ARTICLE INFO

Article History:
Received: November 13, 2021
Revised: December 29, 2021
Accepted: December 29, 2021
Available Online: December 30, 2021

Keywords:
eWoM
Consumer buying behaviors
Consumer Biases
Digitalization

JEL Classification Codes:
I21, I22, I31

ABSTRACT

Electronic word of mouth (eWoM) is gaining a lot of importance during this era of digitalization. The aim of this study is to explore how different dimensions of eWoM are translated through the biases that are a component of each individual consumer’s mindset and psychology, eventually resulting in a positive or negative purchase behavior by the consumer. There has been a lot of literature related to the basic model of communication in a marketing context. In most of the studies of the communication model, the characteristics of the sender and the channel have been explored, but the receiver dynamics still remain a relatively less explored area of the marketing communication literature. Data was collected through a Google Doc-based questionnaire. An encouraging response of 81% was received from the respondents. Before examining the final procedures of analysis, reliability and validity are established through Cronbach’s Alpha, discriminant and convergent validities. Results show that eWoM has a strong impact on consumer buying behavior. Lastly, our results indicate that consumer bias moderates the relationship between eWoM and consumer buying behaviours. There are several practical implications of this research study. Brands must practice marketing strategies that enable value creation, which ultimately results in positive eWoM.

© 2021 The Authors, Published by iRASD. This is an Open Access Article under the Creative Common Attribution Non-Commercial 4.0

1. Introduction

eWoM is becoming more and more prominent with each passing day in its importance for the business world (Saremi & Montazemi, 2019). With its increasing prominence, the scope of how one perceives the available eWoM is expanding because of the increase in consumer reliance on eWoM, the increase in its quantity on the web, and how companies are now trying to leverage it for their own gains (Kappes, Harvey, Lohrenz, Montague, & Sharot, 2020). In this perspective, it is important to know how one might look at a particular piece of eWoM through their own cognitive glasses. From negativity bias to social proof and confirmation bias, consumers of today also need to understand how they choose which eWoM is credible and authentic and which is best left ignored (Prasad, Garg, & Prasad, 2019). Additionally, the effect of the eWoM format is
a less explored area that has interesting opportunities for those aiming to influence a community by generating eWoM. Hence, a study of how various eWoM formats are perceived by the audience is also a worthy dimension to study, and this research aims to answer both of these questions, in light of empirical evidence from the immediate community of buyers and the eWoM audience. The current study focuses on the following two research questions.

**Q1:** What is the impact of eWoM on consumer buying behavior?
**Q2:** How does consumer biases moderate the relationship between eWoM and consumer buying behavior?

2. Literature Review

2.1. Electronic Word of Mouth (eWoM)

Traditionally, word of mouth (WoM) has been one of the oldest ways of communicating information (Dellarocas, 2003). There have been many ways in which the concept of word of mouth has been explained. Among the earliest definitions was the one proposed by Katz and Lazarsfeld (1966), who defined it as the exchange of marketing and product-related information between consumers in a way that plays a significant role in shaping their behaviour and their attitudes towards available products and services (Katz & Lazarsfeld, 1966).

However, when we look at today’s market, we feel a fundamental difference in the way consumers collect information related to companies or the products or services they sell or offer. There have been significant advances in technology in the past two decades, and, as a result of these technological advances, many new means of communication have emerged which have changed the behaviour of consumers Cantallops and Salvi (2014) and Gómez-Suárez, Martínez-Ruiz, and Martínez-Caraballo (2017).

Today’s world involves a newer kind of WoM known as "Electronic Word of Mouth" (eWoM), which has been defined in the literature as all informal communication that occurs through the internet, is directed towards consumers, and is related to the use or the attributes of products, services, or the sellers thereof. The advantage of this type of WoM is that it is accessible to all consumers who may use the online platforms to share their opinions and reviews with other users (Litvin, Goldsmith, & Pan, 2008). Once, consumers looked up to WOM from their friends and family. Today, they look to online comments, reviews, and opinions (eWOM) for information about a good or service (Nieto, Hernández-Maestro, & Muñoz-Gallego, 2014). As a result of advancements in information and technology, consumers from all over the world can leave reviews, comments, share their experiences, or simply communicate their thoughts about a product or service that is not only easily accessible to other consumers but also very specific and easy to interpret.

2.2. Dimension of eWoM

Based upon the review of literature, the researchers have found two dimensions that are highly relevant to the current subject of study, it is pertinent to mention that both of these are well acknowledged dimensions that are translated by subjective attributes of the audiences’ cognition.

2.2.1. eWoM Format

As eWoM gained popularity among consumers it continued to evolve in various ways, producing different effects on consumer behavior. The format of eWoM presentation has developed and changed over time. In early times, eWoM mostly composed of text format but as
different technological advancements occurred, people were able to post various kinds of eWoM including picture based and video-based reviews, comments or opinions (Xu, Chen, & Santhanam, 2015). Where a visual element is incorporated into eWoM, it is known as visual eWoM. Many of the biggest online platforms including Facebook, Twitter, Snapchat, Instagram etc give their users the ability to post reviews in different formats. Today, we can see the availability of various options like text reviews, text-image reviews, image-based reviews and video-based reviews. Various formats of eWoM have different effects on the receiver’s mind that can alter their perceptions of a product or a service.

Although most of eWoM is text-based, image-based eWoM is gaining traction day by day and is expected to have a better impact on consumers’ minds. A research study by (Teng, Khong, Goh, & Chong, 2014) concludes that customers prefer detailed online reviews with visual information along with the text. Video based reviews are considered to be more persuasive as they are extensive, visual and offer better interaction with the information (Liu et al., 2015). According to Erkan and Evans (2016) presence of visual cues in eWoM makes it more enjoyable. In their study Lin, Lu, and Wu (2012) found that blog articles with visual information are perceived better by the audience. Hence, we can say that, the presence of visual elements in eWoM have the potential to make it more interesting and have a positive impact on the minds of the audience.

2.2.2. eWoM Direction

The direction of eWoM refers to its content, more specifically as in whether it has negative content or positive content about a company, product or service.

The direction of eWoM (positive vs. negative) has been observed to have a significant impact on consumers. Past researches suggest that, positive eWoM will have a positive impact on consumer’s buying behavior; whereas, negative WoM would result in consumer being reluctant to make a purchase decision (Cheung, Lee, & Rabjohn, 2008). Additionally, the impact appears to be asymmetrical as negative eWoM has a stronger impact than the positive eWoM in the same context (Cui, Lui, & Guo, 2012).

2.3. Consumer Buying Behavior

The decision-making process and physical activity that individuals engage in when evaluating, acquiring, using, or disposing of goods and services is referred to as a consumer's purchase decision (David & Albert, 2002). Kotler and Armstrong (2006) state that "purchase decision is the phenomenon whereby consumers make a decision to purchase a product or a service." Hence, "Consumer buying behaviour" is the process of decision-making by consumers regarding the purchase of products or services being offered in the market.

A widely accepted model of purchase decision making outlines the following steps in the process of making a purchase decision: "Need Recognition," information research, evaluation of alternatives, purchase decision, and post-purchase decision" (Kotler & Armstrong, 2006). Another commonly identified model of decision making was introduced by Holtzman and it includes three stages: formulation, evaluation, and appraisal. The two stages of formulation and evaluation are the most common as they exist in almost every decision-making context and process (Payne, Samper, Bettman, & Luce, 2008).

In today’s world, there is a wide variety of products available on the market, and each has its own attributes, differentiation, and unique positioning to attract their prospective consumers. Therefore, deciding today is much more complicated than it was when only a few
products were available with little attribute information. Hence, to make a sound purchase decision, today’s consumers turn to digital platforms to learn more about the products and to see how others who have used similar products have responded to them.

Millennials mostly see content on different digital platforms through various devices and are typically influenced very highly by what their peers think (Johnson, 2014). The digital platforms are providing an opportunity to form communities of brands on social media and are in turn generating consumer participation and trust towards brands. This trust is developed through information and experience sharing by the users of the brand that help the prospective buyers in overcoming their concerns regarding the product and thus leads to purchase desire (Prasad et al., 2019).

2.4. eWoM and Consumer Buying Behavior

The impact of eWoM on the purchase decisions of consumers has been a topic of academic research for quite some time. There have been studies that have directly, indirectly, positively and negatively linked eWoM with the intention and decision of consumers to make or not make a purchase decision.

Consumers who once used to look towards word of mouth for purchase decisions are now more interested in online comments (eWoM) for gathering information relating to a product or a service. A study confirmed that consumers tend to watch vlogger reviews before making a purchase decision in order to get the most suitable product for their consumption. In other words, they found online WoM helpful in making an informed purchasing decision (Kim, 2017). Another study discovered that eWoM has a positive impact on customer purchase intention (Prasad et al., 2019). Hence, the literature suggests that eWoM and consumer buying behaviours are linked with each other and that eWoM can impact a consumer’s decision to buy or not to buy a product or a service.

**H1: eWoM is likely to have a positive significant impact on Consumer Buying Decision**

2.5. Moderating Role of Consumer Biases

Psychologists have long believed that biases are prevalent in human decision making (Kahneman & Frederick, 2002). The major reason for which is the fact that humans have limited mental capacity, extensive amount of data at hand and a limited span of time to make the right decision (Van de Sand, Frison, Zott, Rieper, & Holl, 2020) and have emotional and moral influences upon their judgment and analysis (Pfister & Böhm, 2008). As a result, we always tend to make our decision-making process simpler and easier through using various presumptions and shortcuts, known commonly as biases and heuristics. Marketing, advertising and promotional activities of organizations make extensive use of consumer biases and heuristics, to attract them towards their offerings and to get them to buy their products.

Consumer buying behaviors are very often motivated by their perception of a company, their offerings and how they position themselves in the market. This perception is driven by biases that a consumer develops over the period. For instances, when making a purchase decision, people often go towards finding online reviews, asking their friends of their opinions about a product in order to make up their minds about a purchase decision (Saremi & Montazemi, 2019). There is a myriad of biases and heuristics that affect a consumer’s judgment while making a purchase decision and most of them are leveraged by companies in promoting their sales and developing a positive perception about themselves in the minds of their prospects.
**H2: Consumer Biases moderates the relationship between eWoM and Consumer Buying Decision**

![Conceptual Framework](image)

**Figure 1: Conceptual Framework**

### 3. Methodology

The purpose of this research study is to find out the impact of eWoM on consumer buying behaviors. Furthermore, the study also intends to check the contingent impact of consumer biases between eWoM and consumer buying behavior. The population of this research study comprises the consumers living in the twin cities of Pakistan, which are Islamabad and Rawalpindi. Considering that people residing in these two cities are mostly educated and working in governmental, local, or multinational companies, eWoM is considered an important and influential source of information among South Asian countries (Nielsen.com, 2014). The nature of this study is causal research. The sample size of 381 was selected based on the Yamane 1961 formula for calculating sample size. Yamane proposed that if the population exceeds 100,000, then the sample size must be more than 381. Therefore, a total of 480 questionnaires were received on the google-doc based questionnaire. Cross-sectional data was collected for this particular study (Looi, 2005). Although there were many complexities seen in the data collection in the COVID-19 time period, the google-doc based questionnaire helped in receiving an encouraging response of 81% from the targeted sample.

The questionnaires were adapted from previously published articles. For instance, the eWoM scale is adapted from (Bambauer-Sachse & Mangold, 2011). Consumer biases are adapted from those by (Jalilvand & Samiei, 2012). Lastly, the measurement of consumer buying behaviour questionnaire is adapted from (Schivinski & Dabrowski, 2016). All the scale items were measured on a 5-Likert scale, ranging from 1 meaning strongly disagree to 5 meaning strongly agree. Several questions regarding respondents’ demographics were also added (Krosnick, 2018). It was made clear to the respondents that the information collected would be used only for the analysis of this particular research study. Before examining hypothesis testing, data reliability was examined through SPSS Version 23. Construct reliability and average variance were extracted to check the scale reliability of the scale adapted from previously published articles. For scale validity, both convergent and discriminant validities are examined through confirmatory factor analysis (CFA) (Ullman & Bentler, 2003). For hypothesis testing, structural equation modelling (SEM) was employed (Majeed, Zhou, Lu, & Ramkissoon, 2020).

### 4. Results & Analysis

The following table 1 explains the demographic details of the respondents. For instance, there were total 169 male respondents which covers the 74% of the total sample size. 18-23 age category covers 49% sample size. These respondents are using social media marketing from last 5 years.
Table 1

**Sample profile**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Attribute</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>169</td>
<td>74%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>60</td>
<td>26%</td>
</tr>
<tr>
<td>Age group (in years)</td>
<td>18-23</td>
<td>113</td>
<td>49%</td>
</tr>
<tr>
<td></td>
<td>24-29</td>
<td>86</td>
<td>38%</td>
</tr>
<tr>
<td></td>
<td>30 or more</td>
<td>30</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>1-2</td>
<td>32</td>
<td>14%</td>
</tr>
<tr>
<td>Social media usage (in years)</td>
<td>3-4</td>
<td>39</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>5 or more</td>
<td>158</td>
<td>69%</td>
</tr>
<tr>
<td></td>
<td>1-2</td>
<td>32</td>
<td>14%</td>
</tr>
<tr>
<td>Social media usage (in years)</td>
<td>3-4</td>
<td>39</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>5 or more</td>
<td>158</td>
<td>69%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>229</td>
<td>100%</td>
</tr>
</tbody>
</table>

4.1. Scale Validity and Reliability

The following table 2 explains the scale validity and reliability of the questionnaire adapted from previously published articles. For instance, the reliability value for eWoM is 0.880 which is well above the minimum criteria 0.6 of reliability analysis. For consumer bias the Cronbach’s Alpha value is 0.870 and for consumer buying behavior the value is 0.843.

Table 2

**Scale Validity and Reliability**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Item Code</th>
<th>Loadings</th>
<th>Composite Reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>eWoM</td>
<td>WOM1</td>
<td>0.880</td>
<td>0.883</td>
<td>0.791</td>
</tr>
<tr>
<td></td>
<td>WOM2</td>
<td>0.899</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WOM3</td>
<td>0.843</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WOM4</td>
<td>0.881</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WOM5</td>
<td>0.814</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WOM6</td>
<td>0.903</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WOM7</td>
<td>0.900</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer Bias</td>
<td>CB1</td>
<td>0.762</td>
<td>0.870</td>
<td>0.573</td>
</tr>
<tr>
<td></td>
<td>CB2</td>
<td>0.854</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CB3</td>
<td>0.733</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CB4</td>
<td>0.770</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CB5</td>
<td>0.891</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer Buying Behavior</td>
<td>CBB1</td>
<td>0.761</td>
<td>0.843</td>
<td>0.643</td>
</tr>
<tr>
<td></td>
<td>CBB2</td>
<td>0.848</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CBB3</td>
<td>0.793</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3

**Discriminant Validity**

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>eWoM (1)</td>
<td>0.752</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer Bias (2)</td>
<td>0.506</td>
<td>0.755</td>
<td></td>
</tr>
<tr>
<td>Consumer Buying Behavior (3)</td>
<td>0.428</td>
<td>0.432</td>
<td>0.415</td>
</tr>
</tbody>
</table>

Note: Diagonal elements (bold figures) are the square root of the AVE (the variance shared between the constructs and their measures). Below-diagonal elements are the correlations among variables.
4.2. Structural Model Analysis

The following table 4 explains the results of hypothesis testing. The eWoM has a positive impact of 0.50, which shows that a 50% change will occur in consumer buying behavior due to a 1% change in eWoM. Finally, the moderating role of consumer bias also showed that consumer bias can moderate this process of eWoM on consumer buying decisions.

Table 4

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>β</th>
<th>t</th>
<th>p-Value</th>
<th>Statistical Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: eWoM → CBD</td>
<td>0.506</td>
<td>6.603</td>
<td>0.000</td>
<td>Supported</td>
</tr>
<tr>
<td>H2: eWoM*CB → CBD</td>
<td>0.315</td>
<td>4.447</td>
<td>0.000</td>
<td>Supported</td>
</tr>
</tbody>
</table>

5. Discussion & Conclusion

eWoM is fundamentally a set of information that is conveyed from the eWoM initiator to the eWoM receiver. Now, the receivers of eWoM have their own cognitive attributes that affect how they interpret the available information. This means that eWoM is, during its interpretation, filtered by the biases of the receiver. (Luo, Luo, Schatzberg, & Sia, 2013) found that customers might perceive online reviews as less credible because of their anonymity. Studies e.g., (Hussain, Ahmed, Jafar, Rabnawaz, & Jianzhou, 2017) have outlined that consumers tend to decrease their "perceived" risk through the use of eWoM. Likewise, if a consumer has already been exposed to a product in the past, it usually translates into higher credibility (Sotiriadis & Van Zyl, 2013). All of these studies mentioned above lead us to the conclusion that eWoM interpretation is dependent upon various factors and is subjective to the receiver's interpretation based on different cognitive dimensions. Various biases affect the interpretation of eWoM in different ways:

The effect of the eWoM direction mentioned above is explained by a term called "Negativity Bias," which outlines that consumers weight negative information more than positive information in making a perception or a decision (Shen & Dillard, 2009). Furthermore, negative information is processed more deeply and has far-reaching consequences in consumer memory (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). Hence, the direction of eWoM is linked to a key bias in consumer psychology and is ultimately supposed to impact consumer buying behaviours.

Confirmation bias, which is the likelihood of a consumer to overweigh the information that supports their own pre-held beliefs, and under-weigh any evidence that is contradictory to their opinions (Nickerson, 1998). Confirmation bias can have an impact on the perceived helpfulness of online reviews. There is plenty of evidence suggesting that humans tend to gravitate towards information that affirms their pre-held beliefs, opinions, and theories (Klayman & Ha, 1987). Cognitive dissonance theory suggests that humans face difficulty in dealing with information that contradicts their beliefs(Swann, Griffin, Predmore, & Gaines, 1987) ; (Kappes et al., 2020), and they under-value such negating evidence to keep their level of cognitive comfort and confidence intact. Confirmation bias is very likely to occur in the evaluation of online reviews (Shen & Dillard, 2009). because the reviews may contain material that contradicts the reader’s initial beliefs, thereby causing the kind of psychological discomfort we identified above.

Message privacy is another feature that has consequences for a consumer's experience of eWoM. With traditional WoM, the key is personal interaction as information is shared on a one-to-one basis, while in comparison, eWoM tends to be public and anybody can access it online. This gives a lot of space for the personal biases and heuristics of the receivers to creep into the process and affect their interpretation of eWoM. The study has various implications for businesses.
while designing their marketing campaigns for products and services. Because of the advancements in technology and social media, comparing goods and services has never been easier. Therefore, organizations should strive to create positive eWoM for their products by using digital platforms.

5.1. Theoretical and Practical Implications

The study contributes to the eWoM literature by proposing a contingent effect of consumer biases between eWoM and consumer buying behavior. The findings of this study suggest that eWoM has a direct impact on consumer buying behaviors. Which suggests that organisations must shift to e-commerce platforms and create virtual communities to support and encourage positive word of mouth. Furthermore, there is a moderating effect of consumer behaviour between consumer buying behaviour and eWoM. Which proposed that consumer biases can still be a huge challenge for organizations. These biases can only be minimized if consumers have access to C2C virtual communities where they share their actual experience and information regarding different products. For the survival of businesses, digitalization is the only option available to cope with the modern challenges faced by organizations. Therefore, it is suggested that the managers effectively develop e-commerce platforms and social media presence with the help of digital platforms like Facebook, Instagram, Twitter, etc.

5.2. Limitations and Directions for Future Research

Because no prediction can be made about the pandemic's future, it is critical to reevaluate consumer buying intentions following the COVID-19 outbreak's conclusion. It is worth noting that consumer intentions and consumer biases will evolve over time, necessitating additional reflection. Additionally, future studies may be conducted in other cultural contexts, increasing the study's generalizability, as the pandemic has impacted various geographic regions differently. It has numerous disadvantages as a case study, but it also provides numerous avenues for future researchers to explore. Notable are the following restrictions: Due to the widespread nature of COVID-19, the survey was conducted online with a small sample size. General consumers who belong to the twin-cities of Islamabad and Rawalpindi are targeted. For future research, data can be collected from other consumer markets like the cosmetic industry and fast-moving consumer goods. Furthermore, data collected from other major cities may have more diverse findings and implications for managers and practitioners.

References


rural lodging establishments. *Tourism management*, 45, 115-123. doi: [https://doi.org/10.1016/j.tourman.2014.03.009](https://doi.org/10.1016/j.tourman.2014.03.009)


Xu, P., Chen, L., & Santhanam, R. (2015). Will video be the next generation of e-commerce product reviews? Presentation format and the role of product type. *Decision Support Systems*, 73, 85-96. doi: [https://doi.org/10.1016/j.dss.2015.03.001](https://doi.org/10.1016/j.dss.2015.03.001)