

# The Effect of eWOM on Purchase Intention for Korean-brand Cars in Russia: The Mediating Role of Brand Image and Perceived Quality\*

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Yu Evgeniy

Department of Business Administration, Chonnam National University, South Korea

Kangmun Lee

Department of Business Administration, Chonnam National University, South Korea

Taewoo Roh<sup>†</sup>

Department of International Trade, Soonchunhyang University, South Korea

## Abstract

**Purpose** – This paper tried to identify the impact of electronic word of mouth (eWOM) on purchase intention (PI) of Korean-brand cars in the context of Russian consumers, taking into consideration the credibility, quality, and quantity of eWOM while also considering the mediation effects of brand image (BI) and perceived quality (PQ). Although there is a considerable number of studies discussing the impact of eWOM determinants on PI, not many studies were conducted focusing on the Russian market.

**Design/methodology** – This paper is considered to fill this gap between eWOM and (PI) and, in order to do so, 211 Russian respondents were randomly selected. Descriptive analysis, factor, and reliability analysis were conducted using SPSS version 22.0. While structural equation modeling was conducted using AMOS version 24.0.

**Findings** – The results display that, in terms of Russian consumers' perception, eWOM credibility, quality, and quantity for Korean-brand cars show a substantial impact on PI. The mediation effects of brand image, as well as perceived quality, were also supported by analysis. In the final part of the paper, theoretical and managerial implications alongside limitations with further research suggestions are presented.

**Originality/value** – This study endeavored to explore the degree of impact of eWOM and mediating roles of BI and PQ on Russian customer intentions to buy Korean-brand cars.

**Keywords:** Brand Image, Electronic Word of Mouth, eWOM Credibility, eWOM Quantity, eWOM Quality, Perceived Quality, Purchase Intention

**JEL Classifications:** F23, L23, L62

## 1. Introduction

The car industry in Russia is very significant and competitive. In Russia, approximately 60% of the car market belongs to foreign car brands. Among foreign automakers, Japanese car brands dominate the market with a share of 22.6% with Korean-brand cars taking second place with a 10.8% share (ASM-Holding, 2017). However, if we look at an annual statistic of the sales of new foreign brand cars over the last decade, Korean automakers showed the

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<sup>†</sup>Corresponding author: troh@sch.ac.kr

largest share in almost every year among foreign car brands and even giving a stiff competition to a local Russian car brand Avtovaz (Autostat, 2018). Nowadays, despite showing excellent results in sales among foreign car brands, Korean carmakers set the bar to overtake Avtovaz in annual sales in Russia and it is vital to take into consideration modern phenomenon among customers and get in-depth knowledge in what drives consumers' PI while making a marketing strategy.

In our modern age with new technologies like internet, people try to go online and find information about goods, services, or brands in the form of user comments, ratings, reviews, video reviews, or other contents made by other usual consumers before purchasing any product (Park Do-Hyung and Kim Sara, 2008). Nowadays, this phenomenon is spread in almost every country and the business world should pay more attention to it. These days, consumers have more power and, unlike traditional marketing, people tend to trust people and not advertisements or marketers (Morris, 2009). Nielson (2015) has reported that offline and online word of mouth (WOM) take first and third places in the list of the most trusted types of advertising around the globe, leaving behind all other forms of advertising. More and more customers listen and trust in recommendations of their family or friends.

The existing literature emphasizes that eWOM enhances consumers' purchasing intention by reinforcing their awareness, mainly through media. However, recent studies on eWOM show that consumers can search for products that they want to buy online, and the quality of products can be recognized through reviews of various people. As millennial generations emerge, trust in their online community is increasing (Rossmann, Ranjan and Sugathan, 2016). As such, since eWOM makes it easier for consumers to gain access to information about the product, consumers can easily identify the status of that brand. In short, consumers familiar with online communities due to the development of mobile devices have increased their intention to purchase products through eWOM online (Lee Mi-Sook and An Hong-Bok, 2018). As a result, in a context where the main path of the customer's product information is converted to the online network, the more exposed the information about a specific product the online, the more experienced the brand image and perceived quality of the product. Furthermore, this leads to purchasing intention. If eWOM cannot derive brand image and perceived quality, it can be difficult to create a purchase intention. Therefore, we tried to analyze the role of a mediating parameter of brand image and perceived quality in this study.

Also, consumer opinions posted online are considered to be trustful (Nielson, 2015). Looking at this trend, the modern era of technologies is changing the way Russian customers acquire information too. According to Nielson (2015), Russian customers perceive advertisements more skeptically than consumers from other countries. Russian people, like many others, tend to believe that friends' and family members' recommendations are trusted. In Russia, 86% of surveyed people say that they trust recommendations from people they know and 55% trust online recommendations. When customers seriously take into account eWOM messages, it may be turned into a purchase action right away. Forman, Ghose and Wiesenfeld (2008) proposed that there is a direct link between eWOM and the firm's sales. It suggests that eWOM can be a very mighty tool that gives interest to researchers on how it affects PI. To have some understandings of what Russian consumers keep in mind while purchasing a car, analyzing which factors influence the purchase decision is vital. However, there are few existing studies on what factors influence Russian customers in PI of Korean-brand cars and no studies conducted on the influence of eWOM on Russian customer intentions to buy Korean-brand cars. This study attempted to give more academic significance than simply attempting a regional-specific study by integrating the measurement of e-WOM. Therefore, this study utilizes three approaches that have been dealt with in previous studies to measure eWOM as an independent variable, Quality, Quantity, and

Credibility (Lkhaaruren and Nam, 2018). Besides, we have verified the mediating effects of BI and PQ to differentiate ourselves from previous studies.

This study is organized as follows. First, the theoretical background and the hypotheses of the main concepts used in this study were derived. Afterward, the research method and verification results were presented. Finally, in the conclusion section, the implications and limitations of this study were discussed.

## 2. Literature Review

### 2.1. Electronic Word of Mouth (eWOM)

Word of mouth is viewed as one of the most powerful sources of information since the emergence of human society (Litvin, Goldsmith and Pan, 2008). Before the existence of the Internet, people considered word of mouth as the preferred mean for sharing their ideas and experiences with different products and services. There are many studies by various scholars with different perspectives related to the word of mouth concept because of its importance and impact on customers and their purchase decisions. Therefore, there are different variations for definitions of word of mouth with the same core meaning which remains suitable even now and describes word of mouth. Chan and Ngai (2011) argued that “person-to-person communication between a receiver who receives the information and a communicator who sends the information, while receiver perceives the communicator as non-commercial, regarding a product, brand or service.” Word of mouth occurs when one person shares with another any information regarding a particular product or service. The main distinctive trait that differs word of mouth from other types of communication is that WOM holds a non-commercial character. Customers who entered in word of mouth can be confident that the received information is custom-built for their needs without any hidden objectives, contrary to advertisements where there is a target to sell a product. Word of mouth has another specific factor in which the need for social support for participants is that they search the confirmation that they purchased the right product. According to Ryu Gang-Seog and Feick (2007), word of mouth can be referred to as social behavior, where the customer enters into contact with a large number of people starting from close friends and family to acquaintances. Based on Park Do-Hyung, Lee Ju-Min and Han In-Goo (2007), the similarities between one who sends and one who receives the information may be essential when it steps on developing new attitudes about brands. Taking in mind that conversation possesses high perceived credibility, it is often the case that word of mouth significantly influences how consumers evaluate their buying options. Because of the nature of the Internet, now it is possible to communicate and exchange ideas with anyone regarding their locations which leads to the creation of electronic word of mouth.

As the new technologies and internet are developing rapidly, a new prospect has been opened to Word of Mouth, giving the renewed prefix of “electronic” to the name itself forming the new collocation “electronic word of mouth (eWOM).” Nevertheless, the business world has been considering eWOM as a newly formed and essential phenomenon for only the last fifteen years. In the relevant literature, the term “electronic word of mouth” is not only known as “online word of mouth” but also has different variations like “word of mouse,” “Internet WOM” (Goldenberg, Libai and Muller, 2001).

According to the definition proposed by Cheung, Lee and Rabjohn (2008), eWOM can be referred to any statement made by the actual, former, or potential customer regarding a product or company that can be freely seen to lots of people in an online world. The statement is not considered to be only positive, but it also can be detrimental. Additionally, Litvin,

Goldsmith and Pan (2008) made a definition of eWOM as communication among customers in an informal way about specific product or service using networking technologies which provide the specialty of enormous scale, immediacy and anonymity. Chan and Ngai (2011) further mentioned that in online media like online forums, online chat rooms and others, customers post and share with other consumers their positive or negative experience regarding a product or service on their right. In this study, we will examine the attributes of eWOM in three dimensions that are QL, QN, and CD.

## 2.2. eWOM: Quality (QL), Quantity (QN), and Credibility (CD)

According to Bhattacharjee and Sanford (2006), information quality refers to the convincing power of the message and if customers perceive that information about product or service is clear and satisfactory they tend to purchase the product or service more willingly (Cheung, Lee and Rabjohn, 2008; Park Do-Hyung, Lee Ju-Min and Han In-Goo, 2007; Ryu Gang-Seog and Feick, 2007). People usually have their specific criteria that match their needs based on which they decide whether to buy a product or not; for example, the degree to which the given information is easy to understand, clear, and helpful (Cheung, Lee and Rabjohn, 2008). Therefore, while assessing the probable PI, the perception of information quality that consumers hold can be an essential element.

A significant number of studies consider that eWOM is an essential affecting factor on consumer PI (Chan and Ngai, 2011; Park Do-Hyung, Lee Ju-Min and Han In-Goo, 2007). Purchase action can immediately happen when people take into account eWOM messages. Forman, Ghose and Wiesenfeld (2008) argued that there is a direct effect of eWOM on a company's sales. Nowadays, more and more people before deciding to purchase a particular product or service try to read recommendations shared by customers who already have the experience in buying that type of product or service. Due to the development of smart devices and information networks, research on eWOM is being actively conducted rather than traditional WOM. Corporate advertising activities through eWOM help to build trust in customers for specific products as well as the recommendation of acquaintances and family members, a representative WOM tool (Nielsen, 2015). Also, there are existing studies in which eWOM using social media positively influences product selection (Forman et al., 2008; Morris, 2009). Therefore, we can conclude that eWOM is a compelling phenomenon that makes scholars interested in researching how it influences PI.

Furthermore, eWOM quality (QL) is another crucial factor that tends to be discussed with eWOM cogency (Park Do-Hyung and Kim Sara, 2008; Park Do-Hyung, Lee Ju-Min and Han In-Goo, 2007) while Chatterjee (2001) argued that QL which is reading multiple reviews by other consumers who could lead to less anxiety when making a purchase decision. Consumers get to know that there many others who also purchased this individual product or service.

When customers make purchase decisions in order to reduce the feeling that their choices were not right or on the contrary to boost the confidence that they bought the right product or service among many others, the quantity of information steps up and plays a vital role in the decision-making the process. If customers can see a lot of reviews or comments about any particular product or service, it could mean that these products or service is in demand and popular. eWOM quantity (QN) makes reviews more apparent when a customer search for these online reviews (Cheung, Lee and Rabjohn, 2008). Based on the study by Lee Ju-Min, Park Do-Hyung and Han In-Goo (2008), consumers' decision whether to buy a product or service could be affected by the quantity of the information that people can get about this product or service. Nowadays, along with the commonly known trustful source of information - organizations' official websites, other sources like online blogs, online forums, web boards,

product review websites, and online social networking sites are proliferating giving people the chance to read more information before purchasing a product or service.

Hennig-Thurau et al. (2004) defined eWOM credibility (CD) as the degree to which people perceive that one's recommendation is factual, accurate, or believable. According to Awad and Ragowsky (2008)'s definition of perceived credibility, the last one plays the central role in a customer's decision-making process, and also claimed that it decreases uncertainty in business intercommunications, as well as social. On the grounds of these definitions, we can conclude that if the customers feel that products or services' comments or reviews come from credible sources, the purchase decision is likely to be made taking into account these comments or reviews. On the other side, if customers perceive that comments or reviews are not so credible, these comments or reviews will be overlooked, people tend to ignore less credible sources (Sweeney, Soutar and Johnson, 1999).

Existing studies measured eWOM as a variable for the study of eWOM's effect on PI. However, previous studies have shown that eWOM has three internal properties (Lkhaaruren and Nam, 2018). Therefore, assuming that the effects of eWOM on PI existed, it was necessary to check the effects of the properties of refined eWOM on PI. Therefore, the following hypothesis was established.

*H1: QL of Korean-brand cars has a positive effect on PI.*

*H2: QN of Korean-brand cars has a positive effect on PI.*

*H3: CD of Korean-brand cars has a positive effect on PI.*

### 2.3. Mediation Effect: Brand Image (BI) and Perceived Quality (PQ)

Aaker (1996) proposed that brand image is viewed as the essential marketing factor and potential buyers can be targeted adequately through this communication. In a similar study by Dodds, Monroe and Grewal (1991), they explored that brand image (BI) had been considered as one of the most potent factors to affect consumer behavior. Aaker (2009) defined BI as the way how people perceive the specific brand and it can be stored in consumers' memory as a set of brand associations. From the view of general customers, BI is considered as the factor that can help people to decide whether a specific brand has features that match what consumers demand and BI makes a contribution in the process of decision making (Strizhakova, Coulter and Price, 2011; Völckner et al., 2010). A good BI can help companies in several ways: to build an appropriate brand position, to strengthen the company's marketing performance and finally, to be differentiable from other brands. Therefore, in today's competitive environment, companies must build up long-term BI (Aaker, 1996, 2009; Park Do-Hyung and Kim Sara, 2008; Park Do-Hyung, Lee Ju-Min and Han In-Goo, 2007).

The process of a consumer purchase decision is complicated and tends to be tied with customer's behavior, attitudes, and perceptions. Moreover, factors such as PQ and value may affect PI decision. According to Ghosh and Craig (1983), the buying process can be effectively predicted by PI. Also, PI indicates that after estimating a product or service and considering that it is worth buying or not, the customer is going to buy the product or service. To put it differently, a customer has the intention to buy this particular product or service when he or she discovers that there is a need to buy it.

Strizhakova, Coulter and Price (2011) argued that PI is the extent to which customers are willing to recommend the product or service. When a consumer chooses one particular product or service, customer PI affects the final decision whether to buy or reject this product or service Lee Ju-Min, Park Do-Hyung and Han In-Goo (2008). Hennig-Thurau et al. (2004) argued that BI positively affects the PIs of the customers. Furthermore, based on previous

researches Rust, Lemon and Zeithaml (2004) discovered that there is a mediation effect of BI between word of mouth and PI. In presenting the process of creating investment performance for marketing activities, they mentioned that marketing activities, including WOM, influence consumers' brand awareness, and that improved brand image contributes to consumers' attractiveness and retention of products. Ryu Gang-Seog and Feick (2007) also found that BI can considerably mediate the relationship between word of mouth and PI.

According to these studies, the hypotheses are formed as follows:

*H4a: BI of Korean-brand cars mediates the relationship between QL and PI.*

*H4b: BI of Korean-brand cars mediates the relationship between QN and PI.*

*H4c: BI of Korean-brand cars mediates the relationship between CD and PI.*

There are many definitions of perceived quality (PQ) made by different authors. According to Rust, Lemon and Zeithaml (2004), PQ can be seen as a general judgment made by the customer which differs from the objective quality and it also can be a component of brand value. Bickart and Schindler (2001) argued that PQ is the customer's judgment of product added value or product specification consistency. Völckner et al. (2010) proposed that PQ was formed from a comparison between a customer's expected quality and actual quality of a product or service. Based on the study by Ghosh and Craig (1983), they believe that PQ is the everlasting effect of processed product attributes that lead the customers to judge the quality of the product or service.

The more significant definition was proposed by Aaker (2009), he argued that PQ is the consumer's perception of the overall quality or advantages of the product or service compared to other alternatives. Aaker (2009) claimed that PQ is somewhat different from the nature or quality of product components or features. If we look at all definitions proposed by different scholars, while they all are slightly different, the central meaning is similar – PQ is the general consumer's perception about all components of the product or service including tangible and intangible features. Once again, PQ is not the same as the actual quality of products or services. Aaker (2009) claimed that PQ can enlarge customer evaluations. Therefore, it can predict the purchase history well. Besides, many studies have empirically confirmed that there is a positive effect of PQ on the customers' PI (Wang and Benbasat, 2007; Zhao, Lynch and Chen, 2010). Consequently, it can be hypothesized that:

*H5a: PQ of Korean-brand cars mediates the relationship between QL and PI.*

*H5b: PQ of Korean-brand cars mediates the relationship between QN and PI.*

*H5c: PQ of Korean-brand cars mediates the relationship between CD and PI.*

In this study, we primarily explore how Russian consumers perceive the effect of electronic word of mouth on PI while considering the role of mediating constructs such as BI and PQ. The research model is displayed in Fig. 1. First, we measure the direct impact of QL, QN, and CD on PI followed by discovering the mediating roles of BI and PQ.

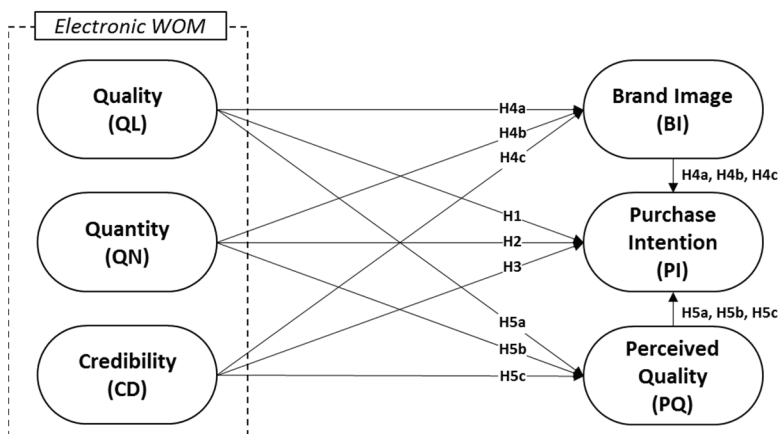
### 3. Methodology

#### 3.1. Samples

In Russia, word of mouth and electronic word of mouth are considered as the most reliable tools that can affect customers' purchase decisions. According to Nielsen research, Russian consumers perceive that WOM with eWOM is the most trusted and leading source in making

purchase decisions. In Russia, about 9 of 10 people (86%) reported that they have trust in what people they know recommend them. The second most affecting factor in the purchase decision is online recommendations and reviews; almost 6 of 10 people (55%) trust them. The third most trusted source is reviews, posts, tweets made by social media influencer or blogger, around a quarter of respondents (23%) in Russia perceive such posts from influencers as somewhat trusted. Fourth place among Russian customers goes to written reviews or online recommendations, such as online shopping website reviews; 17% of customers trust them.

Fig. 1. Research Model



In the Russian online world, the most popular social media is Vkontakte (VK), 61% of people responded that they use VK more frequently than any other SNSs and the global leader Facebook has accounted only for 35% (ASM-Holding, 2017). There are a lot of online groups for car lovers in VK, the most active online group is called Auto Drive and it has more than 1 million of users, the second biggest group is called Avto with 800,000 of users and many more others. Generally, people in these groups tend to have a car and love to discuss any car topic comparing to other people that do not own a car. Therefore, we can conclude that a majority of active car lovers are gathered together and share each other recommendations online which could bring great opportunities for auto companies who are focusing on the Russian market.

For example, Hyundai-Kia Motors in Russia has exceeded its 25% market share in 2018. It is the first time since the company built a plant in St. Petersburg in 2011 and entered the Russian market in earnest. Hyundai-Kia Motors ranked second in market share following the Abtobaz-Renault-Nissan group (34.6%). Hyundai-Kia Motors' robust sales in the Russian market are deemed as the result of aggressive online marketing. Additionally, Rio (Kia), Crete (Hyundai), and Solaris (Hyundai) all ranked third and fifth in sales, all of which are produced at Hyundai Motor's plant in St. Petersburg. In other words, it was reported that Hyundai Kia Motors established production facilities for local people and contributed to the employment rate of Russia and that this information was spread online through word of mouth (Lee Eun-Taek, 2018).

### 3.2. Variable Measurements

For measuring items, we used a commonly known 7-point Likert scale, where '1' represents strongly disagree while '7' means strongly agree. A Likert scale is a good measurement tool to

explore how subjects agree or disagree with statements. For QL, items used in this study were adopted from (Park Do-Hyung and Kim Sara, 2008); for QN from a study from Ryu Gang-Seog and Feick (2007); CD items were taken from a study by Ohanian (1990). To measure PI, we adopted items from Baker and Churchill (1977); BI scale was adopted from Dodds, Monroe and Grewal (1991) and finally to measure PQ construct, the scale that used in this study was from Sweeney, Soutar and Johnson (1999). The summary of all measurements and sources are presented in Table 1.

**Table 1.** Questionnaire Items for Construct

Construct	Item
QL	<ol style="list-style-type: none"> <li>1. I think online comments and discussion about Korean-brand cars have sufficient reasons supporting the opinions.</li> <li>2. eWOM about Korean-brand cars products are understandable and clear.</li> </ol>
QN	<ol style="list-style-type: none"> <li>1. There are many reviews or recommendations on Korean-brand cars products online.</li> <li>2. Many people communicate about Korean-brand cars products online.</li> </ol>
CD	<ol style="list-style-type: none"> <li>1. The comments about Korean-brand cars products are reliable.</li> <li>2. Online comments about Korean-brand cars products are honest.</li> </ol>
PI	<ol style="list-style-type: none"> <li>1. After reading online reviews/comments about Korean-brand cars, it makes me desire to buy the Korean brand car.</li> <li>2. I will consider buying the Korean brand car after reading online reviews/comments about Korean-brand cars.</li> <li>3. I intend to try the Korean brand's car discussed in the online reviews/comments about Korean-brand cars.</li> <li>4. In the future, I intend to buy the Korean brand's car discussed in the online reviews/comments on Korean-brand cars.</li> </ol>
BI	<ol style="list-style-type: none"> <li>1. Korean-brand cars are reliable.</li> <li>2. Korean-brand cars are interesting.</li> <li>3. The purchase of Korean-brand cars can make me feel happy.</li> </ol>
PQ	<ol style="list-style-type: none"> <li>1. Korean-brand cars offer good quality cars.</li> <li>2. The overall quality of Korean-brand cars is high.</li> <li>3. The quality of Korean-brand cars is consistent.</li> </ol>

## 4. Empirical Results

### 4.1. Descriptive Analysis

A total of 211 respondents took part in the survey through online and offline data collection methods and based on these results. This study performed snowball sampling in Russia's Vkontakte, which is similar to Facebook in the United States for random sampling. The investigator uploaded a post on the research goal of this study to Vkontakte, made 500 copies of web-based questionnaires for acquaintances, and collected 211 copies. The questionnaire recovery rate was 42.2%, and the questionnaires that were not used for statistical verification were the respondents who stopped during the response. In Table 2, descriptive statistics are displayed. Among 211 participants, there are 178 men (84.4%) and 33 women (15.6%). According to the age group, more than half participants belong to 25-44 age group, 126 (59.7%); 57 (27%) participants are in 18-25; 23 (10.9%) people in 45-59 and only 5 (2.4%) of



participants in the age group who are over 60. According to the monthly income, 22 participants (10.4%) earn less than 20000 rubles; 66 (31.3%) people have a salary from 20000 to 40000 rubles; 57 (27%) respondents make from 40000 to 60000 rubles a month and lastly, 66 (31.3%) people have an income over 60000 rubles. Finally, for education level statistics, the majority of respondents – 155 (73.5%) hold university degrees, 47 (22.3%) people graduated high school and only 9 (4.3%) participants stopped their education after junior school.

**Table 2.** Descriptive Statistics

Item	Category	Frequency (N)	Proportion (%)
Gender	Male	178	84.4
	Female	33	15.6
Age	18-25	57	27
	25-44	126	59.7
	45-59	23	10.9
	Over 60	5	2.4
Monthly Income (Unit: RUB)	Less than 20000	22	10.4
	20000-40000	66	31.3
	40000-60000	57	27
	Over 60000	66	31.3
Education Level	Junior school and below	9	4.3
	High school	47	22.3
	University and above	155	73.5
Total		211	100

#### 4.2. Exploratory Factor Analysis (EFA)

Factor analysis is a method in statistics to extract combined factors from a bunch of variables; doing this we can shorten our number of central variables to a minimum which still is going to represent all the necessary variable information (Kim Jae-On and Mueller, 1978). In this study, we employed principal component analysis method and factors whose eigenvalue was higher than 1 were extracted. After, we were able to get the value of the variable by rotating the factor matrix through the Varimax method. Table 4 summarizes exploratory factor analysis findings. The KMO value is 0.797 (greater than 0.5) and Bartlett's test of sphericity is also significant ( $p < 0.000$ ). Moreover, every variable corresponds to the right number of items and all factor loadings (FL) for these items representing variables are higher than 0.6. Adding all these together, we can conclude that our conducted EFA proves that the questionnaire used in this study is valid for the next stages of analysis.

Concerning reliability analysis, Cronbach's alpha values were evaluated. According to Nunnally (1994), if the value for Cronbach's alpha is over 0.7, the gathered data is reliable. In Table 4, we can see the Cronbach's alpha value for each variable; PI (0.880), BI (0.819), PQ (0.747), QL (0.771), QN (0.735), QN (0.754); all presented values are greater than 0.7.

#### 4.3. Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis is a particular type of factor analysis which is mainly used for two reasons. It is used to check the dimension of scale at which every concept is measured and we also use confirmatory factor analysis to examine if the measures of the constructs are

consistent with researchers' understanding of the nature of proposed constructs. The model in this study is built of 6 constructs and 16 measurement items. Table 3 shows that model fitting indexes are satisfactory:  $\chi^2/df = 1.864$ , GFI = 0.921, CFI = 0.954, TLI = 0.945, IFI = 0.966, RMSEA = 0.064, and SMRM = 0.058. In Table 4, we can see the summary of all factor loadings with composite reliability (CR) and average variance extracted (AVE). All of the presented factor loadings are greater than 0.6 and the p-value is also significant ( $p < 0.001$ ). CR of PI construct with its four items is 0.890, the composite reliability of BI measured by three items is 0.829, PQ which is measured by three items has composite reliability 0.751, for CD it is 0.732, for QL is 0.799 and finally, QN is 0.758. When the composite reliability value of all constructs is greater than 0.7, the research model has internal consistency (Hair et al., 1998).

**Table 3.** Model Fitting Indexes for CFA

Index	$\chi^2/df$	GFI	CFI	TLI	IFI	RMSEA	SRMR
Standard Value	< 2	> 0.9	> 0.9	> 0.9	> 0.9	< 0.08	< 0.08
Actual Value	1.864	0.92	0.95	0.95	0.97	0.06	0.06

Source: Hu and Bentler (1999).

**Table 4.** Reliability and Convergent Validity

Factor	Item	FL	p-value	CR	AVE	Cronbach's $\alpha$
PI	PI2	0.842	.000	0.890	0.670	.880
	PI3	0.785	.000			
	PI4	0.871	.000			
	PI1	0.747	.000			
BI	BI2	0.823	.000	0.829	0.620	.819
	BI3	0.778	.000			
	BI4	0.733	.000			
PQ	PQ1	0.718	.000	0.751	0.520	.747
	PQ2	0.724	.000			
	PQ3	0.676	.000			
	CD2	0.829	.000			
QL	QL1	0.719	.000	0.799	0.668	.735
	QL2	0.722	.000			
QN	QN1	0.755	.000	0.758	0.612	.754
	QN2	0.786	.000			
CD	CD1	0.772	.000	0.732	0.554	.771
	CD2	0.829	.000			

**Table 5.** Comparison of Square Root of AVE and Correlation Coefficient

Variables	1	2	3	4	5	6
1 PI	0.716					
2 BI	0.411*	0.787				
3 PQ	0.455*	0.409*	0.816			
4 CD	0.625*	0.422*	0.537*	0.818		
5 QL	0.518*	0.414*	0.438*	0.450*	0.738	
6 QN	0.436*	0.388*	0.407*	0.477*	0.493*	0.782

Notes: 1. Diagonal elements are the square roots of the AVE.

2. \* $p < 0.05$ .

According to Fornell and Larcker (1981), the threshold for AVE should be higher than 0.5 in order to show that the proposed model's measurement scale is convergent. In Table 5, we can observe that the values of AVE for all variables are greater than the threshold of 0.5 proving that the model shows a convergent validity. To examine the discriminant validity, we need to compare the square root value of AVE with a correlation coefficient. We can notice that the square root of AVE for all constructs is over the correlation coefficient in Table 5, therefore proving that the presented model has discriminant validity.

#### 4.4. Common Method Bias (CMB)

The risk of CMB is always inherent in the structural equation model using the questionnaire. Podsakoff et al. (2003) recommend Harman's single factor test and suggest that there is no problem with CMB when the variance explanatory power of one factor is less than 50% as a result of principal component factor analysis. On the other hand, in recent multivariate methodology, since latent variable (LV) is used more than in the past, it is paying attention to multicollinearity that can occur between LVs rather than Harman's single factor. In this vein, Kock and Lynn (2012) suggest that the risk of CMB is small when the variation inflation factor (VIF) of lateral collinearity between LVs is less than 3.3. We accepted the method proposed by Kock and Lynn (2012) and found that the inter-LV VIF was less than 2, indicating that there was no CMB problem. Lai et al. (2016) also verified CMB in the same way (p.680).

#### 4.5. SEM Results

In order to control the degree of eWOM's effect on brand image, perceived quality, and purchase intention, this study assumed the gender, age, monthly income, and education level of Russian consumers as control variables. In Table 6, we can observe that each of eWOM (QL, QN, and CD) has a positive impact on PI (0.283, 0.228, and 0.364, respectively) at the 0.001 significant level. Thus, we confirmed that our suggested hypothesis 1, 2 and 3 were supported.

**Table 6.** Result of SEM: Direct Effect

Hypothesis	Path	Std. Coef.	p-value	S.E.	Conclusion
H1	QL→PI	0.283	***	0.075	Supported
H2	QN→PI	0.228	***	0.058	Supported
H3	CD→PI	0.364	***	0.104	Supported

**Note:** \*\*\* $p < 0.001$ .

In order to test the mediating variables, the bootstrapping method was conducted in this study (Zhao, Lynch Jr and Chen, 2010). We set the number of bootstrap samples to 10,000 and the confidence was set to 95% to assure representativeness of the sample (Strizhakova, Coulter and Price, 2011). In Table 7, we can see the result of the mediation effect analysis.

In Table 7, we first tested the mediation effect of BI and found that the coefficient of mediation between eWOM (QL, QN, and CD) and PI is 0.042, 0.037 and 0.043, respectively. Thus, we can conclude that our hypothesis 4a, 4b, and 4c are supported. Since the confidence interval of bias-corrected bootstrapping does not include zero between lower and upper bound, all path of meditation is significant. Second, the mediating effect of PQ was tested. The coefficient of mediating between CD and PI is 0.055, QL and PI are 0.051, and QN and

PI are 0.047, proving that hypothesis 5a, 5b, and 5c were supported. As the same result of the above mediation effect for BI, PQ mediates between eWOM (QL, QN, and CD) and PI by the bias-corrected bootstrapping without including zero. Third, in order to re-examine the mediation effect, we used Sobel and Goodman test and confirmed the partial mediation effect in all paths at the 0.05 significant level (Sobel, 1982). Since all mediated paths do not have a deterioration effect on the significance of the original direct path between eWOM and PI, it could be said that partial mediation effects were verified (Baron and Kenny, 1986).

**Table 7.** Result of SEM: Mediation Effect

Hypothesis	Mediation Path	Coef.	Bias-corrected Bootstrap		Conclusion
			Lower	Upper	
H4a	QL→BI→PI	0.042	0.019	0.083	Supported (Partial Mediation)
H4b	QN→BI→PI	0.037	0.015	0.075	Supported (Partial Mediation)
H4c	CD→BI→PI	0.043	0.021	0.081	Supported (Partial Mediation)
H5a	QL→PQ→PI	0.051	0.028	0.117	Supported (Partial Mediation)
H5b	QN→PQ→PI	0.047	0.023	0.092	Supported (Partial Mediation)
H5c	CD→PQ→PI	0.055	0.032	0.121	Supported (Partial Mediation)

## 5. Conclusion

In this study, we tried to identify the determinants of intention to purchase Korean-brand cars in the context of electronic word of mouth among Russian consumers, and the degree of the impact of factors such as quality, quantity, and credibility of eWOM as well as mediating roles of BI and PQ were investigated. After an empirical analysis of 211 respondents' data collected primarily online in Russia, descriptive analysis, reliability and factor analysis, structural equation modeling analysis was conducted to measure the relationship between all variables of the proposed model on PI for Korean-brand cars in Russia.

The results of the analysis indicate that all the hypotheses from our proposed model were supported: quantity, quality, and credibility positively affect PI, as well as BI and PQ, mediate relationships between eWOM determinants and PI. Russian consumers' CD has the most substantial effect on PI following QL and QN. From the analysis of the mediation effect, PQ mediates QL, QN, and CD more significantly than BI. Unlike previous studies dealing with the direct causal relationship between eWOM and PI (Erkan and Evans, 2016; Kudeshia and Kumar, 2017), this study examined the role of eWOM composed of three characteristics and the function of BI and PQ that mediates the relationship between eWOM and PI to verify the process existing between eWOM and PI. Through the direct and indirect path analysis, valid results were obtained. Later, these results of the study may help Korean-brand cars' producers and dealers in organizing marketing strategies focusing on Russian customers.

The theoretical contribution of this study is as follows. First, the credibility of consumers in online WOM is supplemented. eWOM is becoming more and more widely used, and as consumers become accustomed to it, the small issue of the product spreads quickly online regardless of whether it is positive or negative. In short, when the trust in a product is built up in the online community to some degree, the rate of expansion is too fast to predict (Lee Mi-Sook and An Hong-Bok, 2018; Rossmann, Ranjan and Sugathan, 2016; Wang and Benbasat, 2007). In this regard, credibility is expected to contribute to the eWOM research flow in the future. Second, we expected that eWOM in emerging countries would contribute to PI. Korean-brand cars, represented by Hyundai-Kia motors, grew fast enough to reach

almost one place in less than eight years. Such a phenomenon can be a different approach from efforts in the emerging countries to upgrade the lowest ranking company in the existing consumer goods product unit (Mishra et al., 2018). For example, in the field of international management research, most of the researches that international corporations must actively localize for leapfrogging in emerging countries (Lee Kang-Mun and Roh Tae-Woo, 2019; Park Byung-Il and Roh Tae-Woo, 2019; Yang Ji-Yeon and Roh Tae-Woo, 2019). However, as in the results of this study, it may be more useful to make eWOM active online. In other words, if manufacturing-based products such as Korean-brand cars are to enter the emerging markets in the future, they need to figure out how to disseminate BI and PQ using eWOM.

The managerial implication of the study is as follows. First, this study endeavored to explore the degree of impact of eWOM and mediating roles of BI and PQ on Russian customer intentions to buy Korean-brand cars. We tried to test the reasons why Russian customers buy Korean-brand cars based on the discussed factors through analysis. The higher perception of QL, QN, and CD by Russian customers effectively stimulates PI (Forman, Ghose and Wiesenfeld, 2008). The results may assist companies in making marketing strategies, planning, and strategic decisions in entering the market and further promoting their products among other competitors (Dodds, Monroe and Grewal, 1991). Second, the present study suggests that if Korean-brand cars want to push Russian consumers' intentions to buy their products (Goldenberg, Libai and Muller, 2001; Hennig-Thurau et al., 2004), they need to strengthen QL, QN, and CD among Russian consumers for Korean-brand cars. In conclusion, it would be a major strategic task for Korean automakers to make smart devices and information delivered through them reflect the properties of eWOM we discussed in this study.

This research has several limitations. First, there are only 211 respondents in this study which may not make the results accurate enough in representing all Russian customers. In a future study, it is essential to consider more respondents, especially in a country with a massive population like Russia. Thus, we acknowledge the risk of generalization due to the insufficient samples, causing the distorted interpretation that the effect of eWOM may not apply to the Russian market. Second, the three determinants of eWOM (QL, QN, and CD) are not comprehensive and additional independent variables can be added to this model as well as some other mediating constructs. Third, it would be good that the degree of participation in the online community is controlled among the characteristics of the respondents. In the case of eWOM, purchasers who live up to PI are more likely to actively participate in online community activities (Lee Mi-Sook and An Hong-Bok, 2018). For example, a prospective buyer can search for reviews on each vehicle on Facebook or ask nearby people to review the target vehicle. The effect of such an online participant on the PI of the enthusiastic potential customers may be different from that of eWOM mediated by BI or PQ.

## References

- Aaker, D. A. (1996), "Measuring Brand Equity across Products and Markets", *California Management Review*, 38(3), 102-120.
- Aaker, D. A. (2009), *Managing Brand Equity*, New York, NY: The Free Press.
- ASM-Holding (2017), *Auto Industry 2017*. Available from <https://st-kt.ru/articles/avtoprom-i-avtorynok-itogi-2017-perspektivy-2018> (accessed February 10, 2019)
- Autostat (2018), *Leaders and Outsiders of Russian Auto Industry of 2018*. Available from <https://www.autostat.ru/infographics/37419/> (accessed March 20, 2019)

- Awad, N. F. and A. Ragowsky (2008), "Establishing Trust in Electronic Commerce through Online Word of Mouth: An Examination across Genders", *Journal of Management Information Systems*, 24(4), 101-121.
- Baker, M. J. and G. A. Churchill Jr. (1977), "The Impact of Physically Attractive Models on Advertising Evaluations", *Journal of Marketing Research*, 14(4), 538-555.
- Baron, R. M. and D. A. Kenny (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations", *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Bhattacharjee, A. and C. Sanford (2006), "Influence Processes for Information Technology Acceptance: An Elaboration Likelihood Model", *MIS Quarterly*, 30, 805-825.
- Bickart, B. and R. M. Schindler (2001), "Internet Forums as Influential Sources of Consumer Information", *Journal of Interactive Marketing*, 15(3), 31-40.
- Chan, Y. Y. and E. W. Ngai (2011), "Conceptualising Electronic Word of Mouth Activity: An Input-Process-Output Perspective", *Marketing Intelligence & Planning*, 29(5), 488-516.
- Chatterjee, P. (2001), "Online Reviews: Do Consumers Use Them?", *Advances in Consumer Research*, 28(1), 129-134.
- Cheung, C. M., M. K. Lee and N. Rabjohn (2008), "The Impact of Electronic Word-of-Mouth: The Adoption of Online Opinions in Online Customer Communities", *Internet Research*, 18(3), 229-247.
- Dodds, W. B., K. B. Monroe and D. Grewal (1991), "Effects of Price, Brand, and Store Information on Buyers' Product Evaluations", *Journal of Marketing Research*, 28(3), 307-319.
- Erkan, I. and C. Evans (2016), "The Influence of eWOM in Social Media on Consumers' Purchase Intentions: An Extended Approach to Information Adoption", *Computers in Human Behavior*, 61, 47-55.
- Forman, C., A. Ghose and B. Wiesenfeld (2008), "Examining the Relationship between Reviews and Sales: The Role of Reviewer Identity Disclosure in Electronic Markets", *Information Systems Research*, 19(3), 291-313.
- Fornell, C. and D. F. Larcker (1981), "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error", *Journal of Marketing Research*, 18(1), 39-50.
- Ghosh, A. and C. S. Craig (1983), "Formulating Retail Location Strategy in a Changing Environment", *Journal of Marketing*, 47(3), 56-68.
- Goldenberg, J., B. Libai and E. Muller (2001), "Talk of the Network: A Complex Systems Look at the Underlying Process of Word-of-Mouth", *Marketing Letters*, 12(3), 211-223.
- Hair, J. F., W. C. Black, R. E. Anderson and R. L. Tatham (1998), *Multivariate Data Analysis*, Upper Salle River, NJ: Pearson Education.
- Hennig-Thurau, T., K. P. Gwinner, G. Walsh and D. D. Gremler (2004), "Electronic Word-of-Mouth Via Consumer-Opinion Platforms: What Motivates Consumers to Articulate Themselves on the Internet?", *Journal of Interactive Marketing*, 18(1), 38-52.
- Hu, L. T. and P. M. Bentler (1999), "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives", *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- Kim, Jae-On and C. W. Mueller (1978), *Factor Analysis: Statistical Methods and Practical Issues*, Newbury Park, CA: Sage.
- Kock, N. and G. Lynn (2012), "Lateral Collinearity and Misleading Results in Variance-Based Sem: An Illustration and Recommendations", *Journal of the Association for Information Systems*, 13(7), 546-580.
- Kudeshia, C. and A. Kumar (2017), "Social eWOM: Does it Affect the Brand Attitude and Purchase Intention of Brands?", *Management Research Review*, 40(3), 310-330.
- Lai, C., Q. Wang, X. Li and X. Hu (2016), "The Influence of Individual Espoused Cultural Values

- on Self-directed Use of Technology for Language Learning Beyond the Classroom”, *Computers in Human Behavior*, 62, 676-688.
- Lkhaasuren, M. and K. D. Nam (2018), “The Effect of Electronic Word of Mouth (eWOM) on Purchase Intention on Korean Cosmetic Products in the Mongolian Market”, *Journal of International Trade & Commerce*, 14(4), 161-175.
- Lee, Een-Taek (2018), *Annual Sales of Hyundai and Kia in Russia to Exceed*. Available from <http://www.donga.com/en/article/all/20181226/1589991/1/Annual-sales-of-Hyundai-and-Kia-in-Russia-to-exceed-400-000-units> (accessed March 5, 2019)
- Lee, Ju-Min, Do-Hyung Park and In-Goo Han (2008), “The Effect of Negative Online Consumer Reviews on Product Attitude: An Information Processing View”, *Electronic Commerce Research and Applications*, 7(3), 341-352.
- Lee, Kang-Mun and Tae-Woo Roh (2019), “MNCs’ Learning of Local-specific Knowledge in South Korea: A Focus on the Center of Excellence”, *Journal of International Trade & Commerce*, 15(1), 273-289.
- Lee, Mi-Sook and Hong-Bok An (2018), “A Study of Antecedents Influencing Ewom for Online Lecture Website: Personal Interactivity as Moderator”, *Online Information Review*, 42(7), 1048-1064.
- Litvin, S. W., R. E. Goldsmith and B. Pan (2008), “Electronic Word-of-Mouth in Hospitality and Tourism Management”, *Tourism Management*, 29(3), 458-468.
- Mishra, A., S. S. Maheswarappa, M. Maity and S. Samu (2018), “Adolescent’s Ewom Intentions: An Investigation into the Roles of Peers, the Internet and Gender”, *Journal of Business Research*, 86, 394-405.
- Morris, N. (2009), “Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation”, *Journal of Direct, Data and Digital Marketing Practice*, 10, 384-387.
- Nielson (2015), *Global Trust Advertising: Winning Strategies for an Evolving Media Landscape*. Available from <https://bit.ly/1FxOyE2> (accessed April 20, 2019)
- Nunnally, J. C. (1994), *Psychometric Theory*, New York, NY: McGraw-Hill.
- Ohanian, R. (1990), “Construction and Validation of a Scale to Measure Celebrity Endorsers’ Perceived Expertise, Trustworthiness, and Attractiveness”, *Journal of Advertising*, 19(3), 39-52.
- Park, Byung-Il and Tae-Woo Roh (2019), “Chinese Multinationals’ FDI Motivations: Suggestion for a New Theory”, *International Journal of Emerging Markets*, 14(1), 70-90.
- Park, Do-Hyung and Sa-Ra Kim (2008), “The Effects of Consumer Knowledge on Message Processing of Electronic Word-of-Mouth Via Online Consumer Reviews”, *Electronic Commerce Research and Applications*, 7(4), 399-410.
- Park, Do-Hyung, Ju-Min Lee and In-Goo Han (2007), “The Effect of on-Line Consumer Reviews on Consumer Purchasing Intention: The Moderating Role of Involvement”, *International Journal of Electronic Commerce*, 11(4), 125-148.
- Podsakoff, P. M., S. B. MacKenzie, J. Y. Lee and N. P. Podsakoff (2003), “Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies”, *Journal of Applied Psychology*, 88(5), 879-903.
- Rossmann, A., K. R. Ranjan and P. Sugathan (2016), “Drivers of User Engagement in Ewom Communication”, *Journal of Services Marketing*, 30(5), 541-553.
- Rust, R. T., K. N. Lemon and V. A. Zeithaml (2004), “Return on Marketing: Using Customer Equity to Focus Marketing Strategy”, *Journal of Marketing*, 68(1), 109-127.
- Ryu, Gang-Seog and L. Feick (2007), “A Penny for Your Thoughts: Referral Reward Programs and Referral Likelihood”, *Journal of Marketing*, 71(1), 84-94.
- Sobel, M. E. (1982), “Asymptotic Intervals for Indirect Effects in Structural Equations Models”. In S. Leinhardt (Ed.), *Sociological Methodology*, San Francisco, CA: Jossey-Bass, 290-312.

- Strizhakova, Y., R. A. Coulter and L. L. Price (2011), "Branding in a Global Marketplace: The Mediating Effects of Quality and Self-Identity Brand Signals", *International Journal of Research in Marketing*, 28(4), 342-351.
- Sweeney, J. C., G. N. Soutar and L. W. Johnson (1999), "The Role of Perceived Risk in the Quality-Value Relationship: A Study in a Retail Environment", *Journal of Retailing*, 75(1), 77-105.
- Völckner, F., H. Sattler, T. Hennig-Thurau and C. M. Ringle (2010), "The Role of Parent Brand Quality for Service Brand Extension Success", *Journal of Service Research*, 13(4), 379-396.
- Wang, W. and I. Benbasat (2007), "Recommendation Agents for Electronic Commerce: Effects of Explanation Facilities on Trusting Beliefs", *Journal of Management Information Systems*, 23(4), 217-246.
- Yang, Ji-Yeon and Tae-Woo Roh (2019), An Empirical Study on the Effect of Government Support on Open Innovation and Export Performance for SMEs, *Korea Trade Review*, 44(3), 73-84.
- Zhao, X., J. G. Lynch Jr and Q. Chen (2010), "Reconsidering Baron and Kenny: Myths and Truths About Mediation Analysis", *Journal of Consumer Research*, 37(2), 197-206.