The Effect of Social Media Marketing on Brand Equity Based on Customer Behavior

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Abstract

Purpose: The purpose of this study is to create Brand equity by using social media marketing and the structural equation method. The target society is the users of Telegram and Instagram networks of Samsung mobile phones.

Method: In this research, an unlimited sampling method has been used to collect data from social network questionnaires and Brand equity. Electronic questionnaires were designed to facilitate data collection and access to social network users. After collecting data, the data were analyzed by using LISREL9 and SPSS23 software.

Findings: Based on the results of the research, the dimensions of social networks affect Brand equity. Entertainment, interaction, personalization, and word-of-mouth marketing (WOMM) in this study had a direct and significant effect on Brand equity. According to the rankings, in social media marketing, the brand association has the highest rank.

Conclusion: In light of the findings obtained from the study, it could be said that businesses can increase their brand value perception with planned and well-defined social media marketing strategies. With social media marketing, businesses can gain significant advantages in many areas such as brand loyalty, reduced advertising expenses, increased profitability, access to a large consumer audience, and altered brand attitudes toward purchasing behavior.

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1. Introduction

The Internet, and in particular the vast network communication environment with uncertain infinities, has created a new ecosystem for marketing and business research at the time and has become a major highway in today's business world (Zhao et al., 2017). Social networks are tools that companies can use to enhance and complement marketing research techniques and processes, and can even replace traditional and old-fashioned methods and processes (Vera et al., 2017). These networks have created an intelligent environment with a wide range of communications and an extremely wide capacity for participation (Hasan &

Sohail, 2020). Social networking platforms have emerged today as the dominant communication channels in which customers and consumers interact with the brand they are considering, share information, and also research about them. These networks are extremely accessible and can be used anywhere and anytime, so marketing researchers have focused their strategies on the growing consumers of social networks (Madan et al., 2015).

2. Literature review

Social media networks offer new ways of connecting with companies and consumers (Lai et al., 2012; Godey et al., 2016). Companies hope to reach out to loyal consumers and influence their perceptions of their products, disseminate information, and learn from and about their consumers (Larouch et al., 2012). Meanwhile, traditional sources of communication and social media have emerged as a mass phenomenon with a broad demographic appeal. One of the reasons for the rapid popularity of social media among companies is the spread of virus-type information through the Internet (Zollo et al, 2020). Social media now has a much greater capacity for access to the public than traditional media, such as radio, television, and magazines. On the other hand, they are more likely to have a period of 2 years and more than one year (Klein et al., 2010; Martin et al., 2013; Zhao et al., 2017).

To measure the impact of social media communication, we need to distinguish between two forms: corporate social media production and user production. The distinction between communication sources is related to the fact that the social media communication produced by the company is with the management of the company, while the social media communication produced by the user is independent of the control of company (Wang et al., 2016). The production company's word-of-mouth communication is seen as a combination of traditional advertising and word-of-mouth advertising by the customer, which describes the company as the initiator, but the consumers are the executors. Social media networking is cost-effective and is an alternative way for companies to reach out and bring consumers together to communicate (Flex et al.,

2016). Brand equity is measured by dimensions such as brand awareness, brand association, perceived quality, and brand loyalty. Despite the growing costs of social media marketing, consumers are reluctant to internalize the values that the company creates.

According to Brohen (2008), consumers pay more attention to the advice of their friends and acquaintances, as well as other users of corporate services. Therefore, electronic word-of-mouth communication seems to be neutral, because the approval of other customers is considered a kind of credibility and honesty, so it is considered a credit to the brand's attractiveness (Tutten et al., 2015).

The survival of companies is guaranteed by the ability to create higher value in the markets. The performance of organizations is determined by intangible assets such as quality, knowledge, culture, and brand equity (Godey et al., 2016). Brand value has emerged as the most important area in consumer and service marketing since the 1990s. This importance has been due to the companies' interest in creating a competitive advantage and differentiation in their products (Swani et al., 2016).

With the growth of information technology and the Internet, the influence and interpersonal influences on each other in online environments on decisions to choose and buy a product or brand have increased (Weismueller et al, 2021). Interpersonal influences in online environments are mostly done through social networks and electronic word-of-mouth advertising, which is mainly considered by companies with 3 goals.

- Increasing existing or newly introduced products through a cheap tool to acquire and retain customers.
- Improving the customer satisfaction index,
- Achieving ideas for new product development that offer suggestions about new products among customers that Their realization preserves and acquires the special value of the brand.

In the market of a brand in terms of high specific value, a strong brand will be considered (Golbahar et al., 2016). Brand equity has different models in this research, Acker's model (1996) will be used with the components of brand awareness, perceived quality, brand loyalty, and brand

association. There are also various models for social media marketing that are the most common components of this variable (Godey et al., 2016). Entertainment, interaction, updating, personalization, and word-of-mouth marketing. In general, the present study pursues the following objectives:

1. Explain the role of social media marketing components in creating brand equity

2. Ranking the components of social media marketing from the perspective of brand equity

3- Ranking brand equity components from the perspective of social media marketing

2.1. Brand equity

According to Acker (1996), brand equity is a multidimensional concept that includes brand loyalty, brand awareness, perceived quality, brand association, and other brand proprietary assets (Wang et al., 2016). According to Acker, brand equity can create value for the customer by increasing confidence in purchasing decisions and consumer satisfaction, as well as interpreting information, and by increasing the effectiveness and efficiency of marketing programs (Vinh et al, 2019). Commercializing and expanding the brand and competitive advantage creates value for the company. Brand equity creates value for both the company and the customer, and the value created for the customer ultimately creates value for the company (Chi et al., 2016).

Acker's definition of brand equity has several facets. First, brand equity is a set of assets. Therefore, brand equity management requires the creation and increase of these assets (Mohan et al., 2016). Second, each of the brand's assets generates value in a variety of ways. Third, brand equity creates value for both the company and customers. Fourth, the assets and liabilities associated with the brand name may change or even disappear if any changes are made to the brand name or mark (Jennifer, 2013; Sharma et al., 2016). The following dimensions of brand equity, which include brand loyalty, brand awareness, perceived quality, brand association, will be defined: brand awareness, perceived quality, brand loyalty, brand association

2.2. Social media marketing

Social media has been discovered through marketing, technology adoption model and user motivations and limitations. There is very little research on the role of social media as an advertising medium for an organization (Sahin et al., 2010; Sharma et al., 2012). In this study, we will examine social media marketing from an advertising perspective. Social media is used as a component of marketing advertising, a tool to increase brand awareness, increase sales, increase customer loyalty and create intangible assets such as brand equity. Here are the dimensions to consider: entertainment, interaction, up-to-dateness, customization, and verbal (linguistic) marketing (Casalo et al., 2021). The following dimensions of social media marketing will be defined: entertainment, updating, personalization, word-of-mouth marketing, engagement.

3. Method

This research is applied in terms of purpose and is a descriptive survey in terms of data collection. Library and field methods have been used to collect mixed information. Using library studies, subject literature, research history, and components were extracted. The study population is users of Telegram and Instagram social networks. To determine the sample size, Cochran's formula with infinite population and known variance will be used. Given the infinity of the population, the number of samples should be calculated using Equation (1).

$$n = \frac{Z_{\propto/2}{}^2 \times p(1-p)}{\varepsilon^2} = \frac{(1.96)^2 \times .5 \times .5}{(.05)^2} \cong 384$$

The data collection tool in the present study is a questionnaire extracted from the research of Godey et al. (2016).

In this research, the structural equation model will be used to confirm or not confirm the research hypotheses and a regression test will be used to investigate the effect of the intervention variable.

4. Data analysis

This section examines the demographic characteristics of individuals and respondents who

have contributed to the research and completion of the questionnaire. In the demographic information section, first, the general information of the respondents will be examined separately. Then the measurement model for the validity of the structure is presented and also the divergent validity is investigated. Then, using the least-squares approach, the relationships between the research variables and the main research model are investigated. Raw data obtained from the statistical population are analyzed using appropriate statistical techniques of LISREL9 and SPSS23 software, and after processing are presented in the form of information. In this research, two questionnaires have been used:

Social Media Marketing Questionnaire: This questionnaire includes 5 dimensions (Godey et al., 2016): This questionnaire contains 11 questions: entertainment (2 questions), interaction (3 questions), up to date (2 questions), customization (2 questions), and oral marketing (language) (2 questions). This questionnaire is based on the Likert scale. Brand Equity Questionnaire (Acker model): This questionnaire includes 4 dimensions (Aker, 1984): and includes 27 questions: brand loyalty, perceived quality, brand association, and brand advertising. This questionnaire is based on the Likert scale. To evaluate the reliability of the research tool, Cronbach's alpha method was used (Table 1).

Table 1: Cronbach's alpha coefficient of the questionnaire components

Cronbach's alpha coefficients	Factors of brand equity questionnaire	Cronbach's alpha coefficients	Factors of Social Media marketing questionnaire
0.76	brand loyalty	0.84	entertainment
0.81	perceived quality	0.87	up to date
0.84	brand association	0.89	customization
0.82	brand advertising	0.73	interaction
		0.79	oral marketing

Cronbach's alpha values in all components of the questionnaire and the whole questionnaire have been more than 0.7 (Godey et al, 2016), so the questionnaire has acceptable reliability.

4.1. Inferential analysis

Inferential statistical methods have been used to answer research hypotheses and questions. First, the normality of the data is tested to determine whether parametric methods can be used. Then, depending on the case, appropriate statistical methods have been used. In the present study, structural equation modeling methods, ie the least-squares method was used to test the measurement model and research hypotheses.

4.2. Confirmatory factor analysis

Confirmatory factor analysis examines the relationship between items (questionnaire questions) and structures. Research hypotheses based on questionnaire data cannot be used until the questionnaire questions have proven that the hidden variables are well measured. Therefore, confirmatory factor analysis is used to prove that the data were measured correctly. The strength of the relationship between the factor (hidden variable) and the visible variable is indicated by the factor load. The factor load is a value between zero and one. If the factor load is less than 0.2, a weak relationship is considered and ignored. The factor load between 0.2 and 0.6 is acceptable and if it is greater than 0.6 is very desirable (Klein, 1998). The minimum acceptable factor load is also mentioned in some sources and references as 0.2, but the main criterion for judging the statistic is t. If the test statistic, ie t statistic, is greater than the critical value of $t_{0.05}$, ie 1.96, then the observed factor load is significant.

4.3. Confirmatory factor analysis of social network marketing variables

The results of the factor analysis of the social network marketing variable are presented in Figures 1 and 2. After the correlation of the variables is identified, a significant test should be performed. The t-value statistic is used to evaluate the significance of the relationship between the variables. Because significance is checked at the error level of 0.05, if the t-value test statistic is greater than the critical value of 1.96, the relationship is significant. Based on the results of the measurement indicators of each of the scales used at the 5% confidence level, the value of the t-

value statistic is greater than 1.96, which shows that the observed correlations are significant (table 2).

Table 2: naming variable in model

1	entertainment
2	interaction
3	up to date
4	customization
5	oral marketing

Chi-Square=51.08, df=34, P-value=0.00000, RMSEA=0.048

Figure 1- Standard factor load of factor analysis of independent variables

Chi-Square=51.08, df=34, P-value=0.00000, RMSEA=0.048

Figure 2 - Statistics t confirmatory factor analysis of independent variables

The next good step is to fit the model. One of the general indicators for calculating free parameters in calculating the fit indices of the

normal chi-square index is calculated from the simple division of chi-square by the degree of freedom of the model. If this value is between 1 and 5, it is desirable. (Schumacher and Lomex, 1988; Klein, 2005: 59 and Ghasemi, 2011) In this study, the normal chi-square is 1.502. The RMSEA index is also used as the main fit index in most confirmatory factor analyzes and structural equation models. If this index is less than 0.05, it is desirable. In the saturated model of the present study, the RMSEA index of 0.048 is obtained, which indicates that the model fits are desirable. (Saturation is done in two steps).

4.4. Confirmatory factor analysis of the dependent variable scale

Factor load The standard confirmatory factor analysis of brand equity is presented in Figure 7. The observation factor load in all cases is a value greater than 0.2. Therefore, the factor structure of the questionnaire can be confirmed. After calculating the standard factor load, a significant test should be performed. Based on the observed results, the factor load of the t-statistic, the measurement indices of each of the studied dimensions at the 5% confidence level is greater than 1.96. Therefore, the observed correlations are significant. Confirmatory factor analysis of the dependent variable scale of brand equity is saturated in three stages. Therefore, the fit indices show the desired values. The RSMEA fit index is 0.030, which is even smaller than the strict value of 0.05. The value of normal chi-square (divided by the degree of freedom) is also obtained at 1.980 and is very close to one. Therefore, the observed structural model has a good fit (Table 3).
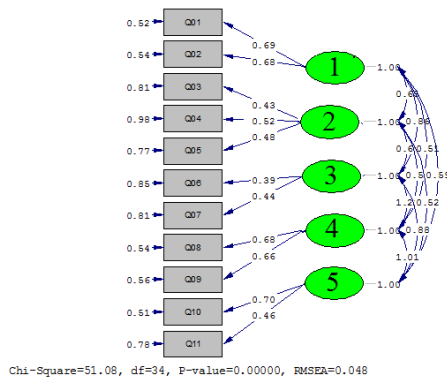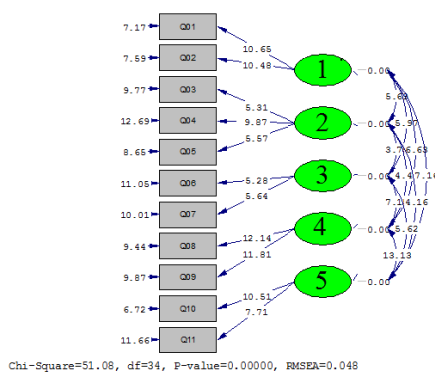
Table 3: naming variable in model

A	brand loyalty
B	perceived quality
C	brand association
D	brand advertising

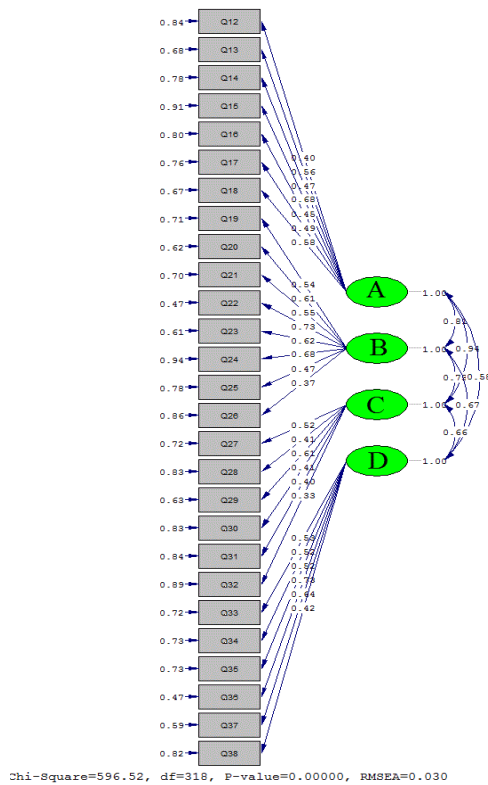International Journal of Knowledge Processing Studies ‖ISSN: 2783-4611

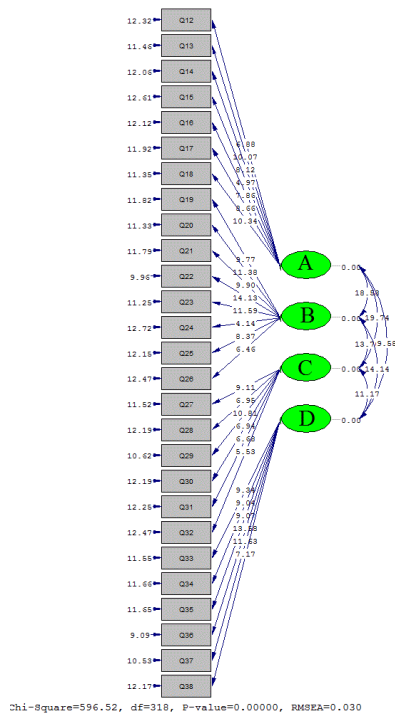Figure 3- Factor burden of variable and dependent factor analysis (brand equity)

Figure 4: T-value statistics of dependent variable factor analysis (brand equity)

4.5. Test of research hypotheses

After confirming the factor structure of research structures, structural equation modeling has been used to investigate the relationships between variables. The results of the analysis are presented separately. In this model, the relationships between the research variables in the output of LISREL software can be seen.
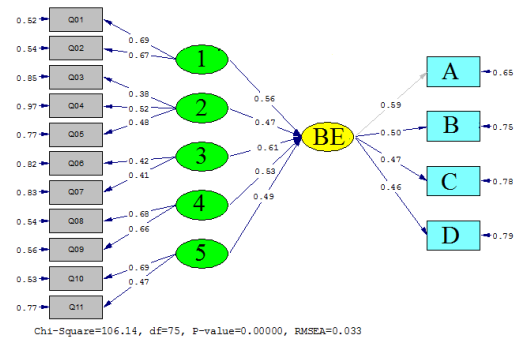

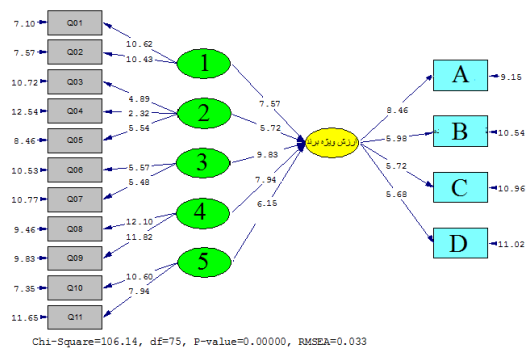Figure 5 - Standard operating factor of testing research hypotheses

Figure 6 - t-value statistics test of research hypotheses

4.6. Entertainment has a significant relationship with creating brand equity.

Based on the results obtained in the fourth chapter, with 95% confidence, entertainment has a significant relationship with creating brand equity.

Perhaps the most important factor influencing social media is its entertainment. People use social networks in their spare time. In these networks, people pursue their interests by forming their groups. Consumers' tastes are also reflected in the popularity of different hobbies. In the meantime, due to the fun of social networks and attracting the

attention of users, creating diverse and attractive entertainment can be a way to create brand attention and special value in the minds of consumers.

4.7. Interaction has a significant relationship with creating brand equity.

Based on the results obtained in the fourth chapter, with 95% confidence, the interaction has a significant relationship with creating brand equity. An important feature of social networks is creating a suitable platform for people to communicate and interact. In general, social networks are social structures made of nodes that are usually connected to individuals or organizations by one or more specific types of communication such as financial exchanges, friendships, business, emotions, prejudices, entertainment, and habits. Social networks connect people with all different interests. As a result of more user interactions and communications, it means that the level of trust and confidence created between users increases and leads to a better knowledge of brands and thus trust in the brand and creating brand equity.

4.8. Update has a significant relationship with creating brand equity.

Based on the results obtained in the fourth chapter, with 95% confidence, the update has a significant relationship with creating brand equity. Social networks are a platform for the user to search and receive valid information and knowledge of the latest products, methods, and comparisons of different products and features desired by the user. Therefore, the important feature is updating information and informing the user quickly and optimally. If the social network information is up to date, the number of followers will increase and as a result, the social network will prosper and the brand's special value will be created.

4.9. Personalization has a significant relationship with creating brand equity.

Based on the results obtained in the fourth chapter, 95% confidence has a significant

relationship with creating brand equity. Social network users create their place in social networks by creating profiles and personal pages. In this case, people with different tastes pursue their interests. They comment. Shares his experiences with other people on his page in the form of text, images, videos, etc. Users tend to attract the attention of other users, friends, and teammates with effective personalization. Therefore, personalization is an important feature to optimize the social network and create brand value for a product or service.

4.10. Oral marketing has a significant relationship with creating brand equity.

Based on the results obtained in the fourth chapter, with 95% confidence, oral marketing has a significant relationship with creating brand equity. Companies can use word of mouth to their advantage. Following the discussions in the forums provides a good understanding of the discussions that affect sales in these places. It is recommended that companies participate in these discussions anonymously and find out what people are saying about them and see who is talking about them and what they are saying. In this study, it was observed that attitudes derived from people's perceptions, most of which are formed from the opinions and opinions of others, or in other words, word of mouth, have a greater share compared to those attitudes formed from experience and reality. People spread these positive and negative attitudes in cyberspace and influence other people with their attitudes.

4.11. Goodness of fit index (GFI)

The above structural model is saturated in three stages. Fitting indices indicate desirable values. The normal chi-square value is 1.371, which is in the acceptable range of 1 to 5. Therefore, the structural model has a good fit.

$$\frac{\chi^2}{df} = \frac{35.67}{26} = 1.371$$

Also, since the RMSEA fit index is 0.036, which is less than 0.05, the model has a good fit.

Other goodness-of-fit indicators have also been accepted in the range.

Table 4: Goodness indicators of structural model fit the main research hypothesis

IFI	NNFI	NFI	AGFI	GFI	RMSEA	χ2/df	Normed Fit Index(NFI)
0 - 1	>0.9	>0.9	>0.9	>0.9	<0.1	<2	Acceptable values
0.92	0.91	0.97	0.95	0.97	0.036	1.371	Calculated values

5. Conclusion

By monitoring cyberspace and being aware of the positive and negative attitudes of people about themselves, companies can try to strengthen positive attitudes as much as possible, and if they see a negative attitude, they can try to find the root of this attitude and try to neutralize and change it. This type of negative word-of-mouth communication is no longer published and does not damage the reputation of the product and brand. In addition, if the company has launched an electronic or viral word-of-mouth marketing campaign, it can be aware of the effects of its marketing campaign by monitoring cyberspace and monitoring conversations between users. Research shows that people are more confident in their decisions about what happens in cyberspace, such as forums, than what they see on the company's official website about the product. By identifying active people and belief leaders in these associations and tracing the origins of their attitudes, it may be possible in the future to use some of these individuals as missionaries and proponents of the brand to strengthen word-of-mouth communication around the brand. Also, based on the research findings, it is suggested that social network managers identify more new entertainment applications, such as lottery games, video, and image editing software, etc. in the social network, to attract more users. It is also suggested that social network managers create different groups based on people's tastes and attract many people to social networks by gaining the trust of users. Holding contests and creating competitions and considering valuable prizes can encourage users to join the social network. In Moradi, social network managers attract users 'trust and loyalty by creating links to access the latest news, identifying users' tastes, and providing accurate, timely, and accurate information.

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