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# International Journal of Business, Analytics, and Technology

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# Consumer's Purchase Intention to Buy Green/Sustainable Products

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**Abstract:** *In this research, an attempt is made to understand the consumer's behavior towards purchasing of sustainable products in a developing country like Pakistan. Numerous readings have been made to discuss the environmental concerns and consciousness about the changing environment conditions. However, the attitude and factors affecting the buying behavior and control has been studied, also testing the environmental knowledge and attitude as mediator. Additional features like perceived behavioral control plus price are also considered. A series of closed ended as well as open ended questionnaires was made in order to gather the data from various people and was analyzed by structural equation modeling (SEM) to conduct examinations. The result supported the findings and helped marketing managers through focusing on the strategies to uplift eco-friendly buying behavior while educating their customers about environmental sustainability. At the end, the implication of strategy has been discussed. For the research, the data was examined through the Smart PLS Software. A questionnaire was developed and distributed among various people online to positively analyze the attitude towards buying behaviors and environmental concerns within different demographic trends such as students, workers in Pakistan. A total of 257 responses were collected and conducted quantitative analysis after handling missing data and outliers. The descriptive statistics were checked with the help of SPSS whereas detailed fitness of the model was analyzed with the help of SmartPLS 3.0 referring to structural equation modeling. It has been found out that the hypothesis is reliable. Customer's negative intention of not purchasing sustainable/recycled products is changing. Attitude plays a major role in it.*

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## **1. Introduction**

### **1.1 Background of Study**

Buyers are much worried about the environmental changes and its effects. Customers considerably are concerned of the ecosystem downfall brought by ingredients utilized for day by day use items. These days, various businesses are shifting to express responsibility with respect to bundling parts/equipment and its management (Prakash et al., 2019). Responsible environmental conduct has acquired a lot of favor since it offers an extra mile advantage to the people belonging to diverse backgrounds (Singh & Pandey, 2018). This mindfulness in recent years has changed the environmental related vision of many organizations in the positive sense

(Kim & Seock, 2019). Presently, a lot of organizations are thinking about organic way outs for the procedures and routine habits, especially for managing the unwanted material. Therefore, this changed conduct has affected profoundly on certain areas, particularly daily usage items, the fashion and style industry is leading in embracing moral creation cycles to decrease the natural consequence (Hur & Cassidy, 2019).

Other businesses such as the textile industry, cotton is created and is reasonable for much usage of insect killer all over the planet which affects environmental issues. This area influences natural heritage in different ways. At first, the engineering processes which make a scope of natural contamination bring about an adverse consequence on air quality, biodiversity, water and also different assets like ozone harming substances (Zamani et al., 2015). Secondly, garments utilization makes strong waste as disposal with clothing to the atmosphere. There have been other studies as well which propose that house washing of clothes also influences the environment badly (Sandin & Peters, 2018). Hence, the interest for moral utilization of clothes has expanded among shoppers. It has been set up that most youthful customers think about ecological issues while buying an item or acquiring services (Govind et al., 2019). However, in many cases buyers are confused with regards to the style and cost of sustainable apparel. Shoppers are wondering whether or not to choose positively influencing clothes in view of the cost in contrast with conventional one; customers similarly are unaware of the advantages to the climate.

The companies which are much familiar with the outcomes of their products against the environment have already changed the processes to maintain the positive impact (Fuentes, 2015). Similarly, daily purchases wrapping measures 33% of the complete contamination from family utilization (Koenig-Lewis et al., 2014); it is also a huge source of strong waste (Radwan et al., 2012). Environment positively influencing the package is a new advancement to achieve a balance between environmental progress and financial development (Martinho et al., 2015). Buyers incline towards ecologically packaged items, while those packing which cannot be reused contrarily impacts with the perspectives towards utilization of items (Stockigt et al., 2018).

After reviewing the literature, gaps were identified to conduct the given research and subsequently the problem statement was designed to consider the people's intention towards environmental changes and consideration for purchasing recycling and green products. It not only helps to save the environment but also reduces the contamination and is good for use compared to chemical based products which eventually harms in the long run.

## **1.2 Problem Statement**

In a couple of years, environmentally cognizant shoppers have accomplished optimistic and huge development in ecological exercises, mentalities and information. Individuals are giving increasingly more consideration to the climate, which straightforwardly influences the progressions in close to personal ways of life and qualities. On account of understanding the significance of the climate, numerous shoppers additionally understand that their buying conduct will affect the natural climate yet tragically, individuals in Pakistan watch out for not giving sufficient consideration to the reusing of items and consequently, have a negative aim of purchasing organic items.

## **1.3 Research Objectives**

This study focuses on identifying the association between customers' Attitude towards green products and their purchase intention towards green products. The primary aim of the study is to test the mediating effect of Environmental Knowledge between Attitude towards green products and its antecedents which include the perceived behavioral control, price, environmental consciousness, and environmental concerns. Moreover, the identification of the mediating effect of attitude between purchase intention and environmental knowledge is also an aim of this study.

## **2. Literature Review**

The adverse consequence of fast advancement industrialization on the environment has turned into an issue of concern around the world. Presently, all types of associations are compelled to take on sustainable practices in their techniques for working. Therefore, organizations are going to the utilization of eco-friendly packaging or green packaging. This should be healthy and safe for people and individuals and is needed to be appropriate in terms of execution and expenses etc (Yadav & Pathak, 2016). Past studies have attempted to identify factors that are liable for shifts in consumer conduct. A few analysts have endeavored to investigate the connections among values, eco-friendly behavior and conduct -specific convictions (Moser, 2016).

### **Attitude and Purchase Intention**

Attitude assumes an essential part while anticipating the behavioral intention of an individual (Al Qaysi & Zahari, 2022; Ramish et al., 2019). The other word for attitude is the behavior which is characterized as positive or negative assessment of intellectual principles regarding the persons, thoughts, occasions or practices being referred to (Maio et al., 2018). It can be favorable or unfavorable. During the past days the studies have helped to investigate the significance of attitude particularly in organic buying, reusing, and environmental positive affect packing and unwanted products in various nations (Prakash et al., 2019). The majority of the studies observed that attitude to a great extent influence the aims of those buyers who are extremely worried about the environment. In this manner, besides that it is thought that additionally altogether influences to the purchase intention of youth shopping while buying natural product packaged or apparels.

**H1:** Attitude has direct influence on Purchase Influence of Organic Products.

**H2:** There is a mediating effect of Attitude between Purchase Intention and Environmental Knowledge

### **Environmental Concerns and Environmental Knowledge**

As of late, various people have been progressively thinking about globe and environment affects to which has given off an impression of being a significant determinant of purchaser behavior (Yadav & Pathak, 2016). Various studies track down ecological concern as an impression of altruistic intentions. Altruistic qualities are fundamental for molding purchaser conduct towards nature. Environmental awareness is developing among purchasers driven by their altruistic qualities; this is reflected in their endeavors to resolve environmental issues by means of green buying (Birch et al., 2018; Zou & Chan, 2019). Furthermore, purchaser mindfulness is additionally expanding around the wrapping of items that are utilized consistently and their effect on the climate and environment. Consequently, we accept that the conservational thoughts of clients is a key component that impacts their buying choices on packages made by natural or organic or environmental friendly items.

### Perceived Behavioral Control (PBC)

Behavioral control is characterized as tends to be an individual's thought or individual understanding that commands over the capacity to do the purchasing behavior (Mishal et al., 2017). Perceived conduct control (PBC) likewise plays a critical role in foreseeing purchasing aim (Jaiswal & Kant, 2018). It is simple to know that these beliefs can change intention and behaviors due to their direct effect (Wiederhold & Martinez, 2018). It very well may be reasoned that these beliefs can without much of a stretch change the insights and capacities of numerous purchasers. Nonetheless, various studies likewise notice that PBC might contrarily affect buyer expectation.

### Environmental Consciousness

Environmentally conscious people are ready to change their behavior for the protection of the environment. It was identified that most US buyers consistently ponder ecological issues when they are buying items (Bozdo, 2019; Communications, 2013). Top organizations are likewise expanding their product offerings and utilizing various green systems to impact buyer buying choices in regards to green items. Nonetheless, less study has been made on buyer expectation towards eco-friendly apparel buying (Mahenc, 2008).

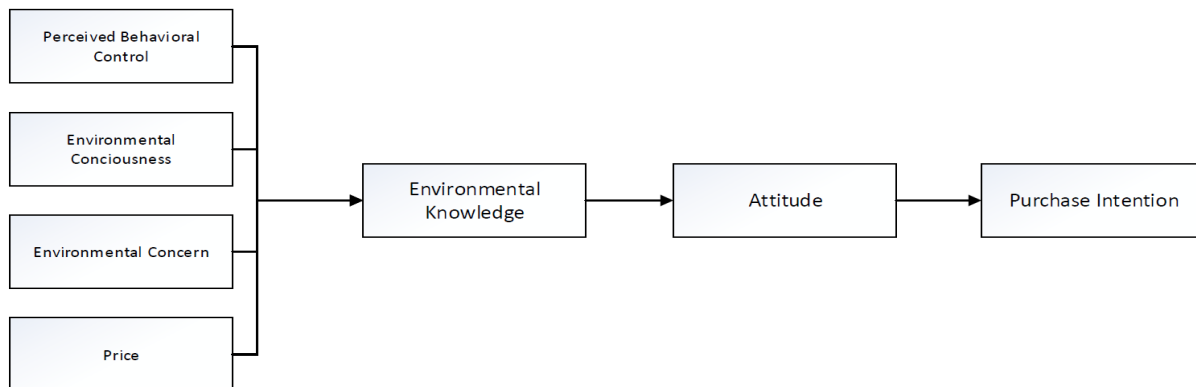
### Price

In examining the buyer choice cycle, product cost is thought to be the major factor affecting the buyer. The thought to purchase any item can be considered "the reasonable cost of an item that the purchaser is prepared to pay the amount" (Schmidt & Bijmolt, 2020). The youthful customers are ecologically aware plus the optimistic union has seen within purchaser paying thought.

**H3: There is a mediating effect between Environmental Knowledge and;**

- a) Perceived Behavioral Control and Attitude
- b) Environmental Consciousness and Attitude
- c) Environmental Concern and Attitude
- d) Price and Attitude

### 3. Conceptual Framework



*Figure 1: Conceptual Framework*

### 4. Methodology

In this research, hypothesis testing is done as the research conducted is quantitative and deductive in nature which is important (Levine et al., 2008). Initially the previous researches

were studied to see the different factors affecting the consumer purchase intention over renewable/green products. After which, constructs were taken from different researches and variables were sorted out to do extra mile study. The total number of constructs taken were including 04 independent constructs which includes Perceived Behavioral Control, Environmental consciousness, Environmental Concerns and Price. Further it includes two mediating constructs i.e. Environmental Knowledge and Attitude. Lastly, 01 dependent variable was taken which is Purchase Intention. Using all the construct's, a questionnaire was developed comprising of 50 questions in Google forms which was shared to different people for various demographic trends for filling out and knowing their intentions and attitude towards Green products in Pakistan.

The questionnaire was filled by a total 257 respondents from different demographic trends to evaluate the overall perception over purchase and usage of sustainable products and know the awareness regarding the environmental concerns. After collecting the data, it was anal zed with the help of SPSS software to check the normality of data and identify the outliers through descriptive analysis.

After getting the accurate data, a reliability test was done with the help of SPSS to find the cronbach alpha within the range of 0.7. Subsequently validity tests and regression tests were done. Moreover the test was also run on SmartPLS 3.0 software referring structural modeling to get the authentication.

Finally the results are interpreted and discussed with the findings to help the marketing managers in order to focus on the strategies to uplift eco-friendly buying behavior. At the end, the implication of strategy has been discussed.

#### **4.1 Instrument Development**

The instruments developed for this research have 07 constructs to form a new conceptual framework. Following is the description of the constructs which are adopted and total number of items from different literature review:

*Table 01: Instrument Development*

Environmental Knowledge	3 items	(Yadav & Pathak, 2016)
	3 items	(Mahmoud et al., 2017)
Environmental Concerns	5 items	(Maichum et al., 2016)
	5 items	(Yadav & Pathak, 2016)
Environmental Consciousness	3 items	(Kumar et al., 2021)
	5 items	(Koenig-Lewis et al., 2014)
Perceived Behavioral Control	3 items	(Yadav & Pathak, 2016)
	2 items	(Maichum et al., 2016)
Purchase Intention	3 items	(Prakash et al., 2019)
	5 items	(Mahmoud et al., 2017)
	1 item	(Maichum et al., 2016)
Price	4 items	(Danish et al., 2019)
Attitude	4 items	(Kumar et al., 2021)
	3 items	(Prakash et al., 2019)
	2 items	(Maichum et al., 2016)

In total 51 items were taken in questionnaires to review in 07 constructs.

## 5. Results

### 5.1 Profile of Respondents

The questionnaire was circulated online within many people with various demographics trends. The total number of respondents who filled the questionnaire was 257. Among the total 257 respondents, 62.40% were males whereas, 37.80% were females. The respondents belonged to a dissimilar age group with the maximum range of 32.90% within the youth of 26-30 years, after which 30.0 % within the youth of 20-25 years. Thereafter, 22.90 % were within the range of 31 to 35 years and the rest were in the age brackets of 36-40 years with 9.30 % and Above 41 years 4.90%.

Further, 68.10 % of the respondents have previously purchased renewable/recycled products. It shows that a moderate amount of persons within the range of approximate 257 have purchased the renewable product. Detailed demographics profile of the respondents is listed in the table below:

### 5.2 Descriptive Statistics

Here respondents are 257, therefore N is showing 257 and on that basis, we can check the value of Statistic Skewness and Kurtosis. The normal distribution for skewness is between -1 to 1. Hence it can be seen in all the constructs from the below table that it follows the normal distribution value. Similarly, in Kurtosis, the normal distribution is between -1 to 1. Hence, as the result shows below, it follows the normal distribution. It concludes the normal distribution condition and doesn't require checking of the outliers through Z score analysis (Hair et al., 2010; Kline, 2011).

*Table 02: Descriptive Statistics*

	Mean	Std. Deviation	Variance	Skewness	Kurtosis
ECONC0	2.4371	0.6382	0.407	0.233	0.093
ECONS0	2.5253	0.68546	0.47	-0.138	0.11
EK0	2.869	0.8815	0.777	-0.523	-0.21
PI0	2.3965	0.75567	0.571	0.007	-0.403
PBC0	2.5844	0.78566	0.617	-0.1	-0.509
Price0	3.0438	0.81086	0.658	-0.335	-0.421
ATT0	2.5603	0.68395	0.468	-0.38	-0.553

### 5.3 Reliability Analysis

Reliability analysis tells about the consistency between the variables in a construct. This study confirms the reliability by testing the Cronbach alpha and composite reliability using the Smart PLS v3. Table 3 depicts the result of reliability analysis (Garson, 2016; Santos, 1999).

*Table 03: Reliability and Construct Validity*

	CA	rho_A	CR	AVE
ATT	0.748	0.762	0.841	0.571
ECONC	0.778	0.800	0.871	0.695
ECONS	0.734	0.742	0.836	0.563
EK	0.874	0.882	0.905	0.613
PBC	0.818	0.835	0.879	0.647
PI	0.916	0.920.	0.931	0.599
Price	0.828	0.835	0.886	0.661

It is evaluated with the help of Cronbach’s Alpha. The adequate and acceptable value of cronbach alpha is 0.7 and above. As it is seen in the above table, all constructs of cronbach alpha are within or above 0.7 (Hair et al., 2011). Hence it is reliable.

**5.4 Correlation Analysis & Discriminant Validity**

There is a strong relation between Attitude/Behaviour and Purchase Intention, and with Behavioral Control and Purchase Intention. The result shows good correlation between constructs (See Table 04).

*Table 04: Discriminant Validity Analysis*

	<b>ATT</b>	<b>ECONC</b>	<b>ECONS</b>	<b>EK</b>	<b>PBC</b>	<b>PI</b>	<b>Price</b>
ATT	<b>0.756</b>						
ECONC	0.594	<b>0.833</b>					
ECONS	0.648	0.663	<b>0.750</b>				
EK	0.610	0.612	0.682	<b>0.783</b>			
PBC	0.686	0.511	0.619	0.618	<b>0.804</b>		
PI	0.738	0.506	0.650	0.645	0.774	<b>0.774</b>	
Price	0.545	0.505	0.565	0.453	0.509	0.424	<b>0.813</b>

Discriminant validity was also ascertained using the Fornell and Larcker (1981) criteria and it was confirmed that the square root values of AVE are found greater than subsequent correlation values (Ab Hamid et al., 2017; Garson, 2016; Henseler et al., 2014). Hence, the constructs used in this study are unique and discriminant to each other.

**5.5 Regression and Moderation Analysis**

The direct and indirect effects were tested using the Smart PLS v3. Bootstrapping with a subsample of 2000 were used with the PLS algorithm approach to get the beta values and p values (Garson, 2016). Table 05 depicts the results of direct and indirect effects.

*Table 05: Direct and Indirect Effects*

	<b>Beta</b>	<b>T Stats</b>	<b>P Value</b>
Att -> PI	0.738	25.111	0
ECONC -> EK	0.294	5.134	0
ECONS -> EK	0.329	4.675	0
EK -> ATT	0.610	15.911	0
PBC -> EK	0.275	4.836	0
Price -> EK	-0.021	0.407	0.684
ECONC -> EK->ATT	0.180	4.944	0
ECONS -> EK -> ATT	0.201	4.501	0
PBC -> EK -> ATT	0.168	4.429	0
Price -> EK -> ATT	-0.013	0.411	0.681
EK -> ATT -> PI	0.450	11.276	0

The first hypothesis developed in this study was about testing the direct influence of Attitude on Purchase Intention of Green Products. This study substantiates the hypotheses ( $\beta = 0.738, p < 0.05$ ). The second hypothesis developed in this study was about testing a mediating effect of Attitude between Purchase Intention and Environmental Knowledge. The results substantiated the hypothesis ( $\beta = 0.450, p < 0.05$ ).

The third hypothesis developed in this study was about testing a mediating effect between Environmental Knowledge. The results depict that Environmental Knowledge mediates between Perceived Behavioral Control and Attitude ( $\beta = 0.168, p < 0.05$ ), Environmental Consciousness and Attitude ( $\beta = 0.201, p < 0.05$ ), and Environmental Concern and Attitude ( $\beta = 0.180, p <$

0.05). However, the mediating effect of Environmental Knowledge couldn't be substantiated between Price and Attitude ( $\beta = -0.013, p > 0.05$ ). Figure 2 depicts the structural model tested using the PLS SEM approach.

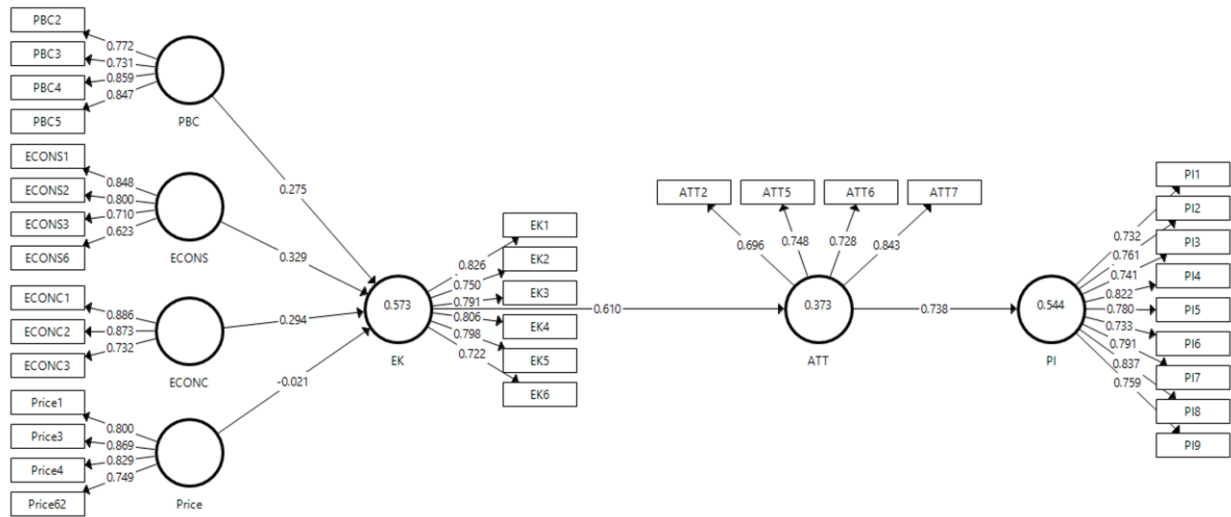


Figure 2: Structural Equation Modeling Using Smart PLS

### Discussion and Conclusion

This study developed a model and tested it using the PLS SEM approach to measure the customers' purchase intention of green products. The result shows that the Consumer Intention to buy Sustainable / Renewable Products in Pakistan is changing and people are getting much concerned about the Environment friendly products. However, the price factor is not the cause of negative intention. The best part to focus for increasing market is changing the perceived behavior and attitude towards sustainable products. The results depict that customers are attracted towards the green products and the Attitude towards green products plays a mediating role between customer's environmental knowledge and their purchase intention.

### Implications for Managers

The results of the study indicate that managers should make customers aware of the difference between green products with other products. Green products are environmentally friendly but people are usually not aware of the concept that green is indicating towards the environment. Moreover, in Pakistan, green color is associated with the color of the flag as well. So, people usually feel difficulty to develop an association with environmentally friendly products. This can be another opportunity that marketers can associate the green products with the green color of Pakistani flag and hammer the concept of environmental friendliness.

### Limitations of the Study

This study was conducted by collecting the data from a metro city. The demographics and psychographic factors of the customers were not taken into consideration while developing the conceptual model of this study. Moreover, this study was focusing on the purchase intention of buying the green products. Future research may consider the purchase behavior and loyalty factors to check the customers' association with green products. Moreover, the rural

areas might be more focusing on green and organic products in comparison to urban areas. Future research should cover this aspect as well.

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# Factors Affecting Customer Loyalty in the context of a leading Telco in Pakistan

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**Abstract:** *The aim of this research is to evaluate the impact of five indirect variables i.e., customer satisfaction, perceived value, communication, conflict handling and service quality on Customer loyalty and how the two variables i.e., Commitment and trust is performing theory role as a mediating variable. This quantitative research based on the primary data collected from the current and past service users of PTCL include telephone, wired Internet/broadband, wireless internet/Charji/EVO, and smart TV/Netflix/Smart play users. The questions were derived from the previous research of factors contributing to customer loyalty. This research is specifically conducted in Karachi. Online surveys distributed were 100 from which 90 had been received, other than online the physical surveys received 149 responses after deleting the outliers the responses became 233. The model was tested through different multiple regression after conducting validity, normality, reliability. The study concludes there is no mediating effect of commitment between customer loyalty and perceived value and service quality. Similarly, trust has no mediating effect in between Conflict handling, perceived value, service quality and customer loyalty and all the other hypotheses were accepted. The hypothesis was tested through the test of simple linear regression and analyzed by using smart PLS 3.0 software. The study can help PTCL with improving their services discussed in the research by using different and better strategies i.e., software enhancement, training of staff members, etc. The limitation of the study was demographics which can be more focused in future research.*

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## Introduction

Customer Loyalty is the most important thing that organizations and key brands are concerned about. The loyal customers are highly obsessed with the brand and make more purchases compared to other customers. The relationship between customer loyalty and customer satisfaction has the key feature of achieving sustainable profits (Adil, 2012; Bowen & Chen, 2001; Ramish, 2020). In the business environment of extreme competition and quick entrance in the market by making an innovation edge, the responsibility of maintaining customers' loyalty has emerged as a challenge (Dick & Basu, 1994; Zhang, 2014). There could be many factors if we study customer loyalty which need to be considered such as customer trust,

customer satisfaction and others (Bowen & Chen, 2001; Iqbal & Siddiqui, 2019; Lin & Wang, 2006). There is extensive research going on in organizations regarding the evaluation and implementation of strategies that are making customers loyal and making a strong relationship with customers. A new perspective of loyalty marketing is being practiced in the industry. The renowned marketers are continuously behind the problem to solve the areas of customer retention and maximum wallet size of the customer (Othman et al., 2021).

Conflict handling is also an aspect which can be described as organizations' ability to deal with conflicts when raised or predict the upcoming conflicts from stakeholders and be prepared to deal with them or avoid them completely by formulating strategies (Chowdhury, 2020; Roberts-lombard, 2011). If the customers are satisfied with the solution proposed by the company after they have raised an issue, they become more loyal. According to a fact, about 34% of customers will result in repeated purchases if their major complaint or issue has been handled properly (Roberts-lombard, 2011).

There is a general fact that satisfied and loyal customers have a willingness to pay more for a product or service offered by a company (Ramish et al., 2019). They are often not reluctant to give a try to new products or services launched by the company. When a high level of outcome is gained by the customer and it results in improving the customer experience the outcome results in medium of exchange in terms of customers' willingness to pay more (Ahmed et al., 2019; Gefen, 2002; Gronroos, 1984).

### **Problem Statement**

In order to attract new customers, the organizations have to put a hefty cost against the revenue that customers bought in. It requires almost a year or more to cope up the cost initially put in to attract the customer and that is recovered once the customers made repeated purchases. The core objectives of companies to create product or service loyalty are viewed in terms of development and sales but that goes wasted because of the commitment and trust related issues.

### **Research Objectives**

The earlier studies conducted have covered few factors for customer loyalty. So, this study reflects an analysis of factors affecting customer loyalty of a specific brand. The core purpose of this research is to examine the relationship of service quality, customer satisfaction, communication, conflict handling, trust and commitment with customer loyalty. A conceptual framework is developed based on the mediating effect of Commitment and Trust, as these are the key variables with already established theoretical background in the context of loyalty.

## **Literature Review and Hypothesis Development**

### **Theoretical Background**

In service marketing literature, these hypotheses have been used in the prediction of consumer behavior. The unconfirmed hypothesis centers on understanding explicit exchange encounters as establishing the resulting (in) customer and consumer satisfaction guide. Although, cognitive psychology has considered the importance of intellectual contours in the consumer behavior science and buying decision making.

In line with the trust and commitment hypothesis in marketing relationships, Morgan & Hunt (1994) identify "relationship benefits" that are fundamental to prioritizing the type of relationships that social commerce participants are. Additionally, consumers want solutions they can trust (Iqbal & Siddiqui, 2019). It is due to the acquisition of suitable service quality,

reliability and capacity of relationship exchanges. Morgan & Hunt (1994) recommend that consumers prefer exchanging relationships with partners that hold mutual values.

### **Customer Loyalty**

In previous research, customer loyalty is explained through various perspectives and dimensions. According to Inamullah Khan (2012), customer loyalty reflects the degree of willingness to buy back a product or service in order to maintain the business relationship with a particular company. It is a mark of loyalty that shows the customer a repeat purchase of the same product or service and healthy word of mouth (WOM) that is widespread in the social circle (Sharma et al., 2020). This happens as soon as a customer discovers a satisfactory feature or function of a particular product or service that competitors cannot offer. Customer loyalty is also defined as a combination of positive customer behavior and customer attitudes towards the brand (Azhar & Bashir, 2018; Guillén et al., 2012). Rauyruen & Miller (2007) also argued that customer loyalty is based on rational or emotional factors, which strengthen the relationship exchange between a brand and customers.

### **Trust and Customer Loyalty**

According to a research conducted by Morgan and Hunt (1994), trust is an element that exists between individuals based on belief, integrity and reliability. Trust is the fulfillment of commitments that are made in a relationship, both personal and professional, between the individuals (Zhang, 2014). It is an act of keeping and delivering promises between the two parties (Abdullah, 2015; Schurr & Ozanne, 1985). Trust is necessary between the parties to fulfill a professional or personal exchange. A lack of trust would result in weaker confidence and ambiguities in the communication among the individuals in commercial exchange (Berntsen & Dibbetz, 2018; Hooi Ting, 2004). If a company is successful in establishing trust among the customer base, it is more likely to attract more target audiences and retain the business for an extensive period. Trust is one of the critical notions between the customers and a business to extend the life of a commercial relationship (Ball et al., 2004; Zhang, 2014).

### **Commitment and Customer Loyalty**

According to Hennig-Thurau & Klee (1997), customer loyalty and commitment are the two similar elements with minimal or no difference. However, most of the research works in the past emphasized that loyalty and commitments are two distinct elements with a strong interconnection (Sharma et al., 2020). As stated by Berry, Carbone, & Haeckel (2002), commitment and its fulfillment are the process of developing loyalty among the customers. Businesses that are effective in delivering to the commitments enjoy loyal customer bases as a result. Commitment is a source of developing an emotional cohesiveness, which drives towards loyalty. Once loyalty is accomplished, if a customer wants to rebuy a product or service it means that it is an expression of increased profitability for the businesses (Ahmed et al., 2014; Newman & Patel, 2004).

### **Customer Satisfaction and Customer Loyalty**

According to Fornell (2016), customer satisfaction is a response achieved by businesses once quality and committed services are delivered to the target audiences. Customers feel satisfied about the promises made by the companies in the proposed product or a service. Simultaneously, Minarti & Segoro (2014) argued that customer satisfaction is a success metric business could use after the completion of the purchase decision cycle.

Customer satisfaction is a predictive form of customer loyalty since satisfied customers would be more likely to make a repurchase of a similar product or service offered by a brand (Ramish et al., 2016). A dissatisfied customer would make a brand switch immediately and would be challenged that a company could re-attract such buyer to make a repurchase in the future (Ha et al., 2011; Vargo & Lusch, 2010). It is further argued that satisfied customers would demonstrate stronger loyalty towards a product or service and it is difficult for competitors to acquire the customer base (Ali et al., 2020; Martín-Consuegra et al., 2007).

### **Service Quality and Customer Loyalty**

By definition, service quality is the post-purchase examination of a customer that is measured based on the difference between expectations from a service and experience at the time of consumption (Jarrett et al., 2019; Perera et al., 2017). It also measures the efficacy of a delivered service to a customer (Gronroos, 1984; Parasuraman et al., 1991; Caruana, 2002). Service quality is a value in which we make sure that the normative assumption of the consumers and the perception of the services executed by the brand can be matched (Parasuraman et al., 1991).

### **Perceived Value and Customer Loyalty**

Perceived value is a ratio difference between consumer outcome and consumer input, against the service provider outcome and service provider input (Oliver & DeSarbo, 1988; Ramish, 2020). Perception is not an easy process for businesses to develop. It involves monetary and non-monetary opportunity costs the businesses provide for creating a healthy image among the customer base (Ali et al., 2020; Bolton & Drew, 1991). The opportunity costs could include time, stress, tentative loss of revenue, etc., which would drive customers towards satisfaction and loyalty (Sharma et al., 2020; Sirdeshmukh et al., 2002). However, businesses invest heavily to strengthen the perception among the customers, as it is a key driver to develop a purchase intention.

### **Communication and Customer Loyalty**

In the discipline of marketing, communication serves as a backbone in initiating a healthy exchange of relationship between a brand and customer base. Communication involves all of the informal and formal exchange of information between customers and a brand, which transforms into a commercial and emotional relationship in the future (Akbari et al., 2016; Ramish, 2020). Based on effective communication exchange, brands could easily understand the expectations of a customer base, build a relatable product or a service, and deliver to measure the satisfaction. It is important that the communication channels should be accessible and open between the customers and businesses. Through open channels, the exchange of information would be faster and effective. The two elements are important to facilitate strategic decision-making. Communication should be strong and predictable for both the parties (Akbari et al., 2016). It serves as a channel to share expectations and reach a win-win situation in the latter stages of an operational lifecycle. Healthy communication is a source of developing a long-term relationship between customers and a brand (Alrubaiee & Al-Nazer, 2010; Ramish et al., 2019).

### **Conflict Handling and Customer Loyalty**

Conflict alludes to the degree of disagreement between two players acting in exchange, which can be seen in a relationship. This reduces the opportunity to make and maintain protracted relationships (Chowdhury, 2020; Gilaninia et al., 2011). Conflict handling incorporates the capacity of parties to move away from the expected conflict, to resolve conflict

that is indicated before creating a problem, and to check the management of the problem (Ndubisi, 2007). Association and new clients who go out of their way to do whining and engaging representatives and healing to do it and where the show has been shown to do in order to achieve revenue and higher frequency of purchase/loyalty (Ramish et al., 2016; Roberts-lombard, 2011).

### **Conceptual Framework**

Literature argues that customer satisfaction is a component of customer loyalty, in turn an element of intellectual exploration of assumptions before real use and encounter (Oliver, 1980). Customer loyalty / dissatisfaction require an understanding of service quality and depend on the perceived value and service quality (Anderson et al., 1994; Ramish et al., 2022). In the marketing literature, the most important constraints that support relationship marketing are suggested, such as communication (Morgan & Hunt, 1994; Crosby & Stephens, 1987), trust (Morgan & Hunt, 1994; Veloutsou, 2015), commitment (Grossman, 1998; Sharma et al., 2020), and conflict handling (Dwyer et al 2009). In this study, they were linked to customer resilience. According to Morgan and Hunt (1994) theory, relationship engagement and trust are key elements, and we have positioned them as intermediaries between five key factors (e.g., customer loyalty, perceived respect, and quality of service, communication, and conflict handling).

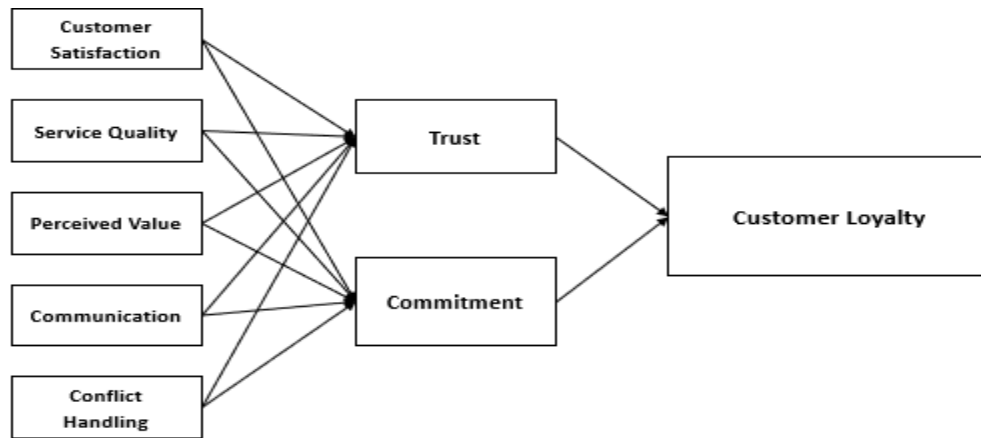
#### **H1: Commitment mediates between:**

- a) Customer Satisfaction and Customer Loyalty
- b) Service Quality and Customer Loyalty
- c) Perceived Value and Customer Loyalty
- d) Communication and Customer Loyalty
- e) Conflict Handling and Customer Loyalty

#### **H2: Trust mediates between:**

- f) Customer Satisfaction and Customer Loyalty
- g) Service Quality and Customer Loyalty
- h) Perceived Value and Customer Loyalty
- i) Communication and Customer Loyalty
- j) Conflict Handling and Customer Loyalty

Based on the hypotheses developed in this study, a conceptual framework was developed using the theoretical underpinnings. This is illustrated in figure 1.



*Figure 1: Conceptual Framework*

## Methodology

### Population and Sample size

A leading Telco (i.e. PTCL) is a technology driving force in Pakistan that enhances lifestyle work, awareness of new technologies, and respect for the life of the individual, and reflects the soul of modernization, change and development. The total consumer base in Pakistan is 1.3 million and Karachi has 62,000 customers. Various researchers also suggest that a sample size of 250 individuals should be considered suitable for research, although some researchers recommend selecting a sample size based on confidence stretch and confidence level (Hair et al., 2010; Song et al., 2015). There are 7 factors in this paper, with 2 factors intervening i.e., Trust and commitment. The sample size of the investigation was 249 and after eliminating the exceptions we focused on the sample size of 233.

### Sampling Technique

This study used convenience sampling to collect responses from the population on which the study is conducted. In convenience sampling the data is gathered from the sub-set of the selected population based on ease of availability (Cavana & Delahaye, 2000; Etikan et al., 2016). The collected data was analyzed through the SPSS 24 and SmartPLS 3.0. The statistical tests were performed in order to evaluate data and interpret in context of this study (Hair Jr. et al., 2017).

### Scale & Measure

A questionnaire was created by adapting the constructs from previous studies. The questionnaire was based on a 5-point Likert scale, and there were choices between strongly disagreeing and fully agreeing. The reliability of the constructs were ensured but rechecked due to the changing demographics in this research (Ling, Chai, & Piew, 2010; Sallam & Algammash, 2016). The reliability of the previous study, the source and the number of items used are given in the table below:

*Table 1: Measures of Entertainment, Information, Credibility, Irritation and Attitude*

Variables	Source	No. of Items	Reliability
Customer Loyalty	(Zeithaml et al., 1996)	4	0.879
Trust	(Z. Ahmed et al., 2014)	5	0.714
Customer Satisfaction	(Racheal W.Y. Yee & Andy C.L. Yeung, 2000)	6	0.922
Commitment	(Z. Ahmed et al., 2014)	5	0.702

Variables	Source	No. of Items	Reliability
Service Quality	(Racheal W.Y. Yee & Andy C.L. Yeung, 2000) (Z. Ahmed et al., 2014)	6	0.809
Perceived Value	(Harris & Goode, 2004)	3	0.852
Communication	(Ndubisi, 2007)	3	0.824
Conflict Handling	(Ndubisi, 2007)	3	0.855

### Data Collection & Analysis

We distributed the questionnaire to 300 consumers, out of which 249 responded and 233 responses were considered valid. The shared services of the company were also written in the questionnaire so that users can select the available services of it and can answer the questions in the context of used services mentioned in the questionnaire.

Section of analysis consists of multiple statistical tests including validity, normality and reliability. Multiple linear regressions were used to identify the relationship between the constructs. SmartPLS 3.0 used to conduct the multiple tests of Cronbach’s Alpha, Exploratory factor Analysis (EFA), convergent and discriminant validity, and other statistical analysis were also conducted.

## Results

### Profile of the respondents

According to the data collected the dominant age group was 31-40 as the percentage of the group is 37% in which 50% male and 41% female. Similarly, as per the statistics 58% of the respondents were married which are the (Kline, 2011)marital status group and 27% respondents were single. As far as the education level is concerned, most of the respondents are Bachelors, having a percentage of 47% and 41% are Masters. The research was conducted on the factors affecting customer loyalty so most of the respondents were those who are using Wireless Internet/Charji/EVO services of the company in which 39% users are full time employed.

### Descriptive Statistics

It is used to quantify the univariate normality of the surveyed data from the respondents. Notable results include skewness, measure of central tendency and kurtosis. Standard variance and deviation are also stored for the pleasing results (Garson, 2016). Outflows are distinguished based on attractive results if the tangible state of univariate normality, such as the size of the kurtosis should be in range between -3 to +3 and the skewness should be -1 to +1 (Hair et al., 2010; Jolliffe, 2002).

*Table 2: Descriptive Statistics*

Construct	Mean	Std. Deviation	Kurtosis	Skewness
Customer Satisfaction	3.242	1.087	-1.078	0.040
Service Quality	3.235	0.910	-0.974	0.130
Trust	3.278	1.093	-0.894	0.074
Commitment	3.293	0.865	-0.944	-0.084
Customer Loyalty	3.203	1.090	-0.990	0.078
Perceived Value	3.411	1.087	-1.022	-0.025
Communication	3.384	1.048	-0.937	0.086
Conflict Handling	3.474	1.040	-0.756	-0.025

In descriptive statistics we found out that the value of skewness is in range i.e., between -1 to +1 and the value of Kurtosis is also in range i.e., between -3 to +3 which means our data is normally distributed (Black & Babin, 2019).

### Reliability and Validity Analysis

In this study, Cronbach alpha is used to measure the internal consistency of the data. Developments are considered strong when the advantages of Cronbach alpha outweigh 0.6 (Cavana & Delahaye, 2000). The reliability test is also used to reduce the error in the data, as well as to reduce scientist predictions (Bell & Bryman, 2007). Despite the fact that the instruments used in this study were used on the basis of effectively billed reliability, the reliability in this study (see Table 3) is restored due to the adjustment of culture and demographics.

*Table 3: Reliability and Validity Analysis*

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
CH	0.855	0.912	0.775
CL	0.879	0.916	0.734
CN	0.824	0.895	0.740
Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
CS	0.922	0.939	0.721
Com	0.873	0.913	0.726
PV	0.852	0.910	0.772
SQ	0.901	0.926	0.716
TR	0.898	0.929	0.767

The reliability analysis conducted for the constructs shows that all the values of Cronbach's Alpha are greater than 0.7. Table 3 shows the reliability of Customer Satisfaction (0.922) towards customer loyalty to be highest while the reliability of Communication (0.824) to be lowest towards customer loyalty. However, the constructs were adopted from previously done studies (Tabri & Elliott, 2012), but we have to check the reliability due to different dynamics of culture and demographics. The constructs are validated by conducting a construct validity test. All the values of Average Variance Extracted (AVE) are greater than 0.5 which shows that in this study all the constructs have convergent validity (Garson, 2016; Song et al., 2015).

### Correlation Analysis

The correlation analysis is done to test the relationship among the variables and to check what level of relationship between variables. Pearson Correlation is used to conduct the test of different variables (Asyraf & Afthanorhan, 2013). Correlation coefficient shows that either the relationship of the constructs is strong or weak. If the coefficient of correlation is close to the zero it means there is no relationship or very weak relationship however in the other case if it is close to 1 no matter the value is in negative or positive but it means that the strong relationship is maintained between the variables (Bryman & Bell, 2011; Song et al., 2015).

*Table 4: Correlation Analysis*

	CS	SQ	TR	COM	CL	PV	CN	CH
Customer Satisfaction	1							
Service Quality	.844**	1						
Trust	.828**	.829**	1					
Commitment	.743**	.755**	.805**	1				
Customer Loyalty	.982**	.811**	.807**	.711**	1			
Perceived Value	.770**	.767**	.811**	.793**	.755**	1		
Communication	.740**	.721**	.769**	.751**	.727**	.849**	1	
Conflict Handling	.734**	.731**	.772**	.686**	.727**	.812**	.792**	1

According to various researchers if the value of the construct is not between 0.2 and 0.9 then the variable will be dropped (Ansari, 2020; Song et al., 2015). The correlation analysis results are presented in Table 3 which shows that variables are distinguished and there is a positive relationship of all variables with customer loyalty because values are significant at p-level < 0.05.

**Discriminant Validity**

*Table 5: Discriminant Validity*

	CS	SQ	TR	COM	CL	PV	CN	CH
Customer Satisfaction	<b>0.849</b>							
Service Quality	.844**	<b>0.846</b>						
Trust	.828**	.829**	<b>0.876</b>					
Commitment	.743**	.755**	.805**	<b>0.852</b>				
Customer Loyalty	.982**	.811**	.807**	.711**	<b>0.857</b>			
	CS	SQ	TR	COM	CL	PV	CN	CH
Perceived Value	.770**	.767**	.811**	.793**	.755**	<b>0.879</b>		
Communication	.740**	.721**	.769**	.751**	.727**	.849**	<b>0.860</b>	
Conflict Handling	.734**	.731**	.772**	.686**	.727**	.812**	.792**	<b>0.880</b>

To correlate variables with each other the test is carried out called the test of discriminant validity, in which we will be able to relate each variable if the similarity will be between them. In the test of discriminant validity (Black & Babin, 2019), it is confirmed that the values of the square root of total variance explained must be greater than the value of each pair of correlation (Ansari et al., 2017; Fornell & Larcker, 1981). The data collected from respondents in order to conduct this study completely satisfy the requirements of discriminant validity, as shown in Table 5.

**Structural Equation Modeling and Mediation Analysis**

The conceptual model was analyzed through PLS-SEM using the software 3.0 Smart PLS. In order to test the model, we have conducted Confirmatory Factor Analysis (CFA) through the defined software. The value of validity and reliability were additionally discovered to be positive i.e., Cronbach’s Alpha is >0.7, loadings >0.5 and composite reliability is > 0.7 (Ansari, 2020). The result of the direct is depicted in the table given below:

*Table 6: Path Coefficient*

Relationship of Variables	T Statistics	P Values	Interpretation
CH -> Com	0.343	0.731	Rejected
CH -> TR	2.294	0.022	Accepted
CN -> Com	2.632	0.009	Accepted
CN -> TR	1.025	0.305	Rejected
CS -> Com	1.767	0.077	Rejected
CS -> TR	3.415	0.001	Accepted
Com -> CL	3.394	0.001	Accepted
PV -> Com	3.862	0.000	Accepted
PV -> TR	2.461	0.014	Accepted
SQ -> Com	3.995	0.000	Accepted
SQ -> TR	6.338	0.000	Accepted
TR -> CL	8.321	0.000	Accepted

Source: Calculated through Smart PLS: p-value < 0.05 CH=Conflict Handling, COM=Commitment, TR=Trust, CN=Communication, CS= Customer Satisfaction, CL=Customer Loyalty, PV= Perceived Value, SQ= Service Quality

The mediation was tested using the bootstrapping technique of sub samples of 2000 in Smart PLS. The specific indirect effect was tested in this study to analyze the mediating effect of the hypotheses. The results are discussed as under in Table 7:

Table 7: SEM Coefficients & Effect of Mediating Factors between Direct and Indirect Variables

Specific Indirect Effects	P Value	Interpretation
CH -> Com -> CL	0.006	Accepted
CN -> Com -> CL	0.047	Accepted
CS -> Com -> CL	0.032	Accepted
PV -> Com -> CL	0.075	Rejected
SQ -> Com -> CL	0.082	Rejected
CH -> TR -> CL	0.075	Rejected
CN -> TR -> CL	0.038	Accepted
CS -> TR -> CL	0.134	Accepted
PV -> TR -> CL	0.105	Rejected
SQ -> TR -> CL	0.228	Rejected

Source: Calculated through Smart PLS: p-value < 0.05 CH=Conflict Handling, COM=Commitment, TR=Trust, CN=Communication, CS= Customer Satisfaction, CL=Customer Loyalty, PV= Perceived Value, SQ= Service Quality

As per the above stats we can conclude that the commitment can be considered the mediating variable between independent variables (Conflict Handling, Communication, Customer Satisfaction) and direct variable i.e., Customer Loyalty (Ramish et al., 2016). However, it is analyzed that commitment cannot be considered the mediating variable between indirect variables (Perceived value and service quality) and direct variable i.e., Loyalty (Garson, 2016). Similarly, from the above analysis it is shown in table 7 we can perceive that the Trust is creating a mediating effect between indirect variables (Communication and Customer Satisfaction) and direct variables i.e., Loyalty (Ansari et al., 2016). It is also concluded that Trust cannot be considered as a mediating variable between indirect variables (Conflict handling, Perceived value and service quality) and direct variable i.e., Customer Loyalty.

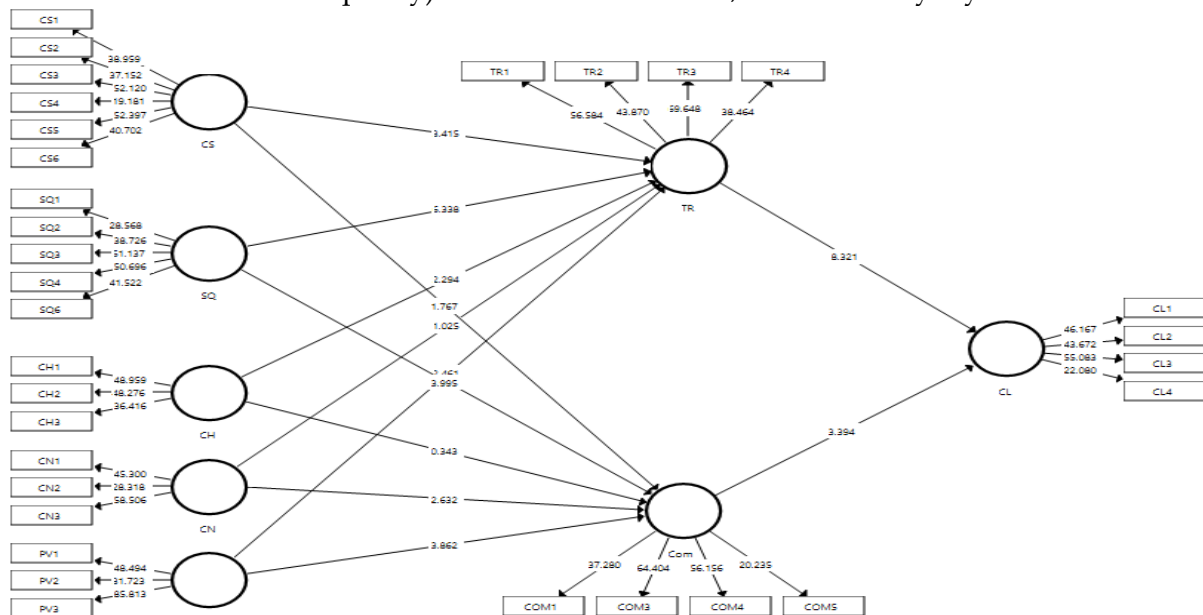


Figure 2: Structural equation modeling using Smart PLS

## **Discussion and Conclusion**

The research is conducted on services of a leading Telco and responses were taken from its users. The research is focusing on customer loyalty which results in increasing profits by increasing revenue and lowering cost. The cost to acquire the customers are also decreased once the customer loyalty has been built as the cost to serve the customers gets low because they are used to the services or product (Hallowell, 1996; Othman et al., 2021). This research is based on seven factors in which two factors are mediating and affecting the customer; the research questionnaire is based on 5 Likert scales from strongly agree, agree, neutral, disagree, and strongly disagree and questionnaires are filled with these responses. The reliability test of seven factors is comparative positive and six out of seven including mediating variables are having reliability value more than 0.8.

### **H1a: Commitment mediates between Customer Satisfaction and Customer Loyalty**

This hypothesis shows that there is a positive or significant mediating impact of commitment between customer satisfaction and customer loyalty. Previous research argued that the level of customer satisfaction is increased when the brand does not compromise its commitments and the customer will be loyal to the brand (Cheema & Javed, 2017).

### **H1b: Commitment mediates between Service Quality and Customer Loyalty**

According to the results this hypothesis shows that there is no mediating impact of commitment between service quality and customer loyalty. Previous researches show the positive impact however, in this research we have found that the hypothesis is rejected. Their result reflected after testing the model by using SmartPLS shows that there is an insignificant effect of service quality on customer loyalty when commitment is a mediating variable because the p-value = 0.082 which is greater than 0.05. Hence, the H1b is rejected in this study

### **H1c: Commitment mediates between Perceived Value and Customer Loyalty**

Result shows that there is no mediating impact of commitment between perceived value and customer loyalty. Previous researches show the positive impact however; in this research we have found that the hypothesis is invalid. The bootstrapping method was used for analysis and the result shows the p-value = 0.082 which is greater than 0.05. Hence, the H1c is rejected.

### **H1d: Commitment mediates between Communication and Customer Loyalty**

This hypothesis shows that there is a positive or significant mediating impact of commitment between communication and customer loyalty. According to the previous research it is found that the hypothesis is valid. Commitment between communication and customer loyalty and it was observed that p-value = 0.047 which is lower than 0.05 so there is a significant effect of communication with customer loyalty when there is a mediation of commitment. Therefore, it can be concluded that commitment acts as a mediating variable between communication and customer loyalty. The test was conducted on 233 responses on which the result of p-value is lower than 0.05 so we fail to reject H1d.

### **H1e: Commitment mediates between Conflict Handling and Customer Loyalty**

This hypothesis shows that there is a positive or significant mediating impact of commitment between Conflict Handling and customer loyalty. According to the previous research it is found that the hypothesis is valid. H1e: There is a mediating effect of commitment between Conflict Handling and Customer Loyalty. The mediation effect of commitment between conflict handling and customer loyalty is significant as the p-value is lower than 0.05 so we fail to reject H1e.

### **H2a: Trust mediates between Customer Satisfaction and Customer Loyalty**

The result shows that there is a significant effect of customer satisfaction with customer loyalty when there is a mediation of customer loyalty. Therefore, it can be concluded that trust

acts as a mediation variable between customer satisfaction and customer loyalty when the hypothesis was analyzed by using a mediation test from Smart PLS. The test was conducted on 233 responses on which the result of p-value is lower than 0.05 so we fail to reject H2a.

**H2b: Trust mediates between Service Quality and Customer Loyalty**

The result after conducting a mediation test of 233 responses done by using smart PLS software shows that there is an insignificant effect of service quality over customer loyalty when trust is a mediating variable because the p-value is 0.228 which is greater than 0.05 so we reject H2b.

**H2c: Trust mediates between Perceived Value and Customer Loyalty**

According to the results this hypothesis shows that there is no mediating impact of Trust between perceived value and customer loyalty. Previous research shows the positive impact. However, in this research we have found that the hypothesis is rejected. The p-value obtained is below the 0.05 so we reject H2c.

**H2d: Trust mediates between Communication and Customer Loyalty**

This hypothesis shows that there is a positive or significant mediating impact of Trust between communication and customer loyalty. According to the previous research it is found that the hypothesis is valid. The test was conducted on 233 responses on which the result of p-value is lower than 0.05 so H2d is failed to reject in this study.

**H2e: Trust mediates between Conflict Handling and Customer Loyalty**

According to the results this hypothesis shows that there is no mediating impact of Trust between Conflict Handling and customer loyalty. Previous research shows the positive impact. However, in this research we have found that the hypothesis is invalid. It can be seen from the result that trust when acted as a mediating variable between conflict handling and customer loyalty gives p-value higher than 0.05 so this study rejects H2e.

**Managerial Implications**

Marketers need to understand the consumer's choice and formulate the relevant marketing strategy for marketing budget so that consumer easily can buy products/services under his/her budget line (Khan, 2021). The commitment carried out between the organization and customers is also vital for gaining customer loyalty.

Nowadays, the marketers of the company are concerned regarding the commitment to be done with the customers that what are the best channels to be utilized for the digital channel is getting popular among the consumers. The medium of communication could be any via email, internet, social platforms, mobile phones just to engage the customers to create positive results on customer loyalty (Merisavo, 2008).

This study has shown what are the factors that impact customer loyalty of a specific brand and the measures that an organization could take in order to overcome it. Customer loyalty is always made or built up by various business activities which also includes or impact of various factors affecting customer loyalty. There were studies conducted that were able to conduct and show the significance or impact of trust on customer loyalty (Nguyen et al., 2013). The consumers are in a position to place trust on a company's product or service when there is a reputation of the firm, a company with the strong trust worthy customers can do better in crisis situations.

**Limitation and Scope for Future Research**

The limitations of this study were the only Karachi's (metro city) consumers who used the services of a leading Telco, so the demographics could be the limitation in our research.

Moreover, there are several other telecom companies which are providing services to different areas of Pakistan. These companies were also not considered in this study. In future research, we can take other cities or we can research the total population of Pakistan. Moreover, other companies will also be targeted in future research to analyze the hypotheses developed in this study. Demographics targeting youth, gender and income may also affect the results. So, in future research, these demographics will also be considered.

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## Change Management in IT Sector of Pakistan

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**Abstract:** *One of the reasons for conducting research on change management in the IT sector is because ever since the COVID-19 pandemic, many software houses have adopted changes and are now using them as the new normal. The key objective for this research is to study the factors of politics, employee aspects, moral, retention, communication of change leading to an implementation of change and whether or not the implemented change because of the factors mentioned have a positive or successful impact on to be called whether the change management was made effective or not. A sample of 286 professionals from different IT companies and software houses were selected to achieve the purpose of this study and prove the facts of being successful or not. Smart PLS 3.0 software was used for statistical analysis. The results revealed that the independent variables (i.e. staff turnover, retention, communication of change, culture, politics and employee aspects on change implementation) have a mediating and positive influence on change implementation and that the moderating variable (information systems) have a positive influence on the dependent variable called (effective change management). All the hypotheses failed to be rejected. The results depict a mediating effect of change implementation on effective change management. This research will help the managers how change can be implemented and also made to retain their employees by communicating why the change was needed. The results will help the organizations to identify how they were implementing change in a different direction and discover the potential reasons to understand how change implemented by them might have failed.*

**Keywords:** *Communication of change, politics, retention, employee aspects, morale, culture, change implementation, information systems, effective change management.*

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### Introduction and Overview

Organizational change goes arms linked with leadership and both are meaningless without the other (Roberts, 2018). The organizations of the IT industry must adapt to the new practices and new technology of the era in a timely manner rather than delaying it till the damage is done, and to be kept in mind that a simple mention of change tends to create nervousness amongst the employees of the company and soon as the change starts taking itself into shape, the employees are bound to feel uncertain and unsure, and these feelings of the employees must be acknowledged (Arshad & Ali, 2023; Gaborov et al., 2023). Given such uncertain realities, the leaders of the company are bound to make an approach which needs to be very clearly communicated to the employees so that the approach which, when implemented, turns to be in favor of the whole company (Aninkan, 2018).

This research is primarily focusing on the world after the pandemic, the world where companies were forced into. How one survived, how one closed their books of business and most astonishingly, how one emerged even faster in times of crisis. Change rises in unstable environment which then gives rise to an emerging change within an organization, most commonly this phase is stated as the reaction on how to deal with the unstable environment and in return benefits that emerge out are an acquired strategy which may also give rise to change (Hassan, 2018; Rouhani & Mehri, 2016). Supported by older research, it is quoted that how change is extremely important in the IT industry, the landscape of every single IT industry must focus on the (Regona et al., 2022), and evolve from the previous ones, the older technologies need to be replaced and the new, latest technologies must always be updated to the time of most important needs and another most essential thing is that the IT businesses should adapt to the newest change practices and methods in order to be able to compete with their competitors (Roberts, 2018). In order to be able to lead change successfully has suggested two steps which need to be followed by any management when implementing the change: Firstly, to analyze factors as per the situation of the company and determine the answers to reluctant questions like 'how much resistance can we face and how do we deal with it' and also with questions like 'who will be having the exact and accurate knowledge of the change that we need to implement.' Secondly, the management must determine the speed and duration of the change, will it take time? If yes, will it affect my employees and will they be able to support the company? In this chapter of our research, we will be highlighting the IT industry which is one very successful sector of Pakistan and has risen up to \$5.138 billion and also generates about \$3 billion revenue according to PSEB for the year 2017 (PSEB, 2017). Further ahead the scope of the study, problem statement and the objectives of this study on which all primary research is based will be discussed in detail.

#### **Problem Statement:**

Our problem statement revolves around the IT companies of Pakistan. Due to the existing culture of companies, traditional politics and the existing information systems of the IT companies, change implementation has become a challenge to achieve effective change management.

#### **Objective of the Study:**

This study will be evaluating the effects of Politics, Culture, Reward & Recognition, Employee Aspects, Staff turnover, Change implementation (as a mediator), communication of Change, Retention, Morale, Leadership, Training & development, and Information System (as a moderator) on Effective Change management.

### **Literature Review**

When deciding to implement change, most organizations had never really even considered this idea and were somewhat happy with the way they were performing but the pandemic that has now become the new normal for all of humanity, this meant that every company now had to change their priorities towards change and hence it can be said the global pandemic provides opportunity to the companies to move start change management process (Hoek, 2020). Change management is a key skill which has been required not just in the modern fast evolving era but even back when the first discovery was merely a telephone. Technological change has played a very vital role in enhancing employee performance and most importantly,

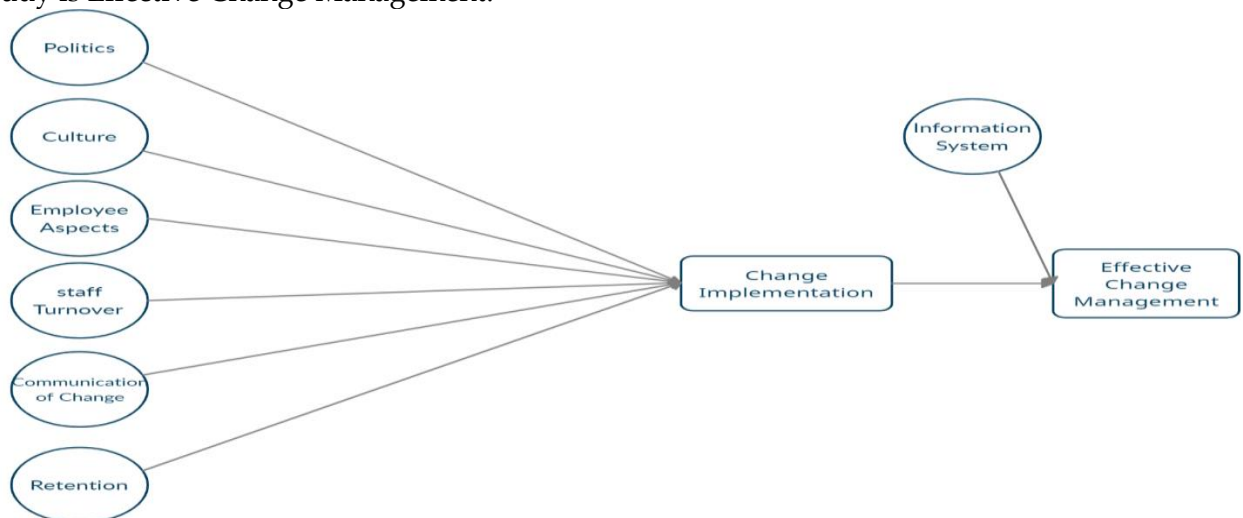
in making lengthy tasks easy to do. A management decision to implement change shows the employees how the company does not wish to stay stagnant and focuses on building culture and also on the working environment of the employees. It should also be kept in mind that change does not merely come from fancy top notch strategic strategies that are adapted from the bigger organizations but rather it is also a very vital to know that leadership is a very important fact of bringing the change to the organization itself (Sinaga et al., 2018). Change does not come in entirely in just one phase and hence different levels of change do exist which means quite clearly that different levels of leadership are required at each stage to successfully apply the desired change at company (*Formation of Strategic Change*, 2019).

### **Theoretical Background**

The theory that has been used in our research is Kurt Lewin's 3-step theory. This theory came into being to merely evaluate two key areas of any organization thriving to change for the better. Firstly, what the existing change process is in the organizational environment currently and secondly, how one can challenge the status quo in order to realize effective changes. Our study majorly relates to this theory as our prime focus is to understand how an organization can communicate change, start implementing it and then make the new change, constant. The key variable which this theory focuses on is "Leadership." According to the article Ali et al., (2018) a far sighted, experienced, mature and consistent leader with the mentioned qualities is the kind of leader who can bring the idea of change and make the employees aware and prepare for how necessary that change is, automatically creating a mindset towards the new goals. There are other theories used for change management as well such as Moss Kanter's Ten Commandments, Pettigrew's and Whipps five factors of change model and Kotter's Eight Step Model. This research however, is purely based on the Kurt model of change (Hassan, 2018; Jai & Jacoub, 2023).

### **Conceptual Framework**

The literature of the research above has given Politics, Culture, Reward & Recognition, Employee Aspects, (Fernet et al., 2017), Communication of Change, Retention, Morale, Leadership, Training & Development are independent variables, while Change Implementation is mediating variable, and Information Systems is moderating variable. Dependent Variable of the study is Effective Change Management.



*Figure No. 1: Conceptual Framework*

### *Culture and ECM*

A very recent article of a school principal implanting change, showed that regardless of the changing situation, he did not force change and rather introduced it to the students step by step, bit by bit and created a mindset amongst them (Hasibuan, 2021). It is at these times when the organizational culture becomes a risky topic to discuss and creates a slight murmur amongst employees (Kiosi et al., 2020). To be able to nurture this mentality amongst the employees of the company, it is important to focus on giving respect and treating with empathy, working on ways to create employee commitment to a whole new level (Karyotakis & Moustakis, 2016).

### *Retention and ECM:*

Retaining employees at the time of implementing change is the biggest challenge to retain employees. Murray writes in his research a very common concept but unfortunately, not valued by most, the secret behind this dilemma. It is the duty of the managers and the leaders to create a healthy relationship with his team, have mutual understanding and communicate daily with them (Murray, 2020). Giving the employee and the team proper guidance gives them a sense of security and comfort that their managers have faith in them. In times where employees are uncertain about their jobs and their future in the company, it becomes a question mark at the risk of going up, meaning, losing employees. The risks that the top management can face in the phase of changes is obviously lower revenues but also the retention of its employees. So, to be able to retain the employees of the company, a strategic vision, the processes of organization, all contemplate the success of enabling the company to face the adversity and reality of the external factors and also keep the employees at their side as a support to go through the phase of change itself. The company then moves in the right direction of growth, has a positive culture and is always ready to face challenges (Basco et al., 2020; Liu et al., 2014; Sauermann, 2018).

### *Staff Turnover and ECM*

By having a new vision, goal and strategies, the company is bound to remain successful and sustainable for its very own existence and the employees. As change is a constant outcome for any new input of decision making and various new strategies, it is largely focused on how the company can convince itself first, as to why the change is needed and then head over to communicate to the employees the reason for change and also share with them the long run effects of the change that can produce positive results for all (Fadzil et al., 2019; Sinaga et al., 2018). One thing that will always remain as a factor amongst the employees during change is the level of trust they have from the company and the leader of the company. Because however successful the change strategy may be, it needs to have it done from a leader who knows how to lead and who is capable of carrying his employees through that transition process and only a true, successful and capable leader would be able to help his organization pass through the changing times of the company if he's skilled enough and experienced much as well (Ahmed, 2021). To be able to gain the trust of the employees and help them guide through change, it is very important to be transparent with them so that they can understand as to why the change is happening in the first place. It is an easy way out as to start firing employees and show the front how the revenue numbers are going up but it is a challenge for those companies, and this challenge is considered as a healthy challenge, for those who strive to success along with all of their employees and reach the desired change without laying off too many people. Unless of course, the employees simply have baggage that is too heavy for the company to carry, the first

priority should always be to utilize the current talent and numbers of employees (Frye et al., 2020; Qureshi et al., 2022; Rafiq et al., 2019).

#### ***Communication of Change and ECM***

Bringing up a change in organization depends how the employees of that organization are responding to the change. And for any organization to be successful with change, the attitude of employees is much more focused. In response to change, emotion, thought and behavior of employees must be focused and measured (Roberts, 2018). Well now when all the organizations around the world are feeling distressed because of the pandemic, employees are always alert on even very minor details which causes a rumor-mongering culture in the company (Lucas & Goh, 2009). It is required by managers to educate the employees, the importance of change, and what will happen if this change is not implemented. This will eventually lead everyone down the slope, keeping these qualities in mind, only then your employees will be able to trust you fully. Keeping in mind the exceeding rise in the pace of change, we need not to lose sight of the one factor which is very essential for every manager, leader and top management to follow and implement, which is, communication of change Now to implement successful ECM, the company needs to focus on communication, of course, but also on a very well defined communication strategy (Attridge, 2009; Katsaros et al., 2014). A communication strategy should be well thought, consistent and have a compelling story attached to it which makes it worth understanding as to why the change is needed (Tang, 2019).

#### ***Employee Aspects and ECM***

It is very critical to understand a word as big as 'change' has a lot of sensitivity connected to its employees and stepping out of comfort zones is never an easy challenge. Employee behavior when it comes to implementing change needs to be studied very carefully and dealt with professionally and employee aspects do have a very strong effect on ECM (NJERI, 2010; Shahrabi, 2012). With the situation of the COVID-19 pandemic, companies must now focus on rethinking and reforming their workplaces entirely. It is a confusing stage as to whether or not the employees will return to office but it does not mean that the company should not prepare themselves for this (de Lucas Ancillo et al., 2020; Meshko & Savinova, 2020). The workplaces should be well thought regarding redesigning keeping in mind all the COVID-19 precautions such as health and safety, social distancing and also focusing on less face area with other employees so that when the employee returns back to the office, the employees aspects regarding returning back will be to a clean back-to-work kind of vibe and would love it if their office gets redesigned as per the need of the moment (de Lucas Ancillo et al., 2020). To have a sustainable development process in the company, it is important to take into consideration the employee side of the story, what behavioral patterns exist and hence need to understand what can keep the company's slope moving higher towards continuous development (Ahmed, 2021; Drela, 2020).

#### ***Politics and ECM***

Politics when going to be discussed in general gives off a somewhat negative vibe but one would be astonished to know the politics play a very important role in a company (Ahmed, 2018; Yaseen, 2020), as they provide a nexus to think on, determining and being able to recognize the company's previous contributions to also aiding and helping to understand the approach that can be beneficial for all employees and the company itself in the future (Hochwarter et al., 2020). The word politics in alignment with ECM seems to give off a down-

sloping idea but just as interesting as this may sound, politics does also play a positive role in the organization. The impact of politics can be overwhelming as it can directly affect the mental well-being of an employee and the decisions happening in the organization as a whole (Ahmad et al., 2015). The leaders of an organization can help shape the culture and overcome the negative politics into a positive politics culture and the most crucial way to do this is to have a two-way communication. Meaning employees have an open communication with management and the management gradually declines the negative culture but brings in positivity and a just system for everyone. A leader is able to define that a positive culture has a positive mindset and the most dominating trait in this culture is that of trust itself (Nadeem & Sully De Luque, 2020; Soares, 2018). It is important for the leaders of every organization to first understand the prevailing environment of the office and also be aware of the fact that a strong and right leader cannot entirely control the whole office culture and environment but be a positive influence to this culture by being an active participant of the environment. A study on organizational politics shows that there are many employees who face organizational politics as a barrier in being able to give their best performance at work (Gbadamosi & Chinaka, 2011). ECM with negative politics will only give rise to uncertainty and factors like lack of communication and lack of trust which will then give the employees more rigor on their mental health, a leader should eradicate the improper use of power/justice and lead his organization towards the path of a smooth transition to change and be able to implement ECM (Alvi, 2017; Labrague & de los Santos, 2021).

#### *Change Implementation and ECM*

The process for ECM is considered to be completely weak if it does not cater to the fact that employees and stakeholders give the organization the level of support to implement the change. The top management then of course plays the most vital role in bringing effective change by how they are using the strategies and policies to implement the change, and therefore there are certain studies that show that there do exist certain organizations which do not put in the right of commitment which then leads to become a hindrance in change implementation (Sansa, 2020). For ECM, modern organizations have pretty much proven the importance of how a successful change implementation strategy is what leads to effective change management in an organization. Simply implementing a basic strategy used by large organizations and then expecting 100% results is never going to be successful. It is important to know firstly as to why the change is required in the first place and what is the motive for implementing this change as research has stated that it is vital to understand the motive for change just as much as it is important to implement the change (Hassan, 2018). It can be said that turbulent environment of the business, technology influence, changing and growing demands of the customers, it is at these crucial times where organizations embark their ways to making successful change management strategies which if not effective, or not studied properly as per the need of the organization, is going to be viewed as an adverse and challenging task and with this it can be stated that strategic change management practices are considered to be the drivers of change implementation in organizations hence need to be focused on with entire commitment of the top management (Murugi & Ongoto, 2018). It is also studied in a previous research regarding change management that the employees who are closer at heart with their company i.e., more committed and those who have more sense of ownership of the work they do in their daily office routines are bound to bring in change in a lot more efficient and successful manner as compared to other employees who are not entirely dedicated and

committed to their current company and those who do not take full ownership of their tasks and responsibilities (Terziev et al., 2020).

### ***Information Systems and ECM***

The 21<sup>st</sup> century which is our modern-day world has shown great inclination towards the use of information systems. It has become quite a challenge on how to handle change and even also to manage the entire process of change and that is where these information systems jump into action and claim to be the vital source of change in a constantly evolving and challenging world who is always at a risk of being defeated by the competitors of the organization and therefore ECM has received much attention in the past recent year (Haider, 2014; Terziev et al., 2020). Given that the current situation, that is, the global pandemic is not going away any time soon, it is now important and has become the need of the hour to be fully aware of technology and the technological practices so that the management of the company is not too much relied on the information of the employees and has its own source of information in hand. It is in today's times that the dependence on information systems is much too high and it is now more than ever that the organizations are planning to design internal controls to have better systems, ensure the compliance standards and monitor its growth while also ensuring.

To have success in managing change in an organized control way and without having to fail in implementing the change, there should a detailed plan on communication which should include who, what why, when, how and that what will be the end results of the change, and along with this, a planned information strategy as these key features are the highlights in going for a planned. It is through communication that leaders are able to communicate the direction of the change and its processes (Roberts, 2018). As the size of the organizations are growing, there is a fast growing culture, employees are now much more inclined towards getting the work done in a matter of a few seconds as compared to old days where tasks required to be done in a day or two, so now for all the companies around the world, having information systems is not a want but more importantly, a need for the company as things are much more complex and require speedy results and for that the information systems are made on completely new and high tech systems for better and faster results (Ahmed et al., 2017).

### **Hypotheses**

On the basis of literature reviews, following hypotheses have been formed:

**Hypotheses 1**= There are mediating effects of Change Implementation between:

- a) Politics and ECM
- b) Culture & ECM
- c) Employee Aspects & ECM.
- d) Staff turnover & ECM.
- e) Communication of Change & ECM
- f) Retention & ECM

**Hypotheses 2** = There is a mediating effect of Change Implementation on ECM.

**Hypotheses 3** = There is a moderating effect of the Information System on ECM.

### **Research Methodology**

#### **Sample Selection and Size**

The sample collected in this research was targeted at the IT industry to employees from executive level to the employees of manager level so as to see which level of employees is most

effectively communicated for change and which size of sample requires effective change management (Arshad & Ali, 2023; Terziev et al., 2020). The sample selection is done with sample size being 250 minimum (Hair et al., 2010; Kline, 2011). In this case, our research consists of a sample size of 286 respondents.

## Results

### Descriptive Analysis

*Table 1: Descriptive Statistics*

Construct	Mean	Std. Dev.	Skewness	Kurtosis
Change Implementation (CI)	3.594	0.806	0.420	-0.696
Communication of Change (CC)	3.507	0.771	0.092	-0.372
Staff Turnover (ST)	3.647	0.806	0.283	-0.751
Morale (MO)	3.647	0.752	0.336	-0.649
Retention (RE)	3.441	0.880	-0.269	0.081
Employee Aspects (EA)	3.748	0.833	0.171	-0.982
Training & Development (TD)	3.846	1.075	0.458	-1.072
Leadership (LD)	3.776	0.917	0.101	-1.223
Rewards & Recognition (RR)	3.780	0.912	0.031	-1.131
Culture (CU)	3.773	0.907	0.010	-1.071
Politics (PO)	sss	0.946	0.100	-1.378
Information System (IS)	3.773	0.887	0.037	-1.044
Effective Change Management (EC)	3.657	0.863	0.230	-0.904

As per typical practices, it is said that the regression analysis test cannot be run on the data if the data is not normally distributed. It can be noted here that the internal consistency of the items are normally distributed and are also checked and verified by the Cronbach Alpha which is ensuring that our data is reliable given that the value of the alpha is up to and greater than 0.7. Skewness of all the above constructs is within the range of  $-1 < S < +1$ , and the range of Kurtosis for the above variables lie between the range of  $-3 < K < +3$ , which suggests that the data follows normal distribution criteria. There is also another research which states that if the data is falling in the range of -1 and +1 of Skewness and kurtosis that range of data is also said to be considered as normal data (Hair et al., 2010; Kline, 2011).

### Reliability Test

Internal consistency of data can be measured through a Reliability test which helps in identifying the reliability of items, whether or not the items are reliable to test the construct (Ansari, 2020). We have run the reliability test on the responses we got from our sample, and the results are shown in the following table 02. Although the variables that have been taken in this research are merely adopted from an existing and already conducted research which had proven that all the variables are reliable and acceptable, it is still a requirement to conduct the test again due to the varying nature of the research study, the culture of the study and the respondents possessing a different level of knowledge and understanding on the research (Garson, 2016; Hair et al., 2017). Therefore, the reliability tests had to be run again on the variables and the results of the reliability are mentioned below.

*Table 2: Test for Reliability*

Construct	Cronbach's alpha	No. of Item	Mean	SD
Change Implementation (CI)	0.824	5	18.245	4.032
Communication of Change (CC)	0.572	3	10.385	2.180
Staff Turnover (ST)	0.817	6	21.370	4.483
Morale (MO)	0.830	7	25.518	5.033

Construct	Cronbach's alpha	No. of Item	Mean	SD
Retention (RE)	0.710	3	10.413	2.572
Employee Aspects (EA)	0.763	4	14.514	3.039
Training & Development (TD)	0.776	4	14.759	3.255
Leadership (LD)	0.820	4	14.469	3.531
Rewards & Recognition (RR)	0.803	4	14.587	3.392
Culture (CU)	0.760	4	14.633	3.310
Politics (PO)	0.812	4	14.511	3.437
Information System (IS)	0.780	4	14.608	3.186
Effective Change Management (EC)	0.835	5	18.276	3.948

Cronbach's Alpha of all the above variables is greater than 0.70, except Communication of Change (CC) whose Cronbach's alpha is 0.572. Hence, it has met the criteria of Cronbach's alpha of 0.70 or above, which was recommended by Hair et al., 2011 for all the variables we use for our study, except (CC). However, there has been research which has stated quite clearly that a reliability level of range of 0.5 is moderately weak but is definitely reliable and hence in this study we can conclude that all of the mentioned variables are reliable and have met the criteria for our study (Cronbach & Meehl, 1955).

### Validity Test

Factor analysis is used to measure the validity of items, and it helps in identifying whether or not the items have served the purpose for which they have been adopted & considered (Ahmed, 2021; Garson, 2016). Table No. 03 has shown the results of Validity Test.

*Table 3: Exploratory Factor Analysis*

Constructs	No of Items	KMO	BToS	Cumulative Factor
Change Implementation (CI)	5	0.821	482.376	48.99%
Communication of Change (CC)	3	0.575	86.424	37.88%
Staff Turnover (ST)	6	0.821	563.018	44.05%
Morale (MO)	7	0.838	646.842	41.87%
Retention (RE)	3	0.66	163.334	45.96%
Employee Aspects (EA)	4	0.751	279.998	45.39%
Training & Development (TD)	4	0.721	313.918	46.87%
Leadership (LD)	4	0.763	402.326	53.69%
Rewards & Recognition (RR)	4	0.79	351.112	51.13%
Culture (CU)	4	0.701	294.759	44.63%
Politics (PO)	4	0.782	379.734	52.65%
Information System (IS)	4	0.768	305.877	47.49%
Effective Change Management (EC)	5	0.832	514.303	50.72%

To be valid the constructs should meet some criteria. KMO value for all the constructs should be greater than 0.70, while the cumulative factor should be greater than 40% (Fornell & Larcker, 1981). The above table shows that KMOs of all the constructs are greater than 0.70 except two variables, i.e. Communication of Change (CC) and Retention (RE), and the KMOs for these two variables are 0.575 & 0.660 respectively. However, the Cumulative factors of all the variables are greater than 40%, except one variable, i.e. Communication of Change (CC) which possesses a cumulative factor of 37.88%. Bartlett's Test of Sphericity is also significant for all the variables, except Communication of Change (CC), which shows BToS of 86.424. Overall it is evident from the above table that constructs have passed the validity test which suggests that all constructs are related to each other and effectively served the purpose for which they are adopted (Ansari, 2020).

**Correlation**

This is the analysis which is carried out to check the relationship between different constructs and whether they have got significant relation or not. In addition to this, correlation analysis is considered as a prerequisite for conducting regression analysis, which helps in identifying the multicollinearity if exist between the constructs. If the collinearity lies in the range of 0.2 – 0.9, that range is ideal and if otherwise, should be dropped from the study as it is either too or too strong, i.e., too similar to the existing variables and are almost confused as the same variable. Variables with correlation of greater than 0.90 suggests that such variables should be dropped (Bell et al., 2015). Correlation is presented in the following Table 04.

*Table 4: Bivariate Correlation Analysis*

Constructs	1	2	3	4	5	6	7	8	9	10	11	12	13
Change Implementation (CI)	1												
Communication of Change (CC)	.586	1											
Staff Turnover (ST)	.713	.599	1										
Morale (MO)	.666	.606	.684	1									
Retention (RE)	.654	.445	.557	.469	1								
Employee Aspects (EA)	.705	.516	.718	.624	.511	1							
Training & Development (TD)	.645	.607	.642	.688	.540	.642	1						
Leadership (LD)	.689	.493	.680	.689	.588	.674	.641	1					
Rewards & Recognition (RR)	.690	.558	.657	.653	.642	.684	.699	.734	1				
Culture (CU)	.628	.567	.600	.726	.513	.635	.695	.677	.733	1			
Politics (PO)	.738	.541	.723	.672	.530	.761	.692	.807	.678	.676	1		
Information System (IS)	.671	.585	.712	.700	.574	.663	.666	.718	.714	.677	.716	1	
Effective Change Management (EC)	.758	.515	.788	.650	.592	.723	.646	.714	.697	.631	.751	.736	1

From the above table of correlation analysis, it can be noted quite clearly that all the variables are lying in the mentioned range of 0.2-0.9 (Ansari, 2020) hence this proves that all the variables do have a relationship with each other and that the relationship between these variables is also significant.

**Heterotrait-Monotrait Ratio (HTMT)**

Discriminant validity has been checked through Smart PLS. To meet the given criteria, HTMT ratios should be less than 1 (Ab Hamid et al., 2017; Henseler et al., 2016), and constructs are assumed to establish discriminant validity successfully, if data satisfies the above discussed criteria.

*Table 5: HTMT Ratio*

	CC	CI	CU	EA	EC	IS	ISxCI	PO	RE	ST
CC										
CI	<b>0.835</b>									
CU	0.976	<b>0.965</b>								
EA	0.912	0.973	<b>0.935</b>							
EC	0.930	0.998	0.870	<b>0.956</b>						
IS	0.938	0.894	0.941	0.925	<b>0.745</b>					
ISxCI	0.353	0.419	0.333	0.361	0.392	<b>0.239</b>				
PO	0.863	0.912	0.823	0.977	0.986	0.919	<b>0.526</b>			
RE	0.872	0.960	0.880	0.803	0.857	0.847	0.429	<b>0.799</b>		
ST	0.888	0.933	0.865	0.906	0.986	0.929	0.474	0.922	<b>0.915</b>	

**Regression Analysis**

Following table shows that Staff Turn-over (ST), Communication of Change (CC), Retention (RE), Employee Aspects (EA), Culture (CU), Politics (PO) have indirectly influenced the Effective Change Management (EC), while Change Implementation (CI) is a mediating variable and Information System (IS) is a moderating variable.

*Table 6: Regression Analysis*

	$\beta$ -value	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
CC -> CI	0.166	0.165	0.046	3.625	0.000
CI -> EC	0.466	0.465	0.047	10.002	0.000
CU -> CI	0.169	0.163	0.053	3.188	0.002
EA -> CI	0.219	0.224	0.052	4.225	0.000
IS -> EC	0.465	0.466	0.043	10.818	0.000
ISxCI -> EC	0.115	0.111	0.044	2.607	0.009
PO -> CI	0.143	0.137	0.058	2.479	0.013
RE -> CI	0.230	0.232	0.044	5.247	0.000
ST -> CI	0.126	0.132	0.057	2.185	0.029

Above table shows positive & significant relationship between the variables, because p-value of all variables is less than 0.05. Criteria for significant value states that independent variables have significant effect on dependent variable, if sig value or p-value is less than 0.05.  $\beta$ -value shows the effect between the variables, a value greater than 0.20 shows strong effect between the variables & if the value is less than 0.20, then this shows a weak effect between the variables (Hair et al., 2010; Kline, 2011).

*Table 7: Specific Indirect Effect*

	$\beta$ -value	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics ( O/STDEV )	P Values
CC -> CI -> EC	0.077	0.077	0.022	3.428	0.001
CU -> CI -> EC	0.079	0.075	0.024	3.215	0.001
EA -> CI -> EC	0.102	0.104	0.027	3.818	0.000
PO -> CI -> EC	0.066	0.064	0.028	2.378	0.018
RE -> CI -> EC	0.107	0.108	0.025	4.345	0.000
ST -> CI -> EC	0.058	0.061	0.027	2.167	0.031

From the above table, it is evident that p-values are less than 0.05, which suggest that all hypotheses are accepted or failed to reject.

**Conclusion**

The results of our hypothesis which were first stating that there does not exist any impact of the antecedents on the mediating, moderating and the dependent variable have been proven otherwise and that there definitely does exist an influence on the mentioned variables. As briefly explained above in the hypothesis and also proven by the test results on the SPSS and (Cartwright, 2001), change can be implemented in the (Arshad & Ali, 2023), if given that all mentioned antecedents are dealt with the same way as mentioned in the literature above. Change is quite too often adapted from formal huge organizations in the industry without really concerning the current culture of the company, improper evaluation of the employee aspects, the ongoing (Daud et al., 2023), not considering the current state of the employees morale and diving directly at the hard challenge of change without having a proper channel of (Kang et al., 2023) to the employees as to why did the change needed to happen in the first place (Wenz & Yu, 2010). For one company to know which change management strategy has to be

adopted for their company, they should first thoroughly understand the existing systems, study the possible consequences that can happen about what can go wrong, also try to determine and analyze in the work (Qing et al., 2019), whether this strategy can help the company grow or eventually die out, and focus and prioritize the company's mission, vision and goals as to what the company can do to protect and then meet its targets (Kahtani, 2020).

While we also noted in our research how the change was being implemented in the companies was not keeping in mind any of the antecedents mentioned in our research, we also came to discover that most companies, who did have the mindset to bring in change, didn't really know what change was required and just followed the steps of the other companies (Okrepilov et al., 2020). The modern day business world faces in their fast growing environments and so many of the companies face the need to implement new information systems (Park, 2018). We have concluded from our above research and literature reviews that information systems play a very vital role in enabling change management effectively (XUE, 2019). Thus, all in all, our research and tests have successfully concluded that the antecedents of change in the IT sector do indeed have an impact on bringing effective change management.

### **Research Limitations and Scope for Future Research**

It is to be noted in this study that the focus lies on the IT sector of the companies and also within the confines and the geographic boundary of the metropolitan city. Not all variables that can either be antecedents of change or have a direct impact on ECM have been taken in this research and hence this means there is more that is still left to study, explore and conclude on regarding this topic. Moreover, the state of the employees' psychological factors has not been gauged and also not included in the respondent's responses for this research. Also, there are many more said theories of change which have not been taken into consideration for this research topic and is primarily based on one theory solely, meaning there is much more to be studied and researched on if the other theories of change are kept in mind for future research purposes. Moreover, there can essentially be more factors, variables and constructs which may be related to change management and might have been overlooked in the regard of this case study and thus meaning that there is room for more research on variables that can lead to different and wider perspectives of change management in an organization. Thus, future studies on change management or related topic can cover vast information on new and unique variables that show an impact or an influence for change management, ability to accept change amongst the employees and how to successfully bring that change into action and set it as the company's new development for growth.

Many organizations are thrown at the face of change. It is a fact that change is indeed not easy and having to step out of lukewarm waters to the cold gushing waters of change is not a desired approach for companies, also employee resistance is stated to be one of the major reasons as to why so many companies fail to implement change in the first place because it is not explained why the change is necessary and what is the rising need to go for an option for change (Hassan, 2018; Wenz & Yu, 2010).

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## Effect of Supplier Selection on Quality Control

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**Abstract:** *Supplier selection is one of the factors impacting quality since it raises the rejection rate and reduces productivity. Despite the fact that cost has been extensively researched in the recent past, few studies concentrate on the mediation influence of performance and conformity. Main goal of this study is to look at the relationship between lead time, supplier sustainability, services, risk factors, supplier capacity, performance, conformance, and cost when choosing a supplier, as well as the mediating function of performance and conformance on cost. For the objective of this study, a sample of 250 experts from various steel sectors professionals was chosen. In addition, the SmartPLS 3.0 programmer was utilized to evaluate the data. Using the PLS-SEM, determine whether the model is fit. The independent variable (lead time, supplier capacity, service, and supplier sustainability) According to the results of this survey, has a big positive impact on cost. The research indicates that there is a mediating influence on performance and conformity between lead time, supplier sustainability, risk factor, services, and cost. This research can assist supply chain managers in selecting suppliers and maintaining quality control. The findings may help firms in identifying new suppliers, resulting in increased productivity and profitability.*

**Keywords:** *Conformance, Risk Factor, Performance, Cost, Lead Time, service, sustainability of supplier, and supplier capacity.*

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### Introduction

A number of risk and socioeconomic characteristics impact the decision to choose a supplier in a supply chain, which are typically incorporated as restrictions or filters (Wang et al., 2010). Developing a more systematic and open approach to purchasing decisions, particularly in the area of supplier selection, may help to encourage authentic supplier selection (Carter et al., 1998). Managers regard quality to be the most critical supplier feature, according to the majority of the articles referenced above. The conceptual articles emphasize Managers should not choose suppliers based solely on price (Khan et al., 2018). Supply relationship management in supply chains looks for exceptional suppliers that can deliver low prices and high quality (Wang et al., 2010). The final buyer-supplier relationship is heavily influenced by the selection of a suitable provider.

The direct and indirect consequences of inadequate decision-making related to supplier selection have become more serious (Thiruchelvam & Tookey, 2011). This interrupts the entire supply chain procedure and has an influence on the quality of the goods purchased, requiring the end-user to make a quality compromise in the end. The final buyer-supplier relationship is heavily influenced by the selection of a suitable provider. If the technique is done correctly, a

best-quality, longer-lasting connection is more likely (A. H. I. Lee et al., 2009). Appropriate supplier selection can help you save time and optimize your supply chain. May help their suppliers by offering information, skills, and As a result of their experience, they gain from improved delivery performance and reduced manufacturing delays caused by low-quality materials (Ghodsypour & O'Brien, 1998; Lee et al., 2009). Supplier selection is a common practice that has economic, environmental, and social benefits (Shoaie et al., 2019). It will increase the quality of the final product and reduce the lead time (Kannan & Tan, 2006).

Quality control includes regular analyses of entering materials and how they impact the outcome of produced items (Azizi et al., 2015). Today's firms consider quality as a significant strategic component of competitive advantage, and enhancing product quality remains a primary focus (Kaur et al., 2019). Quality control is focused on the problem of preventative effort rather than simply removing defective outputs through evaluation procedures. Quality is a complex concept. Certain characteristics and attributes gain or lose relative value over time (Lüdeke-Freund et al., 2018). A good supplier selection leads to the establishment of connections amongst a manufacturer and its suppliers, which is imperative since a lack of coordination creates unnecessary delays, which leads to poor customer service due to quality issues (A. H. I. Lee et al., 2009). In any organization, selecting the right supplier is crucial since it lowers unit pricing and improves corporate price competitiveness (Luthra et al., 2017).

Companies are now up against fierce competition, forcing them to look at new ways to improve quality while cutting costs and shortening lead times. As a result, it's vital to place a greater emphasis on Supplier selection and evaluation, as this may assist minimize rejection rates, prices, and period to arcade while also improving merchandise quality. They have the potential to have a significant influence on production costs and lead times. Although a range of strategies and models for selecting and evaluating suppliers have been employed (A. H. I. Lee et al., 2009)

We see a lot of item rejections in manufacturing organizations due to hurried purchases and poor supplier selection, which reduces the quality of purchases and has an influence on the entire efficient supply chain model. The purpose of this study is to determine how supplier choosing criteria improve, improve or change quality control in Pakistan's steel sector.

### **Literature Review**

Supplier selection (SS) has a direct influence on obtaining high-quality items and, ultimately, customer satisfaction (MacGregor-Fors et al., 2019). Supplier selection is defined as a multi-criteria dilemma with both qualitative and quantitative features (Ghodsypour & O'Brien, 1998). In one of their early studies on the issue, Weber et al. (1991) identified approximately 20 supplier attributes that managers trade-off when selecting a supplier. As a consequence, choosing the right supplier opens up a lot of opportunities for firms to supply high-quality items at reasonable prices. The supplier selection process consists of key steps to determine the need for a new supplier, that include (i) identify and develop selection criteria, (ii) initial screening of potential suppliers from a large list, (iii) final supplier selection, (iv) continuous evaluation and evaluation of selected suppliers (Mukherjee, 2016). A strong supplier selection may help an organization lower operating expenses and enhance the quality of its final products in the long run (Kumar et al., 2018).

Outstanding to the important influence of supplier individualities on cost, quality, delivery, and service in attaining supply chain goals. A firm's competitiveness is strongly reliant on its suppliers, who are becoming increasingly important in the supply chain (SC) (Narasimhan & Talluri, 2009). Proper supplier groups may help a company's social and

financial structure by cutting costs and confirming continuous customer consummation (Zimmer et al., 2016). In today's supply chain options, appropriate suppliers are required for cost efficiency. Choosing a low-performing supplier offers a lot of disadvantages that negatively affect firms in a variety of ways, including lost time spent repeating operations (Luzon and El-Sayegh, 2016). Excessive purchase and procurement prices are a concern, but good supply base building is also essential, thus this decision will have a direct impact on the business continuity of a company (Rezaei et al., 2016). Hence, choosing and assessing suppliers is essential for maintaining and expanding a productive and efficient supply chain.

Advances in quality management throughout the 1980s led to an increasing global acceptance of the concept of corporate improvement through quality control (Azizi et al., 2015). Today's organizations see quality as a top focus (Kaur et al., 2019). Quality control is frequently mentioned as a feature of a high-quality service. Given the necessity of consistency in production, more or better manufacturing equipment receives financing for quality control systems (Ammar et al., 2021). Quality control is performed on a regular basis. Incoming material assessments are part of the materials quality control process. Quality effort must be pushed from the top of the company down to the employees, and managers must encourage this attitude (Parikh et al., 2016). Critical issues like quality, material handling costs, and delivery time constraints are all managed by a comprehensive documentation system. Quality was the responsibility of the quality assurance section. The majority of organizations are now understanding that they need to change their culture to one in which quality is everyone's responsibility (Narasimhan & Talluri, 2009).

Companies utilize an endless variety of approaches and procedures to launch a quality improvement program, and the method chosen and how it is implemented influences how the program is seen by workers (Jarrett et al., 2019; Narasimhan & Talluri, 2009). According to the research, combining quality control activities with cost management may considerably help to greater manufacturing performance in the business, as well as the realization of core competencies for dealing with global challenges. The first step in any quality improvement process is for an organization to confess that it has a problem and that it has to change its culture and structure in order to improve (Parikh et al., 2016). To achieve their suppliers' quality requirements, they understand their suppliers' interior processes and advance component efficiency in close partnership with their suppliers' factories (Ammar et al., 2021). Integration can be described as the capacity of various supply chain partners to collaborate to achieve mutually acceptable outcomes (Kaur et al., 2019). Thanks to digital technology paired with increasingly complicated procedures and smarter processes, high-performance teams will be able to continuously supply consumers with high-performance and quality goods (Ammar et al., 2021).

### **Cost**

Because of its influence on a company's competitive edge, the notion of supply chain management (SCM) has achieved traction in today's market. SCM is the discipline of improving the supply of products, services, and associated evidence from supplier to customer, and it is concerned with the efficiency with which the parties involved in the provision of the product as a whole deal with ultimate consumer demand in terms of cost (Cowan, 2013).

### **Mediating Effect of Conformance**

The results suggest that the most important factors influencing these key aggregate indicators are cost awareness and how the supply chain implements cost efficiency and cost

control measures. Confidence-based conformity awareness for high-quality, on-time delivery, and contextual awareness based on resource usage accuracy, availability, and transparency are additional aspects of thematic analysis. Changes and delays to meet customer needs in the supply chain related to materials (S10 and S11), orders (S8), and quality (S8) are characterized by conformance-related awareness (P2). In this regard, the perceived uncertainty depends on the level of confidence in the supply chain for high quality, on-time delivery. In the supply chain, confidence levels support orchestration and help practitioners improve operational performance and R & D support (Durugbo et al., 2020).

Organizations that embrace the SCO culture can consider a variety of factors when choosing a supplier to improve the quality of design and compliance. The organization is more responsible for shared SCM collaboration and strives to select suppliers that accept site ratings from a cultural perspective (Kannan & Tan, 2006). These two requirements suggest that the supply chain must have a strong SCO culture. Organizations with an SCO culture show a high level of trust and commitment to their supply chain partners and are more likely to live up to their expectations (Lee & Kim, 2023; Tiwari et al., 2023). In addition, it is observed that a high level of compatibility (as one of the shared values of the SCO culture) of an organization will force the organization to select suppliers that are compatible with its goals and objectives (Salimian et al., 2020).

One of the most important processes in supply chain management is supplier selection. New supplies for the important role that suppliers play in terms of service flexibility, product / process technology, supplier profitability, supply suitability, quality of conformity, and relationship density that impact supply chain companies' profits. Chain strategies include the following: This has become even more important. Supplier selection is a multi-criteria decision-making problem where certain factors are more relevant than others. Many input facts for decision making are not known exactly in real life (Li et al., 2012).

By building standardized modules and coordinating supply chain design with product modularization, companies can significantly reduce product development time. The project team can start the project with the current standardized module or use the module as a template to work with the supplier to build a higher-quality original product. Product modularization standardizes product components and avoids unnecessary variability between products (Spivak & Brenner, 2018).

A number of supplier concerns connected to SCM were also uncovered in this investigation. Firms that use SCM outsource more today than in the past, and they use suppliers that can provide a strategic value to the company in terms of product quality, delivery responsiveness, and flexibility. As a result, the competence and conformity of second-tier suppliers has become a critical concern. The consequence is that buying managers should play a more active role in finding first- and second-tier supplier connections and become involved in their management. This study backed up a number of previous research results indicating quality, customer service, and delivery criteria are more significant than product pricing when it comes to supplier selection and assessment (Salimian et al., 2020).

Assessing risk exposures from new or existing suppliers requires systematic risk factor analysis when talking about the impact of risk factors on compliance related to the impact of supplier choices for quality control. Risk factors are a collective concern of all business operations related to key characteristics that must be demonstrated before a supplier can be recognized as a reliable source of information (Haraguchi et al., 2023). This is defined as an essential characteristic that a supplier must demonstrate before it can be certified as a reliable source of information. Twenty-eight years after Dixon investigated supplier choices,

specification compliance and on-time delivery proved to be the most important characteristics as part of the consistency factor. The supplier that does not show acceptable performance in these two categories is excluded from consideration throughout the selection process, so these issues are contractual eligibility. As a result, before focusing on other competitive initiatives, suppliers must ensure that they are achieving their customers' expectations in these two important areas (Westphal et al., 1997).

**H1: Conformance mediates between:**

- a) Sustainability and Cost
- b) Lead Time and Cost
- c) Services and Cost
- d) Supplier Capacity and Cost
- e) Risk Factor and Cost

**Mediating Effect of Performance**

Supply chain management is hailed as a go-to method for boosting competitiveness, Firms embrace supply chain management because it gives new chances to decrease cost, improve quality, and reduce reaction time as competition encourages them to discover better methods to satisfy consumer expectations (Adida & Perakis, 2014; Cachon & Lariviere, 1999). Operative monitoring in responsible SCM, such as audits and third-party certification, can encourage suppliers to enhance their technical skills in green and social concerns, hence improving their sustainability performance. In the South Korean automobile sector, for example, buyer's new green procurement strategy originated and promoted the growth of a supplier's environmental competencies (Damert & Baumgartner, 2018). Previous research has found that buyer-imposed codes of conduct and audits have a considerable beneficial impact on the working conditions of suppliers in developing nations (De Neve, 2009). It has also been noted that buyers' support for responsible SCM improves supplier performance, Includes environmental, social and operational performance. Literature shows that the technical and relationship skills of large buyers (i.e. world-leading brands) support knowledge transfer and suppliers can solve environmental and social problems Increase (Luthra et al., 2017; Parmigiani et al., 2011).

The performance of the system and subsystems determines whether a SC system succeeds or fails. The global economy has altered dramatically during the last two decades for a variety of reasons. The modern corporate environment is characterized by increased complexity, instability, risk, and unpredictability (Salimian et al., 2017; Zhang & Figliozzi, 2010). However, as a result of globalization, SC operations have been exposed to a variety of threats. In general, companies collaborate with suppliers only for the sake of profit maximization; risk mitigation is a relatively new goal in the Supplier selection process. Supplier selection risks include product quality risks, environmental hazards, service risks, conflicting regulatory requirements, supplier profile risks, geographic location, dislike of nature, deadlines and lead times, financial status, performance, import restrictions and response to changes. There is flexibility and so on. And technology and R & D support. For a suitable and long-term supplier selection process, both positive and negative elements of suppliers should be evaluated. As a result, multinational organizations must manage and analyze every chance to improve their operational performance in order to remain competitive in the marketplace by choosing the right trade partners (Yazdani et al., 2020).

Human labor is an integral part of the value creation process of the service supply chain, and physical handling of products leads to standardized, centralized procedures and control of the manufacturing supply chain, but many decisions are made locally. This is completely impossible with the service as it is done. And the volatility and uncertainty of the results is increased by human involvement. In addition, service supply chain efficiency focuses on capacity management, resource flexibility, information flow, service performance, and cash flow management. These difficulties are very different from those faced by industrial supply networks and require a thorough assessment of the service supply chain. We need to better understand these issues (Sengupta et al., 2006).

Contract terms have gotten a lot of attention because of their influence on ordering strategies and supply chain performance. When the supply chain works as a team, it performs better under diverse information and management frameworks. Another study presents a one-period model with identical vendors served by a supplier facing stochastic volume shocks, which is similar to ours (Lee et al., 2009). When capacity is in short supply, it is distributed proportionally to orders. They illustrate that shops may overstate their orders as a result of rivalry for limited capacity (Cachon & Lariviere, 1999).

Fluctuations in customer demand are one aspect that can impact SC performance. However, to analyze the systematic impact of lead-time fluctuations, end-customer demand is considered fixed and known at all stages of the chain. This final assumption eliminates the impact of demand forecasts, which can distort demand data, especially early in the chain. These assumptions can reduce the impact of order bundling (due to order cost), customer demand volatility, and forecasting. Using this method, you can calculate the pure impact of LT uncertainty on SC inventory system metrics such as order variance, Bullwhip effect, and performance indicators (Heydari et al., 2009). Based on the above mentioned discussion, this study formulates the following hypothesis:

- H2: Performance mediates between
- (a) Sustainability and Cost.
  - (b) Lead Time and Cost.
  - (c) Services and Cost.
  - (d) Supplier Capacity and Cost
  - (e) Risk Factor and Cost.

### Conceptual Framework

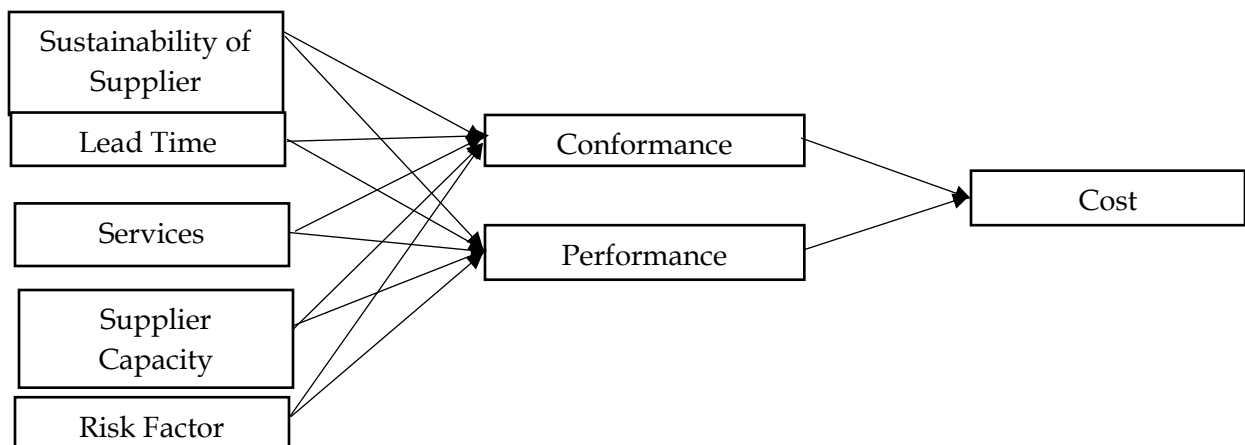


Figure 1: Conceptual Framework

## Methodology

The study is quantitative and an empirical test of the hypothesis is considered appropriate (Fernandez & Moldogaziev, 2013). A representative sample of the population is required as it is impossible to get answers from a large group of people surveyed (Pongsakornrunsilp et al., 2013). According to the annual reports of several Pakistani steel companies, the population covered by this survey includes all steel industry employees working for private Pakistani companies and has more than 300 people. There were different perspectives on sample size selection. It was expressed. To perform multivariate analysis, we recommend that each variable has at least 29 responses. Similarly, some researchers advise that a sample size from 250 companies is appropriate for the study, while others recommend choosing a sample size based on confidence intervals and confidence levels (Black & Babin, 2019). To obtain data from the respondents in question, this research study used a "convenient" sampling strategy. This method allows researchers to select respondents based on their level of comfort. After collecting the data, we used statistical tests to empirically analyze the relevant information. Descriptive, reliability, and validation tests were performed using SPSS17 and SmartPLS 3.0 for this purpose (Ansari, 2020).

### Instrument Development

Conformance (5 items)(Ekholm, 2009), cost (5 items)(Cowan, 2013), lead time (5 items)(Julius, 2016), performance(5 items), service(5 items)(Ting & Cho, 2008), supplier capacity(5 items)(Swaminathan et al., 1997), risk factor(4 items)(Alikhani et al., 2019), and sustainability of supplier(3 items) The questionnaire had a total of 41 items, comprising demographics, and 37 items replicating the selected components. A 5-point Likert scale was utilized to fill out the surveys, with 5 representing "strongly agree" and 1 representing "Strongly Disagree." The dependability of the instrument used in this study has previously been proven, which implies that the Cronbach alpha is more than 0.7, which is a good sign (Andersson & Lurie, 2018).

## Results

The marital status of the respondents was found to be 131 (58%) single, 22 (9%) committed, and 73 (33%) married, according to the results portrayed in this study. All of these responders work in Pakistan's steel industry. In terms of education, there were 88 (39%) respondents with a graduate degree and 138 (61%) respondents with a postgraduate degree.

### Descriptive Statistics

Normally, if your data does not follow a normal distribution, you will not be able to perform regression analysis on your data. Descriptive analysis is used to determine the univariate normality of the collected data. If the skewness and kurtosis range is 3 to +3, the data is considered normal (Adida & Perakis, 2014; Hair et al., 2010). Table 1 shows the overall results of the descriptive statistical analysis. This includes sample mean, standard deviation, kurtosis, and skewness.

*Table 1: Descriptive statistics*

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Conformance	1.8	5	3.514	0.738	-0.385	0.329
Risk Factor	1.25	5	3.526	0.856	-0.949	1.091
Sustainability	1	5	3.418	0.960	-0.756	0.374
Cost	1.6	5	3.474	0.777	-0.594	0.109

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Lead Time	1	5	3.328	0.832	-0.908	1.366
Performance	1.6	5	3.729	0.791	-1.207	1.469
Service	2	4.8	3.712	0.721	-0.931	0.097
Supplier	2	5	3.664	0.697	-0.978	0.435

### Reliability Analysis

The Cronbach's alpha value is used to evaluate items that are closely related to the internal integrity of the normal distribution data. If the alpha value is greater than 0.7, the data is considered reliable (Garson, 2016; Hair Jr. et al., 2017). The equipment used in this study was obtained from a previous study, but reliability tests need to be repeated due to cultural differences and respondents' comprehension (Ansari et al., 2017; Ramish, 2020). Therefore, for the purposes of this study, reliability tests using Cronbach's alpha have been performed and the results are summarized in a table 2 provided below:

*Table 2: Reliability Analysis*

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Conformance	0.730	0.743	0.818	0.475
Cost	0.825	0.839	0.880	0.599
Lead Time	0.796	0.856	0.856	0.546
Performance	0.855	0.880	0.896	0.636
Risk Factor	0.743	0.786	0.835	0.565
Service	0.837	0.856	0.885	0.607
Supplier Capacity	0.713	1.056	0.786	0.440
Sustainability of Supplier	0.724	0.729	0.844	0.644

This table shows that cost compliance is the least reliable ( $\alpha = 0.730$ ,  $M = 3.514$ ,  $SD = 0.7385$ ) and performance is the most reliable for cost ( $\alpha = 0.855$ ,  $M = 3.729$ ,  $SD = 0.791$ ). Overall reliability value of the equipment used in this study, that is, alpha is 0.773, which includes both independent and dependent variables (Ahmed & Ansari, 2020).

### Correlation Analysis

Correlation analysis is used to determine whether or not there is a link between variables. The correlation analysis test verifies multi-collinearity among variables and is required for regression analysis to be performed. Scholars recommended that the correlation between the constructs be between 0.20 and 0.90, or else the item be removed. The items can also be combined if the correlation coefficient is larger than 0.90 (Ansari, 2020; Bell & Bryman, 2007; Hair et al., 2010). Table 3 shows the findings of the correlation study.

*Table 3: Correlation Analysis*

	Conformance	Risk Factor	Sustainability	Cost	Lead Time	Performance	Service	Supplier
Conformance	1							
Risk Factor	.638**	1						
Sustainability	.384**	.717**	1					
Cost	.404**	.668**	.770**	1				
Lead Time	.412**	.670**	.352**	.391**	1			
Performance	.548**	.679**	.704**	.702**	.585**	1		
Service	.550**	.579**	.582**	.525**	.476**	.811**	1	
Supplier	.247**	.244**	.316**	.286**	0.056	.389**	.366**	1

### Construct Validity

Since the sample used in this study is different from other studies, the application in the context of the Pakistani setting may affect the results. Therefore, convergent and discriminative validity tests are used to determine the validity of the construct (Ab Hamid et al., 2017; Fornell & Larcker, 1981). The AVE can be used to decide the convergent validity test (common variance explained), the values of which ought to be greater than 0.5 (Hair et al., 2010).

The square root of variance extracted is calculated during the discriminant validity test to check whether it is greater than subsequent correlation pair values (Ansari, 2020; Roy et al., 2020). As shown in Table 4, the data from the respondents in this study meets the criteria for discriminant validity.

Table 4: Discriminant Validity

	1	2	3	4	5	6	7	8
1. Conformance	<b>0.689</b>							
2. Cost	0.443	<b>0.774</b>						
3. Lead Time	0.487	0.379	<b>0.739</b>					
4. Performance	0.537	0.725	0.642	<b>0.798</b>				
5. Risk Factor	0.715	0.702	0.665	0.733	<b>0.752</b>			
6. Service	0.533	0.541	0.510	0.82	0.618	<b>0.779</b>		
7. Supplier Capacity	0.300	0.389	0.26	0.531	0.43	0.449	<b>0.663</b>	
8. Sustainability of Supplier	0.431	0.783	0.357	0.727	0.728	0.579	0.444	<b>0.803</b>

### Structural Equation Modeling and Mediation Analysis

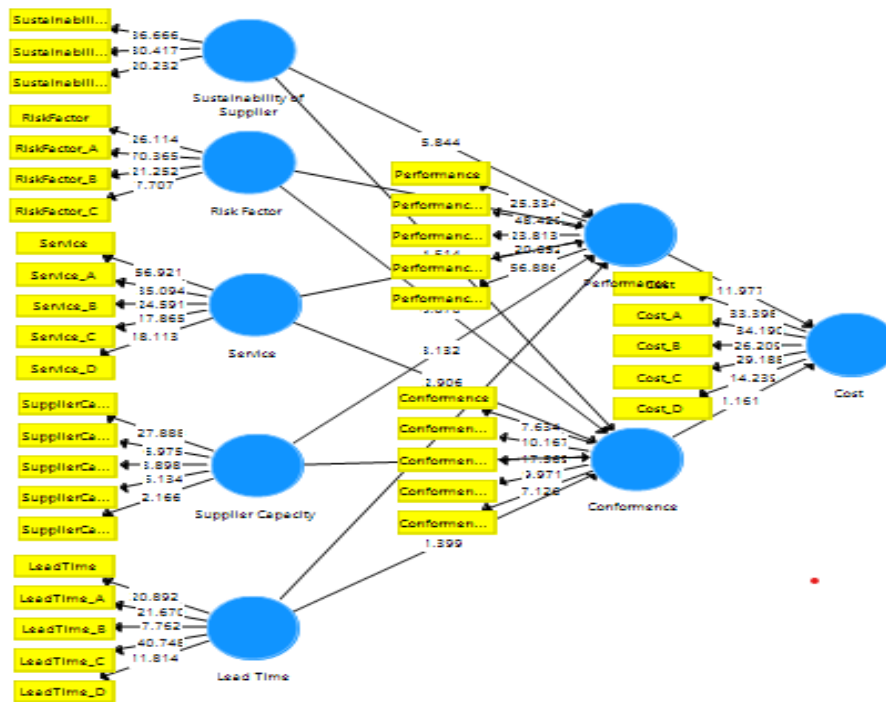


Figure 2: Structural Equation Modeling Using Smart PLS

The entire model was tested using SmartPLS 3.0 software. PLS Algorithm was used to conduct the statistical analysis and it was confirmed that no item is retained that has the loading less than 0.5 (Hair et al., 2010). Bootstrapping test was used to test the hypotheses with subsamples of 2000 (Garson, 2016). Table given below depicts the summary of results.

*Table 5: Mediation Analysis*

	Original Sample (O)	T Statistics ( O/STDEV )	P Values
Lead Time -> Performance -> Cost	0.192	8.414	0.000
Risk Factor -> Performance -> Cost	-0.015	0.324	0.746
Supplier Capacity -> Performance -> Cost	0.082	3.136	0.002
Sustainability of Supplier -> conformance -> Cost	-0.020	1.272	0.203
Risk Factor -> Conformance -> Cost	0.063	1.130	0.259
Service -> Conformance -> Cost	0.017	1.159	0.247
Supplier Capacity -> conformance -> Cost	-0.001	0.166	0.868
Lead Time -> Conformance -> Cost	-0.006	0.815	0.415
Sustainability of Supplier -> Performance -> Cost	0.228	4.971	0.000
Service -> Performance -> Cost	0.304	9.148	0.000

The results of the test designate that there is a significant effect of lead time through performance on Cost, Supplier capacity through on performance on cost, Sustainability of supplier through performance on cost and Service through (Kline, 2011)on cost (See Figure 2). Consequently, performance and conformance can be measured as a mediating factor between Lead Time, Risk Factor, and Supplier capacity (Asyraf & Afthanorhan, 2013), of supplier, Risk Factor, Service, Supplier capacity and cost. For evaluating the mediation analysis, the bootstrapping method with subsamples of 2000 is used in this research. After performing the bootstrapping test, it was found that the definite indirect effect of lead time, supplier capacity (Garson, 2016), of supplier and service through performance on cost is significant, but the relationship between Risk Factor sustainability of supplier, service, supplier capacity, lead time through conformance is non-significant.

### **Discussion and Conclusions**

We attempted to illustrate the importance of supplier selection in terms of quality control, as well as the influence of sustainability, risk factor, service, supplier capacity, and lead time on mediating variable conformance and performance and then mediating variable cost implications. The findings of this study's selected hypotheses were found to be compatible with those of earlier investigations. The specific findings of this study are detailed below to better illustrate the justification of the hypothesis in relation to earlier investigations.

#### **Hypothesis 1 Results and Implications**

The influence of a supplier's risk factor on supplier selection and quality control was hypothesized in Hypothesis 5. This investigation supported the hypothesis that was chosen. The findings show that as the supplier's risk factor rises, it has a negative impact on compliance, which has a direct cost impact. This result is also in line with earlier research answers, which suggest that when a supplier's risk factor increases, the supplier's conformance will exhibit non-significant behavior in terms of conformance and cost (Rezaei et al., 2016).

The findings show that if the supplier's level of service declines, it will have a negative impact on compliance, which would have a direct cost impact. This result is also in line with earlier research findings, which suggest that when a supplier's service is poor, the supplier's conformance would exhibit non-significant behavior in terms of conformity and cost (Li et al., 2012).

The findings show that when a supplier's degree of sustainability rises, it has a good impact on performance, which has a direct impact on cost. This result is also in line with prior research findings, which show that the greater the supplier's sustainability, the better the supplier's performance in terms of both performance and cost (Salimian et al., 2017).

The findings show that when the supplier's lead time rises, it has a negative impact on compliance, which has a direct cost impact. This result is also in line with prior research findings, which suggest that the longer the lead time, the less significant the behavior is in terms of conformity and cost (Abdel-Basset et al., 2018).

The findings show that if a supplier's capacity declines, it will have a negative impact on compliance, which would have a direct cost impact. This result is also in line with prior research findings, which suggest that the smaller the supplier capacity, the less significant the behavior of the supplier in terms of conformity and cost (Cengiz et al., 2017).

The findings show that when the supplier's level of service improves, it has a good impact on performance, which has a direct impact on cost. This result is also in line with prior research findings, which show that the greater the quality of a supplier's service, the better the supplier's performance in terms of both performance and cost (Sengupta et al., 2006).

### **Hypotheses No 02 Results and Implications**

The findings show that when a supplier's level of sustainability declines, it has a negative impact on compliance, which has a direct cost impact. This result is also in line with prior research findings, which suggest that when a supplier's sustainability is poor, the supplier's conformance would exhibit non-significant behavior in terms of conformance and cost (Luzon & El-Sayegh, 2016).

The findings show that if the supplier's lead time is reduced, it will have a favorable impact on performance, which will have a direct impact on cost. The findings are consistent with previous studies that showed that shorter supplier lead times improved supplier performance in terms of both performance and cost (Heydari et al., 2009).

The findings show that if the supplier's capacity grows, it will have a beneficial impact on performance, which will have a direct impact on cost. This result is also consistent with past research findings, which show that the larger a supplier's capacity, the better the supplier's performance in terms of both performance and cost (Cachon & Lariviere, 1999).

The findings show that when the supplier's risk factor rises, it has a negative impact on performance, which has a direct cost impact. This result is also in line with prior research outcomes, which suggest that the higher the supplier's risk factor, the less significant the supplier's performance in terms of both performance and cost (Shoaie et al., 2019)

### **Limitations and Future Research**

This research was conducted by selecting the sample from a metropolitan city of Pakistan. In future, the respondents from rural areas can also be considered to test the hypotheses. Moreover, the psychographics and demographics were not considered to be a part of the model which was tested in this research. Future research may consider this gap and identify the psychographics related factors to be used.

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# Organizational Performance influenced by employee motivation, training, understanding and differentiation and other factors.

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**Abstract:** *The key objective of this research is to study the relationship of training, work engagement, strategic reward, inter-functional coordination, understanding and differentiation, total reward perception, dissemination of information, work happiness, employee motivation and to study the mediating role of employee motivation on organizational performance. A sample of 250 professionals from different banks was obtained for the purpose of this study. Moreover, the SPSS software was used to analyze the results of this study revealed that the independent variable i.e., training, understanding and differentiation, dissemination of information, strategic reward, inter-functional coordination, total reward perception, work engagement and work happiness have a significant and positive impact on employee motivation.*

**Keywords:** *Training, work engagement, inter-functional coordination, Employee Motivation, Organizational performance.*

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## **Introduction**

Enhancement in businesses, increasing competition, increment in overheads, outsourcing core operations, and diversified technology have compelled organizations to rethink their philosophy and core strategic policies (Storm, 2014). In the last few years, the business environment has become different rapidly around the world. Increasing competition calls for businesses to assign their resources in the most efficient way to gain a competitive edge over the competitors in the market (Ahmed, Ansari, Khan, et al., 2019; Ahmed et al., 2019; Tiwari et al., 2023). The history had been viewed as the banking sector continuously growing for almost five years, but COVID-19 had a bad impact on financial institutions such as banks faced day to day challenges and the monetary rate also decreased and is now its constant in the last 3 quarters (Monetary Policy Statement, 2021). Today, competencies are needed to combat new technologies and industry rivalry in order to have a better product and position for consumers as well as workers. Organizations also recognized the importance of Human Resources by seeing workers as assets to be nurtured rather than expenses to be reduced. Many efforts have been made in this respect in order to create a productive workforce (Warraich et al., 2014). Through training, work engagement, strategic reward, inter-functional coordination, understanding and differentiation, total reward perception, dissemination of information, work happiness, employee motivation, and good reciprocal interaction relationships within the firm

can be established (Herbert & Vaughn, 2005). This occurs as a result of workforce preparation, comprehension, and competitive incentive as they are fulfilled (Warraich et al., 2014). Employees are seen as internal customers and it is assumed that in-house organizational efficiency is a continuous phenomenon, which has an effect on service quality and the consumer sector (Gulyani & Sharma, 2018). Employee happiness breeds happier customers and excellent customer loyalty, which means repeat sales and word-of-mouth viral marketing (Rich et al., 2010).

Reasons affecting organizational performance are training, strategic reward, inter-functional coordination, understanding and differentiation, total reward perception, dissemination of information, work happiness, employee motivation that engage employees on a regular basis (Mohanty et al., 2020). Although these elements i.e., training, work engagement, strategic reward, inter-functional coordination, understanding and differentiation, (Amor, 2023) perception, dissemination of information, (Koster, 2014), employee motivation have been researched well in the past, but there are fewer theories focusing on the mediating effect of employee motivation.

The key objective of this is to study the relationship of training, work engagement, strategic reward, inter-functional coordination, understanding and differentiation, total reward perception, dissemination of information, work happiness, employee motivation and to study the mediating role of employee motivation on organizational performance. Training, work engagement, strategic reward, (Ruiz-Alba et al., 2019), understanding and differentiation, (Gulyani & Sharma, 2018) perception, dissemination of information, work happiness, employee motivation are all processes that regard workers as internal consumers and employment as goods (Lee et al., 2010). The main method of data collection was systematic questionnaires. Factor analysis was used to determine the underlying dimensions of these variables and to test the construct's validity.

## **Literature Review**

### **Theoretical Underpinnings**

Employee motivation leads to organizational success. Various experiments and theories show happiness makes employees productivity level high, organizations invest to gain employee motivation level high to achieve productive employees (Sauermann, 2018). Research shows happy employees are better at problem solving and more collaborative in working toward common goals. Organizations achieve employee satisfaction through appreciation of employees at the workplace (Airila et al., 2014; Poona Bai Sughand Suresh, 2022).

Workplace happiness was described as a mind-set that helps you to optimize results and fulfill your potential. This is accomplished by becoming aware of the peaks and downs whether working alone or with others. Happiness is determined not only by personal traits, but also by the social environment (Khoreva et al., 2017). Workplace happiness has restricted the social environment of workplaces, which measure primarily the degree of happiness affected by their work and mirrored in the workplace. Adults, on average, devote a quarter to a third of their active job or career (Choi & Lee, 2014). According to research, job satisfaction accounts for a fifth to a quarter of the difference in adult life satisfaction. These figures once again validate the workplace's attachment to employee satisfaction and highlight the significance of workplace happiness to an individual (Gulyani & Sharma, 2018). Popular press articles and business consultants have claimed that engaged employees give companies competitive advantages (Rich et al., 2010). Employees who work inside a company to make it possible for the outside world. Employees are thus famously referred to as internal consumers, and their loyalty is

almost as critical as that of external customers. Internal messaging, on the other hand, is growing rapidly, and every possible effort is being taken to nurture employee well-being, which could help companies meet their strategic goals (Rafiq & Ahmed, 2000). Employees provide resources to meet the demands of external clients, and as a result, they have become invaluable to the organization's progress (Warraich et al., 2016).

Rewards are valuable in any company for maintaining high standards of individual success as well as fostering employee engagement and participation. Companies have created multifaceted incentives programmed in order to recruit and retain professional workers. (Tremblay et al., 2000) Organizations engage in both financial as well as non-incentives to demonstrate their confidence in and respect for their employees (Frye et al., 2020), and rewards, like any other means of spending, are often calculated in terms of their benefit (Peluso and Innocenti, 2017). If you wish to keep your employees, you must show them more respect. Focus on accomplishments rather than what is missed or not completed to ensure that the workers do not feel underappreciated (Gulyani & Sharma, 2018). Positive employees will boost employee morale. Organizations foster positive relationships with their workers by fostering positive relationships with their employers and peers in order to foster positive relationships among employees (Boso et al., 2013).

One of the key challenges of most companies is figuring out how to get happy, cheerful, and fulfilled on the job (Koster, 2014; Loon et al., 2019). This concern stems from the fact that workers who experience pleasure and satisfaction in different ways have higher levels of success and productivity, which will help businesses achieve their objectives in the most efficient way possible (Herbert & Vaughn, 2005). In comparison to dissatisfied employees, happy workers are more active, approachable, involved in their jobs, and persistent in the face of everyday challenges. As a result, happier employees are profitable workers (Bakker & Oerlemans, 2016).

Positive psychology, or the belief that "what is good in life is as real as what is negative and thus merits equal attention," is the newly evolving field of Positive Organizational Behavior (POB) (Youssef & Luthans, 2007). POB acknowledges that, just as positive thinking does not pretend to have found the value of positivity to individuals, there have been numerous positive constructs in corporate science through the years such as positive affectivity (PA), positive affirmation, procedural justice, role fulfillment and loyalty, pro social and organizational citizenship behavior, central self-evaluations, and so on (Gulyani & Sharma, 2018). Instead, motivational thinking, and now its extension to the workplace as POB, merely seeks to re-emphasize the value of a positive mindset (rather than a transformation or paradigm shift). While this current positive interest on organizational behavior is focused on conventional theory-building processes and research methodologies, there is an effort to study modern, or at least relatively new, theories and research methodologies (Youssef & Luthans, 2007).

Job participation, both at the worker and team levels, has been found in studies to be important in understanding employee success and well-being. Nonetheless, no analytical model that takes into account what is currently understood about team structures and procedures exists to describe the growth of job interaction in teams (Costa et al., 2014). Several studies have shown that workers do well in demanding, resourceful work settings because those environments promote work commitment (Frye et al., 2020; Saadeh & Suifan, 2020). This means that organizations should provide adequate work services to their workers, such as feedback, social reinforcement, and ability diversity. Employees may find it equally necessary to mobilize their own work challenge (Li et al., 2019). Managers are not often eligible for reviews, and companies facing economic instability can prioritize differently. In certain circumstances, it

could be especially necessary for workers to be constructive and optimize their own work atmosphere (Bakker et al., 2014). It is hoped that by implementing the scheme, workers will not only devote their time at work (De Braine & Verrier, 2007), but will also have other lives outside of work, such as families and social life, in order to achieve a balance that will make them happier (Choi & Lee, 2014).

Employment motivation is a successful or emotional reaction to different facets of one's work, but it is not a simple term. An individual can be reasonably happy with one aspect of work while being dissatisfied with one or more other aspects (Bakker & Oerlemans, 2016; Hendriks et al., 2020). Job satisfaction is a (positive) attitude toward one's job that develops because of an appraisal of the work situation. This assessment can be performed on one of his works; the assessment was performed as a gesture of gratitude in order to fulfill one of the essential qualities at work. An employee People who are satisfied with their job condition prefer it over those who are dissatisfied with it (Sageer et al., 2012). Job principles are the objectives to be met when doing job duties. What you want to do is to respect work that is valuable to the person. Later, it was stated that job principles must be acceptable or assist in the fulfillment of basic needs (Tak et al., 2017). As a result, it is possible to infer that career satisfaction is a result of the workers in relation to work motivation.

### **Total reward**

Anything that workers accept as an equal return for their sacrifices and time spent at work is considered a reward. Organizations include compensation as a means of gratitude for specific behavior in the form of financial and non-financial benefits after the completion of delegated assignments. Total prizes include both monetary (all monetary recognitions) and non-monetary (all non-monetary designations) (Gulyani & Sharma, 2018; Joo & Lee, 2017). Total rewards categorization tests have classified total rewards in a variety of ways. Net incentives, also known as total return on effort, can be divided into two main categories: total pay and relational returns (Malinen et al., 2013). The first segment covers both overt and indirect compensation and benefits. The second category includes praise, challenging jobs, job security, and prospects for learning and growth, and overall incentives categorization includes three main categories: financial rewards, material rewards, and psychological rewards. Both cash receipts are included in the first category (Bau & Dowling, 2007). The second category covers tangible incentives like advantages, preparation, and prospects for advancement, while the third category includes psychological rewards like appreciation. Employee intrinsic engagement and association with the organization's aims are more important in recently formed companies than in developed and existing firms (Sauermann, 2018). Employees of new projects place a greater focus on a pleasant working space, interpersonal work relationships, and team culture than on organizational respects. As a result, along with the preceding arguments, we find total rewards categorization as monetary, material, and non-monetary rewards as total rewards elements (Peluso & Innocenti, 2017).

### **Work happiness**

Employees in new programs are more concerned with a fun working environment and happiness, interpersonal work relationships, and team atmosphere than with organizational respects (Joo & Lee, 2017; Raziq & Maulabakhsh, 2015). Total rewards categorization as monetary, material, and non-monetary rewards as total rewards components, in addition to the preceding claims (Youssef & Luthans, 2007). Companies face problems in ensuring that their workers are fulfilled and pleased, research has shown that the objective of promoting good

emotions for employees can be accomplished by a successful employment resource package (i.e., Total rewards system) (Gulyani & Sharma, 2018; Tarigan et al., 2022). Employees feel better about the workplace when they earn material rewards (e.g., practice facilities, bonuses, career development opportunities, and so on). Non-monetary incentives, such as mutual rewards (such as good relationships with colleagues, positive feedback, participation in decision making, job security, etc.) (Gulyani & Sharma, 2018; Sauermann, 2018). However, employees are dissatisfied if companies do not appreciate their efforts) (Aazami et al., 2015; Rono, 2017). Furthermore, this study's theoretical foundation is drawn from social exchange theory (SET) (Blau, 1964). Employees are more likely to contribute their experience and expertise when organizations have sufficient work support (monetary, material, or non-monetary rewards) (Dartey-Baah & Amoako, 2011). They believe that their boss is serious with their well-being, which addresses people's psychological desire for belonging (Sohail Butt et al., 2020). This, in fact, can result in positive affect and satisfaction. As a result of the preceding arguments and hypotheses, it is reasonable to expect that new projects offering job services, such as total compensation components (monetary, material, and non-monetary), can forecast employee motivation at work (Choi & Lee, 2014).

### **Work engagement**

Work engagement and job commitment, the degree of engagement among workers varies according to their perceptions of the return they expect after completing work. As a result, it is reasonable to assume that workers would be more engaged in their jobs if they perceive a larger amount of incentives (job resources) for their mission success (Ahmed & Ansari, 2020; Frye et al., 2020; Visco & Sen, 2001). Employee resentment, such as depression and burnout, is a result of a lack of employee incentives. As a result, adequate employee incentives are critical for employee motivation at work. SET further shows that when workers consider their boss to be investing in their well-being by sufficient resource distribution, i.e., Rewards (job resources), they are more inclined to reciprocate by constructive behavior (Costa et al., 2014). The impact of overall engagement components on workplace employee participation. Previous study has examined the relationships between different components of total rewards and employee work engagement. However, to the best of the researchers' understanding, previous research has not studied the relationship between total rewards components and work engagement in an unstructured work environment of new ventures (Bakker et al., 2014; Bakker & Albrecht, 2018).

Work interaction has three components. The first dimension requires vigor, which refers to emotional toughness when functioning. The second level involves commitment, which requires feeling a sense of accomplishment and being deeply interested in one's work (Joo & Lee, 2017). Absorption, or being fully centered on one's work, is used in the third dimension. Employees are more likely to be enthusiastic and put in additional effort to complete assigned tasks when they are given autonomy, respect for their jobs, and opportunities for learning and development. It raises their motivation to develop new skills, increases their energy to act to achieve set goals, which allows them to generate a wide variety of potential ideas and, as a result, increases their sense of achievement (Bakker et al., 2012). Individuals who have a sense of accomplishment at work prefer to feel optimistic feelings of pride and joy, which may increase their satisfaction levels. The following statement is also supported by self-determination theory, which states that satisfaction is experienced when goals are met, or desires are met. We employ the concept of work involvement, which is described as an optimistic, satisfying, job-related state of mind characterized by three dimensions: commitment,

absorption, and enjoyment (Visco & Sen, 2001). Job engagement is described as an intentional and thoughtful exploration of work (i.e., Dedication or cognitive engagement); as absorbing and fascinating (i.e., Absorption or emotional engagement); and as motivating and energizing that they are able to commit themselves with excitement (i.e. vigour or physical/behavioral engagement). Previous research on employee job engagement has shown that committed workers have higher customer loyalty, higher morale and benefit, lower attrition intention, more in-role and extra-role habits, higher interpersonal involvement, and work-family satisfaction (Joo & Lee, 2017).

### **Motivation**

“Motivation is described as the completely giving motive to the employee so that they want to do their job with sincerity, in order to accomplish the organization's purpose successfully and efficiently”. Work encouragement is described as “giving help or something that forms the background of someone doing or behaving in a certain way.” Employee work morale is conceptually linked to employee job satisfaction (Devloo et al., 2015). Motivation is a psychological influence that guides workers' actions toward achieving corporate goals, such as increased customer experience and efficiency. Motivational influences improved both employee and corporate efficiency (Rafiq & Ahmed, 2000). Organizations will only synergize their success if their workers are happy and driven to work. Motivation is described as a psychological force that guides an individual's actions in an organization in the direction of positive contribution to organizational productivity.

Organizations of the modern world include monetary and nonmonetary incentives to their employees to keep them engaged, who are intelligent (Airila et al., 2014). Organizations would only be able to synergize their achievements if their employees are satisfied and motivated to work. Motivation is described as a psychological force that directs an individual's activities in an organization toward positive contributions to organizational productivity. Organizations in the modern world have both monetary and nonmonetary benefits to their workers in order to hold them motivated. Maslow's hierarchy of needs listed five human needs as follows: 1) Physiological (food, water, etc.) 2) defense, i.e., job security and fearlessness 3) psychological, i.e., friendship and a sense of belonging 4) self-esteem, i.e., acknowledgement 5) Realization of one's own potential (knows himself and self-identification). Maslow's five individual needs are divided into three categories by Alderfer's ERG principle, which are 1) Life, i.e., physiological and safety requirements 2) Relationship, i.e., Social 3) growth, i.e. self-esteem and self-actualization (Ciprian-Dumitru, 2013; Yadav, 2019).

Employee motivation is influenced by expectancy, instrumentality, and excitation (Visco & Sen, 2001). Expectancy refers to an employee's anticipation of compensation, which forces him to work at a high degree. Instrumentality refers to the consistent association between the distribution of incentives and adequate results, whereas valence refers to the worth or significance of rewards in the minds of employees. Employees are inspired to do their jobs, which has a positive impact on employee attitudes, as they strive with passion and zest to accomplish corporate targets such as production maximization and optimal efficiency. Employee success is determined by their abilities, ability, qualifications, and experience in performing delegated tasks, as well as their level of motivation (Sauermann, 2018). Better rewards managers and executive appreciation schemes encourage workers to work at their peak. Employee reward systems increase employees' self-esteem and vigour to work to their full capacity, which has a positive impact on organizational success. When workers are inspired, they can go beyond and beyond to achieve the optimal degree of performance

(Carpentier & Mageau, 2013). Organizations used executive appreciation systems and an updated incentive policy to increase employee motivation at work. Motivated employees have a synergistic effect on corporate agendas, company priorities, efficiency, and success. Employee motivation can be improved by recognition and communication systems (S. Ahmed, Ansari, Waqas Khan, et al., 2019).

### **Organizational performance**

Organizational Performance and Extrinsic and Intrinsic Rewards The provision of monetary or non-monetary incentives motivates workers, and motivated employees go beyond and beyond to positively contribute to organizational success (Joo & Lee, 2017). Employee motivation, retention of skilled employees, enhanced satisfaction, and better employee efficiency, low morale, and development of employee loyalty are all aided by intrinsic and extrinsic incentives. Nowadays, organizations use equity-based incentive plans, i.e., the provision of bonds to employees, to compensate employees for achieving peak results (Costa et al., 2014). Equity-based incentives are an effective mechanism for instilling a sense of ownership in workers and increasing workplace efficiency. Performance-based bonus systems are used to inspire workers to perform diligently in order to meet corporate goals to gain a strategic edge over the competition (Ryan & Deci, 2020). Numerous research studies have found that contribute positively to the achievement of organizational goals and increased organizational efficiency (Sauermann, 2018).

Intrinsic and extrinsic incentives increase employee satisfaction and, as a result, organizational success. Employee morale is heavily influenced by both extrinsic and inherent incentives. Extrinsic and inherent benefits were higher in large companies with specialized workforces than in small organizations with fewer educated and skilled workers. Intrinsic incentives have been an integral part of competition (Rich et al., 2010). Increasing benefits are directly proportional to employee success. Extrinsic and inherent incentives are the most important tools for achieving the optimal degree of employee motivation. Rewards focused on equal performance assessment are a motivating mechanism that can help to increase efficiency.

Organizations in today's dynamic environment are adopting the concept of "low efficiency, low incentives" or vice versa. The HR Manager's most pressing concern is staff motivation and retention. Rewards are the most powerful method for inspiring workers as opposed to other HRM strategies (Baron & Hannan, 2002). It is important to have an effective compensation scheme in place if you want to keep your skilled employees. Performance-based incentives increase motivation, resulting in optimal corporate performance, while an unmanaged incentive scheme induces disappointment and poor performance. Gulyani and Sharma (2018) Employee motivation and increased efficiency are aided by extrinsic and intrinsic incentives. Employee motivation is critical to organizational growth. Employees can be inspired and their success can be enhanced by psychological incentives and appreciation schemes (Brady & Jr., 2001). Employee motivation leads to increased workplace efficiency. Intangible incentives such as gratitude, empowerment, and acceptance are examples of intangible rewards. Extrinsic incentives such as salary, fringe benefits, promotions, and advancement, among other things, are critical for employee motivation and optimal organizational success.

Employee motivation needs a better compensation scheme and acknowledgment of employee success. Intrinsic incentives are intrinsic or psychological rewards such as employee inner happiness, senior gratitude, work control, and respect, while extrinsic rewards are substantive in nature such as compensation, fringe benefits, bonuses, and promotions, etc.

## **Training**

**Training & Growth and Organizational Performance** In order to successfully execute delegated tasks, workers must go through proper training and development courses led by experienced employees. Training is effective exercises that can help a company accomplish its targets, such as gaining a sustained strategic edge over rivals and capturing a large market share (Carpentier & Mageau, 2013). In today's dynamic environment, human resources are seen as the most valuable corporate capital, and strategic HRM is critical to achieving a competitive edge. The provision of appropriate preparation is a best HRM strategy that greatly leads to the accomplishment of corporate objectives. Proper teaching results in increased workplace productivity and efficiency (Joo & Lee, 2017). Organizations who invest in hiring have a comparative edge over those that do not have an educated and professional workforce. Training costs can be seen as an opportunity since it yields favorable returns and optimum productivity. Training is critical for improving an employee's expertise. Organizations rely on skilled labor and product development to achieve long-term competitive advantage (Frese et al., 2016). Organizational management evaluates the efficacy of training and learning activities by evaluating the expenses of conducting training programs and the contribution of skill-oriented training programs to organizational efficiency. Organizations provide intensive training to staff in order to help them develop and achieve a competitive advantage over rivals, as well as a higher standard of success (Wei et al., 2011). **Organizational Performance and the Performance Evaluation System** Organizations may improve desired employee perceptions and behaviors by using a performance rating framework. Employee output is assessed in order to offer guidance and recognize training deficiencies that cause workers to perform below expectations. A fair and open performance evaluation motivates employees to work hard (Tremblay et al., 2000).

The aim of a performance assessment method is to assess an employee's productivity level as well as to determine how to increase the productivity level of a nonperformer. Justified performance evaluation is also an instrument used to determine job benefits and serves as a motivator for hardworking workers. The performance assessment method first identifies work expectations and performance metrics for workers, and then advises them how to achieve these agreed-upon goals. Employees who fulfill their work goals are credited for meeting success expectations under the performance rating scheme. The organization employs a variety of output measurement methods (Baron & Hannan, 2002). Each employee in the company is assigned a performance goal, and the employee's performance is then evaluated in comparison to the assigned performance target. To ensure that workers' success is equitable and open, 360-degree performance assessment solicits input on their performance from all stakeholders. Employee performance evaluations are often mismanaged and skewed. If the performance assessment scheme is dependent on discretionary metrics, it can contribute to employee disappointment and anger (Bedeian et al., 1992). Subjective success assessment is based on the appraiser's opinion and lacks job holders' objectives. As performance assessment is founded on merit and accountability, employee motivation improves, and corporate performance improves because of an empowered workforce. Fair performance appraisal boosts morale and motivates employees to contribute positively to corporate performance. The presence of a performance assessment mechanism is required by management accountability principles (Laulié & Morgeson, 2021; Youssef & Luthans, 2007).

## **Inter functional coordination**

Obtaining employee loyalty by the successful execution of employee-oriented policies through coordinating and coordinating cross-functional activities through an empowering and

satisfying workers environment. To strengthen inter-functional communication and, as a result, staff orientation. Employee orientation is accomplished by employee motivation and inter-functional coordination. Employee orientation is central because of its significance in marketing literature and its central position in achieving employee happiness and therefore corporate goals. Indeed, inter-functional coordination is a critical aspect of business orientation (De Gieter et al., 2006). The empowerment component must be included for the operationalization to be effective. According to inter-functional cooperation, the principle of business orientation was endorsed by three major pillars, each with a behavioral component: Orientation of Employees, Orientation of Competitors and Coordination between functions. Brand equity is the firm's ethos that produces more effectively such practices that have superior value to customers and, as a result, leads to higher market efficiency. Business orientation is conceptualized by reflecting on three activities. Business information generation, Intelligence distribution and Reaction of intelligence (Bakker et al., 2012). Conceptualization of market orientation by focusing on three activities:

Common harmonization and synchronization of strategic intelligence and other tools, as well as alignment and coordination of various organizational units within the firm to generate value for employees integrates employee and competitor focus, resulting in a cohesive competition response behavior (Visco & Sen, 2001). They also argued that companies with the highest level of inter-functional cooperation would outperform others.

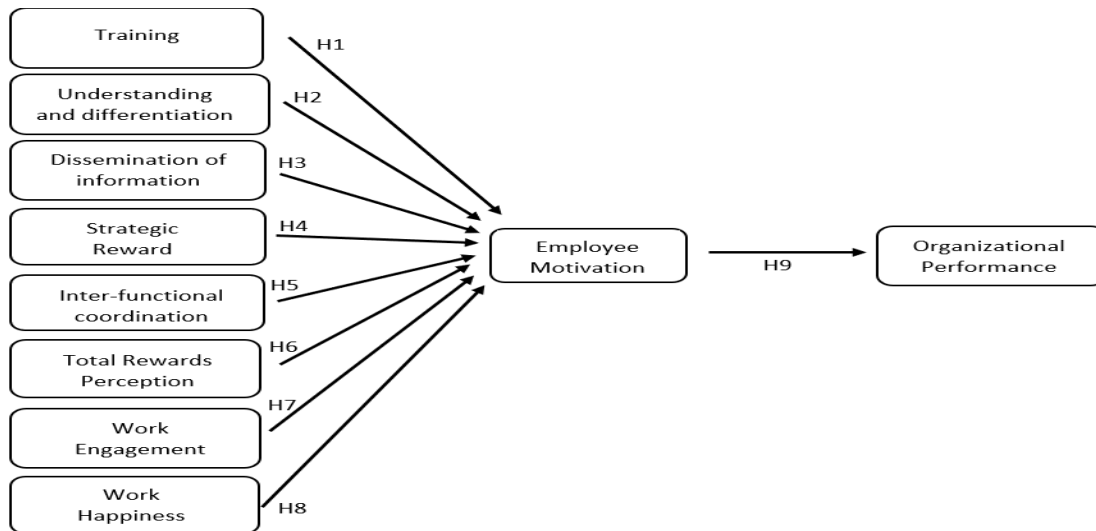
Sharing knowledge becomes an essential part of inter functional cooperation, but there are other variables contributing in inter functional coordination, such as designing and implementing policies and designing business plans (Leung et al., 2006).

Coordination of distribution and marketing roles may improve the firm's efficacy and inter-functional collaboration can improve business efficiency by facilitating the sharing of tacit information between sales and marketing (Lings, 2004). Cross-functional teams would enhance time to market and benefit creation; however, collaboration of many functional segments to recognize their expertise to solve firm problems is significant (Ruiz-Alba et al., 2019).

### **Conceptual Framework**

The above literature gives thoughts on organizational performance as an independent variable, employee motivation as a mediator, and training, work engagement, strategic reward, inter-functional coordination, understanding and differentiation, total reward perception, dissemination of information, work happiness as a dependent variable. Based on the theoretical underpinnings, this study discloses some of its hypotheses that are inter-connected to motivation, organizational performance and training, work engagement, strategic reward, inter-functional coordination, understanding and differentiation, total reward perception, dissemination of information, work happiness.

These constructs have been studied in various research that have suggested models that show training, work engagement, strategic reward, inter-functional coordination, understanding and differentiation, total reward perception, dissemination of information, work happiness can be directly anticipated by employee motivation and organizational performance (Joo & Lee, 2017; Rich et al., 2010). From the above discussion, the conceptual framework for this study has been developed.



*Figure 1: Conceptual framework*

**H1:** Training has a positive influence on employee motivation.

**H2:** Understanding and differentiation has a positive and significant effect on employee motivation.

**H3:** Dissemination of information will have significant and direct influence on employee motivation.

**H4:** Strategic Reward would have a positive influence on employee motivation.

**H5:** Inter-functional coordination has a positive and significant influence on employee motivation.

**H6:** Total Rewards Perception has a positive and significant influence on employee motivation.

**H7:** Work Engagement has a positive influence on employee motivation.

**H8:** Work Happiness would have a positive influence on employee motivation.

**H9:** Employee Motivation has a positive and significant effect on organizational performance.

## **Methodology**

In this research, the survey approach was used to measure the factors that affect organizational performance as well as the impact of training, work engagement, strategic reward, inter-functional coordination, understanding and differentiation, total reward perception, dissemination of information, and work happiness. Using the Statistical Package for Social Sciences, the collected data was washed, sorted, and coded (SPSS Version 22). The factor loadings of the individual structures in the conceptual model were then analyzed using SPSS in an exploratory factor analysis (EFA). A five-point Likert scale with options ranging from strongly disagree (1) to strongly agree (5) was used to measure variables for the research constructs as recommended in previous studies. The survey approach was selected because it was appropriate for the intent and scope of this study. The respondents were all briefed about the report, and their permission was obtained before circulating the questionnaire. In addition, the researchers told the respondents that their comments would be kept anonymous and confidential. The questionnaire consisted of six demographic questions and 35 multi measurement items.

## **Instrument Development**

The instrument developed based on ten constructs i.e., organizational performance (04 items) and training (03 items) strategic reward (03 items) dissemination of information (04 items) inter-functional coordination (03 items) employee motivation (5 items) understanding, and differentiation (04 items) were derived from Warraich et al. (2016) work engagement (03 items) work happiness (03 items) total reward perception (03 items) were adopted from Gulyani and Sharma (2018). In total, there were 35 items in the questionnaire, excluding the demographics as demographics have 06 items, and 32 items were representing the designated constructs. Adopted instrument for the study had already developed the reliability that means that the Cronbach alpha is greater than 0.7, which is on the effective side. The questionnaire was split up into eleven parts i.e., demographics, training, work engagement, strategic reward, inter-functional coordination, understanding and differentiation, total reward perception, dissemination of information, work happiness, employee motivation and organizational performance. This research consists of employees such as tellers, senior officers, department heads, assistants, and all other officers from various departments make up the population of this study. They are all from Karachi's Islamic and traditional banks. The total sample size was 250 people. A five-point Likert scale which option ranging from strongly disagree (1) to strongly agree (5) was used to measure variables for the research constructs as recommended in previous studies. The suggested hierarchical questionnaires were used as the primary source of data collection by Brady and Jr. (2001).

## **Results**

As information extracted from demographic segments, few demographic variables were obtained in this study. These include gender, education, work experience, department, designation, and income level. Status of respondents is shown as 107 Males (43 percent) and 93 females (37 percent) whereas 50 (20 percent) there are people who would not prefer to say regarding their gender. All respondents were from the banking sector. In respect of education, 145 respondents (60 percent) having master's degree, 50 respondents (20 percent) having bachelor's degree whereas the remaining have other degree/qualification. In terms of experience, 65 respondents (26 percent) have more than five years' experience whereas almost the same quantity of respondents i.e., 55 people have more than 2 years' experience but less than five year overall. Income level of 70 respondents (28 percent) is more than PKR 100,000 monthly whereas 68 respondents (27 percent) have their income level between PKR 70,000 to 100,000 monthly.

## **Descriptive Statistics**

To run regression analysis on data, data must follow the normal distribution. A normality test determines whether questionnaire surveys are taken from a natural person and to give under a certain tolerance (Kwak & Park, 2019). Normality test was conducted on responses obtained by questionnaire. No outlier was found in the 250 responses as all shaved Skewness value between -1 to +1 and Kurtosis value between -3 to +3 (Hair et al., 2010). However below is the result generated by the Statistical Package for Social Sciences (SPSS Version 22). Table below depicts the values:

*Table 1: Descriptive Statistics*

<b>Construct</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Skewness</b>	<b>Kurtosis</b>
Motivation	3.585	0.9132	0.424	0.345
Understanding and differentiation	3.623	0.8512	0.304	0.537

Construct	Mean	Std. Dev.	Skewness	Kurtosis
Dissemination of information	3.587	0.8588	0.329	0.563
Strategic reward	3.658	0.9006	0.511	0.156
Training	3.617	0.9263	0.568	0.203
Inter-functional coordination	3.557	0.9142	0.526	0.298
Organizational performance	3.592	0.9418	0.418	0.473
Total rewards perception	3.577	0.9573	0.373	0.624
Work engagement	3.616	0.9666	0.461	0.565
Work happiness	3.601	0.9879	0.473	0.571

### Reliability of the construct

The degree to which a variable shows accurate outcomes as tests are replicated many times is referred to as its reliability. The study of dependability is known as reliability analysis. As a result, if the correlation in reliability analysis is strong, the scale produces accurate results and is hence stable (Billinton et al., 1989; Nunnally & Bernstein, 1994). Reliability test was conducted on responses obtained by questionnaire. Standard Cronbach's Alpha must be 0.7 or greater than it. In the above table, all variables have Cronbach's Alpha is greater than 0.7 so the reliability test is qualified, and data is reliable. However below is the result generated by the Statistical Package for Social Sciences (SPSS Version 22).

*Table 2: Reliability Analysis*

Item	Cronbach's Alpha	No of Items
Motivation	0.899	5
Understanding and differentiation	0.827	4
Dissemination of information	0.813	4
Strategic reward	0.818	3
Training	0.815	3
Inter-functional coordination	0.784	3
Organizational Performance	0.9	4
Total rewards perception	0.848	3
Work engagement	0.881	3
Work happiness	0.896	3

### Correlation test

Correlation analysis is a mathematical tool for determining the frequency of an interaction between the variables. If an association is discovered, it may be positive or negative based on the numerical values evaluated (Begg & Mazumdar, 1994; Bryman & Bell, 2012). Correlation analysis was conducted on responses obtained by questionnaire. In this analysis, all variables show strong relationships with others because mostly variables show value between 0.5 to 0.7 (Ansari, 2020). However, less than 0.5 relation shows the weak relation with variable and no variable showed very weak relation as no value is below 0.3 thus no variable shows multicollinearity because no value is greater than 0.9. However, value 0.7 to 0.9 show very strong relations (Wei et al., 2011). All variables show sig. value 0.000 or less than 0.05. If any variable would have sig. value greater than 0.05 so it means that variable is not significant. (Taherdoost, 2016) However below is the result generated by the Statistical Package for Social Sciences (SPSS Version 22)

*Table 3: Correlation Analysis*

	1	2	3	4	5	6	7	8	9	10
Motivation	1									

	1	2	3	4	5	6	7	8	9	10
Understanding and differentiation	0.533	1								
Dissemination of information	0.826	0.579	1							
Strategic reward	0.449	0.787	0.514	1						
Training	0.574	0.568	0.627	0.616	1					
Inter-functional coordination	0.623	0.628	0.67	0.663	0.759	1				
Organizational performance	0.884	0.646	0.807	0.463	0.581	0.603	1			
Total rewards perception	0.806	0.444	0.761	0.498	0.63	0.697	0.797	1		
Work engagement	0.808	0.424	0.773	0.451	0.602	0.665	0.777	0.801	1	
Work happiness	0.777	0.452	0.736	0.489	0.609	0.633	0.793	0.866	0.896	1

Note: Values are considered as significant when p-level is less than 0.05

**Construct validity**

Validity refers to the method for measuring the expected accuracy of a measurement. If the study is highly effective, this means that the results correspond to the actual characteristics, and dynamics of the physical or social world. High reliability is an indicator of performance validity (Taherdoost, 2016). Validity test was conducted on responses obtained by questionnaire. As all values of Average Variance Explained (AVE) is more than 40% it indicates that data is fulfilling the essentials of convergent validity. However below is the result generated by the Statistical Package for Social Sciences (SPSS Version 22).

*Table 4: Validity Analysis*

Item	Kaiser-Meyer-Olkin Measure	Sig.	Variance Explained
Motivation	.810	0.000	71.393%
Understanding and differentiation	.780	0.000	65.958%
Dissemination of information	.758	0.000	64.547%
Strategic reward	.713	0.000	73.308%
Training	.716	0.000	72.974%
Inter-functional coordination	.697	0.000	69.831%
Organizational Performance	.829	0.000	77.745%
Total rewards perception	.709	0.000	76.971%
Work engagement	.683	0.000	81.055%
Work happiness	.640	0.000	83.980%

The ideal value for the KMO test is greater than 0.7 whereas all variables show values greater than 0.7 except for Inter-functional coordination, Work engagement & Work happiness but they are greater than 0.6 which is also acceptable (Ansari, 2020; Vidal-Alaball et al., 2020). Sig value of all variables is 0.000 which shows that all variable effects are significant. Less than 50% variance explained is not acceptable, and no variable has less than 50% variance explained. Conclusion is that all variables are valid and qualify the validity test.

**Overall Model Regression Test**

Regression analysis is a mathematical research approach that is used for predicting and evaluating multiple variables in a sample, where the interaction comprises a significance level and one or more independent variable (Rawlings et al., 1999). In the below analysis, Adjusted R square is greater than 0.2 i.e., 0.886 it means this is perfect model. If we see the coefficient table, the beta value shows different results. Greater than 0.2 shows good effects such as Motivation, Understanding, Total Reward perception, Work happiness, Dissemination of information, Strategic reward etc. However, less than 0.2 beta shows weak effect (Tonidandel & LeBreton, 2011) i.e., work engagement. If constant does not show sig. value 0.000 so no issue but

independent variables must show sig. value less than 0.05 (Garson, 2016), else it will be dropped such as work engagement. This variable i.e., work engagement will be dropped as it has sig. value greater than 0.05. We have different t values that are significant. Result shows work engagement has t value 1.043 and sig. value 0.298 so, it will be rejected. However, all other constructs will be rejected. However below is the result generated by the Statistical Package for Social Sciences (SPSS Version 22).

*Table 5: Multiple Linear Regression*

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Organizational Performance	0.239	0.102	-	5.352	0.004
Motivation	0.646	0.069	0.626	9.421	0
Understanding and differentiation	0.534	0.043	0.483	12.375	0
Dissemination of information	0.309	0.068	0.291	3.078	0.002
Strategic reward	0.287	0.041	0.275	6.991	0
Training	0.246	0.036	0.245	4.279	0.002
Inter-functional coordination	0.302	0.042	0.399	2.441	0.003
Total rewards perception	0.269	0.056	0.254	4.436	0
Work engagement	0.069	0.06	0.064	1.043	0.298
Work happiness	0.251	0.05	0.236	4.485	0

Dependent variable: Organizational performance (OP), R = .890 Adjusted R2 = .886, P = <0.05

*Table 6: Hypotheses Results*

Indicators	t value	Empirical Result
Motivation	9.421	Fail to reject
Understanding and differentiation	12.375	Fail to reject
Dissemination of information	3.078	Fail to reject
Strategic reward	6.991	Fail to reject
Training	4.279	Fail to reject
Inter-functional coordination	2.441	Fail to reject
Total rewards perception	4.436	Fail to reject
Work engagement	1.043	Reject
Work happiness	4.485	Fail to reject

### Discussion and conclusion

Around the world, the business landscape is constantly changing. To achieve a strategic advantage over their competing firms, companies must allocate their money in the most profitable way possible (Leung et al., 2006). This study revealed the effect of thorough training, work engagement, strategic reward, inter-functional coordination, understanding and differentiation, total reward perception, dissemination of information, work happiness on employee motivation and employee motivation effect on organizational performance among banking sector employees in Pakistan. Conclusion of study shows training, understanding and differentiation, dissemination of information, strategic reward, inter-functional coordination, total reward perception, work engagement and work happiness influence employee motivation as well as organizational performance. Hence, having fair pay that is comparable to the job workers do, as well as maintaining a healthy working atmosphere, preparation, awareness, and so on, will ensure employee loyalty and, by extension, enhanced productivity. If this is accomplished, not only will workers be happier, but it will also go a long way toward the

employee morale, which will contribute to improved corporate efficiency (Khoreva et al., 2017). It is also up to management to recognize and evaluate their workers' expectations and desires, as well as to understand the basis of job satisfaction (Sauermaun, 2018). In the previous studies, Dissemination of information and Inter-functional coordination were rejected and the study we conducted we found only one hypothesis is rejected i.e., work engagement. It has t value 1.043 that is less than 2 so less than 2 t value hypothesis will be rejected. So, this study is not constant as two variables were rejected in previous studies but now, they are failed to reject and work engagement was failed to reject but now in this research it is rejected.

### **Implication for leaders and policy developers**

In the light of results of this study, it would assist organizations to understand the factors effecting employee motivation by providing them training, work engagement, strategic reward, inter-functional coordination, understanding and differentiation, total reward perception, dissemination of information, work happiness at workplace. It also could be incorporated in human resource management's strategies. This study can help leaders in designing the right strategies for retaining their employees by empowering them according to the boundaries set by their organizations. The results can help firms to identify the potential reasons for training, work engagement, strategic reward, inter-functional coordination, understanding and differentiation, total reward perception, dissemination of information, work happiness, employee motivation that will resultantly lead to higher productivity and profitability of the organization. These strategies will consequently lead to enhancement in organizational performance and to achieve objective of the business in this competitive era.

### **Limitation and future research**

The scope of this research was towards employees of banking industry in Karachi. Future research would further increase its scope by enhancing to the employees of banking industry across the country. Demographic elements could also be recorded in future research that was beyond the scope of this research. Constructs utilized in this study were derived from the research that were principally used for measuring organizational performance. The findings of this research, suggest for the constructing of variables related to the theme of organizational performance, will incorporate further insight on the matter.

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