The Measurement of the Relationship between Viral Marketing across Social Network and Smartphones Customers Trends with Reference to the Brand Personality as a Mediating Variable

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Abstract: This study aimed to find out how viral marketing through social networks and brand personality contribute in influencing on smartphones client’s trends. That means, to know the strength and direction of the relationship between each of the viral marketing and the brand personality on the one hand, and smartphones client’s trends on the other hand. The sample of the study consisted of 400 male and female students of Al-Majma’a University. For data collection, the survey (questionnaire) method was used. The results of statistical analysis showed the following: (1) the existence of crucial statistical significant relationship between viral marketing through social networks and the brand personality. (2) There is substantial statistical significant relationship between viral marketing through social networks and smartphones client’s trends. (3) The existence of crucial statistical significant relationship between the brand personality and smartphones clients’ trends.

Keywords: Viral Marketing, Customers Trends, Brand Personality, Social Network, Brand.

1. Introduction

The so called “Social Networks” that are available on the internet is considered one of the most appropriate means of social communication in the midst of people who no longer have the time to communicate traditionally because of their essential dependence on the computer in all scientific and practical activities. As these networks worked to ease exchange of opinions and experiences and the possibility of getting around a particular interest (Mujahideen, 2009)

Viral Marketing has emerged as a result of using social media services. Organizations can use a customer as a marketer for their products (Customer = Marketer) through the so-called word-of-mouth marketing. In return, customers will have rewards in the form of goods, equipment or money discounts when they promote the organization’s product via the use of E-mails, Chat Rooms and Massage Boards. By the use of internet, Viral Marketing is considered a new technique for accessing the market and establishing the awareness for the brand. Actually, the Viral Marketing is achieved when an advertising message is sent to ten persons, and it is transmitted then to another one hundred persons and then to one thousand again, and so on, through free websites in order to have more customers and build a good reputation (Skrob, 2005). Over the last period, customers have started, via this concept of viral Marketing, to promote for the organizations’ products and services in the way of a mouse-click, which is considered as a word-of-mouth marketing. In fact, trust among the message transmitters (colleagues, friends, relatives, etc.) is very significant, since the Viral Marketing is a social-network technique, which reduces the cost of having new customers on the short- and long-term (Kwiatkowska, 2009).

Video clips are also considered very potential in viral marketing, a tool that reaches a wide range of social network audiences. YouTube is the best service for uploading such videos. A tag line in every Hotmail massage was transmitted to the other recipients of the same message just in the same way the virus spreads (hence, viral marketing); in return, those recipients sent that massage again to their colleagues and relatives, which helped increase the Hotmail users (Sadeq, 2008).
2. Problem Statement
   The researcher has noticed that a great number of organizations are keen for the application of any newly emerged technology, an attempt on the side of these organizations to keep up to date with the new global changes and competitions. These organizations also spare no time or effort to reach their target with the least possible costs. In light of this, and since the number of marketing campaigns are in increasing number, and are given a great portion from the organizations' budgets, organizations have to make the best use of information technology and its applications. In fact, the viral marketing has proved useful in so many fieldworks, especially in the electronic ones; this success refers to the fact that the viral marketing is based on a network of social relationships. However, the concept of viral marketing needs to be extensively introduced to the Arab world organizations, so is it possible that our organizations adopt this concept? (Sadeq, 2008). Actually, it is the main problem of this study to identify the different variables influencing, positively or negatively, the trends of the smart phone customers, by understanding the relationship between the viral marketing and the brand personality. This study attempts to answer the following questions:
   - Question 1: is there a positive relationship between the social-network viral marketing and the trade mark personality?
   - Question 2: is there a positive relationship between the social networking viral marketing and the trends of the smart phones customers.
   - Question 3: is there a positive relationship between the trade mark personality and the trends of the smart phones customers.

3. Significance of the study
   The significance of this study stems from its topic, since the concept of viral marketing is very important and is considered a breakthrough in the field of marketing. The viral marketing has helped make a lot of profits, compared to the traditional method of marketing. Yousef (2008) discussed the modernity of this concept in the field of marketing studies, and implementing the marketing functions. The viral marketing depends, in its implementation of marketing activities, upon the use of word-of-mouth via the use of the internet. In addition, the literature on the viral marketing is not much.

   Undoubtedly, the influences discussed by this study will represent a rich resource for the Arabic library. The study attempts to answer many important questions that will help us better understand the significance of viral marketing, by knowing the effect of both the social networking viral marketing and the brand personality on the trends of the smart phones customers, in addition to the profits that will be gained by the Arabic organizations when realizing the importance of the viral marketing as a modern strategy to increase the market share.

4. Research Objectives
   The viral marketing aims to win more customers and achieve satisfaction and good reputation, by using such viral tools as the groups, news networks, and chat rooms, etc. to reach its target market. This study, however, aims to explain how the social networking viral marketing and the brand personality affect the trends of the smart phones customers in KSA. In other words, it aims to identify the relationship between the social networking viral marketing and the brand personality on the one hand, and the trends of smart phones customers, on the other.
   - Identifying the relationship between the viral social networking viral marketing and the brand personality
   - Identifying the relationship between the social networking viral marketing and the trends of the smart phones customers
   - Identifying the relationship between the brand personality and the trends of the smart phones customers.

5. Literature Review
   The literature was divided into three parts:

A- The previous studies related to the social networking viral marketing:
   The viral marketing is of the modern concepts in the field of market. The first to write about this topic was Douglas Rush Roff, in her book Media Viral 1994. Moreover, the concept was first coined by Jeffrey, a professor in the faculty of business at Harvard, 1996. Steve and Time, however, were the first to apply the viral marketing via the free Hotmail website (Skrub, 2005). Besides, viral marketing is one of the word-of-mouth forms (Kotler and lane, 2009), since the viral marketing spreads just like the virus. In other words, when a person tells two of his friends, then these two will tell four friends, and so on, till the infection is spread. It is worth mentioning that this virus is positive, and is different from that of the computer, where the latter can damage the computer programs. The viral marketing includes the transmission of a certain idea from one customer to another rather than having it transmitted directly from the organization to the customer. Therefore, the new model of marketing communication (from customer to customer, hence C2C) replaced the traditional model (from the organization to customer, hence B2C) (Kulp, 2007).
The success of the free Hotmail website and the constant growth of its users encouraged marketers to adopt the concept of viral marketing to spread products and enter the local and global markets, viral marketing benefits from the methods and techniques via networks to promote a certain idea or a specific product. Examples on the applications of viral marketing include the use video clips, SMS messages and emails by some organization such as (Sony), and (Nike). This new type of promotional strategies will get more into our daily lives overtime. However, the spread of such strategies requires the buyers to subscribe and be present one (World Wide Web) to talk about the product supply, and interact with each other and share their opinions about it. The ultimate goal is to establish a spontaneous and viral chat about a certain product (chat words spread just like a virus), in order to gradually attract the largest possible number of the World Wide Web visitors. Actually, the organization trying to promote a certain product does not look to these visitors as buyers, but as partners in internet game that may attract some of them to buy the product; this was strategy was adopted by Nike when it started to promote its new sports shoes «Nike Free» (Sadeq, 2008).

Some experts define the viral marketing as a phenomenon which facilitates and encourages individuals to pass the marketing message voluntarily through a social network using the internet sites to transfer the word-of-mouth (Skrob, 2005); on the other hand, (Kim et al, 2009) states that viral marketing is the continuous creation of a message through its transmission by the internet users.

But (Yourdictionary, 2011) defines viral marketing as a marketing technique and strategy based on access to social networks to pass the advertising messages which take a video clip format, so that it is transferred to a group of viewers, who, in turn, pass it to their friends, which ultimately leads to the spread of that video (Tutunge 2007). also defines viral marketing as incitement to find a spontaneous chat about the brand of a product that leads to the transmission of the brand name from one mouth to another, just like a virus. Moreover, (Jaber, 2006) defines viral marketing as a strategy to encourage individuals to transfer of marketing messages to others, thus clearing the way for the number of messages to grow in terms of the viewers and their impact.

Hitwise Group, which works in the field of internet research, claims that the first six video sites on the internet are, a "YouTube", MSN Video, "Yahoo Video," "Google Video", "AOL Video" AOL Video, and "any movie" iFilm. These sites attract a double number of viewers, who watch the six largest television networks in the United States. People spend longer time on the first group, and an average of 12 minutes of watching, and an average of less than eight minutes in front of the television networks.

Internet forums have also become a high-impact on the minds of people. 52% of Britain, France, Spain and Italy residents tend to buy the product after reading positive comments in the chat rooms (Salama, 2007). Mazda Motor Corporation launched a viral marketing campaign posted on the site (WWW. Mazdamovies.com), which lead to the growth of its brand value and thus increased the overall amount of sales, the director of Mazda engines claimed. This result agreed with the study (Joseph, 2009) The Effect of Viral Marketing on purchasing decision; the most significant finding of her study is the existence of an impact for viral marketing on purchasing decisions. She also found that the information sent over websites is more credible and reliable, thus this information can form a positive of the organization.

(Sadeq, 2008), in his study, viral marketing technique in the market of organizations, found that viral marketing is the key to the success of many businesses, especially electronic ones, as the study has shown that the application of global and experiences in the field of viral campaigns have made a great success, compared to traditional marketing technique.

Ralph (2005) identified six elements for the viral marketing:

a. Give a value for products or services, through providing free websites that support the viral marketing programs.

b. Provides effortless transfer of information to others.

c. Easy transmission of marketing information.

d. Motivating the customer to gain a discount and a privilege;

e. Utilizing communication networks;

f. Benefiting from other people’s resource; viral marketing plans utilize the other people’s resources as means for transferring information.

Kim (2000) also defined some problems regarding the viral marketing:

a. Illegal entry into other people’s sites.

b. Offering the bribes in the form of contests and discounts.

c. The return can be undesirable regarding the product as the marketer mentions his own view about the product.

d. Individuals try to convince others to enter the website and gain additional entry points

e. The product may lose its good reputation due to a wrong transmission of a massage content.
The brand personality is of the impressions forming mental image for the brand, and it presents a group of like traits. The brand impressions depend on the association between the human and the brand personality, in being considered as a modern or traditional one. The brand personality can be of different characters (young, active, happy, strong, complicated, creative, etc.). The brand personality expresses its Implicit Side of the image, which implicitly links the thoughts with feelings (Sampson, 1993). It is also defined as the way the customer views the brand (Morgan, 1999). However, (Aaker, J, 1997) defined the brand personality as a group of human-like traits which have an association in the mind of the customer, and which help the organization distinguish its products in the markets through creating an interest in the mind of the customer. (Aaker, J, 1997) developed BPS: Brand Personality Scale. She tried to measure any brand through a model tool, and came up with the result that the brand has 42 traits, classified under five basic dimensions represented by loyalty, honesty, excitement, efficiency, complication, toughness. Findings also showed that this scale accounts for 93% of differences among the brands (Mujahideen, 2009).

(Aaker’s 1995) was not the first to measure the perceptions of the non-human personality. (Allport, 1951) developed SOV: Study of Values Scale through Human Traits Theory, which was taken then as a basic for later studies. (Tom, 1971) asked his students to organize the personalities they found most suitable for a group of organizations, as an attempt to measure their perceptions of these organizations personalities by referring to the traits provided by Allport (Mujahideen, 2009).

Also the brand personality facilitates the role of communication efforts of the organization to identify the characteristics of the brand to customers, so the representation by using familiar human characteristics helps clients to imagine certain features of the brand (e.g. strong personality for “Michelin” brand also reflects the strength of the tires as a property related to the performance of the product that is distinguished by it), and forming of brand personality is mainly based on the different marketing efforts of the organization. Thus, high quality reflects professional personality, high price reflects the personality which is characterized by richness and elegance, and low quality reflects uncooperative personality (Mehran, 2001). The effects used in brand personality can be divided into two groups as shown in the following table:

<table>
<thead>
<tr>
<th>Characteristics related to the product</th>
<th>Characteristics not related to the product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product category</td>
<td>Sponsorship</td>
</tr>
<tr>
<td>Package</td>
<td>Symbols</td>
</tr>
<tr>
<td>Price</td>
<td>Age</td>
</tr>
<tr>
<td>Attributes</td>
<td>Country of Origin</td>
</tr>
<tr>
<td></td>
<td>Company Image</td>
</tr>
<tr>
<td></td>
<td>Chief Executive</td>
</tr>
<tr>
<td></td>
<td>Officer C.E.O</td>
</tr>
<tr>
<td></td>
<td>Celebrity Endorsers</td>
</tr>
</tbody>
</table>


Fournier (1995) studied the brand personality based on “Relationship Approach”, where she dealt with the brand as a vital party in a bilateral relationship combining the consumer to the brand to formulate a practical framework, where the Brand Relationship considered is the natural extension to the brand personality idea. According to this relationship, it can be evaluated as a 24-character. Fournier assumed that the consumer concludes the brand characteristics as a person through the behaviors and actions that the brand decides as a partner in a relationship, and based on these conclusions, the consumer can build realizations to evaluate the brand (Mujahideen, 2009).

From the above you can imagine the existence of a relationship between viral Marketing across Social Media and brand personality

C- previous studies on trends in the smart phone customers:

The decision-making process is a process composed of several sequential stages with each other and there are requirements for each stage that must be available, but the decision was known as a choice among a set of alternatives to solve a problem or crisis or doing a specific job. But the trend looks like the decision for it may be a decision for some individuals, so the trends provide the perception of the individual and his activities an impact helps to accomplish a lot of goals. Trends study is the most important issues needed
to change human behavior in order to face the effects that help on the composition of the negative trends.

Allport. G (1935) was the first one who defined trends as a state of nervous mental readiness through experience which is based on individual responses to all subjects and attitudes related to them. The researcher can define consumer trends as a state of mental readiness organized by personal experiences to affect consumer behavior about products.

The most previous researches in the field of measuring trends agree that forming of the client's trend is based on three basic components:

- **Cognitive**: refers to a person's beliefs toward something, or toward the studied property.
- **Affective**: refers to the client's feelings toward something, or toward the studied property.
- **Conative**: refers to the tendency or the client's readiness to act in a certain way toward something, or toward the studied property.

This can be illustrated how trends pose client has also shown in the following figure

![Figure (1) attitudes components](source)


It is worth noting that it is not easy to change the trend after being configured by the final consumer. So the marketer should change one of the three components. Changing one of these components enforces the final consumer to change other components of the trend in an attempt to create consistency and compatibility between these three components, for example, when a marketer provides detailed information about his/her product to the final consumer, this may enforce the final consumer to change his/her Cognitive which means perception and beliefs about this product. And in such a case the final consumer may alter the trend towards the product of a negative direction to a positive direction, as there is agreement among most researchers on the necessity of addressing the three components of trend when you make measuring trends process (Hawkins, et al., 1995).

- From the previous revision you can imagine the existence of a relationship between viral Marketing across Social Media and smartphones customer trends.
- It is also from the previous revision you can imagine the existence of a relationship between the brand personality and smartphones customer trends.

6. **The proposed model**

After reviewing a lot of previous studies on the subject of study, the researcher concluded the following form:

![Figure (2): The proposed model for the study](source)

The proposed model for this study is characterized by combining both viral marketing through social networking and brand personality and smartphones clients’ trends together in one model that shows the relationship between viral Marketing across Social Media and brand personality and the effect of each on smartphones clients’ trends.

7. **Research Hypotheses**

After selecting the statement of the problem and reviewing previous studies, the researcher gathered particular information to solve this problem by placing the hypotheses of the study which are the possible solutions to this problem by putting a major assumption for the study, namely the existence of a positive relationship between viral marketing across social media and brand personality and the effect of each on the trends of smart phones customers, this hypothesis can be divided into the following assumptions:

- **a.** There is a significant statistically relationship between viral Marketing across social media and brand personality.
- **b.** There is a significant statistically relationship between viral Marketing across social media and smartphones customer trends.
- **c.** There is a significant statistically relationship between the brand personality and smartphones customer trends.
8. Research Methodology

The theoretical framework was covered through research and investigation in the administrative literature represented in books and studies that relate to each of the viral marketing and brand personality and trends of customers. In the field side, a questionnaire (survey list) was designed and it was based on the approved scientific standards in many of the studies. The list was divided into three sections: the viral marketing, brand personality and customer trends. This research depended on the approach which is derived from reality; that is the inductive entrance which is based on an extrapolation of fact about a certain phenomenon. This approach was chosen in terms of the nature of the subject. The researcher believes that this approach is also appropriate to test the hypotheses of the study by making sure the connections between the different variables and data which is allowed to be collected, and then reaching to valuable scientific results and indications.

A. Sample of the study

Sample of the study consists of all students of public universities in the Kingdom of Saudi Arabia. By using random stratified sample procedures, the sample size was distributed to A group of students of two public universities, King Saud University and Al-Majma’a University. King Saud University was chosen because it is one of the leading and prestigious universities in Saudi Arabia. Al-Majma’a University was also selected as one of the emerging universities. Since the percentage of terms that have the desired characteristics of study is equal 50% (i.e. = 0.5) with a confidence level out of 95% (where Z standard counterpart = 1.96) and determining the acceptable error rate ± 5% (Idris 2005). The sample size is 384 terms that were increased up to 500 terms to take into account the probability of the low response rate to the questionnaires. Thus, 476 of them were received and 14 of them were excluded either for the lack of the required data, or for the standardized answer. 462 terms are valid for analysis, which formed the study sample.

B. Evaluation of measurement tool:

To evaluate the used measurement tool and to ensure the accuracy of the scale and the possibility of its application, there was a use of the following tests:

A) Validity of the test: that means to "measure the extent of ability to measure what it is supposed to be measured" (Idris, 2005). The list of the survey was attested by number of specialists in Saudi and Jordanian universities. The amendments were implemented to the terms of the survey.

b) Reliability test: this means to get the same values when the measurement tool is reused. The higher the degree of stability of the measurement the greater the confidence of it will be (Rizkallah, 2002). So, reliability coefficient of the tool was excluded by using Alph Cronbach’s. The following table shows the reliability coefficient of the study tool and fields.

<table>
<thead>
<tr>
<th>No.</th>
<th>Domain</th>
<th>Reliability coefficient by Alpha Cronbach’s</th>
<th>Validity Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Viral Marketing</td>
<td>0.887</td>
<td>0.892</td>
</tr>
<tr>
<td>2</td>
<td>Trademark Personality</td>
<td>0.869</td>
<td>0.874</td>
</tr>
<tr>
<td>3</td>
<td>Trends of Customer</td>
<td>0.915</td>
<td>0.921</td>
</tr>
</tbody>
</table>

Table (2) clarifies that the reliability coefficients for the areas of the questionnaire is (0.887), and (0.869), and (0.915), respectively; and all the reliability coefficients are high, which shows the suitability of the study tool for scientific research. The researcher tested the validity of the parameters adopted in the study, using the Factor Analysis Method that depends on the Principal Component Analysis (PCA) in an attempt to figure out the real aspects in all the analyzed data; this has helped the researcher use a fewer number of variables and achieve a higher degree of validity.

Factor analysis shows that most of the analyzed variables are high in their correlation coefficients; and since the Load Coefficient must be greater than 0.50, no single variable was excluded. And The researcher concludes from the previous table that the reliability and validity coefficients range between 87%- 92%, which indicates the significant persistence of tool measurement. Furthermore, all the statements were retained in the stability and validity tests; this is ensured by reliability and validity of the views and attitudes of the study sample to the variables of the study in a high degree.

C. The results of the empirical study:

1) Descriptive statistics:

Tables (3, 4) show the distribution of the study sample according to two variables: gender and academic level.
Table (3): The Study Sample Distribution by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Repetition</th>
<th>Percentage%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>353</td>
<td>76.4%</td>
</tr>
<tr>
<td>Female</td>
<td>109</td>
<td>23.6%</td>
</tr>
<tr>
<td>Total</td>
<td>462</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: statistical analysis of the output of SPSS Ver21

Table (4): The study sample distribution by degree

<table>
<thead>
<tr>
<th>Academic Level</th>
<th>Repetition</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>61</td>
<td>%13.20</td>
</tr>
<tr>
<td>Second</td>
<td>66</td>
<td>%14.29</td>
</tr>
<tr>
<td>Third</td>
<td>67</td>
<td>%14.50</td>
</tr>
<tr>
<td>Fourth</td>
<td>54</td>
<td>%11.69</td>
</tr>
<tr>
<td>Fifth</td>
<td>58</td>
<td>%12.55</td>
</tr>
<tr>
<td>Sixth</td>
<td>51</td>
<td>%11.94</td>
</tr>
<tr>
<td>Seventh</td>
<td>49</td>
<td>%10.61</td>
</tr>
<tr>
<td>Eighth</td>
<td>37</td>
<td>%8.01</td>
</tr>
<tr>
<td>Ninth</td>
<td>9</td>
<td>%1.94</td>
</tr>
<tr>
<td>Tenth</td>
<td>10</td>
<td>%2.17</td>
</tr>
<tr>
<td>Total</td>
<td>462</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: statistical analysis of the output of SPSS Ver21

2) Hypotheses:

First hypothesis: there is crucial statistical significant relationship between viral marketing through social networks and the brand personality.

To test the first hypothesis as well as to achieve the first objective, the relationship with its strength between the brand personality (dependent variable) and viral marketing through social networking variable (independent variable) must be examined by using simple regression analysis to determine the independent variable ability in explaining the use of the coefficient of determination variable R2. In addition to that it can identify the nature of the relationship with its strength by using the correlation coefficient which is illustrated in Table (5).

Table (5): Regression method to study the relationship with its strength between viral marketing through social networks and brand personality

<table>
<thead>
<tr>
<th>Analysis of Variance</th>
<th>Sum of Squares</th>
<th>The value of ‘F’</th>
<th>Intangibleness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>213.712</td>
<td>209.242</td>
<td>0.007</td>
</tr>
<tr>
<td>Residuum</td>
<td>132.660</td>
<td>136.755</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>346.372</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The previous table clarifies the following:
- The quality of the model because of Intangibleness of the variance analysis (level of Intangibleness is 0.007).
- The value of the coefficient of determination R2 equals 0.617; any viral marketing through social networks explains approximately 0.62 of change in the dependent variable (brand personality).
- Correlation is positive (correlation coefficient is 0.785).

The researcher concludes as a result of the previous statistical analysis that viral marketing through social networks has an impact on the brand personality. It is obvious from above acceptance of the alternative hypothesis which is stated as:
- There is crucial statistical significant relationship between viral marketing through social networks and the brand personality.
- There is a rejection null hypothesis which indicates the validity of the second hypothesis. The relationship model is:

\[
\text{Brand Personality} = 3.710 + 0.542 \times (\text{viral marketing through social networks})
\]

The interpretation of the previous model shows that the brand personality could be predicted through the measurement of viral marketing through social networks. Thus, every increase of a single unit of viral marketing through social networks increases the brand personality value by 0.54.
The second hypothesis: there is crucial statistical significant relationship between viral marketing through social networks and smartphones clients’ directions.

To test the second hypothesis as well as to achieve the second objective, it is necessary to study the relationship with its strength between smartphones clients’ directions (dependent variable) and viral marketing through social networks (independent variable) by using simple regression analysis to determine the independent variable ability in explaining the use of the coefficient of determination R2. In addition to that it can identify the nature of the relationship with its strength by using the correlation coefficient. This is illustrated in Table (6).

<table>
<thead>
<tr>
<th>Analysis of Variance</th>
<th>Sum of Squares</th>
<th>The value of F</th>
<th>Intangibleness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>244.978</td>
<td>162.090</td>
<td>0.000</td>
</tr>
<tr>
<td>Residuum</td>
<td>146.836</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>391.814</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Correlation coefficient \( R = 0.875 \)

The coefficient of determination \( R^2 = 0.766 \);
Amended coefficient of determination \( \text{Edited}_{1} = 0.759 \)
Regression coefficient = 0.708
Fixed amount = 0.859
Value \( (T) = 8.332 \)

Source: statistical analysis outputs SPSS Ver21

The previous table illustrates the following:
- The quality of the model because of Intangibleness of the variance analysis (level of Intangibleness is 0.000).
- The value of the coefficient of determination \( R^2 \) equals 0.766; that is viral marketing through social networks explains approximately 0.77 of change in the dependent variable (smartphones clients’ trends).
- Correlation is positive (correlation coefficient is 0.875).

The researcher concludes as a result of the previous statistical analysis that viral marketing through social networks has an impact on the smartphones clients’ trends. It is obvious from above acceptance of the alternative hypothesis which is stated as:

- There is crucial statistical significant relationship between viral marketing through social networks and the smartphones clients’ trends.
- There is a rejection null hypothesis which indicates the validity of the second hypothesis. The relationship model is:

\[ \text{Smartphones clients’ trends} = 0.859 + 0.708 \times \text{(viral marketing through social networks)} \]

The interpretation of the previous model illustrates that smartphones clients’ trends could be predicted by the measurement of viral marketing through social networks. So, every increase of a single unit of viral marketing through social networks increases smartphones clients’ trends value by 0.708.

The third hypothesis: there is crucial statistical significant relationship between brand personality and smartphones clients’ directions.

To test the third hypothesis as well as to achieve the third objective, it is necessary to study the relationship with its strength between smartphones clients’ directions (dependent variable) and brand personality (independent variable) by using simple regression analysis to determine the independent variable ability in explaining the use of the coefficient of determination \( R^2 \). In addition to that, it can identify the nature of the relationship with its strength by using the correlation coefficient. This is shown in Table (7).

<table>
<thead>
<tr>
<th>Analysis of Variance</th>
<th>Sum of Squares</th>
<th>The value of F</th>
<th>Intangibleness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>51.649</td>
<td>57.629</td>
<td>0.039</td>
</tr>
<tr>
<td>Residuum</td>
<td>187.466</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>239.115</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Correlation coefficient \( R = 0.465 \)

The coefficient of determination \( R^2 = 0.216 \)
Amended coefficient of determination \( \text{Edited}_{1} = 0.211 \)
Regression coefficient = 0.304
Fixed amount = 5.825
Value \( (T) = 0.964 \)

Source: statistical analysis outputs SPSS Ver21

The previous table shows the following:
- The quality of the model because of Intangibleness of the variance analysis (level of Intangibleness is 0.039).
- The value of the coefficient of determination \( R^2 \) equals 0.216; that is brand personality explains
approximately 0.22 of changing in the
dependent variable (smartphones clients’
trends).

- Correlation is positive (correlation
coefficient is 0.465).

The researcher concludes as a result of the
previous statistical analysis that brand personality
has an impact on the smartphones clients’ trends. It
is obvious from above acceptance of the
alternative hypothesis which is stated as:

- There is crucial statistical significant
relationship between brand personality
and the smartphones clients’ trends,
- There is a rejection null hypothesis
which indicates the validity of the third
hypothesis. The relationship model is:

Smartphones clients’ trends = 5.825 + 0.304 (brand
personality)

The interpretation of the previous model
illustrates that smartphones clients’ trends could
be predicted by the measurement of brand
personality. So, every increase of a single unit of
brand personality increases smartphones clients’
trends value by 0.304.

3) Results of the study and recommendations

This study aimed to find out the strength and
direction of the relationship between the viral
marketing through social networks and brand
personality on the one hand, and the smart phone
clients’ trends on the other hand. This goal has
been achieved through the following results:

1- The results showed crucial statistical
significant relationship between viral
marketing through social networks and the
brand personality. That means students
believe that viral marketing through social
networking leads to increase the clarity of the
brand personality in their minds due to video
clip, mobiles’ messages or emails that are
used by viral marketing to spread a certain
idea or a particular product through the
Internet. This gives ample space for
organizations to build suitable personality for
brands from its point of view. Organizations
can follow this personality through proceedings responses and comments
on what has been published on the social
media regarding their products. Therefore,
organizations must recognize the importance
of viral marketing to build an independent
and explicit brand personality.

2- The results indicated the presence of crucial
statistical significant relationship between viral
marketing through social networks and smartphones
customer trends. So, the students believe that viral marketing
through social networks increases the power
of smartphones customer trends and identifies them
clearly due to students’ believe that viral marketing
across social networks requires subscription of the
potential buyers and their presence on default forum
(World Wide Web) to talk about the offered product,
and interact with each other and share their opinions
about it, which could affect their attitudes in a positive
or negative depending on the different opinions about
the product. This have been mentioned previously in
the literature of the study that a high proportion of
consumers in developed countries learn about different
opinions about the product before buying it. Therefore,
organizations must increase interest in the use of viral
marketing as a promotional tool for products due to its
impact on customers and their purchasing choices
trends.

3. The results of the study demonstrated the presence
of weak correlation relationship between brand
personality and smartphones clients’ trends. Since the
brand personality is a set of human characteristics that
consumer links with the brand in his mind, and the
trends are a state of mental and neural readiness by the
experience and are based on individual responses for
all subjects and attitudes associated with them. So if
the personality is clear for customers, this has an
impact on their purchasing attitudes for these products.
Therefore, the organizations should take in
consideration how to find an independent personality
to their brands and clarify to the customers and make
sure that they reach them appropriately to increase the
impact of this personality on the positive behaviors to
customers about these brands.

Recommendations

The recommendations for the study and
implementation mechanisms were developed by the
researcher in the following table:
<table>
<thead>
<tr>
<th>The result of statistical analysis</th>
<th>The suggested recommendation</th>
<th>Programs and mechanisms for the implementation of recommendations</th>
</tr>
</thead>
</table>
| There is crucial statistical significant relationship between viral marketing through social networks and the brand personality | 1. Marketing administrators at organizations should use viral marketing as a marketing tool in the promotional activity of the products they offer, because of its benefits.  
2. The administrators of the organizations, who are interested in building an independent personality of their products to differentiate them from competing products, should use viral marketing to build this personality. | 1. Working to attract specialized human cadres in viral marketing and planning.  
2. Formation of a specialized committee or working group to determine the responsibilities of a brand personality to be stuck in the mind of the customers.  
3. Using all viral marketing methods and strategies to build a distinct brand personality.  
4. Conducting surveys and periodic studies to the organization clients about measuring the effect of viral marketing in building an independent brand personality in the minds of the customers. |
| There is crucial statistical significant relationship between viral marketing through social networks and smartphones customer trends | 1. The concept of viral marketing in organizations should be adopted because of its impact on customer trends, leading to increased sales. That means that viral marketing is one of the means that has an impact to create positive attitudes towards the products offered by organizations. | 1. Identifying the elements and dimensions of viral marketing that have a direct effect creating positive attitudes to customers and working to achieve them.  
2. Developing short-term working plans for implementing of viral marketing within a specific date range.  
3. Customer participation in decision-making through viewing the comments in social networks and work to resolve complaints by customers as soon as possible. |
| There is crucial statistical significant relationship between brand personality and smartphones customers’ trends | 1. It is necessary for commercial organizations to build a personality to its brand, because this personality affects positively on customers' attitudes towards their products.  
2. Companies must use creative and effective marketing methods to increase the positive trends for its customers compared to competitors. | 1. A comparative study with the competitive commercial organizations must be done in terms of its brand personality and impact on increasing its sales.  
2. Formation of a working group from different disciplines at commercial organization to identify the elements and dimensions of brand personality that have the greatest impact on the positive trends to their customers about their products and that leads to increased sales.  
3. Viewing competing brand personality to take advantage of them. Adapting and developing it properly should be taken in consideration. |

Source: prepared by the researcher

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