The Impact of Website Feature and Viral e-Marketing on the Online Shopping Behavior

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Abstract
Advancements in communication technology have given rise to the evolution of a new electronic form of marketing on the Internet. Viral marketing describes any strategy that encourages individuals to pass on a marketing message to others. Consumers say the primary source of credibility that makes them visit a Web site is word-of-mouth; Also the design of a website interface plays an important role in online purchasing, and customers are more likely to visit and buy from better-designed websites. The present study aimed to evaluate the influence of website features and online viral marketing on online purchase behavior. Data collected from 384 online shopping customers of Digi kala, provides strong support for the proposed research model. PLS (partial least squares, PLS-Graph version 3.0) is used to analyse the measurement and structural models. We found statistically positive values for the impact of, viral e-marketing and website features on online shopping behavior. Statistical data served as the basis for the validation of the model proposed in this work.

Keywords: Website Features, Viral e-Marketing, Online Purchase Behavior, DigiKala.


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1. Introduction

Internet shopping has significantly grown and is increasingly becoming popular since its inception two decades ago. Statistics Incorporated (2015) concealed that around 41% of the global internet users have purchased goods and services online and is believed that this number will continue to rise as internet users may also increase in the following years [1].

There are millions of people online any time and they all are a potential consumer in the online market. Since there are so many providers, the most important thing for organizations is to understand: what are consumer wants and needs in this competitive business environment. In the Internet shopping market since there is no face-to-face contact, analyzing and identifying factors that influence the consumer is vital. Moreover, consumers have new demands in the Internet medium. Therefore, it becomes more important to answer consumer's demands to retain the customer being aware that customers are performing a major role in marketing, finding out how the factors that are essentially affecting the purchasing intentions are important.

Analyzing the process of shopping activities, how consumer decide and make purchases over the Internet and what they buy need to be identified by online providers in order to satisfy and succeed in this competitive business environment. Customer behaviors are influenced by different factors such as culture, social class, references group relation, family, salary level and salary independency, age, gender etc. and so they show different customer behaviors. These differences are seen more specific when it is considered between two different consumer groups from different countries [2]. The rapid increase in consumers’ involvement in online purchase has transformed the Internet into a powerful force that influences consumer behavior [3]. Its characteristics, such as the accessibility of large amounts of information, lower search costs and access to all competitors [4] have changed the consumers’ research and purchase activities. The Internet provides access for anyone at any time and at any location, which has made it easier for consumers to collect and evaluate competing offers.

The existence of the internet has significantly affected retail businesses. Since, traditionally, goods and services were only offered in brick and mortar (physical) stores. However, with the presence of technology-driven generations and further heightening of technological development, the internet has driven businesses to transition its typical marketing mode into a more convenient and encouraging way.

Likewise, the internet has able to facilitate companies in streamlining its operations, allowing better communication to customers and reducing unnecessary costs incurred[5]. Besides, a new business function called e-business/e-commerce was created with a platform to facilitate buying and selling of goods and services through the internet [6]. With the nearly 2 billion people using the internet, e-commerce made a strong contribution to economic growth, generating around 3.4% of the GDP across large economies [7]. In all existing businesses of today, customers as always play a very important role. Many studies have addressed the issues of online behavior by directly applying the knowledge of traditional purchase to the Internet context. Online purchase behavior is different from the traditional one and current knowledge of online consumer behavior is still limited [8]. Hence, increasing the theoretical knowledge in this area, which considers the particular characteristics of the online environment, is crucial.

Purchase behavior on the Internet in general is a very complicated phenomenon which comprises various aspects and is influenced by many factors. This research is motivated by the changes in the behavior of online consumers which stem from the characteristics of the Internet environment. It focuses on understanding the online shopping behavior in terms of the website features quality and online viral marketing. Consumers interact with each other, rate and review products and spread electronic Word of Mouth (e-WOM). Although the influence of these features on “consumers” shopping behavior in terms of how consumers search for information, evaluate alternatives, and make purchase decisions’ is an under-studied area [9], its existence is definite. The website of an online retailer is perhaps its only way to communicate with the customers [10]. Therefore, the website quality is comparable with the shop’s atmosphere [11]. Thus the reliability is grounded in the onset of transactions, particularly in the beginning of exchanges and transactions but it must be noted that providing a quality website is not sufficient by itself to bring about online shopping acceptance [12], because other numerous factors influence this acceptance process. For instance, some researchers have suggested that customers feel more anxious about security when facing unfamiliar salespeople, and probably lose their trust [13]. Given the role and significance of trust, it has been considered as an important factor of online transaction’s success by various studies [14, 15].
In online shopping environment, a website interface serves as the online storefront for customers to interact with the online retailer, and to experience and evaluate the quality of service manifested by the website design [16]. Previous studies have found that the website design interface plays an important role in online purchasing during customers initial experience with an online retailer, as the website design elements and the interaction experience influence customers initial beliefs and subsequent behavioral intention and customers are more likely to visit and buy from better-design websites [17].

Purchase behavior on the Internet in general is a very complicated phenomenon which comprises various aspects and is influenced by many factors. Consumer decision making, which is a part of purchase behavior, has been a focal interest in consumer research and “will continue to be critically important” [18]. This research is motivated by the changes in the behavior of online consumers which stem from the characteristics of the Internet environment. It focuses on understanding the behavior in terms of the online viral marketing and website features that online consumers follow.

2. Online Shopping Behavior

Online shopping also known as online purchasing or online consume, refers to the consumption process by which customers satisfy shopping demand through internet [19]. From the report of China online shopping industry development (2008-2009), online shopping can be defined as the process of sellers delivering products or service to clients, and the elements of information flow, capital flow, logistics that are relevant to this delivering process and every links of overall process are finished with the help of internet [20]. Online purchasing in this paper is mainly determined as a real purchasing behavior that customers meet demand on the basis of internet technology implementation.

As the development of internet technology and the improvement of e-commerce market, online shopping becomes a brand-new individual consumption pattern for buyers and receives a growing amount of attention from the public. In recent years, there is a great deal of scholars doing research on influencing factors for customer online purchasing behavior from different aspects. For example, in China, Wang (2001) executed a research from the sides of demographics, customer characteristics, transaction security, and online store owner to dissect the factors that affect clients’ online shopping behavior and to build an influencing factor model. While some others did the similar research from the aspects of online shopping risks, merchandise features and types, websites’ maneuverability and convenience, and major advantages of online retailers [21].

3. Website Features

One of steps of shopping process followed by most customers is information quest performed through active browsing and collecting the website information by the customer. If the website does not meet the customers’ expectations about information needs, such an incompatibility (not meeting information needs) may be followed by an undesirable response by customers and purchasers. One of the main capabilities of e-stores’ websites is provision of information on products and services for end customers [22, 23]. If the website provides ambiguous, unusable or incorrect information, it will become very difficult to obtain customer trust. Therefore, a website needs to provide useful and suitable content to the target market of that website. This content must be precise, containing useful and up-to-date.

3.1. Website Content Quality

Numerous studies emphasize the fact that creating a website with under-standard content quality (such as usefulness, completeness, clarity and being up-to-date) is in fact a waste of resources and reduces the website’s chances to attract customers [24, 25]. Liu and Arnett (2000) identified three factors of the information and service quality, system application and system design quality as the critical factors of buy-and-sell websites’ success. Website content affects the way an e-shopping website is useful for e-customers. For instance, information quality of a website may determine the acceptance or disacceptance by the e-purchasers [26]. Gefen and Straub (2000) found a positive and significant relationship between content usefulness and people’s purchase behavior. Ranganathan and Ganapathy (2002) identified the completeness of information on the firm and orders (part of information content dimension) as important determinants of e-shopping intention. Also, Song and Zahedi (2001) stated that content clarity and transparency was an important determinant of online purchase behavior (through facilitating the resources and perceived behavioral control). On this basis, creating customers’ desirable attitude and desirable intention towards the website requires useful, complete, clear (explicit), up-to-date and precise content of the website [27]. Therefore, led to the formation of the below hypothesis:

- **H1**: Website content quality has a positive effect on online shopping behavior.
3.2. Perceived Transactions Quality

The ultimate goal of an e-shopping website is to buy and sell goods and services, together with information related to target customers. Successful websites should have a transaction quality that helps e-buyers easily and efficiently do their e-shopping activities. Ease of transaction is important for e-purchasers for completion of the shopping process. E-shopping websites must note that if e-customers cannot complete purchase process within a reasonable time or are confused during this process, they might withdraw from the purchase and exit the website without completion of the purchase process [28]. These customers have been observed to have a less probability to return to that website for repurchase or to continue their purchase [29]. Since the Perceived transactions quality has a positive influence on consumers’ shopping, we hypothesize that:

- **H2**: Perceived transactions quality has a positive effect on online shopping behavior.

3.3. Customers’ Perceived Security

Many e-customers have concerns about security threats and unprotected privacy [30]. Many e-shopping customers are afraid of their personal information being compromised and since in shopping there is a large number of purchase options (buy-and-sell websites) and the cost of shifting from one to another is low, and e-purchasers can evaluate more options before e-shopping, therefore the smallest concerns about transaction security may lead to shifting the store and purchase from another website. In these circumstances, assurance and protection of personal information and maintaining the security is a major factor in selection of e-shopping website by the customers. For this reason, e-shopping websites have to try to eliminate the customers’ security concerns. This is why security and privacy protection for doing online transactions is known as the main trait of an online store which provides the customers with information to decide upon. Numerous studies have indicated online transactions security concerns as an obstacle to online [31, 32]. Wang and et al. (2004) state that protecting the privacy and security is an effective way for online retailers to develop their connection to the customers. They state that most e-customers want to work with sellers who explain personal information applications and protection through a statement. Also, by the customers’ perception of reduced security and privacy risks it is expected that their satisfaction is increased [33, 34]. Thus, it is hypothesized that:

- **H3**: Customer Perceived security has a positive effect on online shopping behavior.

3.4. Website Design Quality

Venkatesh et al. (2003) argue that performance expectancy explains why people use technology to achieve their ends and that facilitating condition influencing such behaviors. This study now advances the notion that web design quality (facilitating conditions) influences not only usage (behaviors) but also performance expectations, because if people believe that they will benefit from a high quality online banking website, not only will they use the website, but they will also raise their evaluations of its usefulness. Researchers report such a relationship in systems design [35, 36, 37, 38]. Shopping behavior. Therefore, the following hypothesis is posited:

- **H4**: website design quality has a positive effect on online shopping behavior.

3.5. Online Viral Marketing

Viral marketing is the term used to describe the method of online marketing that encourages individuals to pass on a marketing message to others [39]. According to (Lekhanya, 2014) the term ‘Viral Marketing’ describes the phenomenon by which consumers mutually share and spread marketing relevant information initially sent out deliberately by markets to stimulate and capitalize on word-of-mouth behavior” [40]. Viral Marketing is built on the old Word-of-Mouth. It is a central concept of viral marketing and is about how to get people to spread a message by word-of-mouth. It can be characterized as oral person-to-person communication regarding a brand, product, service etc. [41].

The people (buyers) who use word-of-mouth as a source for information tend to trust recommendations, as they are coming from a known source, which makes the communication more personal than word-of-mouse. It is important to make the distinction between traditional Word-of-Mouth, and Word-Of-Mouse that takes place on the internet, because the surroundings are different on the internet, and there are other opportunities to communicate. Communication and dissemination through the internet allows the consumer to interact with many other people at the same time, which means that there is no longer need for face-to-face communication. A person can send an email or a message through a social networking site to all its contacts without major time costs. In this way, the consumer has a big reach and is available to spread information quickly [42]. Recent studies have shown that the majority of people who receive some kind of
email advertisement will forward it on. A study by Zimmerman (2001) found that 81% of recipients will forward a message to at least one other person and 49% will send it to two or more others [43]. When considering those percentages, it becomes clear how quickly these viral messages spread, and therefore why businesses need to harness them to aid their marketing objectives. We extend the previous research to assume that online shopping behavior can be influenced by the online viral marketing and therefore lead to the below hypothesis.

- **H5:** online viral marketing has a positive effect on online shopping behavior

### Research methodology

Presented below are the variables included in the proposed research model (Figure 1). A questionnaire has been designed to establish the effectiveness of online viral marketing and website features in generating online shopping behavior. The questionnaire consisted of 36 statements: PerfoCustomer perceived security (6 statements), perceived transactions quality (5 statements), website content (6 statements), website design (6 statements), online viral marketing (5 statements), and online shopping behavior (8 statements). All the statements were examined using a 5-point Likert scale, with answers ranging from 1 (I strongly disagree) to 5 (I strongly agree). The research model was tested with data from 360 DGkala online shopping customers. DGkala was chosen because it is the most widely used online stores in IRAN. The data for the study were collected via a questionnaire which reliability is shown in table1.

#### 5.1. Data analysis

Structural equation modelling (SEM) was used to analyze the data for three reasons. First, according to the suggestions of Hair et al. (2006), SEM is a multivariate technique that permits the simultaneous estimation of multiple equations. Second, SEM performs factor analysis and regression analysis in one step, as SEM is used to test a structural theory. Third, SEM has become a very popular technique in the social sciences based on its main strengths. A structural equation modelling analysis was performed using partial least squares (PLS; PLS-Graph 3.0). PLS places minimal restrictions on measurement scales, sample size and residual distribution [44]. PLS provides an analysis of both a measurement model and a structural model, and allows latent constructs to be modelled as reflective or formative indicators. For the model tested, all constructs were modelled as reflective.

![Figure 1. Theoretical model](image)

- **Indicator reliability**

As shown in Table 1, all items exhibited loading higher than 0.7 on their respective construct, providing evidence of acceptable item convergence on the intended constructs. (see table 1). Convergent validity is assessed through verifying the value of AVE and of outer loadings [45]. AVE values should be greater than 0.5 [46].

<table>
<thead>
<tr>
<th>Number of items</th>
<th>Composite reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPS</td>
<td>5</td>
<td>0.949</td>
</tr>
<tr>
<td>PTQ</td>
<td>5</td>
<td>0.914</td>
</tr>
<tr>
<td>WCQ</td>
<td>6</td>
<td>0.895</td>
</tr>
<tr>
<td>WDQ</td>
<td>6</td>
<td>0.888</td>
</tr>
<tr>
<td>ONB</td>
<td>9</td>
<td>0.894</td>
</tr>
<tr>
<td>OVM</td>
<td>9</td>
<td>0.894</td>
</tr>
</tbody>
</table>

Table 1. Composite reliability and Average Variance Extracted (AVE) values, Source: authors’ own.

#### 6. Analysis of the Model

Collinearity did not prove problematic for the study, as VIF values of specific constructs did not exceed 5 [47], as shown in Table 4.

Coefficient of determination R2 and path coefficients Independent variables (i.e. customer perceived security, perceived transaction quality, website content quality, website design quality and online viral marketing) account for 89.5% of the variance of the variable online shopping behavior.
The value of R2 should therefore be assessed as being moderately high [48]. The results of this study allow us to conclude that variables customer perceived security ($\beta = 0.245$, $p < 0.01$), perceived transaction quality ($\beta = 0.221$, $p < 0.01$), website content quality ($\beta = 0.249$, $p < 0.01$), online viral marketing ($\beta = 0.139$, $p < 0.01$), and website design quality ($\beta = 0.183$, $p < 0.01$) have a significant impact on online shopping behavior. Table 2 summarizes path coefficients.

### Table 2. Assessment of path coefficients, Source: authors’ own.

<table>
<thead>
<tr>
<th>Path</th>
<th>Path coefficient</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>T Value</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPS -&gt; OSB</td>
<td>0.245</td>
<td>0.240</td>
<td>0.059</td>
<td>4.141</td>
<td>0.000</td>
</tr>
<tr>
<td>PTQ -&gt; OSB</td>
<td>0.179</td>
<td>0.182</td>
<td>0.057</td>
<td>3.135</td>
<td>0.002</td>
</tr>
<tr>
<td>WCQ -&gt; OSB</td>
<td>0.249</td>
<td>0.248</td>
<td>0.060</td>
<td>4.119</td>
<td>0.000</td>
</tr>
<tr>
<td>OVM -&gt; OSB</td>
<td>0.139</td>
<td>0.137</td>
<td>0.059</td>
<td>2.353</td>
<td>0.019</td>
</tr>
<tr>
<td>WDQ -&gt; OSB</td>
<td>0.183</td>
<td>0.187</td>
<td>0.076</td>
<td>2.402</td>
<td>0.017</td>
</tr>
</tbody>
</table>
7. Discussion and implications

The main purpose of this research was to examine the influence of website features and online viral marketing on the online shopping behavior. All the Hypotheses have been confirmed in the study a summary of the hypotheses is presented in Table 7. We found that all website features quality such as content quality (β=0.249), design quality (β=0.183) and perceived transaction (β=0.179) had positive and significant impacts on online shopping behavior. As shown in Table 5, online viral marketing also has significant impact (β = 0.139) on the dependent variable.

8. Conclusion

E-commerce market has great potential, especially the aspect of online shopping, but before every moves of development, we must understand the key factors that restrict the activity of consumers shopping online. Only understand these impediments enable the online shopping to develop.

From table 3, we can see that attitude toward the website features constitutes the primary driver of online shopping behavior. This is consistent with previous research indicating that customers’ intention to revisit result of their attitude toward using the technology involved in the site. Furthermore, revisiting the site was mainly influenced by usefulness, perceived entertainment, and perceived informativeness; indicating that Internet designers should add more features that affect the website's appearance, including images, colors, fonts, shapes, animations, and layout, and relevant, current, and easy-to-understand information. The organization and structural layout of the site's pages and content should add up to an easy-to-use website [49]. These results consist to the findings of Bilgihan et al., (2015) they proposed a hypothesis that the flow experience on a hotel booking website has a positive impact on loyalty to the website, was not supported.

Research findings showed that online viral marketing has a significant and positive effect on the online shopping behavior (β=0.139); In other words, viral marketing leads costumers to improve their purchase decisions. An examination of the theories on viral marketing has shown that viral marketing is a modern form of word-of-mouth, also called word-of-mouse, because it is spread through social media channels. Using viral marketing has advantages, which include cost-effectiveness due to lower costs associated with it than traditional marketing like TV ads [50]. The spread of viral marketing is one of the best advantages, because if a marketing campaign or content is catchy it could spread fast across the world. For companies it is much easier to measure the effect of marketing campaigns through viral marketing, because there are numbers that indicates the success, such as likes, number of shares, etc. Even though viral marketing has many advantages, there are also some disadvantages which need to be considered. The Digikala shop should stimulate customer to purchase online by considering websites features and online viral marketing as discussed above.

Table 3. summary of Hypothesis, Source: authors’ own.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Confirmed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Website content quality has a positive effect on online shopping behavior.</td>
<td>Yes</td>
</tr>
<tr>
<td>H2: Perceived transactions quality has a positive effect on online shopping behavior</td>
<td>Yes</td>
</tr>
<tr>
<td>H3: Customer Perceived security has a positive effect on online shopping behavior</td>
<td>Yes</td>
</tr>
<tr>
<td>H4: website design quality has a positive effect on online shopping behavior</td>
<td>Yes</td>
</tr>
<tr>
<td>H5: online viral marketing has a positive effect on online shopping behavior</td>
<td>Yes</td>
</tr>
</tbody>
</table>

References


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