4. Findings

In order to analyze the research data, various methods were used. First of all, the assumption of normality was examined in each group by conducting the Kolmogorov-Smirnov test. The results of the single-sample Kolmogorov-Smirnov test are provided in Table 1.

According to the results of Table (1), as the significance or P-value of the variables was greater than the critical statistic 0.05 and the calculated test statistic for the Kolmogorov-Smirnov test was greater than the critical value, therefore, it can be concluded that the null hypothesis for the normality of data is supported and confirmed and the alternative assumption is rejected. Before the first stage of factor analysis, the correlation between variables is investigated. In this section, using AMOS software version 22, Pearson correlation is used.

Table 1. The results of Kolmogorov-Smirnov test

		Advertiser	Family	Revenue making	legalism	Advertising quality	Informing	Competitive advantage
N		234	234	234	234	234	234	234
Normal Parameters	Mean	3.7733	3.6800	3.7850	3.7229	3.9029	4.0850	4.1527
	Std. Deviation	.80655	.78253	.55561	.86363	.55549	.41453	.46480
Most Extreme Differences	Absolute	.207	.179	.115	.287	.229	.255	.265
	Positive	.104	.114	.079	.167	.152	.122	.133
	Negative	-.207	-.179	-.115	-.287	-.229	-.255	-.265
Kolmogorov-Smirnov Z		.0723	1.264	.812	1.402	1.345	1.201	1.045
Asymp. Sig. (2-tailed)		.630	.082	.524	.060	.072	.0831	.0912

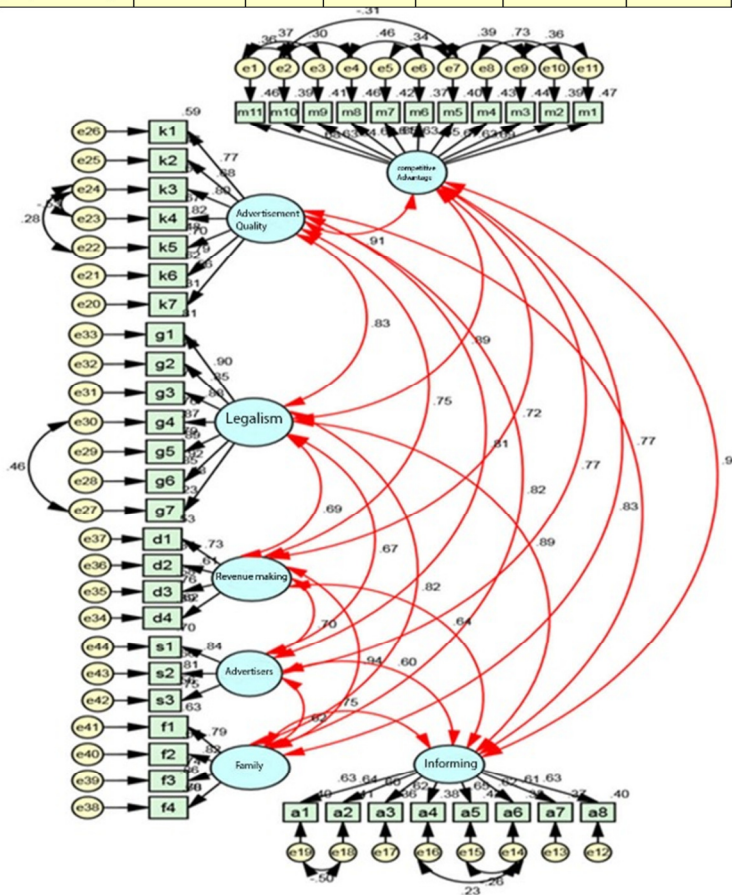


Fig. 2. Correlation between research variables, AMOS software output

Table 2. Correlation between variables

Test statistic	P value	Solidarity intensity	Solidarity relations	Row
2.886	.004	.908	Advantage with quality	1
2.633	.008	.887	Advantage with legalism	2
2.767	.006	.724	The advantage with Revenue making	3
3.090	.002	.775	Advantage with Advertiser	4
3.279	.001	.832	Advantage with family	5
3.063	.002	.900	Advantage with informing	6
2.420	.016	.831	Quality with legalism	7
2.611	.009	.752	Quality with Revenue making	8
2.860	.004	.808	Quality with Advertiser	9
2.940	.003	.821	Quality with family	10
2.666	.008	.765	Informing with quality	11
2.368	.018	.687	Legalism with Revenue making	12
2.486	.013	.672	Legalism with Advertiser	13
2.685	.007	.817	Legalism with family	14
2.566	.010	.895	Informing with legalism	15
2.792	.005	.701	Revenue making	16
3.231	.001	.938	Revenue making	17
2.548	.011	.639	informing	18
2.914	.004	.622	family	19
2.640	.008	.599	informing	20
3.014	.003	.747	informing	21

According to the above table, the intensity of the correlation between the variables is 60% to above, and the sign of this correlation is also positive, which indicates the strong correlation between the variables and also correlates with the positive sign according to the increase One variable is the increase in the other variable, and by decreasing a variable, we see a decrease in the other variable. But are these correlations meaningful? In response to this question, we look at the value of P, which, as we see, is all less than 05. And our statements are more than 1.65, which indicates the meaning of these correlation relations.

Table 3. Goodness of fit indices

--	RMSE	IFI	GFI	Cmin/df
Standard range	Less than 0.8	More than 0.9	More than 0.9	Less than 5
--	0.047	0.915	0.976	2.007

These indices confirm the goodness of fit and show that all values were in the standard range. In this section, the main indicators are examined in several aspects and the following queries. First, do these key indicators influence advertising acceptance? Second, how much do these factors explain the acceptance of advertising as the dependent variable? These questions are answered by applying a confirmatory factor analysis model.

Table 4. Goodness of fit indices for the correlation model

--	RMSE	IFI	GFI	Cmin/df
Standard range	Less than 0.8	More than 0.9	More than 0.9	Less than 5
Estimated values	0.07	0.930	0.92	4.23

These indicators confirm the goodness of fit and shows that all values were in the standard range

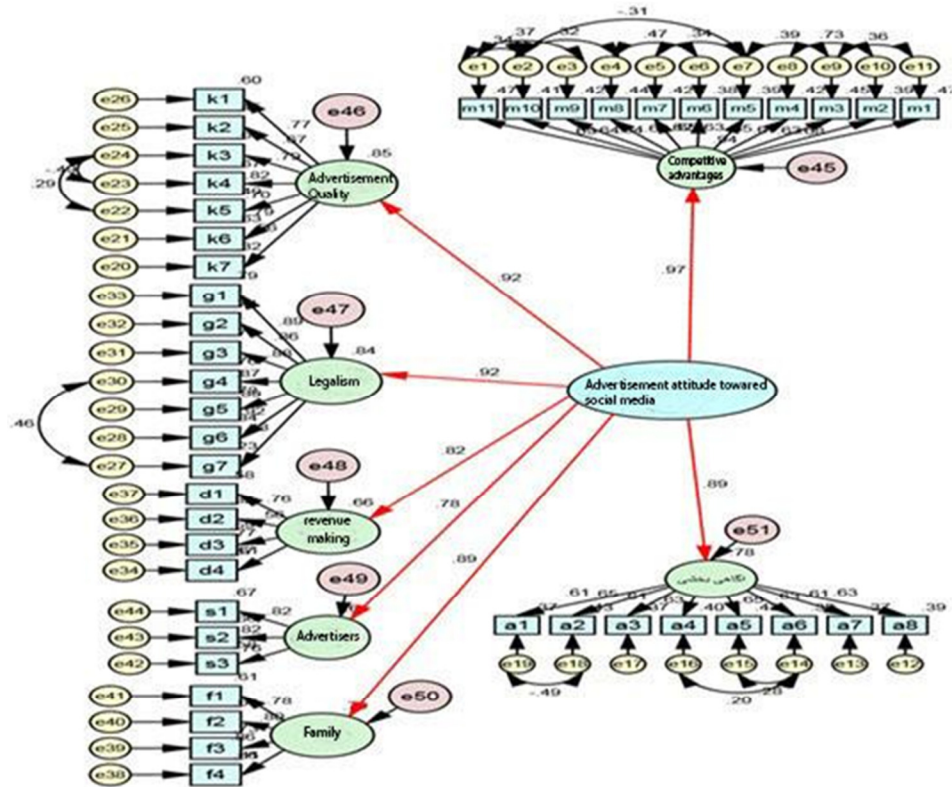


Fig. 3. Confirmatory factor analysis model, AMOS software output

Table 5. Correlations between factors

Rank	Correlations		R-Squared	P-Value	T-Statistic
1	Advertising acceptance	Revenue making	0.664	000	3.88
2	Advertising acceptance	legalism	0.843	000	3.41
3	Advertising acceptance	informing	0.783	000	4.35
4	Advertising acceptance	family	0.793	000	5.93
5	Advertising acceptance	Advertiser	0.609	000	4.73
6	Advertising acceptance	competitive Advantage	0.944	000	5.24
7	Advertising acceptance	Advertising quality	0.855	000	4.02

In response to the question of whether these identified indicators are effective in admitting advertisements, according to Table 6, as the P-values for variables were equal to zero, all of the P-values were less than the critical level of 0.05 and the value of test statistics were greater than the critical value of 1.65, it can be concluded that all the seven identified variables were significant. In response to the second question, the ranking of the three indicators can be expressed based on the R-squared value. The advantage indicator with the value of R-square equal to 94% is ranked first, namely, the advantage describes 94% of the changes in the dependent variable of advertisement acceptance. The legalization and monitoring indicator with the R-square value equal to 0.84 is ranked second and it can be interpreted as follows. 84% of changes in the dependent variable of advertising acceptance can be explained by legalization and monitoring indicator. Moreover, the value of R-squared for the revenue generating variable was 0.66 which means that 66% of changes in the advertising acceptance can be explained by revenue generating.

Discussion and conclusion

Mijani (2016) studied the attitudes of subscriber toward mobile advertising for subscribers of the Hamrah Aval operator in Tehran. His findings show that the characteristics of an advertising message include personalization and information. Getting permission and the validity of the message affect the attitude of mobile subscribers towards mobile advertising. Shobeiri (2011) studied the effects of beliefs and attitudes toward Internet Advertising on consumer behavior. The findings of the study indicated that among the five main determinants of the attitude

toward internet commercials, two factors of being entertaining and being economical had a positive impact on the attitude toward internet commercials. Moreover, deviance of values with a negative effect was considered as a negative determinant of the attitude toward internet advertising. Subsequently, it was determined as an incentive to repeat the purchase of the Internet, and the other two factors including being informed and credibility had a negligible effect on creating positive attitudes and frequent Internet purchases. Kashtorghi and Khajehpour (2010) in research entitled "empirical study of stimulus adoption of mobile advertising" concluded three features, informing and validating the message, having a positive effect and interruptions, have a negative effect on the tendency toward mobile advertising, and incentives are attractive to customers. Also, the results showed that users do not have a negative attitude toward mobile advertising, but they prefer advertising with permission. The results of these studies are in line with the results of present research in some respects. Moreover, deviance of values with a negative effect was considered as a negative determinant of the attitude toward internet advertising. Subsequently, these factors were identified as the motivator for repeated purchasing. On the other hand, two other factors including being informative and being believable had a negligible effect on creating positive attitudes toward repeating Internet purchases. They discussed the incentives of accepting mobile-based advertising. The result of the study identified that three characteristics of entertainment, information and message validity had a positive effect and annoyance had a negative effect on the tendency toward mobile advertising, and incentives for customers are very attractive and can encourage them to have the greater tendency toward mobile-based advertising. Also, the results of their study indicated that users do not have a negative attitude toward mobile advertising, but prefer ads which get permissions from the customer to send mobile advertisements.

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