

The Impact of Online Reviews and E-WOM on Hyundai's Sales Performance

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Abstract

Internet has become the primary source of information for a large number of consumers and it has dramatically changed the consumer behaviour. One of the main changes in modern consumer behaviour has been the transition from a passive to an active and informed consumer. Internet enables customers to share their opinions on, and experiences with, goods and services with a multitude of other consumers. Online consumer reviews are used by prospective buyers of related products who are interested in obtaining more information from people who have purchased and used a product of interest.

Word-of-mouth (WOM) is one of the most important information sources when a consumer is making a purchase decision. The arrival and expansion of the Internet has extended consumers' options for gathering product information by including other consumers' comments, posted on the Internet, and has provided consumers opportunities to offer their own consumption-related advice by engaging in electronic word-of-mouth (eWOM). eWOM can be defined as all informal communications directed at consumers through Internet-based technology related to the usage or characteristics of particular goods and services, or their sellers.

The aim of this study is to assess the impact of, one type of electronic word-of-mouth (eWOM), the online consumer review, on purchasing decision of electronic products. This empirical study also focuses on the relationship between reviews and purchasing behaviour. An instrument was prepared to measure the proposed constructs, with questionnaire items taken from prior studies but adapted to fit the context of e-commerce. The survey was applied to academicians in Turkey through internet. The data was analyzed using the SPSS package. The results show that consumer reviews have a causal impact on consumer purchasing behaviour and they have an effect on choosing the products by consumer. Finally, the results and their implications are discussed.

Key words: Electronic Word-of-Mouth, Online Consumer Review, Internet Marketing, Consumer Behaviour.

INTRODUCTION

The arrival and expansion of the Internet has extended consumers' options for gathering product information by including other consumers' comments, posted on the Internet, and has provided consumers opportunities to offer their own consumption-related advice by engaging in electronic word-of-mouth (eWOM) (Hennig-Thurau et al., 2004). With the help of the Internet, information is no longer only controlled by news media or large businesses. Everyone can share their thoughts with millions of Internet users and influence others' decisions through electronic word-of-mouth (Duan, Gu and Whinston, 2008a). The value of complex information goods is hard to assess because it is only possible to value them after either trying them or understanding its content. In other words, many information and cultural goods are experience goods that a consumer needs to taste before assessing its quality and its location with respect to his or her ideal product (Bounie et al., 2005). While a steady research stream into the impact of eWOM on online sales has emerged in recent years, there are still many unanswered questions. Research has shown that consumers are motivated to read and write eWOM for decision making and social benefits, and this undoubtedly affects the purchasing decision (Hennig-Thurau and Walsh, 2003). However, very little is known as to how certain types of eWOM, such as online text reviews or numerical ratings, affect the purchasing decision, and by how much. The main objective of the study is to assess the impact of the online consumer review, on purchasing decision of electronic goods. The study also contributes to the knowledge of marketers by providing insights into consumers' attitudes and behavior, which can potentially be used by marketers to better respond to, and target, these consumers in order to overcome barriers to consumer choice.

LITERATURE REVIEW

Word-of-mouth (WOM) has been recognized as one of the most influential resources of information transmission since the beginning of human society (Godes and Mayzlin 2004; Maxham and Netemeyer 2002). Prior to the Internet era, consumers shared each others' product-related experiences through traditional WOM (e.g. discussions with friends and family) (Sundaram et al., 1998). The Internet's global nature has created a medium for electronic word-of-mouth (eWOM) communication between consumers who have never met (Gruen et al., 2006). Today, the Internet makes it possible for consumers to share experiences and opinions about a product via eWOM activity. The eWOM phenomenon has been changing people's behavior because of the growth of Internet usage. People often make offline decisions on the basis of online information; furthermore, they tend to rely on the opinions of other consumers when making decisions about matters such as which movie to watch or what stocks to invest in (Dellarocas, 2003). The online market enables customers to write recommendations that influence potential consumers (Lee et al., 2008). The electronic word-of-mouth is network user's information exchange and discussions on some products or services by network media (Sun et. al., 2006). Hennig-Thurau et al., (2004:39) refer to eWOM as any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet. Similarly, Godes and Mayzlin (2004) define eWOM that is measurable since comments on a product are written and available in the websites.

Online consumer reviews (OCR), one type of electronic word-of-mouth, provide product information and recommendations from the customer perspective (Lee et al., 2008). OCR have become increasingly important as consumers continue to purchase products online. When consumers are not able to judge a product in person, they often rely on this eWOM transfer to mitigate risks regarding product quality and the truthfulness of the seller. Online consumer reviews play a major role in the decision to purchase products or services, according to the latest survey from Opinion

Research Corporation. Nearly two-thirds (61%) of respondents reported consulting online reviews, blogs and other sources of online customer feedback before purchasing a new product or service, with search engines being the preferred method of conducting the research. This survey also found that 80 % of respondents said they seek out information online for a particular brand of electronic (Werbler and Harris, 2008). Additionally, from a report made by Nelson Research Company, the 3rd —most trusted advertising methodl is —consumer’s opinions posted on the network (Xiaofen and Yiling, 2009). According to the Nielsen Global Online Consumer Survey, 70 % of consumers trust opinions posted online (Cherecwich, 2009) . In a recent survey, conducted by BIGresearch, consumers say that word of mouth is still the number one influencer in their electronics (44.4%) purchases (BIGresearch, 2008).

Compared with traditional word-of-mouth, the electronic word-of-mouth has the features of extensiveness of spreading information, fast, large volume of information, savable, instant to receive, anonymous and transcend space and time (Hennig-Thurau et al., 2004). Throughout the eWOM activity, consumers can obtain high levels of market transparency. In addition, they can take on a more active role in the value chain and influence products and prices according to individual preferences. And they can make their opinions easily accessible to other Internet users (Dellarocas, 2003). Because of such significance and popularity of eWOM communication, the importance of WOM has been widely documented in the existing literature (Zhu and Zhang, 2006). Bickart and Schindler’s (2001) findings suggest that product information on online forums has greater credibility, relevance and more likely to evoke empathy with consumers than information on marketer-designed websites. According to the results of the study made by Park and Lee (2009) show that the eWOM effect is greater for negative eWOM than for positive eWOM. The survey results from 616 participants of an online forum suggest that customer know-how exchange impacts customer perceptions of product value and likelihood to recommend the product (Gruen et. al., 2006). An other reseacrh conducted by Park and Kim, (2008), focusing on online consumer reviews as eWOM messages, explains this contradiction using the cognitive fit theory. The results show that cognitive fit occurs when experts (novices) process the reviews framed as attribute-centric (benefit-centric). Xiaofen and Yiling (2009) also found that the massage impression of electronic word-of-mouth and leader’s comments have much influence on consumer’s willingness of buying. As a result, eWOM plays an increasingly significant role in consumer purchase decisions (Duan, Gu and Whinston, 2008b).

Earlier studies concluded that consumers ascribe more value to recommendations by fellow consumers than to recommendations by professional reviewers. According to these studies, consumers perceive fellow consumers’ opinions to be less biased. They also find fellow consumers’ experiences easier to relate to (Bickart and Schindler, 2001). Also numerous empirical studies (Dellarocas et al., 2006; Houser and Wooders, 2006; Menlik and Alm, 2002) show that buyers seriously consider online feedback when making purchasing decisions. Additionally, Goldenberg et al. (2001) showed a consumer’s decision-making process is strongly influenced by eWOM. Similarly, Chevlrier and Mayzlin (2006) examined the effect of consumer reviews on books at www.amazon.com and www.barnesandnoble.com, and found that eWOM can significantly influence book sales. On the contrary, some prior studies reported that online user-generated reviews are perceived as having lower credibility than traditional WOM due to the absence of source cues on the Internet (Smith et al., 2005). For this reason, the influence of online consumer reviews needs to be further tested in different contexts.

METHODOLOGY

In order to remain consistent with prior studies, measures were adopted or transferred from previous studies and associated theories. 44 total measures were utilized in order to capture the various latent constructs, in which responses were measured by a 5-point Likert-type scale ranging from 1 = disagree to 5= full agree. In order to validate the instrument, 75 academicians in five different university assessed the relevance of the instruments. Some modifications were made to the questionnaire, on the basis of the comments collected throughout this pilot study. After the pilot study a final questionnaire was developed and administered to 604 academicians were randomly selected from Turkey with using surveymonkey.com is an online survey tool that enables users to create their own Web-based surveys. The research was conducted during the summer semester of the 2009 academic year. The questionnaires were prepared in two parts. One part of the questionnaires was related to the demographic information of the academicians and the other part was related to the online consumer reviews perception of them. The reliability coefficient for the construct ranged 0.81, which exceeded the recommended level of 0.70 (Nunnally, 1978). In total, 750 questionnaires were distributed to the selected samples, of which 675 (87.3%) were completed by the respondents. 604 (80.5%) questionnaires were finally adopted for further data analysis, after eliminating any questionnaires that had not been properly completed. The data analysis was carried out with using SPSS 13.0 package.

In order to reduce data and to classify variables, factor analysis was applied. Factor analysis is one of the good tools used to verify the construct validation for a model (Hair et al., 1998). Before factor analysis, the adequacy of data for factor analyze should be examined. For this purpose, Kaiser-Meyer-Okin (KMO) and Bartlett test was conducted. KMO value is calculated as 0,896 for adequate of sample. Kaiser (1974) recommends accepting values greater than 0.5 as acceptable. So the KMO value shows that data are suitable of factor analysis. According to the results of Bartlett test, Approx. Chi-Square was calculated as 6902, 847 and highly significant level was $p=000$. The results show that sample and data are adequate for factor analysis and therefore factor analysis is appropriate.

FINDINGS

Table 1 summarizes characteristics of the 604 respondents. 369 respondents (61.1%) were male and 235 (38.9%) were female. Most ($n= 263$, 43.0%) were 31–40 years old. A significant number of respondents ($n=328$, 54.3%) studied in social sciences field. The average frequency of internet usage was 20 or more hours in a week. Furthermore, majority of respondents ($n= 505$, 83.6%) have made an online purchase from internet before. Approximately, 272 respondents (45,0%) buy electronic goods online more than once a year.

Table 1. Characteristics of the respondents

Characteristics	Frequency (N= 604)	
	N	%
<i>Age</i>		
21-30	181	30,0
31-40	263	43,0
41 or older	163	27,0
<i>Gender</i>		
Male	369	61,1
Female	235	38,9
<i>Monthly income(TL)</i>		
1001-1500	60	9,9
1501-2000	252	41,7
2001-2500	109	18,3
2501 or more	183	30,3
<i>Academic field</i>		
Natural Sciences	216	35,8
Social Sciences	328	54,3
Medical Sciences	60	9,9
<i>Frequency of internet usage</i>		
Less than 1 hour	4	0,7
1-5 hours	76	12,6
5-10 hours	107	17,7
10-20 hours	165	27,3

To describe the relationship between factors and 27 variables, Principal Components Analysis was conducted. As a result of the component analysis, rotated component matrix table was formed. Table 2 shows the variables and their related factor. Six factors were defined according to their relationship with variables which are; (1) Related to reviews's characteristics; (2) Related to reviewer (writer of review); (3) Related to web site that present the reviews; (4) Related to significance of reviews; (5) Related to the type of advice and (6) Related to product.

Table 2: Rotated Component Matrix

Component	1	2	3	4	5	6
To what extent do product review websites influence your	,206	,064	,106	,700	,029	,277
How important do you think online product reviews are for	,371	-,041	,079	,719	-,066	-,022
How many online consumer reviews do you read before	,200	,021	,083	,757	,179	-,155
Does affect the price of product to visit the online consumer reviews?	,279	,052	,106	,215	-,144	,687
Which of the following items about product on the web do	,227	-,041	,118	,287	-,268	-,540
If I have little experience with a product, I often search	,481	-,105	,196	,013	,403	-,034
When I buy a product online, the reviews presented on the	,731	-,014	,200	,322	,066	-,007
When I buy a product online, the reviews presented on the	,728	,024	,127	,256	,033	-,053
When I buy a product online, the impact of positive reviews on the web effect is greater for electronic goods on	,727	,086	,076	,185	-,042	,148
When I buy a product online, the impact of negative reviews on the web effect is greater for electronic goods on	,642	,068	,114	,185	,111	,114
Simple-recommendation reviews are subjective, emotional	-,068	,098	,043	,071	,785	-,029
Attribute-value recommendations are specific, clear and	,444	-,009	,063	,043	,589	,095
Recency of product reviews posted on the website affect	-,047	,400	,233	-,001	,002	,152
Consistency of other reviews posted on the website affect	,538	,316	,308	,010	,094	-,034
The number of product reviews affect my purchase decision.	,632	,091	,251	,263	,132	,014
Received high ratings for product affect my purchase	,441	,419	,159	,251	-,083	-,182
The reviewer age affect my purchase decision.	,524	,260	,209	-,130	-,224	-,158
The reviewer gender affect my purchase decision.	,195	,679	,061	-,061	,076	-,075
The reviewer residence affect my purchase decision.	,072	,744	-,168	-,113	-,007	,059

The reviewer's frequency of posting reviews affect my	,004	,824	,001	,003	-,073	,032
If the reviewers use the nick name or the real name affect	,125	,647	,182	,179	,065	-,069
Other reviewers' rating of usefulness of the review affect	,016	,723	,222	,045	,047	,039
Reliability of the site that present the reviews affect my	,426	,361	,294	,165	-,023	,100
Popularity of the web site that present the reviews affect	,360	,062	,645	,213	,231	-,008
If Web site that present the reviews concern to company	,376	,205	,604	,009	-,082	-,124
Internationality of the web site that present the reviews affect my purchase decision.	,124	,195	,744	,049	-,001	,045
Spelling or grammar mistakes in product review affect my purchase decision.	,226	,025	,749	,114	,081	,037

Extraction Method: Principal Component Analysis. Rotation Method: Quartimax with Kaiser Normalization. A Rotation Converged in 6 Iterations.

As a result of the factor analysis, the six factors were determined. The six factors and their variances were given in the Table 3. According to the Table 3, the six factors explained the 56,3% of the total variance. It means the six factors can represent 27 variables.

Table 3. Total Variance Explained

Component	Initial Eigen Values			Extraction Sums of Squared			Rotation Sums of Squared		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	reviews's characteristics related to	7,263	26,901	26,901	7,263	26,901	26,901	4,525	16,758
2	reviewer related to web	2,969	10,997	37,898	2,969	10,997	37,898	3,407	12,618
3	site significance	1,474	5,459	43,357	1,474	5,459	43,357	2,546	9,428
4	of reviews	1,352	5,009	48,366	1,352	5,009	48,366	2,241	8,302
5	type of advice related	1,142	4,230	52,596	1,142	4,230	52,596	1,443	5,344
6	to product	1,002	3,710	56,306	1,002	3,710	56,306	1,041	3,856

Extraction Method: Principal Component Analysis.

According to the table 2 and table 3, twenty seven percent of variance shows that buyers' perception has a positive relationship with reviews' characteristics such as, helpful for buyers, make them confident, positive and negative reviews, recency of reviews, consistency of other reviews, received high ratings for product. Eleven percent of variance shows that details of reviewer (writer of review) have a positive relationship with reviewer age, gender, residence, frequency of posting reviews and using the nick name. Five percent of variance shows that the web site that present the reviews has a positive relationship with reliability of the site, popularity of the web site, company's site and internationality of the web site. Five percent of variance of shows that significance of reviews have a positive relationship with influencing online purchase decisions, reviews' level of important and number of reviews buyers' read befor purchase. Four percent of variance of shows that type of advice has a positive relationship with simple-recommendations and attribute-value recommendations. Three percent of variance of shows that detail of product has a positive relationship with the price of product.

Table 4: ANOVA results

	<u>Reading review befor purchase</u>	
	F	p
Age	1,460	,233
Gender	,164	,685
Internet usage time	4,380	,002
Purchase frequency	4,898	,000
Product price	15,152	,000
<u>Purchase decision</u>		
	F	p
Number of reviews	45,719	,000
Recent reviews	7,031	,000
Consistency of reviews	22,153	,000
High ratings for product	2,759	,027
Grammar mistakes in reviews	1,127	,343
Attribute-value recommendation	19,628	,000
Simple-recommendation reviews	,757	,554

In order to examine the relationship (0.05) between the reading reviews and characteristics of respondents a one-way MANOVA analysis was performed. The results (Table 4) showed that there were significant main effects of the reading reviews before purchasing and buyers' purchase frequency. In addition, there was a significant interaction effect between product price and reading reviews before purchasing. Also there was a significant difference between buyers' internet usage time and reading reviews. Furthermore Table 4 showed that there were significant differences between buyers' purchase decision and number of reviews, recency and consistency of reviews and attribute – value reviews.

Twelve propositions were developed to identify perceptions of respondent about consumer reviews, and the participation level of the respondents regarding the propositions was identified by means of a five-item Likert scale. According to Table 5, the participation level of the respondents in predetermined propositions was found to be quite high. This indicates that the participants agree to characteristics of reviews are effective on purchasing decision. Specially, it's seen that consistency of other reviews posted on the website really affect on buyers' purchase decision. The factor of spelling or grammar mistakes in product review is assessed with the least effectiveness on purchasing decision.

Table 5: Statements of respondents about consumer reviews

Statements	Mean	Std. Deviation	N
Consistency of other reviews posted on the website affect my purchase decision.	3,91	,806	604
When I buy a product online, the reviews presented on the website are helpful for my decision making.	3,83	,847	604
Attribute-value recommendations are specific, clear and having reasons for arguments.	3,74	,882	604
Recency of product reviews posted on the website affect my purchase decision.	3,64	,894	604
When I buy a product online, the reviews presented on the website make me confident in purchasing the product.	3,59	,896	604
When I buy a product online, the impact of negative reviews on the web effect is greater for electronic goods on my purchasing decision	3,55	,939	604

When I buy a product online, the impact of positive reviews on the web effect is greater for electronic goods on my purchasing decision.	3,50	,921	604
Simple-recommendation reviews are subjective, emotional and have no support for arguments.	3,47	1,070	604
Received high ratings for product affect my purchase decision.	3,23	,977	604
The number of product reviews affect my purchase decision.	3,14	1,027	604
If I don't read the reviews presented on the website when I buy a product online, I worry about my decision.	2,96	1,034	604
Spelling or grammar mistakes in product review affect my purchase decision.	2,80	1,149	604

1 = disagree to 5 = full agree

Table 6 shows that respondents attitudes for the reviewers (writer of reviews). According to the results are given in Table 6, in order of the arithmetical average, other reviewers's rating of usefulness of the review is regarded as more important than other statements. Therefore, it's suggested that other reviewers' evaluations should be presented on web sites. The factor of reviewer gender and residence are assessed with the least effectiveness on purchasing decision. It can be said that buyers don't consider demographic profile of reviewers as a significant factor.

Table 6: Statements of respondents about the reviewer

Statements	Mean	Std. Deviation	N
Other reviewers' rating of usefulness of the review affect my purchase decision.	3,35	,939	604
If the reviewers use the nick name or the real name affect my purchase decision.	2,81	1,115	604
The reviewer's frequency of posting reviews affect my purchase decision.	2,79	,991	604
The reviewer age affect my purchase decision.	2,72	1,008	604
The reviewer residence affect my purchase decision.	2,33	,910	604
The reviewer gender affect my purchase decision.	2,20	,908	604

1 = disagree to 5 = full agree

Statements of respondents about website that present the reviews are analyzed in Table 7. As the table Table 7 shows, the participation level of the respondents in predetermined propositions was found to be quite high. This indicates that the participants agree to importance of reliability of web site. Therefore, it can be recommended that reliability, internationality and popularity of web site is critical for consumer.

Table 7: Statements of respondents about website that present the reviews

Statements	Mean	Std. Deviation	N
Reliability of the site that present the reviews affect my purchase decision.	4,12	,840	604
Internationality of the web site that present the reviews affect my purchase decision.	4,01	,843	604
Popularity of the web site that present the reviews affect my purchase decision.	3,67	,932	604
If web site that present the reviews concern to company whose product i want to buy, affect my purchase decision.	3,61	,977	604

1 = disagree to 5= full agree

DISCUSSION

Today, many consumers turn to the internet to research products—whether they buy on the Web site or later in-store. As they conduct their research, the critical first-step in the purchase decision, consumers assign more credibility to the opinions of other consumers than to paid experts or sell copy. For this reason, the major contribution of this study is to explore impact of the online consumer reviews, one type of eWOM, on purchasing decision. Besides this, several conclusions can be drawn from these analyses. First, the result of the research has revealed that there were significant main effects of the reading reviews before purchasing and buyers' purchase frequency.

Second, number of reviews have a significant effect on buyers' purchasing decision due to they increases the perceived popularity of a product. According to the results approximately 209 (34,6%) respondents read between 4-7 number of reviews before purchasing product. This research findings confirm that there were significant differences between buyers' purchase decision and number of reviews.

Third, this study shows that participants agree to characteristics of reviews are effective on purchasing decision. Specifically, consistency and recency of reviews are more effective on purchasing decision. It can be said that consumers are more worried about whether the reviews are true or manipulated. Hence, it is clear that trust plays a role in online consumer behaviour. In addition to participants assess the attribute-value reviews as clear and specific.

Fourth, other reviewers's rating of usefulness of the review is regarded as an important factor that influence the buyers purchasing decision. In a world where the social aspects of Web 2.0 have become a requirement for every website, it should come as no surprise that consumers put the most trust into the people they know and online opinions from fellow buyers. And therefore, it's suggested that other reviewers' evaluations should be presented on web sites.

Fifth, as a expected result, it's confirmed that buyers don't consider demographic profiles (such as age, gender and residence) of reviewers as a significant factor in purchasing process.

Sixth, the results of the study indicate that most of the surveyed participants agree to importance of reliability of web site. Therefore, it can be said that reliability, internationality and popularity of web site is critical for consumer decision.

Seventh, also there was a significant difference between buyers' internet usage time and reading reviews. Findings show that participants who use internet too read more online reviews than others. One more finding of this study is that there was a significant interaction effect between product price and reading reviews before purchasing. Most participants base a recommendation on price and convenience. This is especially true in the current economic climate, where shoppers are increasingly intent upon finding deals.

These findings help marketers to develop strategic plans for future applications. In addition, under the network environment, the electronic word-of-mouth is the truest reflection of consumers' product evaluation; enterprises should concern about the electronic word-of-mouth and get consumers' opinion of the brand to improve brand competition force constantly.

Limitations And Further Research

One limitation of the study is that it focused on only electronic goods. Thus, the findings of this study may not be generally applicable to all products. To supplement this limitation, it can suggested a possible future research directions. Further research could examine this issue in an experimental setting by manipulating the type of products. Also future research could investigate an eWOM effect model on cross-cultural basis. Considering that eWOM is global, cross-cultural research on the eWOM effect would be an interesting issue.

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