

CAPITAL UNIVERSITY OF SCIENCE AND
TECHNOLOGY, ISLAMABAD



**Impact of Greenwashing
Perception on Green Purchasing
Intention: Mediating Role of
Word of Mouth and Moderating
Role of Environmental Knowledge**

by

Asia Bibi

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degree of Master of Science

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This Thesis is dedicated to my family.



CERTIFICATE OF APPROVAL

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Abstract

Drawing on attitude-behavior-context (ABC) theory, the study examined the relationship between greenwashing perception and green purchase intention, while taking word of mouth as mediator in the relationship. The moderation of environmental knowledge was also tested in the relationship between greenwashing perception and word of mouth. The concept of greenwashing has gained much attention recently. The term greenwash is used to explain the deceptive behaviors of companies with respect to environment-friendly actions and policies and defined as the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service. As anticipated, we found empirical support for the relationship of greenwashing perception and its relationship with word of mouth and green purchase intention. The mediation hypothesis also received support from the study results. However, the moderation hypothesis was not supported. As sample of 275 respondents participated in the study, who were given a brief orientation about the concept of greenwashing and the study objectives to obtain relevant and valid responses. We used SMART PLS3 to test the study hypotheses. The results demonstrate the importance of greenwashing perception in altering consumer attitudes in creating green purchase intention and the role of word of mouth and environmental knowledge. The study has noteworthy theoretical and managerial implications. The implications of the study findings are discussed alongside the direction for future research.

Keywords: Greenwashing perception, word of mouth, environmental knowledge, green purchasing intentions.

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Abbreviations

GWP	Greenwashing Perception
WOM	Word of mouth
EK	Environmental knowledge
GPI	Green purchase intention
PLS	Partial least square

Chapter 1

Introduction

1.1 Background of the Study

The changing dynamics of consumer preferences have led companies to change the way they serve their consumers and interact with them (Biswas & Roy, 2015; Moisander, 2007). It has become increasingly important for companies to make sure that their production processes do not violate any of the environmental laws in general and their products are environment-friendly in particular (Leonidou, Leonidou & Kvasova, 2010). This is because of the fact that today's consumer is much more aware and has a concern for the environment, as the world is facing a critical situation because of the increasing environmental problems which are resulting in major climate changes around the globe (Bang, 2010). Many companies have made major changes in their production processes to ensure that they comply with environmental laws and their products do not contain any element which can harm the environment (Benn, Edwards & Williams, 2014). This implies that companies are facing both environmental and consumers' pressure to survive in the business. But the profitability may get reduced if a company chooses to be environment-friendly. Hence, some companies use certain deceptive tactics to appear as green companies when they are actually not fully complying with environmental laws and regulations (Gibson, 2009).

The term greenwash is used to explain the deceptive behaviors of companies with respect to environment-friendly actions and policies. Greenwash is defined as, the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service (Parguel, Benot-Moreau & Larceneux, 2011). Greenwashing perception can be detrimental to a company's reputation and further consumer outcomes (Nyilasy, G., Gangadharbatla & Paladino, 2014). Consumers are likely to feel negative about the company when they look at it in a way that it deceives them by making green claims when actually the firm's actions and practices are against its claims. Research suggests that greenwashing perception is associated with negative consumer attitudes and reactions including a reduction in green purchasing intention, low performance evaluation by consumers and decline in corporate performance (Zhang, Li, Cao & Huang, 2018; Lyon & Montgomery, 2015). Researchers remain interested as to how greenwashing perception negatively affects consumer attitudes, specifically their green purchasing intention and green purchasing behavior. It is generally established that greenwashing perceptions is negatively associated with consumer trust (Chen & Chang, 2013). This implies that greenwashing perception results in declining trust of consumers which can be damaging towards green purchasing intention. Additionally, greenwashing perception is linked with reduction in perception and satisfaction of green products (Chen, Lin & Chang, 2014).

In this way, greenwashing perception appears to be associated with green purchasing intention by many means. Here, we argue that word of mouth (WOM) can explain the association amongst greenwashing perception and green purchasing intention. Through WOM, consumers send messages in the environment regarding a company, its products and services. While WOM also has a role to display the firm to change their marketing strategies (Chen, Lin & Chang, 2014). WOM appears to represent a link between greenwashing perception and green purchasing intention. As per the theory of attitude-behavior-context (ABC) theory (Guagnano, Stern, & Dietz, 1995), attitude here refers to the evaluative ratings i.e. greenwashing perception and the resulting behavioral tendency is represented by green purchasing intention. As per the theory, certain contextual or situational

factors may act as mediators or moderators in the model. Therefore, WOM was taken as mediator among greenwashing perception and green purchasing intention. Similarly, we took environmental knowledge (EK) as moderator in the relationship between greenwashing perception and green purchasing intention based on ABC theory. Environmental knowledge is, the ability to identify symbols, concepts, and behavior patterns related to environmental protection (Laroche, Bergeron & Barbaro-Forleo, 2001). Since the level of knowledge is a significant construct that may have an influence upon decision process and also influence consumers gathering and organizing information (Laroche, Bergeron & Barbaro-Forleo, 2001), we argue that EK can be a potential moderator between greenwashing perception and green purchasing intention.

In this way, the study attempted to examine and understand the relationship of greenwashing perception with word of mouth and green purchase intention and to assess the mediating role of word of mouth in the relationship between greenwashing perception and green purchase intention. Additionally, to test the role of environmental knowledge in creating word of mouth. And finally, to test the moderating role of environmental knowledge in the relationship between greenwashing perception and word of mouth.

1.2 Research Gap

It is evident that much research has been done to study the positive sides of companies green policies, initiatives and environment-friendly practices (Lyon & Montgomery, 2015). However, the negative side associated with this concept has not been given equal importance, while more and more companies are getting involved in falsely claiming about their green initiatives (Delmas & Burbano, 2011). Therefore, the current study is an effort to investigate the outcomes of negative aspect of green claims. Here we take greenwashing perception, the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service, as a predictor of green purchasing intention as suggested by Zhang et.al., (2018).

Furthermore, current literature demonstrates that greenwashing perceptions among consumers negatively affect their green purchasing intentions (Chen and Chang, 2013), but the influencing mechanism is under-explored (Zhang et.al., 2018). This implies that there is still a need to identify the mediating mechanism in the relationship between greenwashing perception and green purchasing intention. Hence, the study takes WOM as mediator amongst greenwashing perception and green purchasing intention. Additionally, there is a recent call to find out what factors affect the relationship of greenwashing perception and WOM (Zhang et.al., 2018). In this way, the study addresses another research gap by taking environmental knowledge as moderator in the relationship between greenwashing perception and WOM.

1.3 Problem Statement

Companies attempt to increase their customer base by making them aware of their green initiatives and arousing interest in their products and services. Additionally, to increase consumer purchase intention is the paramount objective of companies, since it has been an established predictor of actual purchase behavior (Joshi & Rahman, 2015; Paul & Rana, 2012). However, there arises a difficult situation when their green claims go wrong, and consumers start perceiving them as deceptive acts. In this way the companies may get a negative result of their green claims that may result reduction in purchasing intention. Traditionally, many factors have been studied in order to forecast consumer purchase intention. Greenwashing perception turns out to be a recent predictor of green purchasing intention which is likely to influence such intentions and subsequent purchase behavior. Additionally, it is important for companies to look for possible greenwashing perception issues so that they can be addressed beforehand, in order to avoid any problems in future.

1.4 Research Questions

RQ1: What is the relationship of greenwashing perception with word of mouth green purchasing intention?

RQ2: What is the relationship of word of mouth with green purchasing intention?

RQ3: Whether or not word of mouth mediates the relationship between greenwashing perception and green purchasing intention?

RQ4: What is the relationship of environmental knowledge and word of mouth?

RQ5: Whether or not environmental knowledge moderates the relationship between greenwashing perception and word of mouth?

1.5 Research Objectives

RO1: To examine the relationship of greenwashing perception with green purchasing intention and word of mouth

RO2: To examine the relationship between word of mouth and green purchasing intention

RO3: To ascertain whether word of mouth mediates the relationship between greenwashing perception and green purchasing intention

RO4: To examine the relationship between environmental knowledge and word of mouth

RO5: To ascertain whether environmental knowledge moderates the relationship between greenwashing perception and word of mouth

1.6 Significance of the Study

The study is an attempt to examine the relationship between greenwashing perception and green purchasing intention of consumers, alongside the underlying

mediating and moderating mechanisms. In this way the study is significant both theoretically and practically.

1.6.1 Theoretical Significance

The theoretical framework that has been formulated is based on ABC Theory (Guagnano, Stern, & Dietz, 1995). The results are likely to be helpful in verifying the theoretical aspects of the variables relationships in line with ABC theory. Green purchasing intention is an important element that can predict green purchasing behavior. By determining greenwashing perception as a predictor of green purchasing intention, it would be useful both for the researchers and practitioners to understand the adverse effects of greenwashing perception. A theoretical insight will be obtained by taking WOM as the mediating link between greenwashing perception and green purchasing intention as suggested by ABC theory. Moreover, the moderation of environmental knowledge in the relationship between greenwashing perception and WOM will also be a significant theoretical contribution. Both the mediation and moderation will add to the existing literature of greenwashing perception and its outcomes based on ABC theory.

1.6.2 Managerial Significance

Likewise, the study will be equally useful for practitioners, since it is an attempt to understand the actual negative effects of greenwashing perception. In this way, the practitioners can have an understanding that their green claims need to be balanced in order to avoid any negativity associated with such claims. Moreover, the study will help the practitioners to understand the implications of WOM and consumers environmental knowledge in order to create a perception of a true green company.

1.7 Theoretical Underpinning

The theoretical model of the study is based on attitude-behavior-context (ABC) theory (Guagnano, Stern, & Dietz, 1995). The ABC theory is based on a means-end approach, in which individuals act according to the gains that they expect from certain behaviors (Feldmann and Hamm, 2015). Hence, the theory provides a useful framework for investigating how attitudes result in certain behaviors (Goh and Balaji, 2016). Attitude here means the evaluative rating of an object, which consists of beliefs, perceptions and the evaluation of outcomes. It is at the center of attempts to predict and explain behavior (Ajzen, 2005). However, attitude does not always translate into expected behaviors, as behaviors are also dependent on a series of contextual factors such as costs, personal relationships, availability, and societal trends (Feldmann and Hamm, 2015). Context serves to facilitate and constrain certain behaviors. It can be a mediator between individuals attitudes and their behaviors, but can also reinforce the relationship between attitude and behavior (Sirieix et al., 2013). Hence, the interaction between consumers attitudes and contextual factors is an important dimension of the ABC theory (Salonen and Ahlberg, 2012). It is therefore necessary to consider situational or contextual factors that may foster or impede customers green behaviors. Building on the ABC theory, this research models the mediating role of WOM and the moderating role of environmental knowledge in the relationship between greenwashing perceptions and consumers purchasing intentions.

Chapter 2

Literature Review

2.1 Greenwashing Perception

Due to change of domestic markets into global markets consumers are more aware about eco-friendly products and services. Consumers try to prefer those products which are less harmful to human beings and their surroundings. As consumers preferences change towards green products, so companies try to adopt those practices and procedures which are environment-friendly. The concern for green products has increased worldwide. While the companies which have a reputation of a green company get positive evaluation of consumers. To gain the perception of green concerned companies, sometimes companies mislead their consumers and it is known as greenwashing. Greenwashing is a broad term like an umbrella under many heads (Lyon and Montgomery,2015), it can be clearer when we see the way it has been used so far.

Greenwashing can be divided in to two main features. One is known as an intrinsic feature i.e. distance from honesty (Lyon & Montgomery, 2015; Parguel, Benot-Moreau, & Russell, 2015; Terra Choice, 2010). Second one is A communicative feature (characters, tools for misleading or confusing people). Greenwashing can also be differentiated through Macrolevel and Microlevel. In macrolevel, focus is there on organizations or firms greenwashing practices, and their financial performance while at microlevel greenwashing represents influencing consumers through

greenwashed messages (Terra Choice , 2010). Greenwashing happens when companies or brands deliver positive imaged news pertaining to environmental or social performance regardless of its real and actual environmental or social performance being deprived (Delmas & Burbano, 2011; Lyon & Maxwell, 2011). So, when firms or companies claims regarding environmental safety and green products are exposed as greenwashing, in this situation their stakeholders and consumers might not trust that firm or brand (Self, Self, & Bell-Haynes, 2010).

As trust is essential for developing strong perception regarding any brand, because strong perception is transformed into intention and intentions leads towards behaviors (buying). Furthermore, brand loyalty can be developed among consumers through trusted brands and for obtaining anticipated results companies should avoid greenwashing. Therefore, brand trust among green products or services and its stakeholders will be damaged in case of greenwashing (Chen & Chang, 2013). Greenwashing is a , firms over-communication for their environmental performance (Delmas & Burbano, 2011). Many companies give information related to their environmental performance and policies through their web pages and around 98% of products with environmental entitlements mislead their consumers by promising one or more features of the seven sin of greenwashing including sin of the hidden trade-off, sin of no proof, sin of vagueness, sin of irrelevance, sin of the lesser of two evils, sin of fibbingandsin of false labels(Choice, 2010). This is why recent research is focusing on greenwashing and its outcomes. Now consumers have more knowledge about green products and they are more concerned about green purchasing, which is the main reason that lead towards purchasing intention for environmental friendly products and services. When companies fulfill their social responsibilities, then consumers perceive them eco-friendly and show willingness to purchase even at a premium price (Grimmer and Bingham,2013). Therefore, when consumers understand that firms are greenwashing, then their purchasing intentions are not likely to develop regarding the products and services (Chen et al., 2014). Therefore, recent studies and research work indicated that greenwashing perceptions negatively affect the green purchasing intention of consumers (Chen and Chang,2013).

For the purpose of sales and developing of brand equity, many companies or brands claim to be environment-friendly, such as airline flights, batteries, car tires, plastic bottles, inverters and nonhybrid cars. Similarly, different advertising campaigns regarding green claims present confusing truths that are not similar to that green products concerning environmental features for their brands or products (Baum 2012). So, this phenomenon is recognized as greenwashing (Carlson, Grove, and Kangun 1993; Kangun, Carlson, and Grove 1991; Parguel, Benoit-Moreau, and Russell 2015) and this denotes to the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service (Terra Choice 2009, p. 1). Greenwashing claims through advertising can persuade a balanced mechanism in which consumers perception are altered through ads, promos. Greenwashing indications can successfully appeal towards consumers attraction on the way to natural sentimental mechanism (Schmuck et al. 2017). Perceived greenwashing states the consumers aptitude to expose greenwashing intentions through ads (Chen and Chang 2013).

Because consumers exposure towards any product or service is done through influential ads, thats why greenwashing is mainly done through ads. As companies are facing two challenges, one from consumer side for environment-friendly products and the other is higher revenue through sales. For meeting both challenges at the same time companies use greenwashing in their advertisements and promotional campaigns and exaggerate about environmental concerns. In this way, firms disclose positive information to their consumers and environment for increasing their corporate image and hide the facts of negative aspects to misleads their consumers regarding environmental practices. Majority of Consumers rely on firms advertising while making decisions, but if there is any doubt of greenwashing, they may lose confidence for the specific product or service (Hamann and Kapelus, 2004). According to Cone Communication (2012) nearly 44% of consumers in the USA have no trust regarding firms green claims while the other 77% showed their willingness to boycott those companies which overall deceived them. In the same way, Zhang et al. (2018) initiated that consumers greenwashing perceptions had adverse effect on their green purchasing intentions and Word of mouth (WOM).

2.2 Environmental Knowledge

The conditions or surroundings of living organisms is known as environment and having know how is considered as knowledge, so information or awareness by consumers regarding its surrounding is called environmental knowledge. Due to rapid technological development consumers have amplified knowledge about its surrounding and have concern for the environment he/she lives in. Knowledge of the environment not only includes knowledge about problems and consequences but also about how to take action (Hines, Hungerford, and Tomera 1987). We argue that consumers have more knowledge and sensitivity for the environment and thats the main reason for switching towards green products, because green products are environment-friendly and more beneficial for human beings, in terms of health and living standards. For the purpose of sales and consumer pressure pertaining towards environmental friendly products, companies mislead their consumers through greenwashing. Hines et al. (1987), says that there is an influence on consumer intentions because of their environmental knowledge in the way they act for environment. Similarly, challenges related to green practices among employees, it is necessary to increase the level of awareness, environmental knowledge and concerns, especially in tourism industry (Chan, Hon, Chan, & Okumus, 2014). Environmental knowledge can also be defined as a general knowledge of facts, concepts and relationships concerning the natural environment and its major ecosystem (Fryxell and Lo, 2003, p. 45).

One side of environmental knowledge is associated that leaders demonstrate their concern for environmental issues (Amyx et al., 1994), this would lead their organizations to take attention towards environment (Boiral, 2002). Many authors identified second side of environmental knowledge association to competitive edge of organizations, because environment is a concern of general public or society, so this strengthens the image of company (Roy et al., 2001).As many companies are providing category of same natured products.But today's consumer showed his concern for the environment.In this way consumers built their trust for the companies and their products which are environmental friendly in nature. In business management, many studies have proven that, there is a lot of factors for failure

of implementing the ecofriendly culture, these factors consists of attitude and behavior of top managers, line managers, coworkers and unsupportive organizational culture (Sena da Silva and Dumke de Medeiros, 2004; Gadenne et al., 2009).

Due to rapid global changes worlds greatest significant priorities are linked with environmental protection, so companies and consumers perception for purchasing intentions also changes and in order to gain supportable expansion (Nouri et al., 2008). According to Boiral (2002), environmental knowledge is helpful for both companies and customers, as both gain positive results. Another important benefit pertaining to environmental knowledge that is emphasized by researchers is the enhancement of public image by means of company can be seen socially accountable (Erdogan and Tosun, 2009). Individuals furnished with diverse environmental knowledge behave differently from one another. Frisk and Larson (2011) presented that declarative knowledge, that is linked with operational information regarding socioecological structure may perhaps indirectly encourage behavior.

Environmental knowledge can also be defined as concepts, symbols and behavior designs which relates to environmental protection (Laroche et al., 2001). Because sometimes specific designs, symbols and patterns show concerns related to environmental protection and it enhances knowledge amongst consumers. According to previous studies, that there are mixed findings in the relationship of environmental knowledge and green intentions. Some researchers reported non-significant relationships (Bartiaux, 2008; Laroche et al., 2001; Leonidou & Skarmeas, 2015). While some researchers found that environmental knowledge is a significant predictor of environmental friendly behavior (Kaiser & Fuhrer,2003; Kanchanapibul, Lacka, Wang, & Chan, 2014; Kollmuss& Agyeman,2002; Nittala, 2014) and few studies found no relation between environmental knowledge and green purchasing intention (Ramayah & Rahbar, 2013;Wolsink,2007). Due to two different constructs (object & subject knowledge), results are contradictory. In objective based knowledge, information related to products are precise while in case of subjective based knowledge, it is related to self-perceived knowledge of people (Pieniak, Aertsens, & Verbeke, 2010).Excess of self-perceived or wrong knowledge can be the

result of wrong conclusions related to environment but in case of environmental enhancement of awareness, consumers develop motivation that leads environmental friendly intentions (Vicente-Molina, Fernández-Sinz, & Izagirre-Olaizola, 2013). In case of lack of reliable information or deficiency of knowledge might be resistant to environment behavior (Kennedy, Beckley, McFarlane, & Nadeau, 2009) and if knowledge is high concerning to environmental issues, it has positive effect on green purchasing intentions amongst consumers (Chan & Lau, 2000; Eze & Ndubisi, 2013). Some people are enthusiastic for information, so they have high knowledge and involved in pro-environmental actions, in this way they always try to get more knowledge about different products and their influences on environment.

2.3 Green Purchasing Intentions

Purchase intention is defined as the tendency of an individual for purchasing a specific product or service (Bagozzi, 1981). Purchasing intention concept has importance in the field of marketing and intentions are different from attitudes and it might be defined as the persons motivation in the sense of his or her conscious plan to exert effort to carry out a behaviour (Eagly and Chaiken, 1993, p. 168). The term green is referred to those products or services which are environmental friendly and intentions are developed for purchasing green products.

Green purchasing intention refers to the likelihood that a consumer will buy a particular product resulting from his or her environmental views and represents the extent to which consumers are prepared to purchase products and services from firms with a reputation for being environmentally friendly (Netemeyer et al., 2005; Newton et al., 2015). As consumers are more aware about green products so their perceptions lead towards green purchasing intentions as consumers get attracted towards those products which are environmental-friendly. Therefore, consumers have concern about the producing firms or companies while purchasing specific brands. Green purchasing intentions can also be abstracted as willingness of consumers created in such a way that, they prefer green products as compared to non-green products while purchasing. It has been found that purchase intentions

have positive effect for purchasing green products while making decisions and it is also suggested by many researchers that in developing countries, green purchasing intention is a significant predictor of green purchasing behaviors (Chan, 2001; Mostafa, 2007; Ramayah et al., 2010).

According to previous studies, researchers identified the elements for influencing green purchasing intentions are environmental consciousness (Chan, 2001; Chan and Lau, 2000), environmental concern (Beckford et al., 2010; Haron et al., 2005; Kim and Sejung Marina, 2005; Lee, 2008), environmental attitude (Mostafa, 2007; Sinnappan and Rahman, 2011), emotional value (Lin and Huang, 2012), conditional value (Lin and Huang, 2012), influence of social media (Chan, 2001), man-nature alignment (Chan, 2001), organic facts (Chan, 2001; Sinnappan and Rahman, 2011) and self-respect (Lee, 2008). The empirical findings suggest that determinants, such as values, knowledge, needs and motivations, attitudes and demographics, influence the environmentally friendly products (Bui, 2005). Previous researches found two aspects (social influence and personal characteristics) that influence green purchasing intention and both aspects have their impact on consumer attitude for environmental protection (Rylander and Allen, 2001) and moral purchasing intentions (Anget et al., 2001; Wang et al., 2005). From integrated perception it is found that green consumption is indicated empirically that personal characteristics and subjective norms (social influence) of consumers are associated with green purchasing intentions.

In the early years companies main focus revolved around profitability and earnings, but due to globalization and competition increasing, companies develop and design their strategies in such a way that their brands became strong in marketplace. Because of consumers concerns pertaining to ecofriendly products and services, companies have gotten novel idea by introducing green brands and this leads towards diverse factors, such as profitability, sustainability, big market share and competitive edge. Green brands can be defined as "a brand, which offers a significant eco-advantage over its competitors and is able to attract consumers who set a high priority on making green purchasing" (Grant, 2008, p. 25).

According to Hartmann and Ibanez (2006), a green brand entails a set of attributes and benefits associated with reduced adverse environmental impact and the creation of a positive impression on consumers by raising their environmental concern (p. 673). Green customers are those individuals who consumed their money for purchasing green products and they have high level of environmental awareness and knowledge (Norazah and Norbayah, 2015). Few companies showed their sincerity for preserving environmental concerns, like automotive industry, Toyota, Honda and GM have supported green products through adopting green concern strategies and green technologies, which are helpful for conserving raw material and reduces emissions of greenhouse gases (GHG), specifically through hybrid cars that aims for preserving environment (Marcus and Fremeth, 2009; Oliver and Lee, 2010). According to Cooney (2010), in the Lifestyles of Health and Sustainability (LOHAS) Club (eight out of ten members) had spent \$300 billion for purchasing of green products. According to some researchers it has been explored that green products or services influence attitude and green purchasing intentions, so marketing for green products must be done in such a way that consumers get attracted towards green brands and show their interest in terms of green purchasing intentions (Chen, 2010; Rios et al., 2006). Greenwashing creates doubts in customers mind and that influence negatively on word of mouth, green trust for the products and purchasing intentions (Leonidou and Skarmeas, 2017; Chen and Chang, 2013). It is also noticeable that, in low-involvement consumers focus while purchasing of green products, mainly two things matters a lot, that are, label source and environmental orientation (Cokunet al., 2017; Atkinson and Rosenthal, 2014). The other one is High-involvement, consumers preference is of seeking of information rather than only labeling (Atkinson and Rosenthal, 2014). For entering international markets companies design their strategies according to situation and demand, as consumers are now more intelligent, so have concern for green products, that's why green purchasing intentions are taken as vital element for fulfilling of international laws, regulations and policies.

2.4 Word of Mouth

Each and everything need some identity for the purpose of recognition, the same is applied to products and services. So, marketing experts and brand managers give each product an identity through giving specific name for recognition. Next step that is also very important, is marketing of that product and this can be done by giving awareness to customers, this is known as advertising. There are many tools for advertising, like sales promotions, advertisement campaigns, ads, emails, social media and face to face interaction (WOM) etc. The effective and economical tool is word of mouth and its very influential for advertisement. Before advancement of technologies, there were only two tools used for advertising, one was using of walls and second was direct interaction of people, so people used to get together and shared their experiences about different products or services they had used or consumed.

Word of Mouth has been defined as informal communication between private parties concerning evaluations of goods and services (Anderson, 1998, p. 6). Many researchers encouraged this definition, they said that WOM can be measured in terms of frequency and the number of people who receive it (e.g. Bowman and Naryandas, 2001; Eliashberg et al., 2000; Godes and Mayzlin, 2004; Liu, 2006; Westbrook, 1987). Word of mouth has been explored for more than 6 decades (Bauer and Gleicher, 1953; Du and Kamakura, 2011; Knapp, 1944; Schmitt et al., 2011) Word of mouth is informal communication about a product or a service (Anderson, 1998; Dichter, 1966; Westbrook, 1987). Ryu and Han (2009) says that WOM can occur among two or more consumers. For the purpose of self-enhancement WOM is used (Duan et al., 2008) .

Keeping in view the effectiveness of word of mouth advertisement, many organizations left their traditional advertising techniques and develop their strategies and shifted towards word of mouth, as its more powerful and influential marketing tool for advertising (Brand Science Institute, 2005; Kilby, 2007). So, marketers gained beneficial results through word of mouth advertising, because it increases trust of consumers and related consequences (e.g. DeCarlo et al., 2007). On the other

hand, researchers investigated the elements that cause motivation through word of mouth, because WOM creates credibility (e.g. Brown et al., 2005; Harrison-Walker, 2001). With the passage of time technologies become more advanced, people are connected online through social media, so it has been noticed that WOM activities are rising day by day and it has been done through online reviews and online connectivity of people. In consumers market, WOM has significant role, specially while investigating issues, like motivational ability of individual to talk and listen (Berger 2014), about which brand individuals talk about (Berger and Schwartz 2011). In this way there is an effect of WOMs effect has been noticed on customer profitability by individuals (Kumar et al. 2010) and there is also an impact on overall sales (You, Vadakkepatt, and Joshi 2015).

Word of mouth have two sides for influencing any product or service, one is positive WOM and other is negative WOM. When consumers have great experience with any brand, then result will be positive WOM and they are likely to share their experience for positive attributes of the specific product or service. Consumers become loyal with that brand and own the it, even sometimes they feel their personality fit for that brand. On the other hand, if consumers have negative experience with the specific product or service, they became dissatisfied and they are likely to talk negatively about that product or service among their social circle and even on social media, this is considered as negative WOM. So, WOM is very important for any brand for its sustainability and consumer involvement. In this way, it is necessary for companies to design their product with great quality and develop advertising strategies that positively influence their customers and creates positive WOM, which may lead the brands towards success, profitability, loyalty and sustainability.

WOM is a very economical and inexpensive way for advertising. Many companies use WOM in their marketing campaigns, they consider WOM an essential tool that is useful for growth of new product and seeding campaigns are beneficial for initiating the process (Libai, Muller, and Peres 2013). Additionally, previous studies have as focused broadly on organic WOM and firm-created WOM has established significantly less consideration.

2.5 Greenwashing Perception and Green Purchasing Intention

Greenwashing perception has emerged as an important construct pertaining to green behaviors of companies. Greenwash is defined as, the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service (Parguel, Benot-Moreau & Larceneux, 2011). It has been noted that green behavior of companies not only affect their financial performance and reputation (Leonidou, Kvasova, Leonidou & Chari, 2013; Walker & Wan, 2012) but also affects a number of external stakeholders (including regulators, consumers, shareholders, investors and the society at large (Guo, Tao, Li & Wang, 2017). This implies that greenwashing perception has far-reaching impact and implication for companies. Similarly, there are many reasons why consumers have an increasing concern for green products and green behavior of firms. Environmental pollution has raised concern for the use of environment-friendly products (Pagiaslis & Krontalis, 2014). Moreover, consumer awareness levels have increased regarding environmental issues and the crisis faced by the world (Zhang, Wang & You, 2015). It is evident that consumers have increasingly started preferring green and organic products in many domains including food, cosmetics, packaging etc. (Paul, Modi & Patel, 2016). This suggests that the deteriorating environmental conditions coupled with consumers green awareness are the major reasons for increasing green concern and usage of green products, which is linked with their preference of selecting companies with respect to authentic green behavior.

In the past years people were not much conscious regarding brand and its image, although they showed their concerned for quality while purchasing any product or service. Advanced technologies become the reason for consumer involvement for branded products. Consumers are more aware about brands and their intentions for purchasing any product follow this awareness. So, consumers prefer branded products as compared to unbranded products. Many Social and environmental activists raised some concerns about companies perceptive behaviors. It means

companies mislead their consumers about their products and claims to be environment friendly. This is known as greenwashing, and many previous studies showed corporate greenwashing, bluewashing and different forms that are used by companies for repairing public reputes and public images (Beder, 1997; Bruno, 1997). It has also been observed that deceptive companies may gain short-term benefits through greenwashing but not on long run basis (Polonsky et al., 2010). The word Greenwashing originated from whitewashing, that means to cover up, camouflage and mask. This concept was used first time by an American environmentalist Jay Westerveld in 1986, who stated that hotels used greenwashing through reuse towels for directing consumers but in reality hotels needed profit and they just showed deceptive behavior about environment.

Additionally, greenwashing has positive impact on green skepticism and a negative influence on green purchasing intention (Leonidou and Skarmeas, 2017). Greenwashing is used to represent insincere, dubious, inflated or misleading environmental claims (Cherry and Sneirson, 2012, p. 141). Consumers who have low concerns for environment and are skeptical in nature, do not show positive intention for green products (Albayrak et al., 2013). Growth of greenwashing has created more skeptical consumers by tempting their suspicious (Johnstone and Tan, 2015; Self et al., 2010). So, green skepticism and perceived deception creates negative impact on organizational integrity and performance of company (Nyilasy et al., 2014). There is a criticism in lodging industry while discussing environmental concerns in the business ethics (Donovan and McElligott, 2000; Knowles et al., 1999), through green initiatives direct financial gains are obtained (Kirk, 1998) while considering low-cost procedures. It denotes misleading consumers by the companies that pretend to be environment-friendly products or services (Parguel et al., 2011). Greenwashing is a concept that is used while companies want to promote environment friendly programs to deflect attention from an organizations environmentally unfriendly or less savory activities (Websters New Millennium Dictionary of English, 2009). Similarly, many other environmental conscientious turns with profit increasing while labeled as greenwashing, so mostly research about greenwashing is used in CSR context (Bazillier and Vauday, 2009; Parguel

et al., 2011) and marketing (Carlson et al., 1993; Newell et al., 1998; Stokes, 2009). Consumers show negative attitude while purchasing and in this way greenwashing ads or deceptive behaviors of companies create negative impact of green purchasing intentions (Newell et al., 1998; Stokes, 2009).

With the passage of time consumers are getting more knowledge or awareness regarding greenwashing and consumers are more skeptical in nature (Chen and Chang, 2013; Horiuchi and Schuchard, 2009; Pomeroy and Johnson, 2009). It has been observed that green products have captured large market share during the 1990s. So, companies advertised about the products or services as environmental friendly but their claims were not confirmed (Montague and Mukherjee, 2010). This is measured as greenwashing, in this way companies adopt deceptive acts by false advertising (Vermillion and Peart, 2010). Because of greenwashing, sacrifice can be seen by the companies as short term sales and profits on long term loyalty of customers. This act leads towards mistrust for companies (Zinkhan and Carlson, 1995). Federal Trade Commission (FTC) has implanted rules and regulations in 1992, that companies must avoid false advertising and consumer mistrust, pertaining to environmental privileges (Montague and Mukherjee, 2010).

Additionally, in 1999, FTC collaboration with Environmental Protection Agency (EPA) by releasing the article *Sorting out green advertising claims*. So, these were the steps taken by regulatory authorities but still consumers are facing greenwashing (Montague and Mukherjee, 2010). These organizations have strong bonding for working with government, for avoid greenwashing by the companies (Vermillion and Peart, 2010). Green industry is developing day by day because of green consumers and its a challenge for the companies for producing green products or services. In addition, consumers also have the wish that companies must involve in green procedures or practices, like energy efficiency and recycling (Montague and Mukherjee, 2010).

It is evident that consumers look for genuineness in companies claims regarding green practices, policies and procedures and overall green behavior (Schmuck, Matthes & Naderer, 2018). When consumers find clues that a company is deceiving them about its green practices, they generally become skeptical and slowly

start isolating themselves with that company (Do Pao & Reis, 2012). This indicate that, it is not sufficient for firms to only formulate and announce green policies, but it is equally important for them to fully implement their green policies and make sure that their green claims are authentic. Then comes the role of purchase intention which generally predicts actual purchasing by the customers. Green purchasing intentions denotes that a consumer will buy a particular product that may cause by environmental views and represents the degree for which consumers show their willingness of purchasing products and services from those firms which have environment friendly repute or image (Netemeyer, Maxham III & Pullig, 2005; Newton, Tsarenko, Ferraro, & Sands, 2015). If consumer perceive companies as greenwash firms, their level of trust declines (Leonidou, Kvasova, Leonidou & Chari, 2013). Additionally, the consumers get confused about the claims of greenwashing firms (Chen & Chang, 2013). In this way, the consumers get cautious and start avoiding the firms products in order to save themselves from being deceived again. This implies that greenwashing perception appears to be negatively related with green purchasing intention. Hence, we hypothesize the following:

Hypothesis 1: greenwashing perception has a negative impact on green purchasing intention

2.6 Greenwashing Perception and Word of Mouth

Greenwashing refers to the misleading act or claims of firms that exaggerate the communication messages through advertisements. In this, firms misleads their customers, for the purpose of profit and image building. It has been observed that consumers show their affiliation towards those companies , that show ethical procedures and policies. These ethical act is related to environment friendly products or services. Consumer show their purchasing intentions towards those companies, which are not involved in greenwashing(Atkinson & Rosenthal, 2014; Kalafatis & Pollard, 1999).Consumers play a vital role for the firms or brands, as they can spread information amongst their social circle, that can be positive

,in case of honesty of firms for their claims of eco-friendly advertisements. But it can be negative WOM, when companies or firms exaggerate about their claims of having eco-friendly products or services.

Greenwashing is a negative word in nature, that's why those firms get negative WOM of promotion by their customers. Global warming, damage of ozone layer, pollution are some serious environmental concern issues. Therefore, consumers become more sensitive for their surroundings, while purchasing of any product or service. Consumers built their trust for the companies which are involved in those practices or performance that is environment friendly (Chen, 2010). Greenwashing is becoming common in the marketplaces due to regular over exaggeration by the companies about the products and this is increasing dominance of greenwashing perception in the markets (Parguel et al., 2011). Greenwashing amongst customers is becoming a challenge for green marketing activities (Hamann & Kapelus, 2004). Therefore, consumers show distrust on the green marketing actions by the firms (Polonsky et al., 2010).

Some companies use dishonest claims or advertisements and this would create confusion among consumers while they are making green purchases of products. This act of companies is demaging the green product markets (Balmer et al., 2009; Parguel et al., 2011). Hence consumers create displeasures for the greenwashed companies and they spread negative WOM. This negative WOM may result distrust and disbelief for greenwashed brands of companies. Consumers attitudes for the companies and their environment promises would decrease green purchasing (Papasolomou, Thrassou, Peattie, Peattie, & Ponting, 2009). This may also hurt green image of companies and it cause doubts in the minds of consumers pertaining to green marketing advertisements and green marketing activities (Polonsky et al., 2010).

In last few years, greenwashing concept has been explored and received attention of researchers and mostly studied in marketing context (Stokes, 2009) and Corporate Social responsibility (Parguel et al., 2011). Parguel, Benoit-Moreau, and Larceneux (2011) also defines greenwashing as tactics that deceive consumers regarding the environmental practices of a company or the environmental benefits

of a product or service (p. 15). In greenwashing literature distrust is frequently used interchangeably with greenwash, so perceived greenwash mostly decrease attitude of consumers towards a firms environmental engagement, therefore allowing consumers distrusting green products (Polonsky et al., 2010). It can be said that consumers show strong negative purchasing intentions in response to misleading or greenwashed advertising ads (Stokes, 2009). Similarly, a strong negative relationship has been found between greenwashing and green trust (Chen and Chang, 2013; Aji and Sutikno, 2015).

Green brand image of firms denotes to, a set of perceptions of a brand in a customers mind that is connected to environmental features and environmental concerns (Chen, 2010). Consumers become confused because of greenwash of firms unreliable marketing activities that could make difficulty for consumers while they evaluate products (Ramus & Montiel, 2005). In this situation greenwash would reason for the damage of green products of the firms (Laufer, 2003). Even these kinds of greenwashing activities can harm loyalty of consumers that is strength of an individuals trust for a product, service or brand (Dick & Basu, 1994). According to Gillespie (2008) because of rapid changes through out the world , consumers are more conscious pertaining to their environment. Greenwash is also getting famous amongst consumers and greenwash can affect loyalty of consumers about protection of their environment, when consumers can not judge green claims of firms. There fore, the firms which takes green initiatives successfully through appropriate communication to their consumers while doing efforts for environment and this may help to believe on the firms in their advertising activities(Chen & Chang, 2013d; Chen & Chang, 2013; Horiuchi et al., 2009). On the other hand the firms with exaggeration of green claims for their products may result distrust by the consumers (Kalafatis, Pollard, East, & Tsogas, 1999). Hence greenwash of firms may harm attitude of consumers for the green promotion and marketing activities (Parguel et al., 2011). As consumers are ambassador for advertising any product or service through WOM, greenwashed claims would lead negative WOM. The companies which have exaggerated their marketing advertisements amongst consumers , this would create greenwashing perception and it is negatively affect

advertising through WOM. In this study greenwashing perception is negatively associated with WOM.

H_{1a}: Greenwashing perception has a negative impact on word of mouth.

2.7 Word of Mouth and Green Purchasing Intention

According to previous studies WOM is an influential and economical tool of advertising. Many firms get fruitful results through WOM. WOM has credibility amongst consumers, as consumers rely on reference by their social relations. Recent research has acknowledged positive association between green practices and guest loyalty, so it also suggests positive effect on revisit intention and positive WOM (Berezan et al., 2013a; Gao et al., 2016; Kassinis and Soteriou, 2003; Manaktola and Jauhari, 2007; Martinez and Rodriguez del Bosque, 2013; Xu and Gursoy, 2015; Yusof et al., 2015, 2017). Technological advancement created more awareness for decision making. Consumers prefer to buy those products which are highlighted by their peers, siblings and friends. WOM is responsible for two aspects (emotional appeal and standing of an organization) in social networks dimensions. Allsop et al. (2007) argued that while making decisions, consumers consider both aspects and means-end chain frameworks are used for emotional and rational messages that strengthen personal values and result in influential outcomes. For example, in tourism management destination loyalty and word of mouth have importance (e.g. Alegre & Juaneda, 2006; Confente, 2015).

Many researchers discussed an argument regarding loyalty and WOM, according to them customer satisfaction with destination may lead towards loyalty and it creates positive WOM and because of loyalty and WOM chances of profitability increases. Last two decades in the field of marketing explored, that WOM should be part of marketing mix, as WOM is considered very influential tool, so, it is important to manage it with marketing mix accordingly (Chen and Xie 2008; Rosen 2009). Therefore, literature investigated very significant stream, like how WOM

motivates and influences target audience, what customers perception for brands are and what they think about brands, how they interpret and how profitability amongst customers has influenced through WOM (Berger 2014; Kumar et al. 2010; Lamberton and Stephen 2016; Lovett, Peres, and Shachar 2013). In this situation intellectuals have increased their considerations towards firms- development for creating strategies that cause amplified WOM through different tools, like referral reward programs, influencer marketing and broadcasting programs (Godes et al. 2005; Haenlein and Libai 2017; Kumar et al. 2013).

Many marketers identified that consumers are more willing to buy those products or services ,which protect their environment. In this way green markets are getting huge market share and profits. In tourism industry satisfaction of customers is created through green initiatives and it has a positive effect upon revisit intentions and WOM (Gao and Mattila, 2014; Han and Kim, 2010; Lee and Heo, 2009; Martinez and Rodriguez del Bosque, 2013; Prudhomme and Raymond, 2013; Xu and Gursoy, 2015; Yusof et al., 2017).

H_{1b}: Positive word of mouth has a positive impact on green purchasing intention.

2.8 The Mediating Role of Word of Mouth between Greenwashing Perception and Green Purchasing Intention

Greenwashing perception is linked with various negative outcomes (Nyilasy, Gangadharbatla, & Paladino, 2014). However, it is worth studying the mechanism through which greenwashing perception leads to those outcomes. Mainly consumer outcomes are important to marketers, because they are likely to affect green purchasing intention. Green information is generally transferred to consumer by companys efforts using advertisements, posters, banner, packaging etc. (Rahbar & Abdul Wahid, 2011). However, consumers themselves are another important source to spread company information in the market. The information shared by consumers is known as word of mouth (Chen, Lin & Chang, 2014). Specifically,

word of mouth (WOM) is defined as the extent to which a customer would infer friends, relatives, and colleagues about positive environmental messages of a product or a brand (Sderlund, 1998). Research suggests that greenwashing has a negative relationship with WOM. Because the company's misleading and deceptive acts annoy the consumers, they speak negatively about the company's claims. This implies that greenwashing WOM gets negatively affected by greenwashing perception.

Marketers target the relevant prospects these days and this is done by different mediums, such as print media, television, radio, social media etc. All the mediums are used for the purpose of advertising, while the most influential tool of advertising for promoting brands is word of mouth. Word of mouth (WOM) is connected to verbal communication, and it is present between two parties i.e. consumer and other parties (Chaniotakis and Lympelopoulos, 2009). According to Anderson, 1998, WOM can be positive or negative, pleasing experiences are linked to positive WOM while unpleasant experiences are considered as negative WOM. Many studies are based on the WOM mechanism.

In this study, word of mouth is used as mediator between greenwashing perception and green purchasing intention. There is a Chinese saying that, bad news has wings, so if consumers have bad experience, they become the source of negative WOM for the company. Therefore, people recommend others for changing their preferences while taking decisions (Zhao and Xie, 2011). WOM plays a vital role while consumers show their purchasing intentions, that's why companies are designing their marketing strategies and adopting WOM for advertising (Yang et al., 2012). This is the era of Millennials, who have many characteristics. Such as need for being unique, peers review, blogs, social media authentication, in this way they prefer those brands which are approved by their peers, so they rely on electronic WOM. The case when consumers are not well-informed about the products, they generally build brand credibility through e-WOM (Chatterjee, 2001). In addition, e-WOM is very effective that reduces cost of advertising and WOM communication can be measured easily through posting about any brand on website or social media (Godes and Mayzlin, 2004).

In today's world, E-WOM communication is useful for consumers for getting information about any brand, because of digitization and internet. So, links are formed between consumers from diverse geographic locations or group of people (Dellarocas, 2003). Social media and web pages create a platform for consumers and people use e-WOM foundations (Hennig-Thurau et al., 2004) it become more beneficial, as consumers can easily share their experiences with others and also get different experiences and opinions for the specific product or servicemen. WOM has two dimensions which are positive and negative e-WOM. According to Park and Lee (2009), negative e-WOM is greater than positive e-WOM when consumers have purchasing intentions. For example, in tourism industry, consumers rely more on WOM communication at the time of decision making for their travelling concerns (Christy and Dimple, 2012) or city image construction development (Jalilvand et al., 2012).

WOM/e-WOM is trustworthy among customers and its more influential tool for marketing (Keller and Fay, 2012) and this tool is more reliable as compared to commercial ads (Lopez and Sicilia, 2014; Taylor et al., 2012; Warrington, 2002). Many previous studies took WOM as mediator between perception and purchasing intentions. Nielsen (2012) describe through his research work, that online reviews play an important role for purchasing any brand. It has also been observed that traditional communication styles of advertising are gradually decreasing, because of advanced advertising tool e-WOM through social media (Dobele et al., 2007). There are two recent concepts of eWOM that are acceptance and forwarding, while many others factors cause acceptance and forwarding (Cheung et al., 2008; Ho and Dempsey, 2010).

In hotel industry WOM plays an important role, because when services are high-perceived risk or complex in nature (Jalilvand and Samiei, 2012). Many past researches explored positive relationship amongst spread of positive WOM and CSR (Choi and La, 2013; Hong and Rim, 2010). Those companies who take care of their societies, in terms of producing environment-friendly products or services. In this way consumers feel attached and involved with those companies and become loyal with them. On the other hand, the companies who are involved in greenwashing,

it negatively influences WOM. So, greenwashing perceptions appears to have a negative relationship with green purchasing intention. For those companies who have good reputation, it creates positive purchase intention by customers (Kim and Kim, 2016). It has been explored that a firm's reputation is done by evaluation of cognitive and affective and it results in purchasing intentions through WOM (Su et al., 2015; Su et al., 2014; Bartikowski et al., 2011; Walsh et al., 2009).

In the same way, WOM is likely to affect consumer preferences, because word of mouth is a strong element of brand message information (Allen & Spialek, 2018). A positive word of mouth is likely to effect purchase decisions positively and vice-versa. Consumers are likely to develop negative thinking about the products and services of the firms whom they perceive as making false claims regarding their green practices (Rahman, Park & Chi, 2015). Subsequently, the consumers will spread negative WOM about those companies which are involved in greenwashing. This WOM can affect the purchase intention of other consumers who hear negative about greenwashing firms. In this way, WOM serve as a mediating link between greenwashing perception and green purchasing intention.

This can also be explained from the theoretical lens of ABC theory which is based on a means-end approach, in which individuals act according to the gains that they expect from certain behaviors (Feldmann and Hamm, 2015). Attitude here means the evaluative rating of an object, which consists of beliefs, perceptions and the evaluation of outcomes, which is taken as greenwashing perception. As per the theory, attitudes translate into behavior via the context which can serve as mediator or moderator. Therefore, we take WOM as mediator in the relationship between greenwashing perception and green purchasing intention. Based on the above discussion, we hypothesize the following:

Hypothesis 2: WOM mediates the relationship between greenwashing perception and green purchasing intention.

2.9 Environmental knowledge and word of mouth

Today's customer is well aware and knowledgeable as compared to the past and shows his/her concern for the issues related to their environment and its protection. According to (Cegarra et al., 2010) the information that is considered best pertaining to environmental enhancement is Knowledge which is known as Environmental Knowledge. Many researchers presented almost similar definitions of environmental knowledge, those consist of information, knowledge and store of data (environmental recalls) that has been gathered regarding environmental matters by the organization during its olden times (Boiral, 2002). Environmental knowledge can be seen by considering it as simple general knowledge or information that contains the perception of environmental safety, ecosystem and the natural atmosphere (Fryxel and Lo, 2003). In this way, this concept of environmental knowledge, in which environmental dimension is associated to both the purpose of the knowledge and environmental properties of consequential knowledge (Cegarra et al., 2010).

Previous studies identified green knowledge as well, green knowledge has been taken an important element while consumers are engaged in decision making for specific product or service (Chan, 1999; Getzner & Grabner-Kruter, 2004). Green knowledge can be defined as, a general knowledge of facts, concepts and relationships concerning the natural environment and its major ecosystems (Fryxell & Lo, 2003, p. 45). Green knowledge of consumers may strengthen the positive attitude for green products create more awareness pertaining towards green brands. This may result positive WOM for the firms (DSouza, Taghian, Lamb, & Peretiatko, 2007).

Those consumers who have less knowledge about environment, they perceive higher level of uncertainty, this may result for increasing skeptical attitude for the branded green products or services. With the passage of time consumers are recognizing the environmental issues and consumers are well informed for the ecological problems (Han, 2015; Lee, Hsu, Han, & Kim, 2010). These kind of well aware consumers can estimate the currently and upcoming environmental issues, like air pollution, water pollution, ozone layer damage and global warming. In this critical situation

consumers are preferring to choose those firms which have eco-friendly products or services. Thus consumers choose eco-friendly firms, which would not harm their environment and that's why consumers are willing to pay more (Laroche, Bergeron, & Barbaro-Forleo, 2001; Lee et al., 2010).

In hospitality and tourism industry, firms are taking green initiatives through environmental friendly technologies, policies and procedures amongst their employees and consumers (Chen & Tung, 2014; Han, 2015; Kim, Njite, & Hancer, 2013; Lee et al., 2010; Tang, 2015). Consumers are becoming more conscious and because of this consciousness, they have curiosity for getting environmental knowledge. It has been observed that, the consumers with higher environment knowledge has a positive influence upon WOM.

Hypothesis 3: Environmental knowledge has a positive impact on word of mouth

2.10 The Moderating Role of Environmental Knowledge between Greenwashing Perception and Word of Mouth

Since greenwashing perception appears to be an important predictor of WOM, it is important to note what factors reinforce the relationship. Recent literature of greenwashing and WOM (Zhang, Li, Cao & Huang, 2018) suggests that environmental knowledge of consumers can play a role in the relation between the two variables. Environmental knowledge (EK) is the ability to identify symbols, concepts, and behavior patterns related to environmental protection (Laroche, Bergeron & Barbaro-Forleo, 2001). This means that environmental knowledge can be an important element pertaining to consumers responses to green behavior of companies. As research suggest that consumers who have high level of EK have a positive green purchasing behavior (Mostafa, 2007; Lee, 2010). Additionally, EK has a role to play in green consumption behaviors. Pagiaslis and Krontalis (2014) demonstrated that green concern is positively linked with EK, which is a likely predictor of green consumption behavior.

Moderator is an important element in research model, as it strengthens or weakens the relationship between variables. In this study, environmental knowledge is taken as moderator, i.e. it strengthens the relationship between greenwashing perception and word of mouth. Prior studies explored relationship among environmental performance and advertising (Alves 2009; Delmas and Burbano 2011; Furlow 2010; Gillespie 2008; Greer and Bruno 1996; Paladino and Pandit 2012; Ramus and Montiel 2005; TerraChoice 2010). The consumers who have a concern for environment show resistance on greenwashing ads or promos (Parguel, Benoit-Moreau, and Russell 2015).

In greenwashing perception, two very important moderators can be discussed, which are environmental knowledge and environmental concern, so understanding for these variables are necessary. For this, it is essential to consider their role, that how vulnerable greenwashing claims are and which roles are not to be considered (Johar 1995; Parguel, Benoit-Moreau, and Russell 2015). The consumers who have environmental knowledge have the aptitude to expose greenwashing intentions, which are presented through ads (Chen and Chang 2013). Therefore, many experimental studies propose that there is a negative relationship between greenwashing perception and consumers evolution of brand through ads (Newell, Goldsmith, and Banzhaf 1998; Nyilasy, Gangadharbatla, and Paladino 2014).

when consumers become more aware about greenwashing, there attitude towards the brands and ads get altered. In this way, greenwashing claims consisting of misleading acts negatively affect consumers attitude and there is a decline of green purchasing intention (Olson and Dover 1978). Because attitude toward ad has appeared as an important predictor of attitude towards brands (e.g., Matthes, Wonneberger, and Schmuck 2014; Hartmann and Apaolaza-Ibanez 2012; Tucker et al. 2012). Environmental concern and environmental knowledge are basic elements of environmental involvement. But environmental knowledge is more reliable, because it has the ability to indicate greenwashing perceptions in advertising (Newell, Goldsmith, and Banzhaf 1998). It has also been observed that the consumers who have more awareness about their surroundings or environment can

easily judge greenwashing perceptions in ads, so it negatively affect green purchasing intention. Therefore, environmental knowledge will negatively influenced WOM and vice versa.

Environmental knowledge has increased due to the environmental issues faced by the world (Zsoka, Szerenyi, Szchy & Kocsis, 2013). Consumers awareness levels have increased and so is the green concern they have (Hartmann & Apaolaza-Ibez, 2012). These days consumers seek new information regarding the environment, green firms and their polices and practices (Akehurst, Afonso & Martins Gonalves, 2012). Environmental knowledge then plays its role in green consumption behavior and preference of green products and services. Moreover, the governments and regulators have gone an extra mile to increase public awareness regarding the environmental issues and their repercussion for today and the generations to come (Darnall, Ponting & Vazquez-Brust, 2012).

Hence, it is plausible to state that consumers who have more environmental knowledge than others will be more responsive to greenwashing perception and will be more involved in a negative WOM and vice-versa. This have another explanation when looked from the angle of ABC theory. As per the theory various attitudes get translated into behaviors via the context. The context may serve as mediator or moderator in the relationship. Here, we take EK as the context where the relationship between greenwashing perception and green purchasing intention is held. Thus, it appears that the consumers level of environmental knowledge can reinforce the relationship i.e. the higher the level of EK, the higher will be the level of negative WOM and vice versa. Hence, we hypothesize that:

Hypothesis 4: Environmental knowledge moderates the relationship between greenwashing perception and WOM, such that the higher the level of consumers EK, the lower will be the level of positive WOM and vice versa.

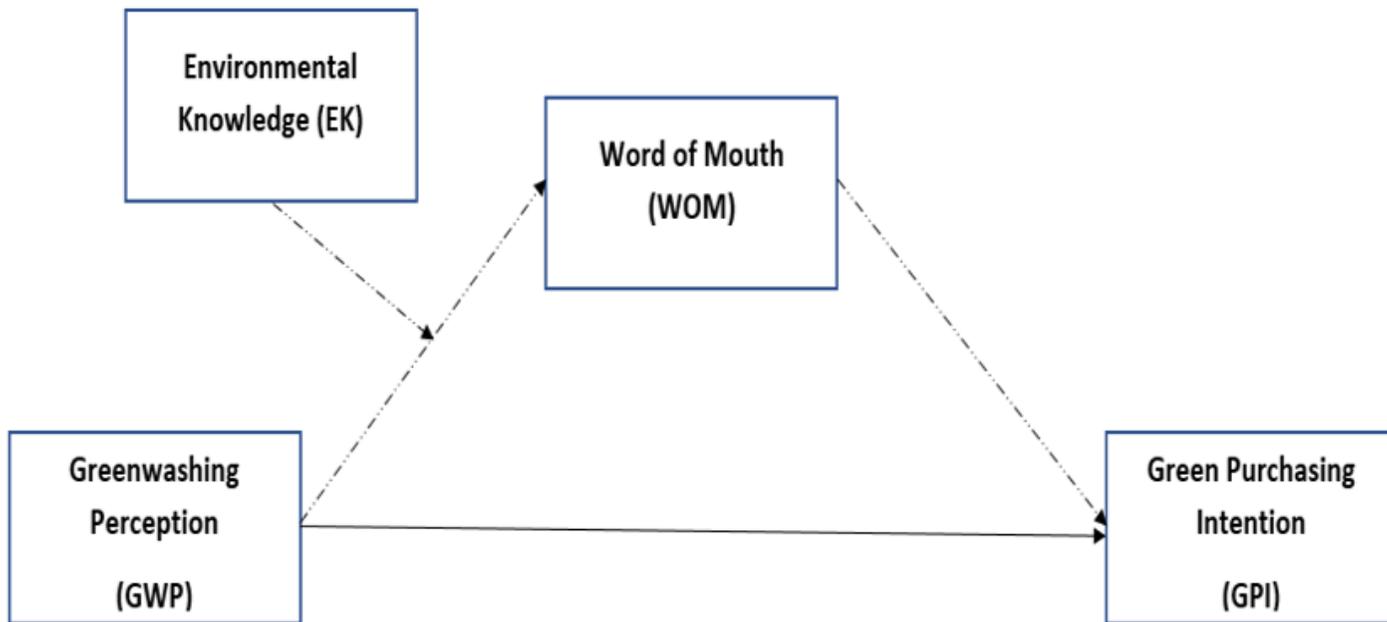


FIGURE 2.1: The Hypothesized Model

Chapter 3

Research Methodology

3.1 Research Design

In line with the study objectives and based on the literature review, a causal relationship has been hypothesized between the variables of interest i.e. greenwashing perception (independent variable), word of mouth (mediating variable), environmental knowledge (moderating variable) and green purchasing intention (dependent variables). Therefore, data collection and analysis for further interpretation was made accordingly through various means and procedures as discussed further.

3.2 Type of Study

The researcher introduced no changes or external modifications in natural settings from where the responses are sought from the respondents (consumers) through questionnaire demonstrating that the researchers interference was minimal. In this manner, the study will be a field study of obtaining first-hand information from the respondents.

3.3 Study Settings

The study settings represent the conditions under which the research gets carried out. The settings can be contrived or noncontrived depending upon the study objectives. In a contrived setting, the investigator makes some changes in the environment to obtain certain results and to test the effect of some conditions. While, in noncontrived settings, no changes or modifications are introduced in the environment from where the responses are sought. The current study took place in a noncontrived setting implying that the responses were obtained in natural settings where routine activities occur.

3.4 Time Horizon

The time horizon represents the time span under which data collection takes place. Depending upon its scope and research objectives, a study can be cross-sectional, multi-wave, time-lagged or may span over the period of years as well. The current study was cross-sectional in nature implying that the data was collected once by the respondents and they were contacted only for one time slot.

3.5 Researcher Interference

This represents the role the researcher plays in the study pertaining to his/her interference in the research. A researcher's interference can be minimal, moderate or excessive depending upon the study objectives and investigation attributes. In the present study, the researcher introduced no changes or external modifications in natural settings from where the data was gathered from the respondents (consumers) employing a survey questionnaire representing that the researcher's interference was minimal. Therefore, the researcher gained first-hand information from study respondents in natural settings.

3.6 Unit of Analysis

Unit of analysis represents that aggregation of data which is required at the time of analysis. The researcher determines to have the appropriate unit of analysis based on the study objectives and scope. Unit of analysis can be individual, dyads or groups. For the present study, the unit of analysis was individual, which was represented by consumers who were contacted and became respondents.

3.7 Population and Sample

The target population of the study constituted Pakistani consumers from Pakistan capital territory i.e. Islamabad. As Islamabad has more diverse mix of population, because people from different cities lives here being the capital and most advanced city of the country. Therefore, diversity of culture can also be seen in the markets of Islamabad and Rawalpindi (twin cities). The study took into account consumers from various age groups and income level to collect data pertaining to study variables. The consumers in the market of Islamabad and Rawalpindi represented the target population. They were approached in Giga Mall, Centaurus Mall and Safa Gold Mall. The sample was best chosen from twin cities, as it reflects diversity of culture, preferences and attitudes of people. 275 out of 300, questionnaires were filled by the respondents.

The study revolves around greenwashing perception and green purchasing intention. Greenwashing is new concept for Pakistani consumers. Therefore, an orientation was given to respondents, in this way study was scenario based and respondents were instructed to imagine any brand or company in mind. Subsequently explaining the scenario, respondents were asked to give their candid opinion to questions about greenwashing perception, environmental knowledge, word of mouth and green purchasing intention. Respondents were also asked to fill their demographics which includes gender, age, qualification and monthly income. This sample was most suitable for analysis for research in the capital territory, as it consists of diverse cultures of Pakistan. A total of 300 questionnaires were distributed

among study respondents. 275 respondents filled the questionnaire. Convenience sampling method was employed to contact respondents based on their willingness to participate in the survey. Questionnaires were distributed amongst survey respondents. Only those respondents who give their consent to participate in the study was finalized as participants.

3.8 Instrumentation

All variables of the study will be measured through standard instruments developed and validated previously, as discussed below.

3.8.1 Greenwashing Perception

Greenwashing Perception will be measured by using the scale of (Laufer,2003 and Chen & Chang, 2012). The scale has five items and measures responses on a likert scale. Sample items include, the product misleads with words regarding its environmental features and the product misleads with visuals or graphics regarding its environmental features

3.8.2 Green Purchasing Intention

Green purchasing intention will be measured by using the scale of (Abdul-Muhmin,2007) and Goh & Balaji (2016). The scale consists of 3 items and asks respondents to rate the statements on a Likert scale. Sample statements include I will purchase products from this company because of its environmental concern. and I am willing to buy other products from this company because of its environmental performance.

3.8.3 Word of Mouth (WOM)

The scale of (Molinari et al.2008) will be used to measure WORD OF MOUTH. It has four items and measures responses on a likert scale. Sample items include,

I would highly recommend this product to others because of its environmental image.

3.8.4 Environmental Knowledge (EK)

The scale of (Leonidou and Skarmeas ,2015) will be used to measure environmental knowlege. It has four items and measures responses on a likert scale. Sample items include, I am very knowledgeable about environmental issues.

TABLE 3.1: Instrumentation Table

S.No	Variable	Author	Number of Items
1	Greenwashing perception	Laufer (2003) and Chen & Chang(2012)	5
2	Environmental knowledge	Leonidou and Skarmeas (2015)	4
3	Word of mouth	Molinari et al.2008	4
4	Green purchasing intentions	Abdul-Muhmin (2007) and Goh & Balaji(2016)	3

3.9 Statistical Techniques and Tools

The study was quantitative in nature; therefore, certain statistical techniques was employed to analyze the relationship between the dependent, independent, moderating and mediating variables. Descriptive statistics was used to describe the characteristics of sample in terms of age, gender, work experience, qualification and income. Scale variables descriptive statistics was explained in terms of frequency distribution, arithmetic mean, and standard deviation. Regression was applied to establish causal relationship between the variables. Smart PLS3 was used to analyze the data.

Chapter 4

Results

4.1 Descriptive Statistics

Table 4.1 represents the descriptive statistics of scale variables used in the study. It becomes convenient for the researcher to describe the study variables when they are represented in terms of mean, maximum, minimum and standard deviation. The mean value shows the average of each variables in the data set. Minimum value shows the minimum recorded response, while maximum value shows the maximum recorded response of the sample. Standard deviation is a measure of dispersion and shows how distant the values are from mean value. Table 4.1 shows the said values of greenwashing perception, word of mouth, environmental knowledge and green purchasing intention.

TABLE 4.1: Descriptive Statistics (Minimum, Maximum, Mean and Standard Deviation)

Variable	Sample	Min	Max	Mean	Std. dev
Greenwashing Perception	275	1.00	5.00	2.650	0.814
Word of Mouth	275	1.00	5.00	3.572	0.842
Environmental Knowledge	275	1.25	5.00	3.501	0.713
Green purchasing Intention	275	1.00	5.00	3.597	0.884

4.2 Sample Characteristics

The demographic characteristics of study respondents are reported in table 4.2. Respondents represented different gender, age group, qualification and income levels. Out of 275 respondents, 174 were males and 101 were females, representing 63.3% and 36.7 of each gender respectively. The age mix of respondents was as follows. They were from the age brackets of 18 - 25 years (81.1%), 26 - 33 years (14.5%), 34 - 41 years (3.3%) and 42 years or above (1.1%) respectively. Mainly the participant who had a minimum qualification of intermediate were selected for the study, as the study was focused on greenwashing perception and environmental knowledge. Participant had different qualification ranging from intermediate to higher degrees. Five (05) participant had intermediate qualification, 164 had a Bachelors degree, while the remaining 106 possessed a Masters or higher degree representing 1.8%, 59.6% and 38.5% of each category respectively. Finally, the income level of participants was asked. The income groups represented in the study are as follows. Respondents having PKR20 to 30K income (13.1%), 31 to 40K income (3.6%), 41 to 50K income (1.1%), 51 to 60K income (2.9%) and not earning individuals (70.2%).

TABLE 4.2: Sample Characteristics

	Frequency	Percent	Cumulative Percent
Gender			
Male	174	63.3	63.3
Female	101	36.7	100
Age			
18-25 years	223	81.1	81.1
26-33 years	40	14.5	95.6
34-41 years	09	3.3	98.9
42 years or above	03	1.1	100
Qualification			
Intermediate	05	1.8	1.8
Bachelor's Degree	164	59.6	61.5
Master's Degree or Higher	106	38.5	100
Monthly Income (Rs.)			
20,000-30,000	36	13.1	13.1
31,000-40,000	10	3.6	16.7
41,000-50,000	03	1.1	17.8
51,000-60,000	08	2.9	20.7
60,000 or above	25	9.1	29.8
Other	193	70.2	100

4.3 PLS SEM

Partial Least Squares - Structural Equation Modelling (PLS-SEM) is one of the second-generation techniques to overcome the weaknesses of first-generation methods. It is most appropriate instrument for analysis of data which aims to forecasting the relationship among constructs (Hair et al., 2014). Hence Smart PLS3 was employed for evaluating measurement and structural model. PLS path model consists of two elements, which are given as below.

- A. Measurement model (outer model)
- B. Structural model (inner model)

4.3.1 Measurement Model

To assess the measurement model, convergent and discriminant validity are calculated (Hair et al., 2014). According to previous studies, Convergent validity and discriminant validity are used for evaluation of validity (Chua et al., 2016).

a. Convergent Validity:

It can be defined as, How much correlated the items of a latent construct are. Convergent validity is estimated through three criteria ,which are given as follows:

i. Factor (outer) Loading

Factor (outer) loading should be higher than 0.70(Hair et al., 2014). In this study, Outer loadings are higher than the set standard. In this study EK has four items, EK1, EK2, EK3, EK4 have outer loadings of 0.770 ,0.753, 0.719, 0.710 respectively. GPI has three items , which are GPI1, GPI2, GPI3 and they are having outer loadings of 0.861, 0.869, 0.876 respectively. GWP has five items, namely GWP1, GWP2, GWP3, GWP4, GWP5, and these have outer loadings of 0.824, 0.853, 0.798, 0.815, 0.777 correspondingly. Last variable is WOM, that has four items.WOM1, WOM2, WOM3, WOM4, and they have outer loadings of 0.793, 0.863, 0.870, 0.813 respectively. Hence all the items have outer loadings higher than 0.708, which satisfy the set criterion.

ii. Composite Reliability

As per Chin (2010), composite reliability is calculated to assess composite reliability CR should be higher than 0.7 as suggested by Hair et al. (2011). A reliability analysis was carried out to make sure that each scale used in the study fits the study requirements and is suitable to be used in current study settings. Reliability represents the condition when a scale gives consistent results when administered multiple times or to varying audiences. As a benchmark, a scale is reliable if it gives a Cronbach's alpha value of 0.7 and above. Here, it can be observed that all scales have reliability value of more than 0.7. Greenwashing perception had 05 items with alpha value of 0.872. Word of mouth had 04 items with the alpha value

of 0.855. Environmental knowledge had 04 items with the alpha value of 0.722. Whereas, the reliability value of green purchasing intentions scale turned out to be 0.838 which had 03 items. This shows that all scales used in the study were fit for the study settings and were reliable in terms of their statistical strength. Reliability of items and construct shown below in table 2 meets the criteria for further analysis.

iii. Average Variance Extracted

AVE (average variance extracted), which should be higher than 0.50 (Chin, 2010). Convergent validity was evaluated through AVE. The AVE of latent variable is reported in table 3, which shows that AVE for all variables is greater than 0.50 ranging from (0.545 0.698) which meets the standard. For discriminant validity, square root AVE was compared with correlation all the construct in the model. Shown in table below the square root of AVE has a greater value than correlation when all the constructs were compared with each other. In this study EK has AVE value of 0.545, GPI has 0.755 AVE, GWP has 0.622 AVE and WOM has 0.698 AVE. All the variables meet the set standard. Therefore, convergent validity has been found appropriate for the measurement model.

TABLE 4.3: Outer loadings

Variables	Outer Loadings
EK1	0.770
EK2	0.753
EK3	0.719
EK4	0.710
GPI1	0.861
GPI2	0.869
GPI3	0.876
GWP 1	0.824
GWP2	0.853
GWP3	0.798
GWP4	0.815
GWP5	0.777
WOM1	0.793
WOM2	0.863
WOM3	0.870
WOM4	0.813

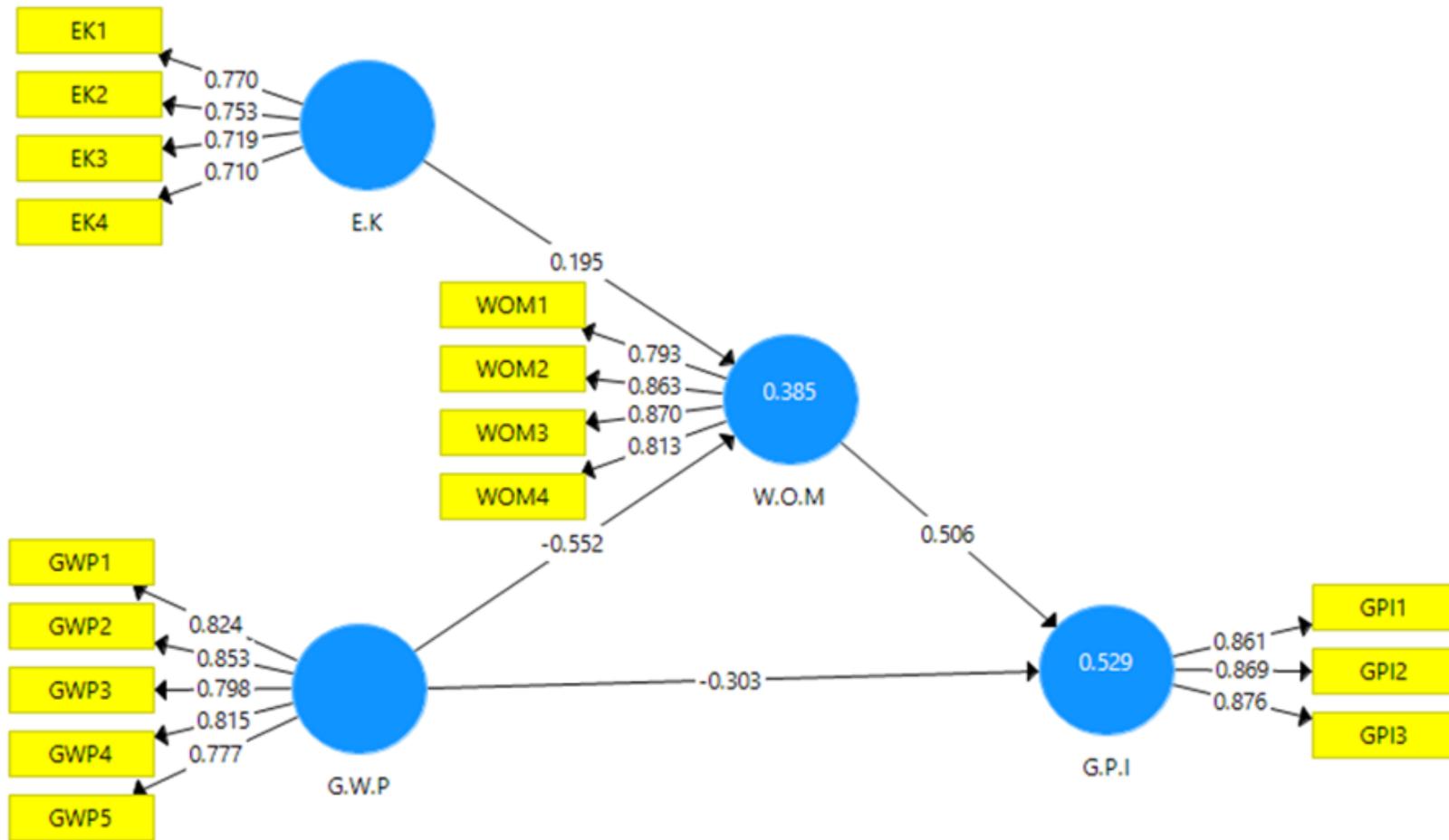


FIGURE 4.1: PLS/SEM Model

TABLE 4.4: Measurement Model

Measures	<i>Cronbach alpha</i>	CR	AVE
EK	0.722	0.827	0.545
GPI	0.838	0.902	0.755
GWP	0.872	0.907	0.662
WOM	0.855	0.902	0.698

b. Discriminant Validity

Discriminant validity is, the extent to which a construct is truly distinct from other constructs. Discriminant Validity is assessed by three methods, which are given as follows.

1. Square root of AVE is greater than Inter-construct correlation
2. Cross Loading
3. HTMT

1. Square root of AVE is greater than Inter-construct correlation

For discriminant validity, square root AVE was compared with correlation all the construct in the model. Shown in table below the square root of AVE has a greater value than correlation when all the constructs were compared with each other. Discriminant Validity evaluated through Fornell and Larcker(1981) criterion (Hair et al.,2014). According to this standard ,square root of AVE for each construct is compared with its correlation of the outer construct. In Table ,square root of AVE for each construct has greater value than its correlation with outer construct. Bold diagonals values are square root of the average variance extracted and the other (off diagonals) are correlations among constructs.

TABLE 4.5: Fornell-Larcker Criterion

	EK	GPI	GWP	WOM
EK	0.738			
GPI	0.366	0.869		
GWP	-0.194	-0.602	0.814	
WOM	0.303	0.685	-0.590	0.835

Bold(diagonals) are the values of square root of the average variance extracted and the remaining (off diagonals) are correlations among constructs. EK = Environmental Knowledge, GPI = Green Purchasing Intention, GWP = Greenwashing Perception, WOM = Word of mouth.

2. Cross Loadings

For evaluating discriminant validity cross loadings are used. Cross Loadings shows, the loading of each indicator must be greater in comparison with the rest of its cross loadings to ascertain discriminant validity. Difference between items should be 0.20, because if difference is less than 0.20, then it will create problem. In this study cross loadings were in the range, which satisfy the set criterion of Cross loadings for evaluation of discriminant validity.

TABLE 4.6: Cross Loadings

	EK	GPI	GWP	WOM
EK1	0.770	0.262	-0.157	0.247
EK2	0.753	0.301	-0.142	0.208
EK3	0.719	0.248	-0.129	0.219
EK4	0.710	0.274	-0.144	0.216
GPI1	0.400	0.861	-0.537	0.623
GPI2	0.279	0.869	-0.501	0.510
GPI3	0.271	0.876	-0.528	0.640
GWP1	-0.125	-0.466	0.824	-0.518
GWP2	-0.145	-0.479	0.853	-0.508
GWP3	-0.155	-0.512	0.798	-0.469
GWP4	-0.171	-0.532	0.815	-0.489
GWP5	-0.200	-0.456	0.777	-0.409
WOM1	0.211	0.513	-0.460	0.793
WOM2	0.231	0.544	-0.484	0.863
WOM3	0.329	0.604	-0.520	0.870
WOM4	0.232	0.618	-0.503	0.813

3. Heterotrait-Monotrait Ratio (HTMT)

For evaluating discriminant validity HTMT is used. (HTMT) as a new approach for evaluation of discriminant validity in variance-based SEM. The value of HTMT should be less than 0.90 and because of this set standard, discriminant validity has been established between two reflective constructs. In this study Table. Shows HTMT values of constructs and all values were below than 0.9, that satisfy the set criterion.

TABLE 4.7: Heterotrait-Monotrait Ratio (HTMT)

	EK	GPI	GWP	WOM
EK				
GPI	0.470			
GWP	0.246	0.701		
WOM	0.381	0.800	0.680	

EK = environmental knowledge, GPI = green purchasing intention,

GWP = greenwashing perception, WOM = word of mouth

Hence, Measurement model has adequate convergent validity. After satisfactory results of measurement model through reliability and validity, the next step of structural model for assessing of hypotheses validation has been done.

4.3.2 Structural Model

Structural model represents the relationship between latent variables that hypothesized in the research model . Table 4.5 represents the results for structural model analysis, that shows the results of inner model .

4.4 Hypothesis Testing

The direct relationships of study variables have been reported in Table 4.5. The beta value pertaining to the relationship of greenwashing perception and green purchasing intention turned out to be -0.307 with a significant p value. This signifies that hypothesis 1 has been supported which stated that greenwashing perception has a negative impact on green purchasing intention.

The beta value pertaining to the relationship of greenwashing perception and WOM turned out to be -0.553 with a significant p value. This signifies that hypothesis H1a has been supported which stated that greenwashing perception has a negative impact on positive word of mouth. The beta value pertaining to the relationship of WOM and GPI turned out to be 0.505 with a significant p value. This signifies that hypothesis H1b has been supported which stated that positive WOM has a positive impact on green purchase intention. The beta value pertaining to the relationship of EK and WOM turned out to be 0.203 with a significant p value. This signifies that hypothesis H5 has been supported which stated that EK has a positive impact on word of mouth.

TABLE 4.8: Path Coefficients

Hypothesis	Relationship	B	S.E	T- statistic	R ²	Q ²	f ²	Decision
H1	GWP → GPI	-0.307	0.069	4.370	0.529	0.371	0.127	Supported
H1b	WOM → GPI	0.505	0.065	7.821				0.355
H1a	GWP → WOM	-0.553	0.048	11.509	0.385	0.248	0.477	Supported
H5	EK → WOM	0.203	0.060	3.250				0.060

GWP = greenwashing perception, GPI = green purchasing intention, WOM = word of mouth, EK = environmental knowledge

4.5 Mediation Analysis

Mediation of word of mouth in the relationship between greenwashing perception and green purchasing intention has also been established as reported in Table . The beta value -0.279 with no zero lying between the upper and lower boot limits. Based on the results (figure 3), we found support for the mediation hypothesis which stated that word of mouth mediates the relationship between greenwashing perception and green purchasing intention.

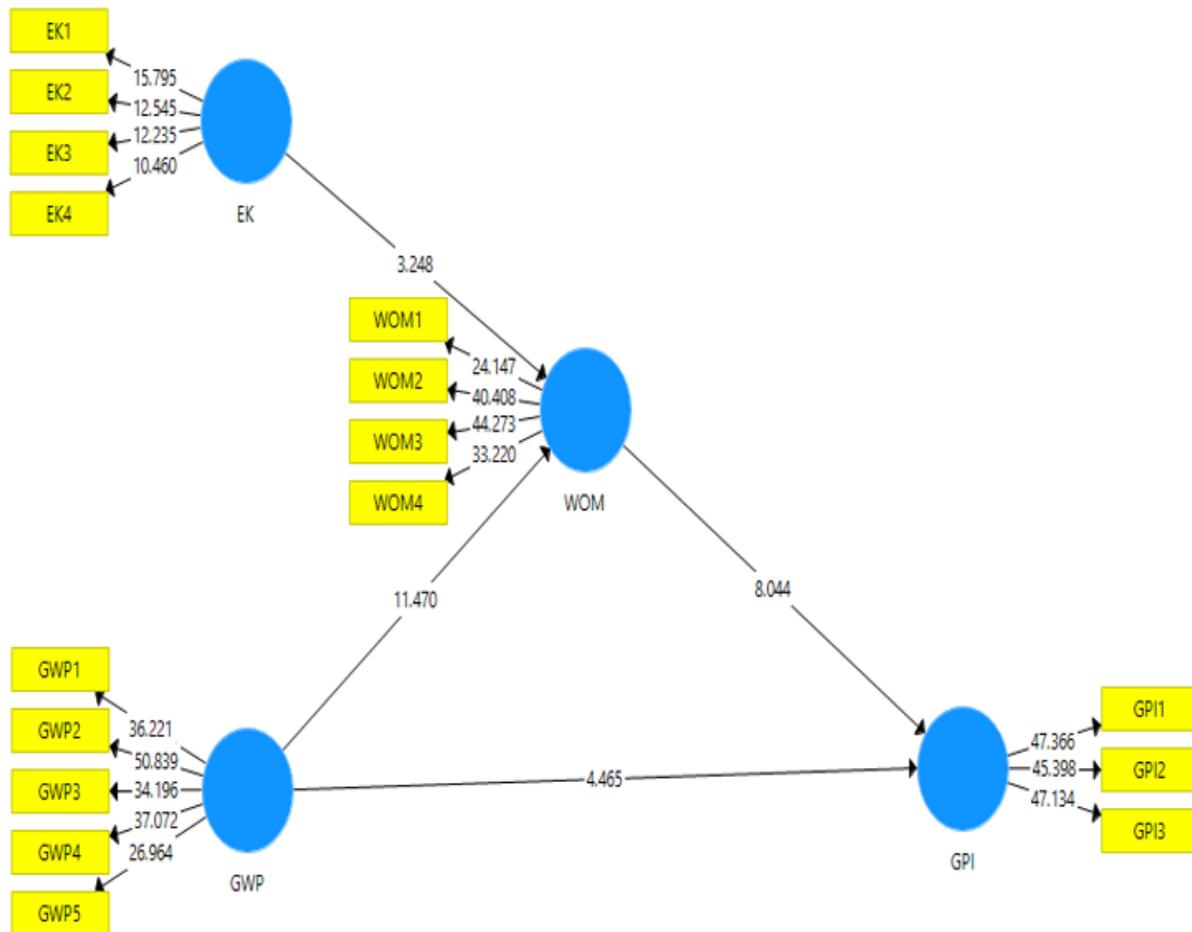


FIGURE 4.2: Mediation Analysis

4.6 Moderation Analysis

A moderation analysis was run to test the moderating effect of environmental knowledge in the relationship between greenwashing perception and word of mouth as shown in figure 4. The beta value turned out to be -0.125 with p value higher than 0.05 and a zero value lying between upper and lower boot limits. This shows that the moderation has not been established. Thus, we conclude that moderation hypothesis has not been supported, which stated that; environmental knowledge moderates the relationship between greenwashing perception and word of mouth, such that the higher the level of consumers EK, the lower will be the level of positive word of mouth and vice versa.

TABLE 4.9: Moderation Analysis

Hypothesis	Relationship	Beta	T- statistic	p- value	Confidence Interval 95%		Decision
					Confidence interval 2.5%	Confidence interval 97.5%	
H4	Moderation of EK between GWP and WOM	- 0.126	1.143	0.253	-0.194	0.258	Not supported

EK = environmental knowledge, GWP = greenwashing perception, WOM = word of mouth

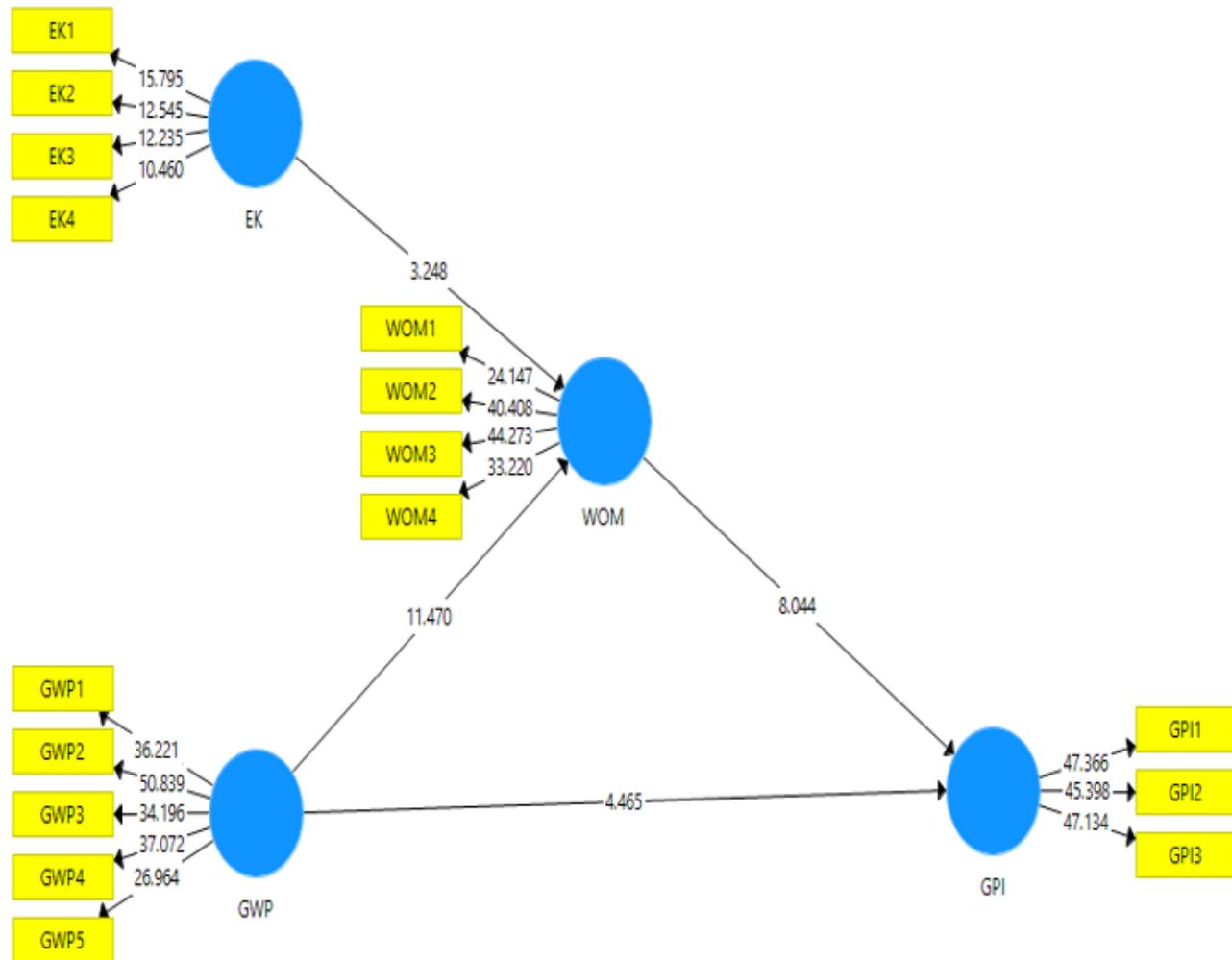


FIGURE 4.3: Moderation Analysis

4.7 Summary of Hypotheses Supported/Not Supported

TABLE 4.10: Hypotheses

Hypothesis	Statement	Result
H1	Greenwashing perception has a negative impact on green purchasing intention	Supported
H1a	Greenwashing perception has a negative impact on word of mouth	Supported
H1b	Positive word of mouth has a positive impact on green purchasing intention	Supported
H2	Word of mouth mediates the relationship between greenwashing perception and green purchasing intention	Supported
H3	Environmental knowledge has a positive impact on word of mouth	Supported
H4	Environmental knowledge moderates the relationship between greenwashing perception and word of mouth, such that the higher the level of consumers environmental knowledge, the lower will be the level of positive word of mouth and vice versa.	Not Supported

Chapter 5

Discussion and Conclusion

The main objective of the study was to test the relationship between greenwashing perception and green purchasing intention, while taking word of mouth as mediator in the relationship. Next, to test the moderating role of environmental knowledge in the relationship between greenwashing perception and word of mouth. The objectives were translated into hypotheses which were formulated on the basis of literature and theoretical support. The chapter carries a discussion of study results with respect to study objectives.

5.1 Discussion

RO1: To examine the relationship of greenwashing perception with green purchasing intention and word of mouth

The first hypothesis was about the relationship of greenwashing perception with green purchasing intention. The relationship was hypothesized based on the literature and recent work on greenwashing perception and subsequent green purchasing intentions. The hypothesis got support from the study results. This represents the negative impact that greenwashing perception has on green purchasing intention. In today's world, consumers are getting more and more conscious about green behavior of companies. Specially, the educated consumers are more concerned about companies green behavior and they do not merely base their purchase decisions on

the basis of companys green claims, but they also verify such claims. greenwashing perception which is defined as a deceptive behavior based on falsified claims of the firms has gained much attention recently for researchers, marketers and consumers alike. Greenwashing happens when companies or brands deliver positive imaged information regarding environmental or social performance regardless of its real and actual environmental or social performance being deprived (Delmas & Burbano, 2011; Lyon & Maxwell, 2011). The results have confirmed that greenwashing perception has a role to play in consumers purchase intentions, which are likely to be translated in actual purchase decision.

The result is broadly consistent with the work of other scholars. The literature in the field of purchase intentions highlights the importance of many factors in determining such intentions. Greenwashing perception has been identified as one such factor in this study. While it mainly focuses on the importance of intentions with respect to future purchase decisions. Therefore, the result is important in inferring that the reduced green purchasing intentions based on a companys greenwashing perception are a precursor of weaker actual purchase behavior. This implies that firms need to be very careful while making green claims. Companies need to make sure that their communication with the consumers through advertisement, packaging and other means is true and aligned with their actual practices pertaining to green behavior in order to trigger consumers purchase intention and subsequent purchase decisions.

The next hypothesis was about the relationship of greenwashing perception and word of mouth, which stated that greenwashing perception has a negative impact on word of mouth. It was also hypothesized based on the foundations provided by ABC theory. The theory suggests that positive or negative evaluation can lead to attitude development. Therefore, greenwashing perception was taken as the evaluation of the brands or companies which can lead to attitude development in the form of word of mouth. We hypothesized that greenwashing perception will lead to prevent consumers from spreading positive word of mouth i.e. they will not be involved in spreading positive word of mouth about the greenwashing brands and/or companies. When consumers feel that the company is deceiving

them and the community by making false claims about their green practices and policies, they will feel betrayed and stop spreading positive word of mouth about the company. Our results show that the hypothesis received support from the data. The substantiation of the hypothesis demonstrates the negative link between greenwashing perception and word of mouth.

This implies that the firms which are perceived as greenwashing by the consumers will start losing their good reputation and consumers will be less involved in spreading a positive message about those firms. The results are broadly consistent with the notion that the firms who deceives consumers, stop enjoying the reputation of an ethical firm and loose consumer trust which result in lesser circulation of positive messages about those firms. For example, the work of Chen and Chang (2013); Nyilasy, Gangadharbatla and Paladino (2014) can be seen for a detailed explanation. Therefore, the study findings confirm the role of greenwashing perception in predicting word of mouth. Generally, greenwashing perception is thought of only having ethical and legal implications, however, the study results put forward another important outcome of greenwashing perception in the form of word of mouth. This leads to the idea that firms need to be very careful in making their green claims because it has wider implications for word of mouth which is considered the most effective and efficient way of promoting firms messages.

RO2: To examine the relationship between word of mouth and green purchasing intention

The next hypothesis was about the relationship of word of mouth and green purchasing intention which stated that word of mouth has a positive impact on green purchasing intention. We hypothesize the relationship in line with ABC theory. According to the theory, attitude leads to intentions of individuals with some associated context. Therefore, we conjectured that a positive context in the form of word of mouth will lead to improved green purchase intention of consumers. As discussed earlier, word of mouth is considered as the most effective method of company promotion. Actually, word of mouth represents the attitude of consumers which can lead to arouse specific intentions. This is also supported by Ajzen (2005), who posits that attitude leads to intentions and the intention subsequently

lead to actual behavior. Here, actual behavior is expected to be demonstrated in the form of buying decisions which is beyond the scope of this study. We only took intentions as the outcome in our study.

The support found for the hypothesis depicts the role of word of mouth in creating green purchasing intentions. In this way, we can say that word of mouth has turned out to be as a predictor of green purchasing intention as our findings suggest. The results are largely in consistence with the idea that word of mouth leads to purchase intentions. However, the uniqueness here is the usage of green purchasing intention as outcome which is restricted to green products only. The results are consistent with the view that word of mouth leads to green satisfaction and green perceived quality (Chen, Lin & Chang, 2014). Whereas, specifically this result is unique to this study.

RO3: To ascertain whether word of mouth mediates the relationship between greenwashing perception and green purchasing intention

The study was also aimed at finding out the mediating link between greenwashing perception and green purchasing intention as the underlying mechanism to this relationship. We hypothesized that word of mouth mediates the relationship between greenwashing perception and green purchasing intention. This was based primarily based on the foundations provided by attitude-behavior-context (ABC) theory. According to ABC theory (Guagnano, Stern, & Dietz, 1995), attitude here refers to the evaluative ratings i.e. greenwashing perception and the resulting behavioral tendency is represented by green purchasing intention. As per the theory, certain situational or contextual factors may act as mediators or moderators in the model. Therefore, word of mouth was taken as mediator between greenwashing perception and green purchasing intention. In this way, word of mouth was used as the variable that explains the relationship in the said model. We found support for the mediation hypothesis. This implies that greenwashing perception first influences word of mouth and word of mouth subsequently influences green purchasing intention. This supports the view of ABC theory, which holds that

certain attitudes (greenwashing perception) have an impact upon behavioral tendencies (green purchasing intention) of individuals, while the context may work as mediator (word of mouth) or moderator.

The relationship of green purchasing intention and word of mouth has alignment with existing body of knowledge. For example, Chen, Lin, and Chang 2014 also reported a negative relationship between greenwashing perception and word of mouth. In their qualitative study Lim, Ting, Bonaventure, Sendiawan & Tanusina, 2013 also proposed that, while consumers realize that the company has made false green claims, they are likely to spread negative word of mouth. Moreover, the results are consistent with the notion that greenwashing perception reduces trust in the eyes of consumers (Chen, Y. S., & Chang, 2013). The relationship of word of mouth and green purchasing intention has a broad support from the previous literature but has been specifically examined in our study. Similarly, the mediating mechanism of word of mouth between greenwashing perception and green purchasing intention is unique to this study as a scholarly contribution. In this way, the study uncovers the mechanism by which greenwashing perception influences green purchasing intention.

RO4: To examine the relationship between environmental knowledge and word of mouth

The next hypothesis was about the relationship of word of mouth and green purchasing intention which stated that environmental knowledge has a positive impact on word of mouth. Environmental knowledge was hypothesized to positively influence word of mouth about green products. Environmental knowledge was taken as the ability of individuals to assess and understand the symbols, signs and packaging associated with green products. And this level of environmental knowledge is normally expected in educated customers or who are more aware of green behavior. The hypothesis received support from study data. The substantiation of the hypothesis is the manifestation of the fact that environmental knowledge plays its role as a predictor of word of mouth.

This shows that consumers who are more environmentally aware can get a positive word of mouth regarding green products of firms. This is a benefit to the firms as

long as they are true and genuine in their green claims. However, it is likely to become a problem when firms are involved in greenwashing. Because, environmentally concerned and knowledgeable consumers can get the firms into trouble if they start spreading a negative message about the firms practices. In this way, firms need to be extremely careful while making green claims. This result is unique to this study.

RO5: To ascertain whether environmental knowledge moderates the relationship between greenwashing perception and word of mouth

We also hypothesized that environmental knowledge moderates the relationship between greenwashing perception and word of mouth such that the higher the level of consumers environmental knowledge, the lower will be the level of word of mouth and vice versa. This has not been supported with study results. It was also hypothesized based on ABC theory. Greenwashing perception was taken as evaluative rating that consumers have about the firms or brands, environmental knowledge (moderator) was taken as the context, while word of mouth was taken as the subsequent behavior of consumers. It was theorized that knowledge of the environment not only includes knowledge about problems and consequences but also about how to take action (Hines, Hungerford, and Tomera 1987). The hypothesis did not receive support from our data. This implies that our data does not support the idea that consumers who have relatively higher levels of environmental knowledge will be less involved in promoting the firms that are involved in greenwashing. Firms may feel it easy to deceive consumers, since greenwashing perception is a recent phenomenon and it is linked with the technical knowledge that consumers have. Apparently, it is hard to deceive those consumers who are environmentally aware and can understand environmental symbols and messages communicated by the firms, but the moderation of such knowledge in the relationship between greenwashing perception and word of mouth has not been established.

This result signals towards the idea that there are certain other factors that can influence the relationship between greenwashing perception and word of mouth. However, firms should consider environmental knowledges as an important factor

for firms to consider while boosting about their green behavior. An educated consumer with higher level of environmental knowledge should also be considered while making green claims. These days consumers are exposed to multiple sources of information and they can confirm companys green claims from those sources. It can become a major problem for greenwashing companies to handle the resulting situation if consumers identify discrepancies in green claims and green behavior. This suggests that companies need to be extremely careful while making green claims. They should make an alignment between their deeds and word regarding their green behavior in order to protect themselves from negative word of mouth and subsequent dissatisfaction of consumers. The study results of direct, indirect and moderation hypotheses are important for both researchers and marketers as they carry insights and implication for both which are discussed further.

5.2 Theoretical Implications

As discussed above, the study has noteworthy insights for researchers. The overall model was based on attitude-behavior-context (ABC) theory. This was an integrated model with mediator and moderator incorporated in it. The mediating mechanism of word of mouth in the relationship between greenwashing perception and green purchasing intention provides an insight about the underlying mechanism in the said relationship. The role of a mediator is to uncover and explain the theoretical relationship between two variables. Here, word of mouth has theoretically explained the relationship. This also opens the opportunity for further researchers to test other possible mediators between greenwashing perception and green purchasing intention, which is proposed later. Moreover, remaining unable to find the moderation of environmental knowledge in the relationship between greenwashing perception and word of mouth opens avenues to test other possible moderators. The moderating mechanism in any relationship identifies the variable/s that may strengthen or weaken the relationship between two variables. Here, environmental knowledge was hypothesized to weaken the relationship between greenwashing perception and word of mouth such that the consumers who

are high on environmental knowledge will be less likely to promote the firms who they perceive as involved in greenwashing and vice versa. The testing of other suitable moderators can also help in identifying them as strengthening or weakening factors in the relationship, which is suggested further. As a whole, the study results are supported by ABC theory in terms of direct, indirect and moderation relationships.

5.3 Practical Implications

Similar to theoretical implications, the study has important practical implications as well. The results suggest that marketers need to be careful while designing their green advertisement campaigns, packaging and branding. It is important to claim about only those aspects which are actually present in the products and/or the green activities which the firms are actually practicing. Today's consumer is much more aware and has many sources to confirm about the green claims made by any company. Moreover, increased environmental knowledge has also started playing a substantial role in green purchasing decisions. Environmental knowledge has become important for all because the world is facing many environmental problems including carbon emission, greenhouse gases and other types of pollution. As the world faces an environmental challenge, no one can remain aloof of what is happening in the environment. Consumers expect firms to go an extra mile in order to protect the environment rather than making false claims to gain their sympathy.

The study results have confirmed that the firms which are involved in greenwashing will have a negative impression in the eyes of consumers which will be translated into reduced purchase intentions via the path of word of mouth. Similarly, the environmental knowledge of consumers will come into play when consumers start assessing the green claims of any company. Therefore, the study's findings are important for marketers from two angles. The first angle is of actually making programs, plans and strategies in order to protect the environment. The second angle is of portraying their green efforts and activities in a positive manner while

avoiding any sort of exaggeration and falsification. By doing so the companies can win customer loyalty and trust, which will ultimately lead to increased sales and profitability.

5.4 Limitations and Future Research Directions

Despite having theoretical and practical strengths, the study also has some limitations. First, the study was based on a cross-sectional design i.e. the data were collected from the respondents at one point in time. This means that study actually took a snapshot of consumers responses about the variables of interest, while ignoring the sequence of subsequent responses that may occur one after the other. In this way, causality cannot be fully established. Secondly, the study used a survey-based approach instead of using an experimental one. Experiment is the most suitable method to verify a cause and effect relationship. Third, the study measured consumers purchase intention as the criterion variable instead of measuring actual purchase behavior, which may occur once the purchase intentions are developed. Fourth, the study used only one mediator in the relationship between greenwashing perception and green purchasing intention i.e. word of mouth.

Future researchers are encouraged to carry out such a study by employing a multi-wave study design by collecting data in different time lags. Furthermore, an experimental design is suggested for such a study in future. By carrying out a multi-wave study and using an experimental design, causality can be established appropriately, and more robust results can be obtained. Additionally, actual purchase behavior should be taken as the criterion variable in further studies in order to verify the actual results of greenwashing perception. There is a need to test more mediators in the relationship between greenwashing perception and green purchasing intention. For example, trust can be tested as a mediator in the said relationship for better understanding of the its dynamics. Finally, other factors can also be tested as moderatos in the relationship between greenwashing perception and word of mouth. For example, green skepticism can play its role in the

said relationship. Therefore, we suggest to test the moderation of green skepticism in the relationship.

5.5 Conclusion

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Appendix-A

CAPITAL UNIVERSITY OF SCIENCE & TECHNOLOGY

ISLAMABAD

Department of Management Sciences

Dear respondent,

I am a research degree student, at Capital University of Science & Technology Islamabad. Currently, I am pursuing research on Greenwashing Perception of Consumers. This survey takes approximately 08-10 minutes. All information provided will remain confidential and will be used only for research purpose. Please choose the most appropriate option which defines you best. I am thankful to you for your time and participation.

Regards

Asia Bibi

Section-1

Male ()

Female ()

Age

18 -25 years () 26 – 33 years () 34 – 41 years ()

42 – 49 years () 50 years or above ()

Qualification

Matriculation () Intermediate ()

Bachelor's Degree () Masters or higher Degree ()

Monthly Income (Rs.)

20,000 to 30,000 () 31,000 to 40,000 ()

41,000 to 50,000 () 51,000 to 60,000 ()

61,000 or above () Student /not earning ()

Section-2

Please indicate the extent of agreement or disagreement with the following statements

Environmental Knowledge						
		Strongly disagree	disagree	Neither agree nor	agree	Strongly agree
1	I know more about recycling than the average person.	1	2	3	4	5
2	I am very knowledgeable about environmental issues.	1	2	3	4	5
3	I am confident that I know how to select products and packages that reduce the amount of waste ending up in landfills	1	2	3	4	5
4	I understand the environmental phrases and symbols on product packages	1	2	3	4	5
Greenwashing Perception						
		Strongly disagree	disagree	Neither agree nor	agree	Strongly agree
1	The product misleads with words regarding its environmental features.	1	2	3	4	5
2	The product misleads with visuals or graphics regarding its environmental features.	1	2	3	4	5
3	The product is associated with a green claim that is vague or seemingly un-provable.	1	2	3	4	5
4	The product overstates or exaggerates what its green functionality actually is.	1	2	3	4	5
5	The product leaves out or masks important information, making the green claim sound better than it is.	1	2	3	4	5

Word of Mouth (WOM)						
		Strongly disagree	disagree	Neither agree nor	agree	Strongly agree
1	I would highly recommend this product to others because of its environmental image.	1	2	3	4	5
2	I would positively recommend this product to others because of its environmental functionality	1	2	3	4	5
3	I would encourage others to purchase this product because it is environmentally-friendly.	1	2	3	4	5
4	I would say good things about this product to others because of its environmental performance.	1	2	3	4	5

Green Purchasing Intention						
		Strongly disagree	disagree	Neither agree nor	agree	Strongly agree
1	I will purchase products from this company because of its environmental concern.	1	2	3	4	5
2	I am willing to buy other products from this company because of its environmental performance.	1	2	3	4	5
3	I am happy to purchase this company's products because they are environmentally friendly.	1	2	3	4	5

Thank you