

Role of Green Construction Practices and Service Quality in Creating Client's Positive Word of Mouth

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Abstract

On the basis of empirical research, this study examined the effect of green construction practices and service quality on client satisfaction. The study also examined the moderating role of Client-Project Manager's team trust among green construction practices, service quality and client's satisfaction. Moreover, current study analysed the impact of customer satisfaction on client's positive word of mouth. The study was based on deducted approach. Survey method was employed for data collection from respondents those were clients of construction industry. A non-probability purposive sampling technique was used. Population for the current study was from the clients of construction companies such as Sardar group of companies, Habib Construction services and Dascon Construction companies etc. within twin cities of Pakistan. In total 277 responses were collected through survey. For data analysis, SPSS (Statistical Package for Social Sciences) and Smart PLS has been used. Current study found that green construction practices and

service quality have positive impact on client satisfaction. Moreover, client satisfaction (as organism) acts as mediator between green construction practices and service quality (as stimulus) and client's word of mouth (as response) based on S-O-R Approach. Finally it also found that Project manager trust acts as moderator between Stimulus (green construction practices and service quality) and Organism (client satisfaction). The findings of the study would provide helpful information to the top management, project managers and marketers from which they could develop and improve appropriate marketing strategies directed towards clients, to gain their trust and engage them in spreading positive word of mouth. This study had a few limitations including use of cross-sectional time horizon, non-random sampling technique and top three construction companies only. Researchers may consider these limitations as the guideline for research in future.

Key Words: Green construction practices, Service quality, Client satisfaction, Client PWOM, Client-Project Manager Trust.

1. Introduction

Businesses significantly influence economies of developing countries around the world (Chege & Wang, 2020). As the economy grows, so do environmental and pollution concerns, such as environmental pollution, industrial waste, and extreme carbon emissions (Wu, Xu, Ren, Hao, & Yan, 2020). This is due to pollution of the air and water, haze is also on the rise around the world (Zhang, Xue, & Jin, 2020). There are only a few large corporations left, and those that do exist invest heavily in efforts to reduce pollution. According to Onubi, Yusof, and Hassan (2022), green construction practices include the use of best practices from the procurement of building materials through the completion of construction. This is all done in a manner that is environmentally friendly and sparing of resources.

Increased construction has been blamed for the rise in environmental issues, which has been attributed to a growing urban population. The construction industry has devised project management goals with "green" as a major component in order to minimize environmental damage (Yousaf, 2021). As a result, there has been an increase in the number of individuals interested in green construction. The construction industry has a

significant impact on any country's economy. According to Portnov, Trop, Svechkina, Ofek, Akron, & Ghermandi, (2018), since its inception, the Green Building (GB) movement has been regarded as a significant contributor; thus, it has been recognised as a global priority. For example, the establishment of GB councils in more than 70 countries shows that cleaner, more sustainable practices are being promoted and transitioned (World Green Building Council, 2018a). It has been a long time since academics have studied green construction practices in depth. Papers from a wide range of disciplines have inspected numerous stages of the green practices, but not in depth with relationship to client satisfaction. a detailed examination of the theories used to inform knowledge and green marketing gained from their application is needed in this area. It's clear that the green construction sector is a major source of client engagement and client's positive word of mouth (Tokbolat, Nazipov, Kim, & Karaca, 2019).

We have used the terms clients and customers interchangeably. Customers are more likely to choose companies and organizations that offer more environmentally friendly projects. As a result, customer satisfaction has remained the marketer accepted as a company's target and used to encourage follow-up after-purchase behaviour. By focusing on a few key capabilities (Otto et al., 2020) those demonstrate the advantages of taking an aggressive approach to finding out what customer's value the most. Management could devise systems to uncover the root causes of quality and service issues when armed with first-hand knowledge of what customers value (Ahmed & Kangari, 1995; Hussain et al., 2019).

Previous studies mostly related to green construction practices or environment related issues were derived from theory of planned behaviour (Woo & Kim, 2018). The current study first time uses SOR theory to determine client's satisfaction and client's PWOM with the lens of core theory of consumer behavior particularly from marketing discipline. In recent study, authors found that green construction practices and health safety performance are significant antecedents of client's satisfaction (Onubi et al., 2021). Whereas the current study finds green construction practices and service quality as antecedents of client's satisfaction from clients of construction industry. Moreover, in the previous research 'client-project manager trust' was studied with team cohesion and team

trust (e.g., Webber, 2008) which lacked the element of client's perspective about project-manager trust. The previous study regarding client-project manager trust was conducted 15 years ago, after that not much work has been done in this perspective, this current study fills this gap. Very recent study reviewed client's satisfaction from B2B perspective (e.g., Mahliza, 2020), whereas business to-consumer (B2C) is still missing. Therefore, this gap is addressed by this current study.

It is necessary to follow the research gaps stated in this part in order to establish the relevance of variables like green construction practices, service quality, client's satisfaction, client-pm trust, and client's positive word of mouth in the construction industry in Pakistan. In simple words, it is worthy to realize, that the mentioned influences need to be studied together in order to examine their interaction and to analyze their role towards client's satisfaction that eventually leads towards the client's PWOM. Due to lack of green construction practices and service quality from construction industries, it affects satisfaction of the clients who are concerned about the environment, which eventually affects the environment and overall projects outcome.

The literature on customer satisfaction would benefit greatly from the findings of this study. Most of the research on customer satisfaction focuses on customer satisfaction surveys. It was the purpose of this study to investigate the relationship between various variables and customer satisfaction. Green construction practises, service quality, positive word-of-mouth from clients, and trust among project manager and client were all examined in depth in this research. The findings of this study will help academicians better understand the needs of their clients. This study would benefit both construction firms and their clients/customers. A constant effort is made by retailers and marketers to better attract customers. Using this research, they can learn how to better market and sell their services to customers in order to gain their attention and keep them coming back for more. Having a thorough understanding of the client's satisfaction and its overall effect on customers spreading positive word-of-mouth can help retailers formulate and improve such strategies more effectively. Academicians, marketers, and retailers, as well as clients themselves, will benefit from this research, which aims to shed light on the factors of client's satisfaction and the ways to achieve it.

2. Literature Review

2.1 Green Construction Practices (GCP)

According to Issock, Mpinganjira, & Lombard, (2019) "green practices" refer to ways of doing things that aim to benefit the environment, conserve natural resources and ensure the health and safety of both humans and other living things by making better use of available resources and implementing more energy-efficient construction methods. Environmentally friendly, sustainable, and green construction are all terms that are frequently used interchangeably (Onubi, Yusof, & Hassan, 2022). Whereas Onubi et al, (2019) describes that "Stakeholder analysis is a strategic step in green marketing that aims to create lasting relationships with customers while maintaining, promoting, and improving the environment". Similarly, GCPs can be defined as practices that are used to ensure the quality and safety of construction, save money and time by reducing waste, reduce construction's negative impact on environment by utilizing land management, energy management, water conservation, and resource management strategies in the process (Onubi et al., 2022). GCPs comprise, without being restricted to following: efficient use of resources, conservation of land and water, and efficient use of raw materials. Construction quality and safety are prioritized, while resources are conserved, and the environmental impact of construction is minimized through the use of these methods.

2.2 Service Quality (SQ)

Many academics have defined the term "service" and these types of service are a type of product which are essentially intangible and does not result in the ownership of any tangible goods or services." (Giao & Trang, 2021). Scholars have defined service quality in a variety of ways (Mahliza, 2020). Service quality can be defined as the extent to which a service meets or exceeds the expectations of its customers (Giao et al., 2021). Whereas Lie, Sudirman, Efendi, and Butarbutar (2019) argue that service quality is a service provider's most potent competitive weapon. The ability to provide high-quality service is also linked to the success of service businesses. They contend that engineering consulting companies will have happier clients if they exhibit professionalism, competitiveness in service, time-to-market delivery quality of design, innovation and support for their clients during the project implementation stage. Giao (2021) explained

that services can be summarized as follows: "services are an intangible type of product consisting of activities, benefits, or satisfactions offered for sale that do not result in ownership of anything.

2.3 Client's Satisfaction (CS)

Construction success is a measure of the project's actual performance as compared to the client's expectations at the start of construction (Onubi, Yusof & Hassan, 2022). The use of client's satisfaction (CS) in measurement of project performance (along with the traditional criteria of cost, time, quality) has become increasingly popular (Onubi et al., 2022). Similarly, Otto, Szymanski, and Varadarajan (2020) studied post-consumption assessment as to whether the service or product provide a satisfying level of overall usage satisfaction for the clients or not? Wang et al. (2018) said in a previous study that, the project may be owned by a client. The owner is the investor and the one who will use the facility that has been built. Moreover, based on a study by Hussain et al (2019), the description of satisfaction " a comparison between what was expected and what was really got as a result of some comparative procedure". Customers' satisfaction has long been regarded as a significant goal or accomplishment indicator in the planning and execution of building projects. It is necessary to define the fundamental meaning in order to assess customer satisfaction in the public construction industry.

2.4 Client-Project Manager Trust (CPMT)

An individual's willingness to put themselves at risk because he or she believes another person will do something important to him or her is defined as "interpersonal trust," according to (Webber, 2008). Webber and Klimoski (2004) suggested that a growing trend in service organizations is co-creation or co-production between service providers and their clients. They analyzed those services provided by organizations are evolving, traditionally, the goal was to satisfy customers. This is a necessary, but not sufficient, condition for a successful endeavor. As a result, organizations are working to build long-term, trusting relationships with their employees that will help them be more productive. To achieve this, the customer and service or product provider are blurring their boundaries more frequently than they did in the past (Bond-Barnard, Fletcher, & Steyn, 2018). Trust between business relationships is wide ranging, comprising of both cognitive and affective aspects, according

to these ideas applied to client-project manager relationship (Boccia et al., 2019). Whereas Bond-Barnard et al. (2018) suggested that the client's belief in project manager's concern for or emotional connection to client constitutes affective trust. Credibility, dependability, and competence are all terms used to describe client's confidence in project manager's abilities.

2.5 Client's Positive Word of Mouth (CPWM)

To put it this way, word-of-mouth (WOM) refers to the informal sharing of customer feedback on products and services. A lot of the time it was engaging, fast, and had no commercial intent. An enormous amount of consumer behaviour was influenced by word-of-mouth, as a result of WOM, new brand categories may be created or established, and established brands may be preferred over new ones (Bairrada, Coelho, & Lizanets, 2018). The term "WOM" refers to a type of communication between a consumer and a non-commercial source of information about the brand and its products and services (Nguyen et al., 2019). They defined WOM as a means of personal communication about goods and services in which the recipient saw the communicator as unbiased. WOM can be positive or negative, according to other scholars (Ozdemir et al., 2016), and it has occurred traditionally in offline and individual conversations as well as online communications. Marketing experts used positive word-of-mouth communication as a means of influencing customers to purchase the brand mentioned (Bairrada et al., 2018). Customers who are happy with the products or services of a brand are more likely to spread positive WOM about it to others who haven't yet experienced them, according to Zhang, Li, Cao, & Huang, 2018).

2.6 S-O-R Approach and Development of Hypotheses

Because we didn't examine the clients' intentions or behaviour in relation to this study, we used the SOR approach rather than the TPB (the theory of planned behaviour). The research framework of this study is explained by the SOR model. This model is based on cognitive psychology and helps explain consumer behaviour better. The key concept of this theory is that customer behaviour is influenced by both internal and external factors (Mehrabian & Russell, 1974). Behavior is influenced by a combination of external and internal factors. A common model in environmental psychology holds that certain aspects

of the environment act as stimuli (S) to influence a person's internal feelings (O), which then leads to behaviour (R). In the SOR model, the term "stimulus" refers to things in the consumer's immediate environment (it can be environmental factors, marketing factors, financial, technological, situational factors etc.) that elicit strong emotions in them. Similarly, Organism can be considered as individual's psychological factors, emotions, perceptions, attitudes etc. However, response can be considered as outcome variables such as client loyalty, WOM, purchase intention etc.

Therefore, forensuring GCP practices and service quality can be adopted to enhance organizational performance and client satisfaction. GCPs are used to ensure the quality and safety of construction, save money and time by reducing waste, reduce construction's negative impact on environment by utilizing land management, energy management, water conservation, and resource management strategies in the process (Onubi et al., 2022). Organizations can make efforts to include environmental management, especially water management, construction site waste management and energy management, which demonstrate the environmentally friendly practices. To improve organizational performance and to guarantee client satisfaction, green construction practices are introduced by organizations (Forsythe, 2016). Thus, green construction practices can be practiced enhancing client's satisfaction. Based on above literature, it is hypothesized that

H1. Green construction practices (stimulus) have a significant impact on client's satisfaction (organism).

In order to keep their customers happy, businesses need to focus on providing high-quality service on their construction projects. The success of an organization is directly related to its ability to provide high-quality service. Their construction services must meet the client's specific needs in order to provide the best possible experience (Giao et al., 2021). The quality of the services provided, the shifting dynamics, and the various activities that take place on-site during construction are all likely to have an effect on customer satisfaction. Customers' perceptions of a company's level of service quality are frequently cited as success criteria (Ozkan et al., 2019). If a company is concerned about providing the best possible service to its customers, they know that customers are more likely to buy from

them if they are satisfied, and they are also more likely to buy from the company again if their first experience was positive (Lie et al., 2019). Based on above literature, it is hypothesized that

H2. Service quality (stimulus) have significant impact on client's satisfaction (organism).

In the planning and implementation of building projects, customer satisfaction has long been regarded as an important goal or achievement indicator. Customers' satisfaction has been shown to be an important factor in determining product quality from the customer's perspective (Haverila & Fehr, 2016). Final goals and expectations of the clients have to be met for a project to be considered a success, and the result is positive word of mouth (Ogunlana, 2009). "WOM" has long been regarded as an indicator of customer satisfaction and an inexpensive method of marketing (Wu, 2017). According to Zhang, Li, Cao, & Huang, (2018). Positive word-of-mouth about a company is largely dependent on customer satisfaction. Customer referrals are a good indicator of customer satisfaction. One of the best approaches to adopt is to link GCP, SQ, and customer satisfaction with customers' positive word of mouth for a successful outcome of customer satisfaction, which is their positive word of mouth. Based on above literature, it is hypothesized that

H3. Client's satisfaction (organism) has significant impact on client's positive word of mouth (response).

Client Satisfaction (CS) is a metric for measuring project performance (Onubi et al., 2022). Due to customer feedback, organizations are better able to make timely decisions and perform better as a result of including green construction practices in their projects. A study conducted by Shan et al. (2020) revealed the importance of incorporating environmentally friendly practices into the construction process in order to keep customers satisfied. According to these experts, Client's satisfaction serves as a bridge between GCP and Client's positive word of mouth. Customers will remain loyal to an organization if it is able to provide them with the most effective methods of conserving their environment. Positive word of mouth about a company's green practices is bolstered when its customers

are satisfied. Additionally, green construction practices can have a significant influence on customer's satisfaction, which leads to positive word of mouth (Hussain et al., 2019). Based on above literature, it is hypothesized that

H4. Client's satisfaction (as organism) will mediate the relationship between green construction practices (as stimulus) and client's positive word of mouth (as response).

Planning and executing construction projects have long included customer satisfaction as a key goal or success indicator. Focusing your efforts on what your customers value and reducing the scope of your capabilities has obvious benefits (Shan, Liu, Hwang & Lye, 2020). It was concluded that managers who had firsthand knowledge of what customers valued could devise systems to find the root cause and implement long-term changes to eliminate quality and service issues. The success of service businesses is also dependent on their ability to provide high-quality service. Engineering consulting firms should be able to demonstrate professionalism, competitiveness of service, time to market delivery quality of design, innovation, and support for their clients during the project implementation stage, according to them. When customers receive high-quality customer service, their satisfaction levels rise, according to researchers (Ozkan et al., 2020). A company's reputation grows when its customers are happy and satisfied with its services. Marketing a product through word-of-mouth is ten times more effective than advertising on television or in print (Islam, & Rahman, 2016). Based on above literature, it is hypothesized that

H5. Client's satisfaction (as organism) will mediate the relationship between service quality (as stimulus) and client's positive word of mouth (as response).

Affective trust, according to Bond-Barnard et al. (2018), is created when a client believes that the project manager cares about or has an emotional connection to the client. The client's confidence in project manager's abilities is expressed in terms of credibility, dependability, and competence. Project managers who want to gain the confidence of stakeholders must consistently deliver on their promises, as their clients place a high value

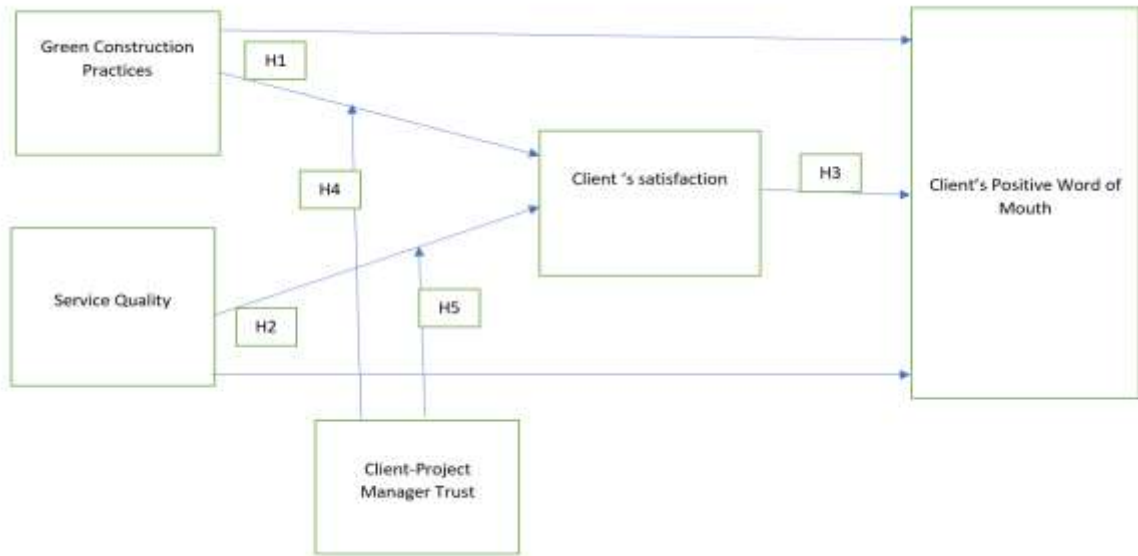
on the products and services that their company provides. A company's project manager is responsible for promoting the company's green construction practices by providing detailed information about the practices offered by the company. The project manager's information is relied upon by the clients, so they are willing to invest in the company's projects. Customers' satisfaction with the company's practices can be improved by regularly exchanging project information via various formal and informal channels of communication, as stated by Kalkman and de Waard (2017). The ability to deliver on time and on budget is essential to maintaining good client relations. Customers' willingness to buy again, their confidence in the service, their refusal of competitors' products, and their eagerness to recommend the service to others reflect customer trust, it has been stated (Afthanorhan et al., 2019). Based on above literature, it is hypothesized that

H6. Client-Project Manager Trust act as a moderator between the relationship of green construction practices (as stimulus) and client's satisfaction (organism).

Lie, Sudirman, Efendi, and Butarbutar (2019) argue that service quality is a service provider's most potent competitive weapon. The ability to provide high-quality service is also linked to the success of service businesses. Knowing what service quality is and how to attain it in organizations is now a top priority for academic research in this area (Giao & Trang, 2021). However, the effective adoption of trust among project manager and the clients is the key to derive valuable insights to enhance client's satisfaction and promote the overall performance of the projects by giving the insight of services provided by the company. The project manager acts as an advocate of the company who tells the clients about the service quality of their projects offered by the company). Client-project manager trust is linked to an effective organizational strategy that allows companies to be more authentic and project their better image publicly. Based on above literature, it is hypothesized that

H7. Client-Project Manager Trust act as a moderator between the relationship of service quality (as stimulus) and client's satisfaction (as response).

2.7 Theoretical Framework



Stimulus -----> Organism -----> Response

3. METHODOLOGY

Non-probability purposive sampling is used in the existing study to gather data from willing participants in a causal research design with cross-sectional time horizon (Moon et al., 2017). Structure survey were used to collect data for current research purposes. Due to limited time and resources, it was easier to target specific population from twin cities (i.e. Islamabad and Rawalpindi) of Pakistan than to include clients from across Punjab or from all of Pakistan (Moon, Rasool, & Attiq, 2015). All respondents had to fill out questionnaires in person.

All of the study variables were measured via five-point Likert scale. The scale items range from "1 = Strongly Disagree" to "5 = Strongly Agree". Green construction practices were judged by a scale proposed Onubi and Hassan (2020). It is a 13-items scale. Service quality was judged by 8 items scale that was previously used by Özkan, Süer, Keser and Kocakoç (2019). Client's satisfaction was assessed by a scale consisting of 7-items and was given by Özkan, Süer, Keser and Kocakoç (2019). Client-Project Manager Trust was

assessed by 6-item scale previously used by Wu, Zhao, and Zuo (2017). The given study used a 5-item scale which was previously used by DAM (2020) to measure client's positive word of mouth.

There were 169 (61 percent) male and 108 (39 percent) female participants in the study. In total, 48 people are between the ages of 31 and 35 years old. 36- to 40-year-olds make up the 75 of total. Majority of the respondents (i.e. 94) are over the age of 40. 91 of the respondents hold less than 14 years education. The majority of the 124 respondents stated that they had received a 14 to 16 years education.

Table 1: Demographic Analysis

Variable	Code	Frequency	Percent
Gender	Male	169	61 (%)
	Female	108	39 (%)
Age	21-25	22	8 (%)
	26-30	38	14 (%)
	31-35	48	17 (%)
	36-40	75	27 (%)
	Above 40	94	34 (%)
	Less than 14 years	91	33 (%)
Education	14-16	124	45 (%)
	16-18	53	19 (%)
	Above 18 years	9	3 (%)

3.1 Procedure

This study used a structural equation modeling approach to assess hypotheses. Anderson and Gerbing (1988) propose a two-step method for applying SEM. They propose that a measurement model should be validated first to ensure its reliability and validity. Following that, a structural model that incorporates the conceptual framework and shows variable paths is tested (Hussain & Attiq, 2017).

4. RESULTS AND ANALYSIS

4.1 Measurement Model Analysis

Item reliability is used to determine how much each construct item contributes to a specific component. Outer loadings are determined to do this (Harmann, 1976). Outer loadings should be more than 0.60. However, because this criterion has a range of 0 to 1, the value closest to 1 is always preferred (Hair et al., 2017).

Internal consistency is measured using Cronbach alpha as the first criterion. It calculates reliability using correlations between constructs, assuming that all constructs have identical reliability. All latent variables had Cronbach alpha values ranging from 0.77-0.90, passing the threshold > 0.70 (Hair et al., 2017). Further, internal consistency of all latent variables is determined using the composite reliability criterion. The composite reliability of all latent variables varied from 0.84-0.92. As the composite reliability is greater than 0.70, passing the threshold (Hair et al., 2017).

Latent variable convergent validity is assessed using average extracted variance (AVE). The convergent validity of all latent constructs was found to be between 0.52-0.67. Because AVE is more than 0.50, all latent variables have strong convergent validity, as advised by Fornell and Larcker (1981). Table 2 summarizes the internal consistency and convergent validity results for each latent variable.

Table 2: Measurement Model Evaluation

Construct	Code	loadings	alpha	CR	AVE
Green Construction Practices					
Stormwater Management	SWM1	0.79	0.80	0.87	0.63
	SWM2	0.84			
	SWM3	0.77			
	SWM4	0.76			
Waste Management	WAM1	0.82	0.83	0.89	0.67
	WAM2	0.85			
	WAM3	0.79			
	WAM4	0.80			

Energy Management	<i>ENM1</i>	0.57	0.81	0.87	0.63
	<i>ENM2</i>	0.82			
	<i>ENM3</i>	0.79			
	<i>ENM4</i>	0.79			
	<i>ENM5</i>	0.79			
Service Quality	<i>SQL1</i>	0.71	0.90	0.92	0.59
	<i>SQL2</i>	0.76			
	<i>SQL3</i>	0.75			
	<i>SQL4</i>	0.80			
	<i>SQL5</i>	0.76			
	<i>SQL6</i>	0.80			
	<i>SQL7</i>	0.81			
	<i>SQL8</i>	0.76			
Client's Satisfaction	<i>CLS1</i>	0.76	0.90	0.92	0.62
	<i>CLS2</i>	0.81			
	<i>CLS3</i>	0.83			
	<i>CLS4</i>	0.81			
	<i>CLS5</i>	0.79			
	<i>CLS6</i>	0.76			
	<i>CLS7</i>	0.74			
Client's Positive Word of Mouth	<i>CPW1</i>	0.82	0.82	0.88	0.65
	<i>CPW2</i>	0.82			
	<i>CPW3</i>	0.80			
	<i>CPW4</i>	0.80			
Client-Manager Trust	<i>CTR1</i>	0.78	0.77	0.84	0.52
	<i>CTR2</i>	0.70			
	<i>CTR3</i>	0.68			
	<i>CTR4</i>	0.54			
	<i>CTR5</i>	0.67			
	<i>CTR6</i>	0.76			

Italic items are deleted, alpha- Cronbach alpha, CR- Composite Reliability, AVE- Average Variance Extracted

Discriminant validity determines the distinction between all latent variables. The Fornell-Larcker method is used to determine discriminant validity. The square root of the AVE of latent constructs is matched with correlations scores of latent constructs in the Fornell-Lacker technique. The square root of AVE is higher than the correlation between latent components, according to the findings. Table 3 summarized the findings.

Table 3: Discriminant Validity

Constructs	1	2	3	4	5	6	7
1. Stormwater Management	0.79						
2. Waste Management	0.65	0.82					
3. Energy Management	0.61	0.51	0.79				
4. Service Quality	0.73	0.68	0.58	0.77			
5. Client's Satisfaction	0.61	0.81	0.49	0.69	0.79		
6. Client's Positive Word of Mouth	0.57	0.67	0.42	0.68	0.75	0.81	
7. Client-Manager Trust	0.45	0.46	0.29	0.51	0.50	0.58	0.72

4.2 Structural Model

Collinearity problem was verified before moving on to hypothesis testing. For this reason, the variance inflation factor (VIF) was calculated separately for each item of each variable. The VIF results are less than the threshold set by Hair et al (2017), i.e. $VIF < 5$.

The hypotheses were examined in the second stage, and the results of each hypothesis were discussed. The first hypothesis proposed that green construction practices had a positive impact on client satisfaction. The results showed that $\beta = 0.60$ with $p < 0.00$, demonstrating that green construction practices have a significant positive impact on client satisfaction, indicating that H_1 is accepted. The second hypothesis proposed that service quality had a positive impact on client satisfaction. The results showed that $\beta = 0.22$ with $p < 0.00$, demonstrating that service quality have a significant positive impact on client

satisfaction, indicating that H₂ is accepted. The third hypothesis proposed that client satisfaction had a positive impact on client's positive word of mouth. The results showed that β= 0.74 with p < 0.00, demonstrating that client satisfaction have a significant positive impact on client's positive word of mouth, indicating that H₃ is accepted. The hypotheses results are reported in Table 4.

Table 4: Hypotheses Testing

Path	Beta	T Statistics	P Value	Decision
H₁: Green Construction Practices → Client's Satisfaction	0.60	9.78	0.00	Supported
H₂: Service Quality → Client's Satisfaction	0.22	3.34	0.00	Supported
H₃: Client's Satisfaction → Client's Positive WOM	0.74	22.88	0.00	Supported

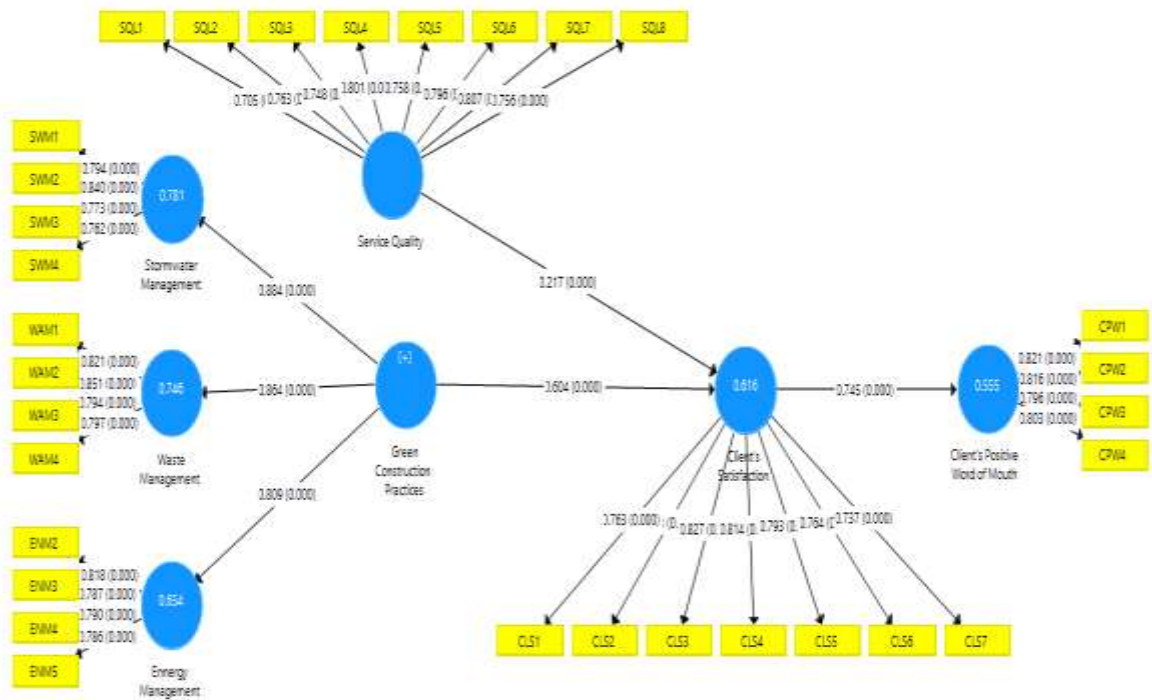


Figure 2 Structural Model

The model's predictive accuracy is measured by the coefficient of determination (R²). Based on the criteria established by Chin (1998), R² values of 0.67, 0.33, and 0.19

are regarded as large, moderate, and small. Client satisfaction = 0.63 (moderate) and client positive word of mouth = 0.56 were found to have moderate R^2 values.

4.3 Mediation Analysis (Indirect Effect)

The fourth hypothesis postulated that the association between green construction practices and client positive word-of-mouth is mediated by customer satisfaction. The findings indicated that $\beta = 0.45$, $p < 0.00$, which showed that client satisfaction mediate relation among green construction practises and client positive word of mouth, with lower confidence intervals of 0.37 and upper confidence intervals of 0.53 not overlapping the zero value in between, supporting H4.

The fifth hypothesis postulated that the association between service quality and client positive word-of-mouth is mediated by customer satisfaction. The findings indicated that $\beta = 0.16$, $p < 0.00$, which showed that client satisfaction mediate relation among service quality and client positive word of mouth, with lower confidence intervals of 0.08 and upper confidence intervals of 0.25 not overlapping the zero value in between, supporting H5.

Table 5: Indirect Paths Analysis

PATH	B	5.0%	95.0%	Decision	WHY
GCP → CLS → CPW	0.45	0.37	0.53	Supported	$p < 0.00$ & $0 \notin CI$
SQL → CLS → CPW	0.16	0.08	0.25	Supported	$p < 0.00$ & $0 \notin CI$

GCP- Green Construction Practices, SQL- Service Quality, CLS- Client Satisfaction, CPW- Client Positive Word of Mouth, CI- Confidence Interval

4.4. Moderation Analysis

It was hypothesized in sixth hypothesis that client manger trust moderate the relation among green construction practices and client satisfaction. Result showed that client manger trust significantly moderate the relation among green construction practices and client satisfaction as $\beta = 0.06$, $p < 0.02$, hence H_6 is accepted.

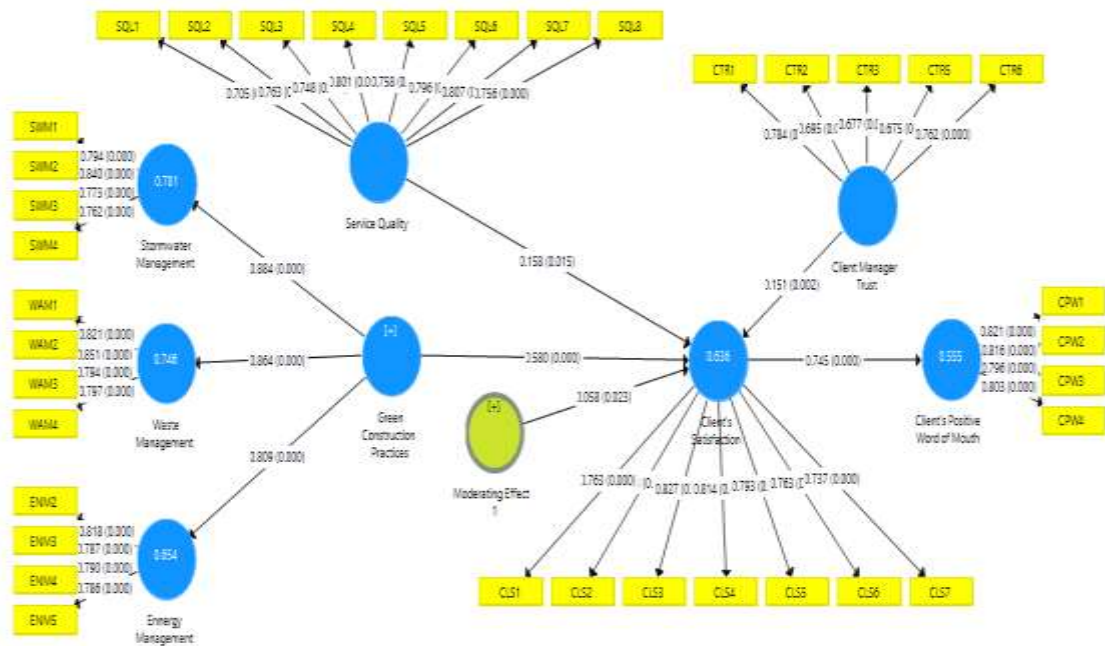


Figure 3: Moderating Effect of Client Manager Trust between Green Construction Practices and Client Satisfaction

It was hypothesized in seventh hypothesis that client manger trust moderate the relationship between service quality and client satisfaction. Result showed that client manger trust significantly moderates the relationship between service quality and client satisfaction as $\beta = 0.07$, $p < 0.03$, hence H_7 is accepted.

5. DISCUSSION

It was hypothesized that green construction practices would have significant impact on client’s satisfaction. The results of the study showed that GCP had a significant positive impact on satisfaction of the client. A study conducted by (Onubi et al., 2020) seconds our view that green construction practices have influence on client’s satisfaction. Their views give strength to our findings that the construction companies those made sure the proper management for storm water, waste and energy, during and after the completion of their projects tends to have satisfied and happy customers.

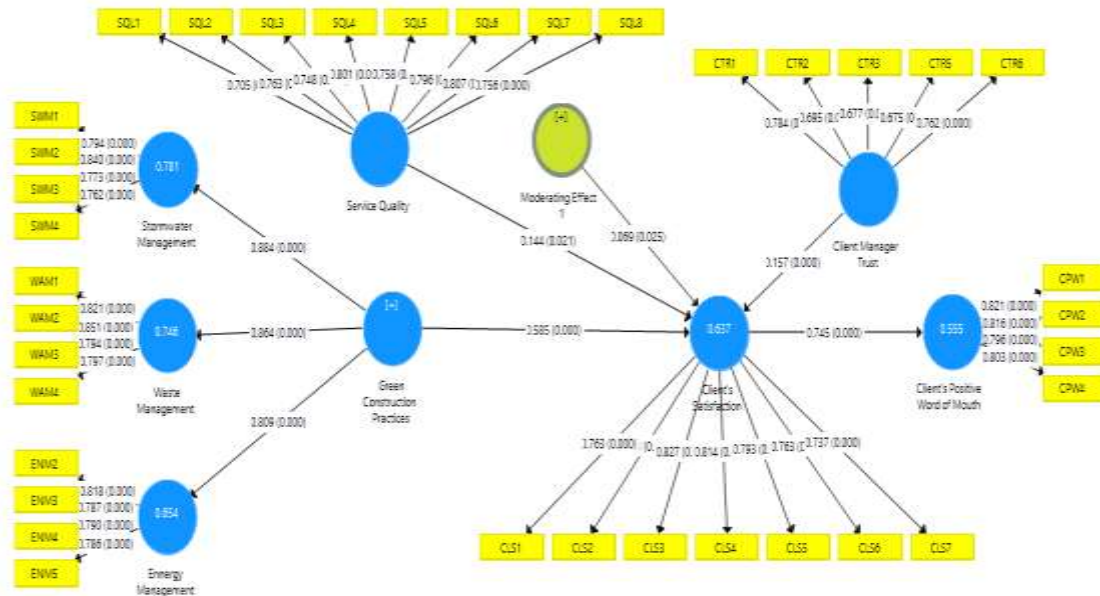


Figure 4: Moderating Effect of Client Manager Trust between Service Quality and Client Satisfaction

We hypothesized in the study that service quality would have significant impact on client’s satisfaction. The results of the study showed that service quality had a significant positive impact on client’s satisfaction. The results of the study suggested that companies who have overall better service quality of their projects, have satisfied clients. The clients were satisfied that their complaints and suggestions were taken into consideration in order to provide them with improved service quality. A study conducted by Özkan et al. (2019) seconds the findings of our study that service quality has positive influence on client’s satisfaction.

It was hypothesized that client’s satisfaction would have significant impact on client’s positive word of mouth. The results of the study supported that client’s satisfaction had a significant positive impact on client’s positive word of mouth. The results of the study therefore suggested that individuals who are satisfied by the practices and services of the company, are more likely to spread positive word of mouth among their friends and family about that company. Haverila & Fehr, (2016) had the same findings, in their study

they stated customers' satisfaction has been shown to be an important factor in determining product quality from the customer's perspective.

We hypothesized that client's satisfaction would mediate relation among green construction practices and client's positive word of mouth. The results of the study showed that client's satisfaction significantly mediates relation among green construction practices and client's positive word of mouth. Findings of the research illustrated that client, who are satisfied with the practices offered by a company are more likely to spread positive word of mouth among their family and friends about that company. Researched by Hussain et al., (2019) says that green construction practices have a significant impact on the customer's satisfaction, which leads to positive word of mouth.

We hypothesized that client's satisfaction would mediate relation among service quality and client's positive word of mouth. The results of the study showed that client's satisfaction significantly mediates relation among service quality and client's positive word of mouth. Findings of the research suggested that clients, who are satisfied by the quality of services provided by the construction company are more likely to spread out positive word of mouth about that company among peers. Satisfied clients often find themselves telling people about the positive experiences they have had with that construction company. When customers receive high-quality customer service, their satisfaction levels rise which makes them say good things about that company (Ozkan et al., 2020).

In this study it was hypothesized that client-project manager trust would moderate relation among green construction practices and client's satisfaction. From the results of the study, it was found that client-project manager trust significantly moderates relation among green construction practices and client's satisfaction. Kalkman and de Waard (2017) also suggested in their study that project manager's information is relied upon by the clients, so they are willing to invest in the company's projects. they also stated that customers' satisfaction with the company's practices can be improved by regularly exchanging project information via various formal and informal channels of communication. their findings gives more strength to our results.

We hypothesized in this study that client-project manager trust would moderate relation among service quality and client's satisfaction. The results also supported that

client-project manager trust significantly moderates relation among service quality and client's satisfaction. The results of the study suggested that clients who have trust on the company's project manager, who actually advocates about the service quality of his company, are more satisfied and happier, hence they are willing to invest their money in that company's projects. The research conducted by Giao & Trang, (2021) shared the same views as ours.

5.1 Implications

This study contributes to the knowledge of clients of the construction industry, influences of green construction practices and better services quality on the satisfaction of clients, which may provide important implications particularly to the marketers, retailers, and to the construction company owners as well. Client's satisfaction is mainly discussed in the literature either in respect from the company's point of view or from managers perspectives. This study has examined the link between client's satisfaction and the practices and services offered by the construction company that influences to improve the knowledge related to client's satisfaction. More-over this study provides the knowledge for the important role played by the trust among the managers and their clients which leads to satisfaction of clients. This study will prove to be important in improving the understanding of the academicians regarding client's satisfaction. The study also provides meaningful implications for the practitioners. Findings of study would be helpful to increase construction companies' owners and project managers awareness of the factors that play an important role for client's satisfaction. The study's findings provide information to the marketers from which they could develop and improve appropriate marketing strategies directed towards consumers, to gain their attention and engage them in spreading positive word of mouth about their company. Such strategies can be formulated and improved efficiently, if the marketers have a thorough knowledge of services and practices that make their clients satisfied.

5.2 Limitations and Future Research

Every study has constraints that may have an impact on the results. Despite the fact that this study met its goals and made significant contributions, there were several limitations that are worth highlighting. Future research will, however, use these study's

limitations as a benchmark. First, due to time limitation we used a cross-sectional method to study the impact of various factors on client's satisfaction. It is suggested that future research may use a longitudinal study method. Second, in the study a survey design was used to see the impact of green construction practices, service quality and client-project manager trust on client's satisfaction. Future research may use experimental design to investigate the impact of these variables on client's satisfaction. Third, this study was primarily based on clients of construction industry. In future the model of this study could be replicated to other population segments. The focus of this research was construction industry. Future research may emphasize inclusion of other industries as well.

5.3 Conclusion

The study has presented an effort to explore the antecedents of client's satisfaction. The goal of this study was to investigate the impact of green construction practices, service quality and client-project manager trust on client's satisfaction using the S-O-R model. The hypotheses were developed and tested to examine the model of the study. The findings of the study indicated that the stimulus (i.e. green construction practices and service quality) have a significant impact on organism (i.e. clients satisfaction), which in turn impacts client's response (i.e. client's positive word of mouth). Based on the findings of this study we may conclude that individuals who are fully aware of the construction practices and service quality offered by the construction company, are more satisfied and happier. They are more likely to spread positive word of mouth about that company among their family and friends. Additionally, the trust between clients and the project managers of that company also plays an important role in enhancing the satisfaction of the clients. Hence, the companies who offer ecofriendly practices in their construction projects are more likely to have happy and satisfied customers, which eventually make the clients to spread positive word of mouth, that is the most effective way of marketing and image building for the companies. In light of the findings of the study we may conclude that green construction practices and best service quality have a positive influence on the client's satisfaction, which leads to the positive word of mouth. Additionally, trust plays a key role in this whole scenario.

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