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The author (s) declared no conflict of interest and have not received any funds for the project.

# Antecedents to Change and Moderating Role of Organizational Culture

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## Abstract

In the prevailing era of technology diffusion and globalization, firms worldwide are changing their work process, policies, and procedures for growth and sustainability. However, implementing change management is challenging for organizations as they receive resistance from the employees. Many factors promote resistance to change, including job security, uncertainty, and losing rewards and benefits. Bank employees believe in following conventional practices and often have negative attitudes toward organizational change. Given its importance, we identified the antecedents that positively or negatively affect attitudes toward change. The study focused on the leading banks in Karachi. Based on purposeful sampling, we collected a sample of 432 employees of local banks. The study found affective commitment insignificantly affects job satisfaction. Job stress negatively affects job satisfaction and attitudes towards change. Social influence promotes job satisfaction. Job satisfaction and social influence positively affect attitude towards change. And organizational culture insignificantly moderates affective commitment and job satisfaction. The study recommends that organizations implementing change management must share the change management programs with all the stakeholders. Additionally, organizations must find out why employees are against change management. Organizations may face little resistance from employees if they understand why employees are against change management.

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**Keywords:** *Attitudes towards change, job satisfaction, affective commitment, organizational culture, and social influence.*

## Introduction

Researchers have extensively used “resistance to change” in their studies (Baquero, 2022; Azouri et al., 2022; Lawluy, Guo, & Wang, 2022). It explains why large-scale changes are related to “technology, production methods, and management practices” (Sorensen, 2023). In the same context, Seppälä, Harju, and Hakanen (2020) asserts that many employees have a negative attitude towards change as they believe negative consequences of organizational change, including lost jobs, reduced perks, and power and authority. Mansaray (2019) asserts that organizations, to implement organizational change, must focus on understanding what apprehensions employees have against change management. Many researchers believe that change management in an organization promotes a sense of uncertainty in employees, and they think the change may not align with their values (Neill, Men, & Yue, 2020). Extant literature documents that attitude toward change is a multi-dimensional construct including “affective, cognitive, and behavioral components” (Widiyanto et al., 2021). Given the complexity of the attitude toward change, it is important to understand the relationship between resistance to change and its antecedents and consequences (Uchenna & Abiodun, 2020).

Stress at work promotes low motivation, decreased job performance, and low job satisfaction, resulting in turnover intention and conflicts (Labrague, Nwafor, & Tsaras, 2020). Many researchers document that the abovementioned problems, directly and indirectly, are related to organizational efficiency and resistance to change (Kurniawanto, Rahmadi, & Wahyudi, 2022). Many studies have examined the direct (Kurniawanto, Rahmadi, & Wahyudi, 2022) and indirect (Opoku, Hongqin, & Aram, 2022) effects of “job satisfaction, organizational commitment, and job stress on attitudes toward change.” But, a few studies have examined the moderating (Opoku, Hongqin, & Aram, 2022) effect “of organizational culture on affective commitment and job satisfaction” (Opoku, Hongqin, & Aram, 2022). Thus, this study has examined “the effect of job stress, job satisfaction, and social influence on attitude towards change.” It also examined the effect of affective commitment on job satisfaction. Moreover, the study also examined the “moderating effect of organizational culture between affective commitment and job satisfaction.”

## Literature Review and Hypotheses Development

The following sections provide the theoretical support for the hypotheses we have proposed.

### Affective Commitment and Job Satisfaction

Extant literature suggests that all forms of commitment (i.e., Affective, normative,

and continuous) individually and collectively affect job satisfaction (AlKahtani et al., 2021). Aruldoss et al. (2021) assert that affective commitment is employees' attachment to their organizations. The Social Exchange Theory postulates that organizations and employees maintain interpersonal relationships with each other and reciprocate valued resources (Tsen, Gu, Tan, & Goh, 2022). Affective commitment focuses on the attachment to an organization, while job satisfaction relates to a specific work environment where employees perform their duties (Xu, Wang, & Ma, 2022). To and Huang (2022) assert that alignment of the employees and organizational work goals promotes affective commitment, leading to high job satisfaction. Many past studies, including Nachmias et al. (2022), document that employees' strong commitment to an organization promotes high job satisfaction. Social Exchange Theory also postulates that when employees perceive the exchange relationship between employers and employees is fair, they reciprocate with positive attitudes toward work (Zeb et al., 2023). In contrast, Ahmad (2013) believes that employees may not be satisfied, but their organizational commitment level could still be high.

*H1: Affective commitment positively affects job satisfaction.*

### **Job Stress and Job Satisfaction**

Human resource researchers believe job stress and satisfaction are crucial for organizational sustainability. Therefore, they have examined their relationship from different perspectives in different domains (Zang et al., 2022). For example, Dodanwala et al. (2022) found that, apart from other factors, job stress adversely affects job satisfaction. Similarly, another empirical study in tourism also validated a significant negative association between job stress and job satisfaction. Thus, the study concluded that organizations must develop a culture that reduces job and non-job-related stress (Akgunduz & Eser, 2022). Zhang and He (2022) believe excessive workload adversely affects job stress and satisfaction. Many researchers believe that stress and job satisfaction are highly interrelated.

Thielmann et al. (2022) believe low satisfaction stimulates stress, and high satisfaction enhances job-related stress. Thus, we argue that organizations must maintain a balance between the stress and motivation levels of employees. Many past studies have documented that the precursors to stress, including physical health, psychological wellbeing, and job satisfaction, vary from industry to industry (Akgunduz & Eser, 2022).

*H2: Job stress negatively affects job satisfaction.*

## **Stress and Attitude to Change**

Attitudes are individuals' "enduring perceptions about a person or brand, which could be positive or negative" (Sedghikhanshir et al., 2022). At the same time, attitudes toward a change relate to individuals' "cognitions about change, affective reactions to change, and behavioral tendencies toward change (Verplanken & Orbell, 2022). Based on empirical research, many studies found some employees believe that change is essential for the organization (Sedghikhanshir et al., 2022). Therefore, they develop positive attitudes toward change. While other employees perceive that the change would adversely affect organizational performance, they develop negative attitudes toward it (Purwaningrum et al., 2022).

Cortis et al. (2022) assert that employees who are excited and happy about the change would respond positively. At the same time, employees who show anger and resentment toward change develop negative attitudes and oppose them. Although researchers have developed different frameworks for implementing change in organizations, results are not very encouraging. Most change management programs fail as employees perceive that the change in an organization would not benefit them (Widarko & Anwarodin, 2022). They believe that due to change, organizations may reduce the number of employees and their benefits. As a result, it promotes stress in employees and negative attitudes toward change (Gray et al., 2023). Saleem et al. (2022) also assert that organizational change is a significant precursor to negative attitude towards change. Given the above argument, we argue that stress and attitude towards change are inversely related.

*H3: Job stress negatively affects attitude towards change.*

## **Social Influence and Job Satisfaction**

Social influence refers to individuals' behavior adjustment according to social environmental demand. It includes family, peers, and cultural values (Paliga et al., 2022). Extant literature documents that social influence is an important precursor of job satisfaction (Silva et al., 2023). For example, Amin (2022) asserts that employees raised under modest circumstances may desire high salaries but would not be dissatisfied with their jobs. Cultural values also translate into individuals' attitudes toward jobs. Studies using Hofstede's (1997) individualism index value concluded that individuals in developed countries focus more on their achievements, resulting in high job satisfaction (Yousuf et al., 2022).

The Social Information Processing approach significantly explains how individuals form attitudes and behavior toward jobs (Ali et al., 2023). According to this approach, job attitude depends on the availability of attitude-relevant information. Researchers



believe that the social environment, directly and indirectly, influences job satisfaction. Individuals' attitudes about a situation or an event also depend on social norms. If the situation is contrary to social norms, individuals' attitudes will be positive; otherwise they will be negative (Conrad et al., 2022). Similarly, more direct exposure to the attitudes of coworkers also affects their attitudes toward jobs. For example, if employees in an organization have positive attitudes toward their jobs, it will motivate other employees to form positive attitudes toward their jobs (Paliga et al., 2022).

*H4: Social influence positively affects attitude towards change.*

### **Job Satisfaction and Attitude towards Change**

Organizational change refers to organizational structure, work processes, and technology changes (Bagga et al., 2023). At the same time, attitude toward change refer to employees' responses or reactions to an organization's change initiatives (Lundmark et al., 2022). Sirola et al. (2022) assert that employees' attitudes toward change consist of their cognition and behavior tendency toward change. Many researchers have classified individuals' or groups' responses to change in three categories: affective, cognitive, and instrumental (Khaw et al., 2022). Affective response relates to individuals' feelings about the change. It includes satisfaction or anxiousness about change (Li et al., 2022). Individuals' cognitive responses include "advantages and disadvantages, usefulness, and knowledge" to deal with the change (Weber et al., 2022). Instrumental responses relate to individuals' favorable or negative responses to change management (Tipu, 2022). Many past studies found varying results on "job satisfaction and attitudes toward change" (Lin & Huang, 2021).

A study examined the association between job satisfaction and various dimensions of attitude toward change. It found job satisfaction directly and indirectly affects the dimensions of attitude toward change. Similarly, Da Ros et al.(2023) examined the effect of job satisfaction and attitude toward change and found they are positively associated.

*H5: Job satisfaction positively affects attitude towards change.*

### **Social Influence Attitude towards Change**

Favorable social influence positively affects attitude towards change, and unfavorable social influence promotes resistance to change (Farahnak et al., 2020). Social Network Theory postulates that individuals form their attitudes toward change based on the social system in an organization (Bagga et al., 2023). Bhatt (2022) asserts that individuals develop negative attitudes toward change when they find that their colleagues, supervisors, and subordinates resist change. Similarly, Siregar (2022) argues that factors

(i.e., trust, Information, and social influence) are critical for employees' attitude towards change. Cultural aspects are also important precursors of attitudes toward change. For example, individuals in an individualistic society are more concerned about their self-achievement. Therefore, they have positive attitudes toward change. At the same time, individuals in a collective society adhere to the norms and values of their society. If a society has a positive attitude towards change management, individuals will comply with the norms of society and develop positive attitudes toward change (Bagga et al., 2023).

*H6: Social influence positively affects attitude towards change.*

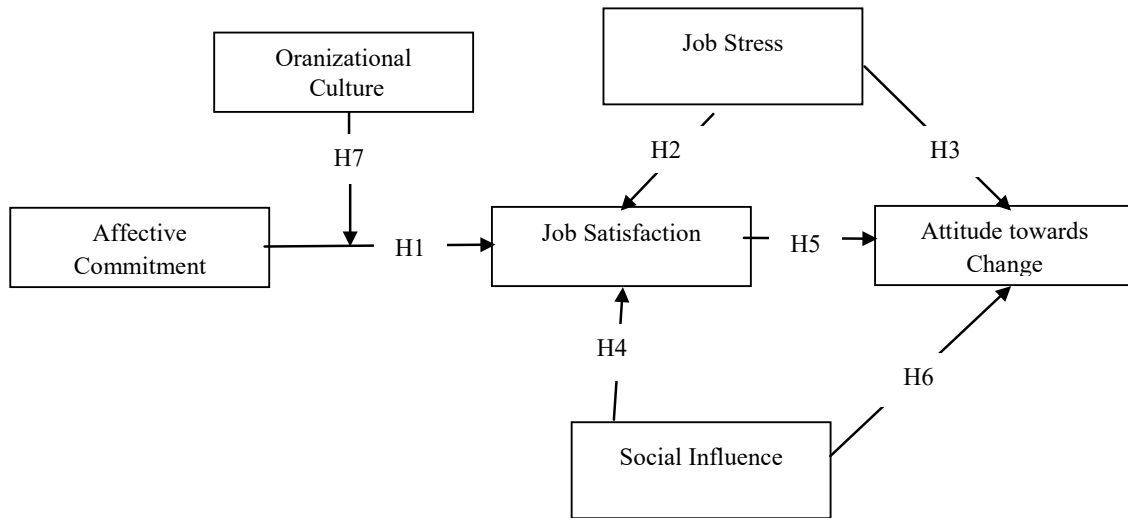
### **Affective Commitment, Organizational Culture and Job Satisfaction**

Organizational culture guides individuals on how to behave in an organization (Kenedi, Satriawan, & Khaddafi, 2022). Past studies have documented that organizational culture positively affects organizational commitment (Schwarz et al., 2023). Literature documents that organizational culture affects affective commitment and job satisfaction (Pathardikar, Mishra, & Sahu, 2023). Organizational culture has several dimensions, including "trust and organizational support." (Pathardikar, Mishra & Sahu, 2023). Many studies found that a supportive organizational culture significantly increases the association between affective commitment and job satisfaction (Pitts, Milstein, & Saha, 2022). At the same time, an unsupportive organizational culture inversely affects the association between affective commitment and job satisfaction (Meredith et al., 2023).

*H7: Organizational culture "moderates affective commitment and job satisfaction."*

### **Conceptual Framework**

Given the above discussion, the study formulated a conceptual framework (Refer to Figure 1). It has one moderating six direct relationships.



**Figure 1: Conceptual Framework**

### Population and Sample

The study used a cross-sectional field survey to collect data from the leading commercial banks in Karachi. We have targeted this segment because bank employees have long working hours that adversely affect their wellbeing and contribute to unwarranted stress. Apart from generating employment, the banking sector also contributes to economic activities, which is necessary for the growth and development of a country. The selection criteria for the banks in this study was deposit market share. The HBL has the highest deposit market share of 14.6%, followed by National banks with a deposit market share of 11.7%, UBL with a deposit market share of 9.2%, and MCB with a deposit market share of 7.8%. The number of employees of the four banks posted in Karachi is about 20,000 Using Raosoft, we calculated the minimum sample size of 387. However, we visited the selected branches, distributed 450 questionnaires, and received 432 with a response rate of 89%.

### Scales and Measures

We adapted the questionnaire from past literature. It has six latent variables. Affective commitment has five items adapted from Meyer and Allen (1997). An example of the question used in this construct is, "I feel a strong emotional attachment to this organization." Organizational culture has five items adapted from Cameron and Quinn (1995). An example of the question used in this construct is, "The organization encourages open communication and feedback." Job stress has five items adapted from Rahe, Quick, and Sinclair (1980). An example of the question used in this construct is, "I often feel overwhelmed and stressed at work." Job satisfaction has five items adapted from Weiss et al. (1985). An example of the question used in this construct is, "I am

satisfied with the opportunities for professional growth in my job.” Social influence has five items adapted from Park, Cohen, and Murch (1996). An example of the question used in this construct is, “My colleagues’ opinions and actions influence my attitudes towards change.” Attitude toward change has five items adapted from Witt and Brown (2012). An example of the question used in this construct is, “I believe that change is necessary for the organization’s growth and success.”

### Statistical Analysis

Since our study has complex relationships, we have used Smart PLS for results. As suggested by many researchers, including Wong (2013), we have used two-step methods. Step one relates to developing a measurement model for “reliability, validity, predictive power of the measurement model and fit indices.” Step two relates to developing a structural model to identify the association between the exogenous and endogenous variables.

### Demographic Profile

The demographic breakdown of the sample consist of gender, age, education, marital status, experience, management levels. The summary of the respondents profile is presented in Table 1.

**Table 1 Demographics**

<b>Demographic</b>	<b>Category</b>	<b>Percentage</b>
Gender	Male	39%
	Female	61%
Age	21-30	20%
	31-40	41%
	41-50	19%
	51 or above	20%
Education	Intermediate	9%
	Bachelors	48%
	Masters	38%
	Post Graduation	05%
Marital Status	Single	47%
	Married	53%
Experience	1-5 Years	20%
	6-10 Years	35%
	11-20 Years	30%
	20 Years Plus	15%
Management Levels	Junior	35%

Middle	30%
Senior	20%
Executive	15%

## Results

### Measurement Model

As suggested by many researchers, we initially generated a measurement model (Wong, (2013) for “internal consistency, composite reliability, discriminant validity, and fit indices.” Figure 2 shows the measurement model, followed by the relevant results.

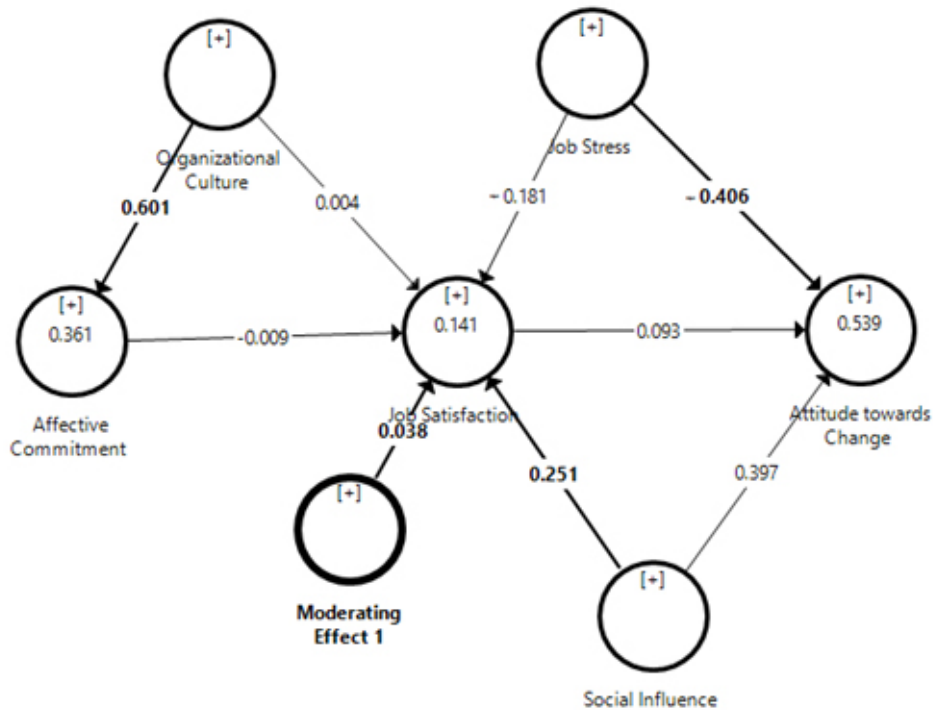


Figure 2: Measurement Model

### Descriptive Analysis

Table 2 depicts the internal consistency, composite reliability, and AVE results.

**Table 2: Descriptive Analysis**

<b>Constructs</b>	<b>Cronbach's Alpha</b>	<b>rho_A</b>	<b>Composite Reliability</b>	<b>AVE</b>
Affective Commitment	0.848	0.853	0.908	0.768
Attitude towards Change	0.716	0.719	0.841	0.638
Job Satisfaction	0.828	0.828	0.897	0.744
Job Stress	0.835	0.837	0.89	0.669
Organizational Culture	0.88	0.885	0.926	0.807
Social Influence	0.882	0.883	0.927	0.810

Kennedy (2022) suggests that for acceptable internal consistency, Cronbach's Alpha must be greater than 0.70. Composite reliability (Aburumman et al., 2022) must be greater than 0.80, and AVE Values (Kennedy, 2022) must be higher than 0.60. Our findings align with the above researchers. Therefore, the study fulfills the requirements of "internal consistency and convergent validity."

**Discriminant Validity**

Researchers, including Roemer Schuberth and Henseler (2021), suggest that apart from discriminant validity based on Fornell and Larcker (1981), researchers also examine the same based HTMT ratios, an improved version of discriminant validity. Following the authors' advice, as mentioned above, the study has used both methods for discriminant validity analyses. Tables 3 and 4 depict the results of Fornell and Larcker (1981) criteria and the HTMT ratio (Henseler, 2021).

**Table 3: Discriminant Validity (Fornell and Larcker, 1981)**

<b>Constructs</b>	<b>AC</b>	<b>ATC</b>	<b>J.SAT</b>	<b>J. Stress</b>	<b>OC</b>	<b>SI</b>
Affective Commitment	0.876					
Attitude towards Change	0.440	0.799				
Job Satisfaction	0.208	0.352	0.863			
Job Stress	0.442	0.630	0.306	0.818		
Organizational Culture	0.601	0.522	0.239	0.437	0.899	
Social Influence	0.511	0.630	0.339	0.497	0.652	0.900

Fornell Larcker (1981) suggests that the "square root of AVE values must be greater than Pearson Correlation values." The results in Table 3 are in confirmatory to the Fornell and Larcker (1981).

**Table 4: Discriminant Validity (HTMT Ratio)**

Constructs	AC	ATC	Job Sat	Job Stress	OC	SI
Affective Commitment	-					
Attitude towards Change	0.561					
Job Satisfaction	0.251	0.447				
Job Stress	0.523	0.818	0.365			
Organizational Culture	0.692	0.651	0.282	0.509		
Social Influence	0.592	0.785	0.396	0.577	0.741	-

Roemer Schubert and Henseler (2021) suggest that HTMT values must be less than 0.90. The results align with the above mentioned authors, therefore, we have established discriminant validity based on HTMT ratios.

### Predictive Power of the Measurement Model

Following the suggestion of Ramayah et al. (2017), the study used R<sup>2</sup> and Q<sup>2</sup> values for the predictive power of the measurement model. Refer to Table 5 for a summary of the results.

**Table 5: R Square Values and Q Square Values**

Constructs	R Square	R Square Adjusted	SSO	SSE	Q <sup>2</sup> (=1-SSE/SSO)
Affective Commitment	0.361	0.361	3594	2608.808	0.274
Attitude towards Change	0.539	0.538	3594	2379.364	0.338
Job Satisfaction	0.141	0.238	3594	3228.917	0.102

The results show that R square values are at least 0.20, as Ramayah et al. (2017) recommended, and Q square values are greater than zero, as Harel (2009) suggested. Thus, we have inferred that the “measurement model has adequate predictive power.”

### Fit Indices

Wong (2013) suggests that SRMR < 0.08 and NFI > 0.90. The results presented in Table 6 align with the suggestion of the researcher mentioned above, indicating the measurement model has adequate fitness.

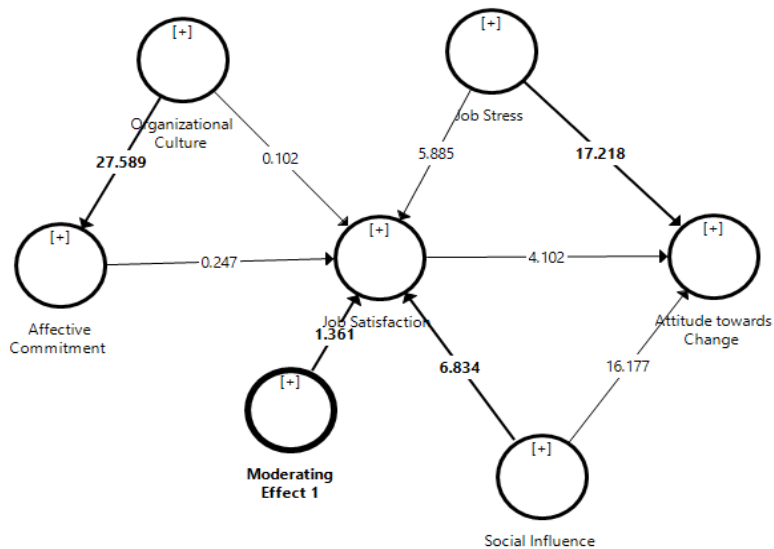
**Table 6: Fit Indices**

Fit Indices	Saturated Model	Estimated Model
SRMR	0.062	0.078
d_ULS	0.737	1.167
d_G	0.326	0.346
NFI	0.902	0.905



### Structural Model

The structural model measures the association between “exogenous and endogenous variables,” presented in Figure 3.



**Figure 3: Structural Model**

### Hypotheses Results

Table 7 shows that the results support five hypotheses and do not support two hypotheses.

**Table 7: Hypotheses Results**

Hypotheses	$\beta$	T Stat.	P Values	Results
Affective Commitment -> Job Satisfaction (H1)	-0.009	0.247	0.805	Rejected
Job Stress -> Job Satisfaction (H2)	-0.181	5.885	0.000	Accepted
Job Stress -> Attitude towards Change (H3)	-0.406	17.218	0.000	Accepted
Social Influence -> Job Satisfaction (H4)	0.251	6.834	0.000	Accepted
Job Satisfaction -> Attitude towards Change (H5)	0.093	4.102	0.000	Accepted
Social Influence -> Attitude towards Change (H6)	0.397	16.177	0.000	Accepted
Org. culture*Affective Commitment -> Job Sat. (H7)	0.038	1.361	0.174	Rejected

Our study supports five direct hypotheses but does not support one direct and one moderating relationship. In the context of direct hypotheses, we found the strongest effect size between job stress and attitude toward change ( $\beta=-0.406$ ,  $t= 17.218<0.05$ ). The weakest effect size is between job satisfaction and attitude toward change ( $\beta= 0.093$ ,  $t= 4.102<0.05$ )

## Discussion and Conclusion

### Discussion

We found affective commitment insignificantly affects job satisfaction (H1). Many past studies, including Nachmias et al.(2022), document that employees' strong commitment to an organization promotes high job satisfaction. Social Exchange Theory also postulates that when employees perceive the exchange relationship between employers and employees is fair, they reciprocate with positive attitudes toward work (Zeb et al., 2023). In contrast, Ahmad (2013) believes that employees may not be satisfied, but their organizational commitment level could still be high.

The study found job stress negatively affects job satisfaction (H2). Dodanwala et al. (2022) found that, apart from other factors, job stress adversely affects job satisfaction. Similarly, another empirical study in tourism also validated a significant negative association between job stress and job satisfaction. Thus, we argue that organizations must develop a culture that reduces job and non-job-related stress (Akgunduz & Eser, 2022). Zhang and He (2022) believe excessive workload adversely affects job stress and satisfaction. Many researchers believe that stress and job satisfaction are highly interrelated.

We found job stress negatively affects attitude towards change (H3). Although researchers have developed different frameworks for implementing change in organizations, results are not very encouraging. Most change management programs fail as employees perceive that the change in an organization would not benefit them (Widarko & Anwarodin, 2022). They believe that due to change, organizations may reduce the number of employees and their benefits. As a result, it promotes stress in employees and negative attitudes toward change (Gray et al., 2023). Saleem et al. (2022) also assert that organizational change is a significant precursor to negative attitude towards change.

The study found social influence positively affects job satisfaction (H4). The Social Information Processing approach significantly explains how individuals form attitudes and behaviors toward jobs (Ali et al., 2023). According to this approach, job attitudes depend on a complex information environment that includes the availability of attitude-relevant Information. Researchers believe that the social environment, directly and indirectly, influences job satisfaction (Conrad et al., 2022). Similarly, more direct exposure to the attitudes of coworkers also affects their attitudes toward jobs. For example, if employees in an organization have positive attitudes toward their jobs, it will motivate other employees to form positive attitudes toward their jobs (Paliga et al., 2022).

We found a positive association between job satisfaction and attitude toward change (H5). Many past studies examined the association between job satisfaction and attitudes towards change and found varying results (Lin & Huang, 2021). A study examined the association between job satisfaction and various dimensions of attitude toward change. It found job satisfaction directly and indirectly affects the dimensions of attitude toward change. Similarly, Da Ros et al.(2023) examined the effect of job satisfaction and attitude toward change and found they are positively associated.

The study found social influence positively affects attitude towards change (H6). Cultural aspects are also important precursors of attitude toward change. Bhatt (2022) asserts that individuals develop negative attitudes toward change when they find that their colleagues, supervisors, and subordinates resist change. Similarly, Siregar (2022) argues that factors (i.e., trust, information, and social influence) are critical in employees' attitudes toward change. Cultural aspects are also important precursors of attitudes toward change. For example, individuals in an individualistic society are more concerned about their self-achievement. Therefore, they have positive attitudes toward change. At the same time, individuals in a collective society adhere to the norms and values of their society. If a society has a positive attitude towards change management, individuals will comply with the norms of society and develop positive attitudes toward change (Bagga et al., 2023).

The study documents that organizational culture insignificantly “moderates affective commitment and job satisfaction.” Organizational culture guides individuals on how to behave in an organization (Kenedi, Satriawan, & Khaddafi, 2022). Many studies have documented that organizational culture positively affects organizational commitment (Schwarz et al., 2023; Pathardikar, Mishra, & Sahu, 2023). Organizational culture has several dimensions, including “trust and organizational support.” (Pathardikar, Mishra & Sahu, 2023). Many studies found that a supportive organizational culture significantly increases the association between affective commitment and job satisfaction (Pitts, Milstein, & Saha, 2022). At the same time, an unsupportive organizational culture inversely affects the association between affective commitment and job satisfaction (Meredith et al., 2023).

## **Conclusion**

Organizational change is necessary for the growth of business entities and to remain competitive in the present era of globalization. Most employees worldwide resist change. They feel change management in an organization may result in downsizing and reducing other benefits. Such feeling is also common in the banking sector of Pakistan. Given its importance, we identified the antecedents that positively or negatively affect

attitude toward change. The study collected a sample of 432 employees of pre-selected banks. The study found affective commitment insignificantly affects job satisfaction. Job stress negatively affects job satisfaction and attitude towards change. Social influence promotes job satisfaction. Job satisfaction and social influence positively affect attitude towards change. And organizational culture insignificantly moderates affective commitment and job satisfaction.

### **Implication**

The study found that job stress negatively affects attitude towards change and satisfied employees cooperate in the change management process. Thus, the study suggests that firms must enhance employees' job satisfaction by reducing undue stress. Besides other measures, firms may develop a culture in which they empower the employees and allocate job-related assignments based on the capabilities of the employees—assignments beyond the capabilities of the employees or below their capabilities promote job dissatisfaction. Literature suggests that if most employees have positive attitudes toward change, the rest will follow them. Thus, while planning and implementing change management, the firms must share it with the employees and other stakeholders. Employees often have apprehension that due to change management, they would lose their jobs and other benefits. Addressing employees' concerns and apprehensions about change management may increase the participation of the employees in implementing change management. Employees develop affective commitment when they believe employers are concerned about the wellbeing of the employees. Clarity in the policies and procedures of firms and fair distribution of resources and rewards enhance effective commitment and promote positive attitude towards change management.

### **Limitations and Future Research**

The study has focused only on one city, Karachi's banking sector. Other studies may extend this model to other sectors and cities. Change management is a complex phenomenon, and we recommend others add more antecedents and consequences of job satisfaction in their conceptual framework. For example, other researchers may consider adding variables such as leadership style types and turnover intention. Organizational culture, affective commitment, and social influence mediate job satisfaction and attitudes toward change. These mediating relationships were beyond the scope of this study. But we invite others to use them in their studies. Attitude towards change may also vary from one culture to another, which we did not consider. However, we recommend others to incorporate cultural aspects in their studies.

## Annexure-1

### Constructs and Items Used in the Questionnaire

#### Affective Commitment

AC1. I feel a strong emotional attachment to this organization.

AC2. I am proud to be a part of this organization.

AC3. I am willing to put in great effort to help this organization succeed.

AC4. I am committed to the goals and values of this organization.

AC5. I am enthusiastic about working for this organization.

#### Organization Culture

OC1. The organization encourages open communication and feedback.

OC2. The organization emphasizes teamwork and collaboration.

OC3. The organization values innovation and creativity.

OC4. The organization has a strong customer-oriented culture.

OC5. The organization values employees' wellbeing and work-life balance.

#### Job Stress

JST2. I often feel overwhelmed and stressed at work.

JST2. The workload in my job is manageable.

JST3. I have adequate resources to cope with work demands.

JST4. I experience a high level of pressure in my job.

JST5. My job negatively impacts my physical and mental wellbeing.

#### Job Satisfaction

JSAT1. I am satisfied with the opportunities for professional growth at work.

JSAT2. I feel valued and recognized for my contributions at work.

JSAT3. I am satisfied with the level of autonomy at work.

JSAT4. I find my job interesting and fulfilling.

JSAT5. I am satisfied with the overall work environment in my organization.

#### Social Influence

SI1. My colleagues' opinions and actions influence my attitudes towards change.

SI2. I am influenced by my immediate supervisor's stance on organizational change.

SI3. I often discuss the proposed changes with my coworkers before forming an opinion.

SI4. Social interactions with others play a significant role in shaping my attitude towards change.

SC5. I am more likely to accept change if I see others around me supporting it.

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**Attitude towards Change**

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ATC1. I believe that change is necessary for the organization's growth and success.

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ATC2. I am open to trying new approaches and methods at work.

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ATC3. I feel anxious about the uncertainty that comes with organizational change.

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ATC4. I resist change because I prefer the status quo.

---

ATC5. I am optimistic about the positive outcomes that can result from organizational change.

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## **Conflict of Interest**

The author (s) declared no conflict of interest and have not received any funds for the project.

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# Impact of Servant Leadership on Job Performance with Mediating Role of Trust and Moderating Role of Power Distance: A Case of Hospitals in Pakistan

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## Abstract

Job performance is essential for growth, especially in the service sector like hospitals. Apart from other factors, the leadership style affects job performance and other organizational-related outcomes. The literature documents that hospital employees' job performance has declined. Thus, we have focused on nurses and other healthcare staff, excluding doctors in the healthcare industry. The study's sample size was 582. The study supports all five hypotheses. We found that "servant leadership and trust positively affect job performance." Servant leadership positively affects trust. The study also documents that "trust mediates servant leadership and job performance." At the same time, our results also suggest that "power distance" moderates servant leadership and trust relationship. Based on the direct and indirect effects of servant leadership and job performance, we suggest organizations hire servant leaders. The organizations must

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also regularly conduct counseling sessions for their leaders to focus on the employee's development and wellbeing. Such attitudes positively enhance job performance and increase employees' trust. Consequently, employees reciprocate by developing loyalty with the organizations and the leaders.

**Keywords:** *Servant leadership, job performance, trust, power distance, healthcare industry.*

## Introduction

One of the fundamental themes in the literature on leadership is the importance of serving others (Turner, (2022). Several studies found that servant leadership promotes employee engagement and performance. These studies also document that servant leadership enhances employees' motivation, resulting in positive attitudes toward work (Nguyen, Nguyen, & Tuan, 2023; Chen, Zada, Khan, & Saba, 2022). Vuong (2022) asserts that servant leadership focuses on humanity and employee empowerment, due to which employees' trust toward leaders increases, resulting in loyalty to the firms and leaders. Extant literature documents that servant leaders adopt responsible and ethical behavior, focus on efficiency, utilize resources efficiently, and adhere to organizational norms. Therefore, researchers believe this leadership style is more effective than other leadership styles (Xie, 2020; Meuser & Smallfield, 2023).

Employees' trust in organizations and leaders is essential for organizational performance, which many researchers believe is decreasing (Islam, 2023). Given the significance of trust, Ayça (2023) asserts that organizations need servant leaders as they are more concerned about employees and organizations than their personal goals. According to Harb, Hachem, and Hamdan (2021), a team's effectiveness positively correlates with leadership styles. Xu and Wang (2020) describe servant leaders' characteristics are modesty, gratitude, compassion, and generosity. Most studies have focused mainly on the benefits of leadership, but a few have examined how servant leadership affects employee trust and performance (Wang, Liu, Wen, & Xiao, 2022; Ali, Khan, & Saleem, 2023). Moreover, Latif, Ahmed, and Aamir (2022) recommend that there is a need for more studies on servant leadership in the domain of public sector organizations.

Given the above gap, the study has extended the LMX Theory to examine the impact of servant leadership and trust on job performance—the effect of servant leadership on trust. The mediating role of trust in servant leadership and job performance relationship, and the moderating role of power distance in servant leadership and trust relationship.

## Literature Review

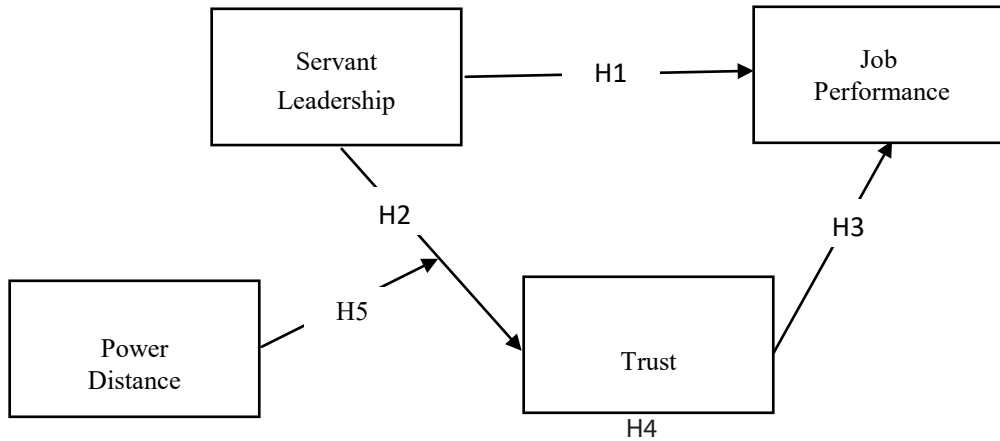
### Theoretical Grounding

Many past studies have extensively used the Leader-Member Exchange Theory (LMX) to explain the consequences of the servant leadership style, including trust and job performance (Algarni, Munshi, 2023; Menezes, 2023; Imran, Sarwar, Fatima, & Iqbal 2023). LMX is an emerging philosophy grounded in the Social Exchange Theory (Scandura & Meuser, 2022). LMX philosophy suggests leaders and subordinates have a vertical dyad linkage (Barke, 2022). The Theory postulates that servant leadership improves employees' performance by inspiring them with selfless attitudes (Presbitero & Aruta, 2023).

Suhartanti and Prasetyanto. (2022) asserts that servant leaders enhance employees' confidence and productivity (Kumari, Abbas, Hwang, & Cioca, 2022). In the same context, Sarkus (2022) asserts that employees trust servant leaders. Therefore, employees' loyalty to organizations and leaders increased significantly (Cortez & Johnston, 2020; Fisher & Costa, 2023). Kuijpers, Kooij, and van-Woerkom (2020) also inferred that a healthy relationship between two individuals enhances their devotion to each other. While Zhao, Huang, and Su (2019) believe that a conducive social interaction between two individuals positively affects the relationship. Many researchers assert that construct exchange refers to a connection or association between two or more individuals (Prouska et al., 2023; Beitelspacher & Getchell, 2023). They also believe that constructs association and exchange have different connotations but are related (Gottfredson, Wright, & Heaphy, 2020; Boekhorst & Frawley, 2022). Researchers, including Latif, Ahmed, and Aamir (2022) and Blau (1964), document that many studies found trust mediates organizational-related antecedents and consequences. Moreover, extant literature also documents trust is an inspiring factor and a precursor for healthy social exchange.

### Conceptual Frame Work

Based on the LMX Theory and Social Exchange Theory, we have developed a model containing four latent variables and five hypotheses, presented in Figure 1.



**Figure 1: Conceptual Framework Adopted from (Atiq, 2020)**

## Hypothesis Development

### Servant Leadership and Job Performance

Job performance is the output of employees in an organization in the context of employee involvement. Productive employees meet their leaders' expectations and positively impact organizational performance (Melhem, Ababneh & Alsukkar, 2023). Kadarusman and Bunyamin (2021) assert that job performance measures what employees have accomplished compared to their work-related tasks. This could be qualitative or quantitative judgement. Servant leaders focus on one-on-one communication to assess subordinates' "abilities, needs, desires, goals, and potential" to enhance employees' productivity (Gnankob, Ansong, & Issau, 2022). In contrast, job performance is employees' attitudes and behaviors toward organizational goals, which are in the control of the employees (Vuong, 2022). Organizations need talented employees to achieve their organizational goals (Febrianti & Yulian, 2022). Melhem, Ababneh, and Alsukkar (2023) assert that employee involvement and engagement are critical factors for improving employees and organizational performance (Li, Chen, Bai, Liden, Wong, & Qiao, 2023). Gnankob, Ansong, and Issau (2022) believe that servant leaders' important traits are employee empowerment and involvement, which collectively and individually enhance job performance (Arijanto, Widayati, & Pramudito, 2022).

Moreover, servant leaders provide services to employees, promote a sense of togetherness, and involve them in decision-making, resulting in improved job performance (Melhem, Ababneh & Alsukkar, 2023). Additionally, servant leaders promote organizational citizen behavior in employees, which benefits organizations

(Vuong, 2022).

*H1: Servant leadership positively affects job performance.*

### **Servant Leadership and Trust**

Leader-Member Exchange (LMX) Theory, a leadership theory similar to Social Exchange Theory, postulates that social interaction among employees promotes a conducive working environment, which is necessary for the growth and sustainability of an organization (Saleem et al., 2022). Compared to other leadership theories, LMX Theory is unique as it focuses on the dyadic relationship between subordinates and leaders (Rahal & Farmanesh, 2022). Servant leaders ensure employees develop positive attitudes toward work, are fully empowered, and have egalitarian qualities (Ng, 2022). Karatepe, Ozturk, and Kim (2019) assert that servant leaders prioritize others need and have no qualms about sacrificing their personal needs. Servant leadership, apart from being a modern and authentic leadership style, ensures that employees develop the same qualities and competencies as their leaders (Zargar, Sousan, & Farmanesh2019). All employees working under servant leaders have equal dignity and actively participate in decision-making, promoting trust toward the leaders (Reddrick, 2023). Louw (2023) argues that the philosophy behind servant leadership is to empower employees and increase their trust. Servant leaders achieve all these by being ethical role models and serving others (Qiu & Dooley, 2022).

Rashid and Ilkhanizadeh (2022) stress that servant leaders sacrifice their self-interest and focus on developing their followers (Ahmed, Xiong, Faraz, and Arslan, 2023). As a result, employees develop confidence and trust in the leadership (Haq et al., 2022). Also, under servant leaders, employees' trust in organizations increases significantly, so employees' support for the organization also increases (Uymaz & Arslan, 2022). Employees' perceptions that organizations and leaders support them are important precursors of employees' trust. Therefore, Saleha (2023) suggests that organizations must enhance employees' trust perceptions (Awasthi & Walumbwa, 2023). Researchers believe employees' trust in their leaders significantly depends on "integrity, benevolence, and ability," which are hallmarks of servant leaders (Susanto, 2023). Integrity refers to honesty and strong moral and ethical norms (Khan & Chaudhry, 2023). Benevolence relates to caring and supporting behavior towards employees (Zargar, Sousan, & Farmanesh2019). Ability refers to leaders' technical skill to solve technical and other organizational-related problems (Reddrick, 2023).

*H2: Servant leadership positively affects trust.*

## Trust and Job Performance

Organizations cannot achieve their goals without the help of all the stakeholders, including leaders and subordinates (Silva, Moreira, & Mota, 2023). Mutual trust between leaders and subordinates is essential for job performance (Maslikha, 2022). Trust refers to the belief of one person that the other persons would fulfill their promises and other obligations (Noble-Nkrumah, Anyigba, & Mensah, 2022). Researchers believe employee trust and respect for the leaders positively correlate with job performance (Kumari, Abbas, Hwang, & Cioca, 2022; Chunara et al., 2022). Moreover, employees' respect and trust in their leaders are essential for job performance. Diversification of the workforce enriches an organization. It will only be effective if organizations develop a conducive environment that promotes mutual trust between the employees (Chunara et al., 2022).

Singh and Desa (2018), in a study on public-sector manufacturing concerns, concluded that trust and job performance are positively correlated. Therefore, they recommended that firms promote a culture of trust in their organizations. An environment of mutual trust within organizations allows employees to take calculated risks by developing innovative products, which increases job performance and organizational growth (Aboramadan et al., 2022). Researchers believe that trust is crucially important for organizational effectiveness. Without trust environment in an organization, individuals may not work together, adversely affecting job performance (Farid et al., 2023). Maslikha (2022) asserts that trust promotes communication within an organization, without which organizational performance may be affected adversely. The exchange of information is important for job completion. Lack of trust may force the employees to doubt the creditability of the received information, resulting in adverse job performance (Aryee et al., 2023).

*H3: Trust positively affects job performance.*

## Servant Leadership, Trust, and Job Performance

While extending the Social Exchange Theory, many studies document that trust mediates servant leadership and job performance (Chunara et al., 2022). Farid et al. (2023) argue that servant leaders are concerned about the well-being and betterment of their subordinates. Therefore, they reciprocate by trusting their leaders and working diligently. Aboramadan et al. (2022) assert that servant leaders mentor and guide employees in their career growth and development. As a result, subordinates' trust in the leaders increased immensely, resulting in increased job performance. Likewise, Chunara et al. (2022) assert that a high-trust relationship between employees and leaders positively correlates with job performance. Many researchers, including Aryee et al. (2023), have also validated that servant leadership and trust are highly

correlated. Elshae and Saad (2022) also assert that trust is a significant precursor to job performance. Taken together, we argue that servant leaders promote trust, which affects job satisfaction (Kumari, Abbas, Hwang, & Cioca, 2022). Our argument, discussed in the preceding sentences, align with the findings of Aboramadan et al. (2022), which document that servant leadership through trust affects job performance.

*H4: Trust mediates servant leadership and job performance.*

### **Moderating Role of Trust**

Power distance is a critical cultural value for accepting authority (Saleem et al., 2022). From a societal perspective, it refers to society accepting that the power in institutions and business entities is distributed unequally (Nemati, Nemati, & Firdous, 2022). Power distance is one of the dimensions of Hofstede cultural Model. Many researchers believe that Hofstede studied the individuals' data rather than the data of societies (Xia, Liu, Han, Gao, & Lan, 2022). Despite the limitations of Hofstede's model, many researchers have used its dimensions in their studies. Thus, individuals' acceptance of an unbalanced power increases the distance between subordinates and leaders. (Ahmed, Xiong, Faraz, & Arslan, 2023; Wang, Wu, He, & Gu, 2022). In contrast, individuals who believe in less power distance advocate that everyone in an organization should have the same privilege ( Du, Ma, Lin, & Wang, 2022).

Many past studies have used power distance as a moderator between other variables (Saleem et al., 2022). For example, Nemati, Nemati, and Firdous (2022) examined the moderating effect of power distance between individual outcomes and practical justice climate. Similarly, Lin, Wang, and Chen (2013) examined the moderating effect of power distance on employees' wellbeing and abusive supervision. Past studies document that the construct power distance has a varying effect on the relationship between servant leadership and trust (Du, Ma, Lin, & Wang, 2022). Researchers also argue that higher "power distance" will increase the effect on the relationship between servant leadership and trust (Nemati, Nemati, & Firdous, 2022). At the same time, "lower power distance will reduce the effect on the relationship between servant leadership and trust.

*H5: Power distance "moderates servant leadership and trust."*

## **Methodology**

### **Research Design**

Research design is the overall plan or strategy that helps researchers in their project, from conception to the final data analysis (Abbott & McKinney, 2013). A good research

design includes defining the target population, calculating the minimum sample size and selecting appropriate sampling technique. It also includes developing and adopting a questionnaire that aligns with the study's objectives (Bloomfield & Fisher, 2019). The study has presented all the abovementioned aspects of the research in the following sections. The research could be qualitative or quantitative. This study is quantitative as it has collected quantitative data.

### Population And Sample Size

A population refers to a group of phenomena, people, and material objects a researcher is interested in studying (Rahman et al., 2022). The target population for this study is the hospital sector of Karachi. The healthcare industry is crucial to a country's economic development. The study has collected data from nurses and other healthcare staff, excluding doctors from the two largest hospitals in Karachi. Researchers have suggested different techniques for calculating sample size. For example, some researchers suggest using a study's number of constructs to calculate the minimum sample size (Sekaran & Bougie, 2016). Others recommend using the number of indicators in a study to calculate the maximum sample size (Hair Jr. et al., 2017). The study has 27 indicators. Therefore, our calculated sample size is 540 (27X20) (Hair Jr. et al., 2017). However, we distributed 650 questionnaires and received 582 with a response rate of 90%.

### Instrumentation

The study has adopted all the constructs used in the study from past studies. Table 1 depicts a summary of the instrumentation.

**Table 1: Instrumentation**

Variables	Sources	Items	Reliability
Servant Leadership (IV)	Chughtai (2016).	8	0.808
Job Performance (DV)	Kül, and Sönmez (2021).	7	0.825
Trust (MED)	Iqbal, Ahmad, and Latif. (2021).	6	0.811
Power distance (MOD)	Zhang and. Begley (2011).	6	0.756

### Sample Characteristics

The study in Table 2 has presented the sample characteristics of the respondents in terms of gender, age, education, marital status, and experience.

**Table 2: Sample Characteristics**

<b>Demographic</b>	<b>Category</b>	<b>Percentage</b>
Gender	Male	52%
	Female	48%
Age	25-35	31%
	36-45	33%
	46-55	25%
	51 or above	11%
	Education	Intermediate
	Bachelors	38%
	Masters	14%
	Post Graduation	15%
Marital Status	Single	46%
	Married	54%
Experience	1-5 Years	25%
	6-10 Years	29%
	11-15 Years	27%
	15 Years Plus	19%

## Statistics Tools

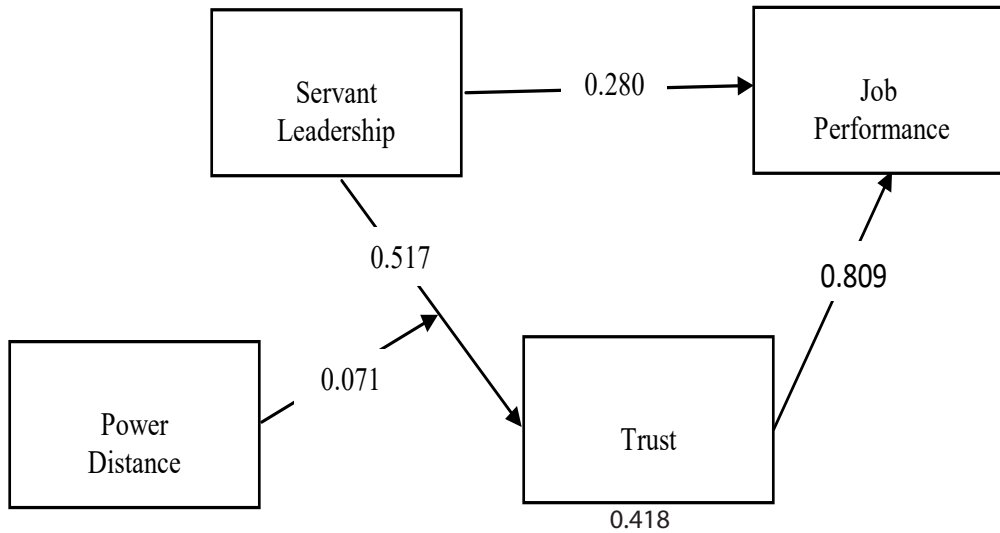
The study used Smart PLS version 4 for statistical analysis (Chin, 1998b). We generated a measurement model for the required statistics (Henseler et al., 2009). Subsequently, we generated a structural model for the results related to the proposed hypotheses (Henseler et al., 2009).

## Results

### Measurement Model

The measurement model shows the relationship between indicator variables and latent variables. In Figure 2, we have presented the measurement model. In subsequent sections, we have discussed results related to reliability, validity, univariate normality and discriminant validity.





**Figure 2: Measurement Model**

**Descriptive Analysis**

We ascertained the univariate normality based on the Skewness and Kurtosis values and found all of them ranged between  $\pm 3.5$ , validating the univariate normality of the construct. Subsequently, we generated Cronbach’s Alpha, composite reliability values, and average variance extracted values, presented in Table 3.

**Table: 3 Descriptive Analysis**

Constructs	Cronatch’s Alpha	Composite Readability	Average Variance Extracted	Skewness	Kurtosis
Job Performance	0.801	0.805	0.501	-1.265	1.990
Power Distance	0.790	0.791	0.543	1.164	1.360
Servant Leadership	0.840	0.845	0.572	-0.989	0.930
Trust	0.854	0.856	0.533	1.333	0.920

Table 3 shows that all Conbatch’s values are greater than 0.700, indicating good internal consistency (Cain, Zhang, & Yuan, 2017). Also, composite values are greater than 0.700, and AVE values are at least 0.500, suggesting acceptable convergent validity (Schoenherr et al., 2019).

**Discriminant Validity**

Results in Table 4 suggest that all the constructs are unique and distinct since “AVE square root values presented diagonally in Table 4 are greater than all Pearson

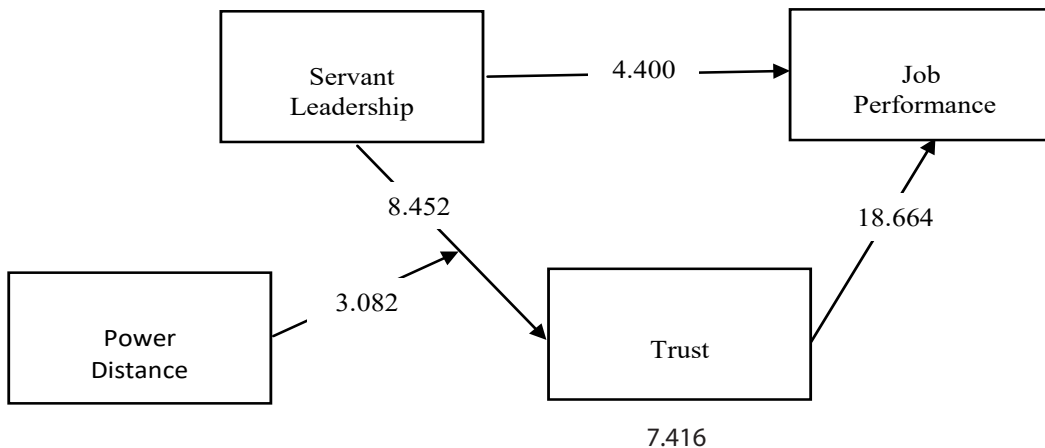
Correlation Values" (Fornell and Larcker Criterion 1981).

**Table 4: Discriminant Validity (Fornell and Larcker 1981 criterion)**

Constructs	JP	PD	SL	TR
Job Performance	0.863			
Power Distance	0.706	0.865		
Servant Leadership	0.815	0.696	0.887	
Trust	0.809	0.761	0.838	0.973

### Structural Model

The structural model presented in Figure 3 shows the association between latent variables in Terms of t values. The subsequent section shows the hypotheses' results.



**Figure 3: Structural Model**

### Hypothesis Results

Results depicted in Table 5 show we failed to reject all the direct and indirect hypotheses.

**Table 5: Hypotheses Results**

Relationships	Beta	t	p	Results
Servant leadership -> Job Performance (H1)	0.280	4.400	0.003	Accepted
Servant leadership -> Trust (H2)	0.517	8.452	0.000	Accepted
Trust -> Job Performance (H3)	0.809	18.664	0.001	Accepted
Ser. Leadership -> Trust -> Job Performance (H4)	0.418	7.416	0.000	Accepted
Power Distance x Ser. Leadership -> Trust (H5)	0.071	3.082	0.000	Accepted

The results show the strongest effect is for Hypothesis 3 ( $\beta=0.809$ ,  $t=18.664 < 0.05$ ), followed by Hypothesis 2 ( $\beta=0.517$ ,  $t=8.452 < 0.05$ ), Hypothesis 4 ( $\beta=0.418$ ,  $t=7.416 < 0.05$ ), Hypothesis 1 ( $\beta=0.280$ ,  $t=4.400 < 0.05$ ), and Hypothesis 5 ( $\beta=0.071$ ,  $t= 3.082 < 0.05$ ).

## Discussion and Conclusion

### Discussion

The study found servant leadership positively affects job performance, which validates the finding of Vuong (2022). Servant leaders focus on one-on-one communication to assess “subordinates’ abilities, needs, desires, goals, and potential” to enhance employees’ productivity (Gnankob, Ansong, & Issau, 2022). In contrast, job performance is employees’ attitudes and behaviors toward organizational goals, which are in the control of the employees (Vuong, 2022). Organizations need talented employees to achieve organizational goals (Febrianti & Yulian, 2022). Melhem, Ababneh, and Alsukkar (2023) assert that employee involvement and engagement are critical factors for improving employees and organizational performance (Li, Chen, Bai, Liden, Wong, & Qiao, 2023). Gnankob, Ansong, and Issau (2022) believe that servant leaders’ important traits are employee empowerment and involvement, which collectively and individually enhance job performance (Qiu & Dooley, 2022).

The study found servant leadership positively affects trust, which validates the findings of Qiu and Dooley (2022). Leader-Member Exchange (LMX) Theory, a leadership theory similar to Social Exchange Theory, postulates that social interaction among employees promotes a conducive working environment, which is necessary for the growth and sustainability of an organization (Saleem et al., 2022). Compared to other leadership theories, LMX Theory is unique as it focuses on the dyadic relationship between subordinates and leaders (Rahal & Farmanesh, 2022). Servant leaders ensure employees develop positive attitudes toward work, are fully empowered, and have egalitarian qualities (Ng, 2022). Karatepe, Ozturk, and Kim (2019) assert that servant leaders prioritize others need and have no qualms about sacrificing their personal needs. Servant leadership, apart from being a modern and authentic leadership style, ensures that employees develop the same qualities and competencies as their leaders (Zargar, Sousan, & Farmanesh 2019). All employees working under servant leaders have equal dignity and actively participate in decision-making, promoting trust toward the leaders (Reddrick, 2023). Louw (2023) argues that the philosophy behind servant leadership is to empower employees and increase their trust. Servant leaders achieve all these by being ethical role models and serving others (Qiu & Dooley, 2022).

The study found trust positively affects job performance, which endorsed

Maslikha's (2022) finding. Singh and Desa (2018), in a study on public-sector manufacturing concerns, concluded that trust and job performance are positively correlated. Therefore, they recommended that firms promote a culture of trust in their organizations. An environment of mutual trust within organizations allows employees to take calculated risks by developing innovative products, which increases job performance and organizational growth (Aboramadan et al., 2022). Researchers believe that trust is crucially important for organizational effectiveness. Without trust environment in an organization, individuals may not work together, adversely affecting job performance (Farid et al., 2023). Maslikha (2022) asserts that trust promotes communication within an organization, without which organizational performance may be affected adversely. The exchange of information is important for job completion. Lack of trust may force the employees to doubt the creditability of the received information, resulting in adverse job performance (Aryee et al., 2023).

We found that "trust mediates servant leadership and job performance," which endorsed the finding of Kumari, Abbas, Hwang, and Cioca (2022). Farid et al. (2023) argue that servant leaders are concerned about the well-being and betterment of their subordinates. Therefore, they reciprocate by trusting their leaders and working diligently. Aboramadan et al. (2022) assert that servant leaders mentor and guide employees in their career growth and development. As a result, subordinates' trust in the leaders increased immensely, resulting in increased job performance. Likewise, Chunara et al. (2022) assert that a high-trust relationship between employees and leaders positively correlates with job performance. Many researchers, including Aryee et al. (2023), have also validated that servant leadership and trust are highly correlated. Elshae and Saad (2022) also assert that trust is a significant precursor to job performance. Taken together, we argue that servant leaders promote trust, which affects job satisfaction (Kumari, Abbas, Hwang, & Cioca, 2022). Our argument, discussed in the preceding sentences, align with the findings of Aboramadan et al. (2022), which document that servant leadership through trust affects job performance.

The study result aligns with past studies documenting that "power distance moderates servant-leadership and trust." Many past studies have used power distance as a moderator between other variables (Saleem et al., 2022). For example, Nemati, Nemati, and Firdous (2022) examined the moderating effect of power distance between individual outcomes and practical justice climate. Similarly, Lin, Wang, and Chen (2013) examined the moderating effect of power distance on employees' wellbeing and abusive supervision. Past studies document that the construct power distance has a varying effect on the relationship between servant leadership and trust (Du, Ma, Lin, & Wang, 2022). Researchers also argue that higher "power distance" will

increase the effect on the relationship between servant leadership and trust (Nemati, Nemati, & Firdous, 2022). At the same time, “lower power distance will reduce the effect on the relationship between servant leadership and trust.

## Conclusion

The health industry is critical for individuals’ and societies’ health being. Governments worldwide spend considerable resources on the health sector. Past studies have examined the effect of various organizational-related outcomes on job performance. However, a few studies have examined the moderating role of power distance between servant leadership and trust. Given its importance, this study extended LMX Theory to develop a model containing one mediating, one moderating, and three direct hypotheses. We collected a sample of 582 employees from the two local hospitals. We found that “servant leadership and trust positively affect job performance.” Servant leadership positively affects trust. The study also documents that “trust mediates servant leadership and job performance.” At the same time, our results also suggest that “power distance” moderates servant leadership and trust relationship.

## Implications

Based on the direct and indirect effects of servant leadership and job performance, we suggest organizations hire servant leaders. Organizations must also regularly conduct counseling sessions for their leaders to focus on the employee’s development and wellbeing. Such attitudes may positively enhance job performance and increase employees’ trust. Consequently, employees reciprocate by developing loyalty with the organizations and the leaders. Our results support the moderating effect of power distance on servant leadership style and trust. Thus, when a firm has a low power distance, the association between servant leadership and trust decrease significantly. Also, a high level of power distance would increase the association between servant leadership and trust. Culturally, employees in developing countries accept a high power distance as the norm. These attitudes and behaviors will take time to change. We suggest that the firms focus on creating a low power distance culture as it aligns with the philosophy of servant leadership and enhances job performance.

## **Limitations of Research**

The study has focused on the consequences of servant leadership style. Others may examine the impact of other leadership styles on organizational-related outcomes. In the study, we have used the moderating effect of power distance on servant leadership and trust. Other studies may use other dimensions of the Hofstede model, like individualism and collectivism, as the moderating variables. Since we focused on the healthcare industry, other researchers may extend this model to other domains like manufacturing and construction. The study used four organizational-related variables. Others in their studies may include variables such as ethnicity, spirituality, and religiosity.

## Annexure-1

### Constructs and Items Used in the Study

#### Servant Leadership

SL1. I would seek help from the leaders if I had a personal problem.

SL2. I can solve work-related problems in consultation with my leader.

SL3. My leader knows if I am facing work-related issues.

SL4. My leader gives others the responsibility to make important decisions about their jobs.

SL5. My leader focused on others' career development.

SL6. My leader cares more about others' success than his/her own.

SL7. My leader is always interested in helping people in the community.

SL8. My leader trusts me when I make decisions on my own.

#### Trust

TR. I feel that my leader listens to what I have to say.

TR2. I am confident that my leader acts in good faith.

TR3. I act knowing that my leader keeps his/her word.

TR4. I believe that my leader's promises and actions align.

TR5. I believe that my leader does not share my problems with others.

TR6. My leader trusts his/her employees to work without excessive supervision.

#### Job Performance

JP1. I do not lose my concentration due to environmental turbulence.

JP2. I am efficient in multi-tasking.

JP3. I manage and plan my work so that I finish it on time.

JP4. I kept in mind the results I needed to achieve.

JP5. I can carry out my work efficiently.

JP6. I take the initiative to start a new assignment.

JP7. I keep my job-related knowledge up-to-date.

#### Power Distance

PD1. Low power distance is necessary for increasing organizational performance.

PD2. I believe that a society's culture affects the level of power distance in an organization.

PD3. Acceptance of unequal power leads to high power distance in an organization.

PD4. I believe all employees and leaders should have the same rights and privileges.

PD5. I believe that the leaders are a privileged class.

PD6. I believe that reducing power distance in a dualistic society is difficult.

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**Conflict of Interest**

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# Antecedents to Employee Engagement and Moderating Role of Climate for Innovation and Mediating Role of Employee Psychological Wellbeing

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## Abstract

Employee engagement is necessary for the growth and sustainability of firms. Many past studies have used different antecedents of employee engagement, including commitment, psychological well-being, and other organizational-related outcomes. However, a few studies have examined the moderating effect of climate for innovation on ESMU and EE. Given its importance, we have developed a conceptual framework that examines the impact of ESMU, EPWB, and EC on EE and the effect of ESMU on EPW. The study also examined the moderating effect of CFI and the mediating effect of EPW. The study has focused on Pakistan's textile sector. Its employment generation and contribution toward GDP are significantly higher than other industries. Based on the data collected from the targeted textile sector and using smart PLS, we found support for all the hypotheses. The study documents ESMU, EPWB, and EC promote EE. ESMU promotes EPWB. EPWB mediates ESMU and EE. CFI moderates ESMU and EE. The study increased the generalizability of Bandura's Social Cognitive Theory (1977), as our results

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support all the proposed hypotheses. We recommend firms must focus on creating an innovative environment. Employees suggest new ideas about new business processes and innovation in such an environment. New ideas may not always result in innovative products but may increase employee involvement and engagement. Many leading firms have made a policy in which all the employees have to give new ideas perpetually, producing good results. Textile firms in Pakistan may adopt and implement this policy. Therefore, we recommend firms must focus on creating an innovative environment. Employees suggest new ideas about new business processes and innovation in such an environment.

**Keywords:** *Textile sector, social media usage, climate for innovation, employee commitment, employee engagement, and employees' psychological well-being.*

## Introduction

The usage of social media in organizations has increased significantly. Researchers believe its usage in firms is important for growth and sustainability (Luqman, Talwar, Masood, & Dhir, 2021). Social media users generate content, comments, and reviews that benefit organizations (Olanrewaju et al., 2020). In the last few years, different forms of social media have emerged that have increased social interaction and exchange of ideas in business entities (Orben et al., 2022). Given its importance, many studies have examined the impact of social media usage (SMU) on organizational-related outcomes (Luqman, Talwar, Masood, & Dhir, 2021). Tao (2023) has divided social media into four different types. It includes (i) collaborative projects (Wikipedia), (ii) Gaming (World of Warcraft), (iii) social networking sites (Facebook), blogs and content communities, (iv) virtual social environments (Tourani, 2022). The phrase "Social Media" refers to various tools and software developed on cutting-edge technologies (Hosain, 2023), real-time communication (Agozie & Nat, 2022), and an interactive interface that enables people to share, discuss and produce information (Murray, Kim, & Combs, 2023). It allows individuals to engage virtually in discussions and social interaction (Bapitie & Carter, 2022).

Individuals with varying knowledge, skills, expertise, and experience connect in social media forums (Vătămănescu et al., 2023). As a result, it promotes innovative ideas and increases employee engagement (EE) (Mathur, Lawrence, & Chakravarty, 2023). Similarly, Mathur, Lawrence, and Chakravarty (2023) assert that a wide range of information and expertise is available on social media, enhancing employees' creativity and engagement. Engaged employees are more committed to their jobs than others (Rahmadani et al., 2022; Bapitie & Carter, 2022).

According to Benjamin et al. (2022), engagement denotes a worker's mental presence while performing his job. Using social media, employees can develop collaboration, increase engagement, and develop entrepreneurial and flexibility skills (Zhang & Erturk, 2022). At the same time, researchers believe that social media can adversely affect personal lives (Rahmadani et al., 2022) and waste organizational resources (Addawood et al., 2019; Murthy, 2023).

Given the above discussions, the study has formulated the following research questions:

1. What is the effect of employee social media (ESMU), employee psychological well-being (EPWB), and employee commitment (EC) on employee engagement (EE)?
2. How does employee-social media usage (ESMU ) affect employee-psychological well-being (EPWB)?
3. What is the "mediating effect of employee psychological well-being (EPWB)" on employee social media usage (ESMU) and employee (EE)?
4. What is the moderating effect of climate for innovation (CFI) on employee social media usage (ESMU) and employee engagement (EE)?

## Literature Review

### Employee Social Media Usage (ESMU)

Social media SMU coined in the twenty-first century relates to all social networks and forums (Campos-Blázquez et al., 2023). Social media is a collection of programs, platforms, and tools that allow people to create and share content (Aliyu & Goyal, 2022). Also, technology makes it possible for billions of individuals to interact and communicate with one another at a low cost (Heinemann, 2023). Many researchers believe social media is a collection of cutting-edge technology with affordable real-time communication capabilities. It also has an interactive interface where workers may search for and exchange knowledge (Naidu, 2019).

Consequently, it allows groups and individuals to interact socially and exchange views and knowledge about diversified subjects virtually (Aliyu & Goyal, 2022). Examples of social media technologies include "Facebook, YouTube, Flickr, LinkedIn, and Google Apps" (Sze, 2020). In addition, blogs and wikis are other examples of social media (Heinemann, 2023). Sze (2020) found that 86% American and 79% European youth use social media regularly (Naidu, 2019). Many studies document that social media is beneficial for academics and corporate world. Social media also helps acquire knowledge and innovative ideas (Heinemann, 2023).

### **Employee Engagement(EE)**

Engaged employees actively participate, boosting their intelligence and professional effectiveness (Fait et al., 2023). Lee, Rocco, and Shuck (2020) believe EE is crucial for managers, as it generates social interactions and interest in jobs. It also refers to “feelings, behavior, achievements, and approach” (Hu et al., 2022). Moreover, enterprise engagement stimulates productivity and competence. Kral, Janoskova, and Dawson (2022) assert EE is a crucial precursor to sustainability and growth. Similarly, Boccoli, Gastaldi, and Corso (2023) assert that engagement relates to individuals’ mental openness, connectedness, and focused approach. Employees are more engaged, involved, dedicated, and fulfilled when excited to execute a certain task (Lee, Rocco, & Shuck, 2020). Likewise, Kral, Janoskova and Dawson (2022). assert that job distinctiveness and organizational support, including incentive and recognition, stimulate engagement.

### **Employee Psychological Well-being (EPWB)**

Rahi (2022) asserts that EPWB is a prerequisite for involvement. EPWB is a conviction surrounded by a feeling of happiness and stability. Few academics, however, believe that individuals health, safety, interests, and happiness are related to their overall well-being (Crawford, 2022). The term “well-being” was initially used by Wright and Cropanzano (2000), who distinguished it from psychological and subjective well-being. Happiness and contentment are examples of subjective well-being, whereas full participation and contribution relate to psychological well-being (Rahi, 2022). Gargantini et al. (2022) clarified the distinction between psychological and subjective well-being by pointing out that psychological well-being relates to an individual’s internal well-being, while subjective well-being relates to “personality traits, joy, delight, and happiness” (Crawford, 2022). Rahi (2022) believes that psychological well-being, compared to subjective well-being, has a greater impact on performance and productivity.

### **Employee Commitment (EC)**

Many studies have examined the antecedents and consequences of EC in different domains (Mathieu & Zajac, 1990). Hur (2022) believes that EC is a component of an employee’s psychological state. Therefore, employees with a high EC exhibit various positive behaviors, such as high job performance and civic engagement, significantly contributing to organizational growth and sustainability (Hur, 2022). Yandi and Havidz (2022) assert employees’ strong belief that organizations are concerned about their well-being promotes EC. Thus, we argue that committed employees follow organizational objectives and principles and strongly desire to be part of the organization (Lee, Rocco, & Shuck, 2020).

This study has divided EC into three categories: affective commitment, continuance commitment, and normative commitment. Affective commitment refers to emotional attachment and identification with an organization (Muhamad et al., 2023). Continuance commitment refers to loyalty to an organization as employees perceive that switching a job costs too much (Almutairi & Bahari, 2022). Normative commitment relates to employees' work ethics and implicit responsibilities towards an organization (To & Huang, 2022).

### **Climate for Innovation (CFI)**

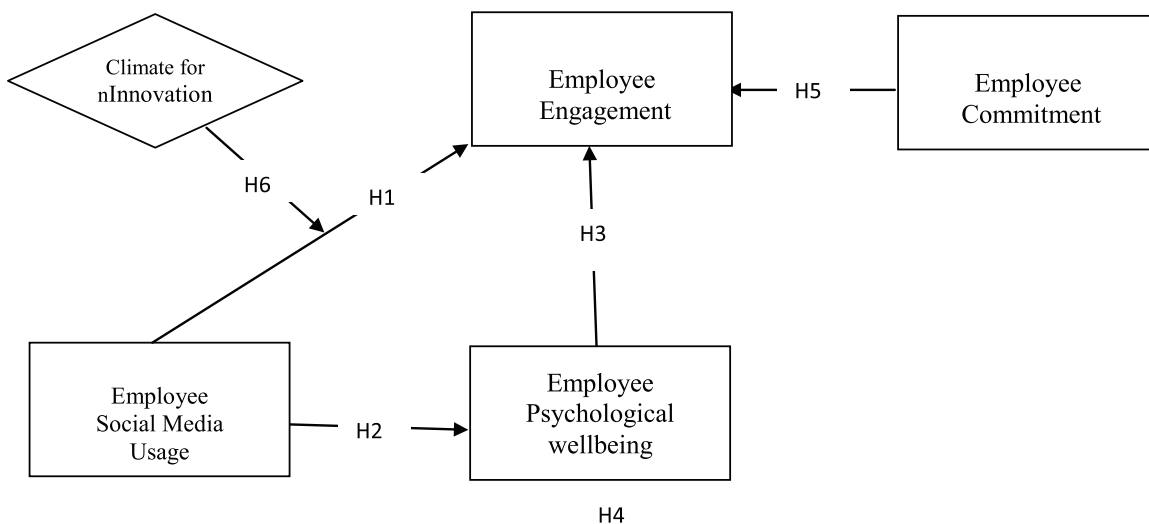
CFI is a merger of "climate and innovation" (Ye, Liu, & Tan, 2022). Climate refers to a firm's established rules, regulations, and policies, which employees follow to achieve organizational goals and objectives (Fischer & Riedl, 2022). Innovation refers to developing new products and business processes that give a firm a competitive edge (Peng & Chen, 2022). Yandi and Havidz (2022) assert that organizations must develop an environment that allows employees to share their thoughts and ideas and criticize prevailing organizational practices. Such interaction and exchange of ideas are necessary for improving a firm's CFI (Fischer & Riedl, 2022).

### **Theoretical Grounding**

Many theories and frameworks support the association between ESMU and EE. However, we have extended Bandura's Social Cognitive Theory (1977) to develop a conceptual framework. Social Cognitive Theory (SCT) postulates that the "human mind" can produce ideas, react, and be proactive (Han et al., 2022). Positive psychology views human functioning from two angles, the first being a fundamental process and the second involving personal development, advancement, and transformation. The social system and societal subsystems affects human attitude and behaviour (Schneider et al., 2022; Hall, Hill, & Dunnington, 2023). Moreover, social culture has an impact on this psychological system. Individuals pick up new skills from their surroundings and achieve their goals (Shah, Shafqat, & Abid, 2023). Social culture is, therefore, not the primary factor influencing how people behave. Rewards and penalties also enhance human behaviors (Diyorugli, 2022; Kim & Baek, 2022). Extending SCT, Alkhayyal, and Bajaba (2023) assert that self-motivation affects PWB when workers know that social engagement improves mental well-being and reduces distress. Ibrahim et al. (2022) assert that social engagement improves employees' output, self-direction, and self-reliance. The Social Cognitive Theory focuses on learning from the social environment Gok et al., 2023). Climate change can have a significant impact on people's behavior and inventiveness. Munir and Djaelani (2022) assert that changing technology and information can affect employees' productivity and efficiency.

## Conceptual Framework

Extending the Social Cognitive Theory, we have proposed a new model, presented in Figure 1.



**Figure 1: Conceptual Framework, Adopted from Reham (2019)**

## Hypothesis Development

### Employee Social Media Usage (ESMU) and Employee Engagement (EE)

Extent Literature Document engagement is essential for transforming and modernizing companies (Ewing, Men, & O'Neil, 2019). Recent research suggests, job qualities, support, incentives, and justice are four factors that influence EE (Nkansah et al., 2022). However, Nimon et al. (2023) distinguished between EE and general involvement. EE refers to adaptability, resolve, and job responsibility, whereas engagement relates to eagerness, attention, and necessity (Cavallone & Palumbo, 2022). Yet, EE and ESMU among employees received little consideration in academic research and managerial practices (Nimon et al., 2023). New technology has transformed conventional forms of communication, leading to the emergence of social media (Oyekan, 2022). Thus, we argue that there is a pressing need to learn new technological and social network skills so employees can do their jobs efficiently. Aichner et al. (2021) claim that Web 2.0 tools can raise EE, foster employee involvement, and strengthen employees' interpersonal skills.

According to earlier research by Alkhayyal and Bajaba (2023), firms can gain a competitive edge by fostering EE (Elrehail et al., 2019; Schneider et al., 2022).



Correspondingly Zhang and Farndale (2022) assert, employees' work approach, behavior, and insight relate to their engagement. In the same context, Rossiandy and Indradewa (2023) assert that engaged employees pay more attention to organizational tasks and objectives than others. Furthermore, social media can be the best tool for bridging the knowledge and information gap (Muna et al., 2022). Using social media at work, such as Facebook, can increase engagement since it fosters worker pleasure, connectivity, affiliation, and engagement (Ndebele, 2019). Conversely, if an organization curtails social media access to the employees, they will become demotivated and disengaged (Kulesza, 2019).

*H1: ESMU positively affects EE.*

### **Employee Social Media Usage (ESMU) and Employee Psychological Well-being (EPWB)**

According to Lunde et al. (2022), EPWB includes life satisfaction and mental health. It also portrays employees' joy, sentiments, and emotions (Harahap et al., 2023). Additionally, communicating on social media is simpler and less skill-intensive than communicating face-to-face (Pradhan & Hati, 2022). Conversely, reduced social media usage may reduce employee commitment (Guerci, Hauff, & Gilardi, 2022). Moreover, it stimulates unhealthy behaviors and employee disengagement, leading to distress, low productivity, and low morale (Pradhan & Hati, 2022). Extant literature documents that social media content has four categories: "informative, entertaining, remunerative and relational content" (Senanu et al., 2023). Individuals choose one or more of the above mentioned contents based on their personality and needs. Previous studies have documented that social media provides a resourceful virtual forum for exchanging knowledge and information with a broad, diversified audience (Huarng, Lee, & Yu, 2023). Researchers believe employees can use acquired knowledge from social media for creativity and innovation (Zhang et al., 2023).

The Social Cognitive Theory postulates that the human mind can perform numerous functions, including creative, reactive, and proactive thinking (Rodrigues et al., 2023). Moreover, the human mind has two mechanisms. The first is the fundamental mechanism, and the second relates to personal development, advancement, and transformation (Vanderhaeghen & Polleux, 2023). Many researchers believe social media usage affects EPWB (Koutroubas & Galanakis, 2022; Zhang et al., 2023). For example, Huarng, Lee, and Yu (2023) assert that social media improves employees' output, self-direction, and independence. In contrast, many researchers believe social media usage is not an adequate measure of employee performance, as social media may divert employees' focus from work, reducing productivity and performance (Zhang et al., 2023).

*H2: ESMU positively affects EPWB.*

### **Employee Psychological Well-being (EPWB) and Employee Engagement (EE)**

Evidence in the literature shows that EPWB precedes employee participation (Tisu et al., 2020). Priskila, Tecoalu, and Tj (2021) assert that EPWB enhances EE and employee performance. Similarly, extant literature documents that adaptability, enthusiasm, and high performance are important precursors of EPWB and EE (De-la-Calle-Durán & Rodríguez-Sánchez, 2021). Moreover, researchers believe EPWB enhances employees' morale and mental health, resulting in many positive outcomes, including job satisfaction and self-assurance. Conversely, low EPWB relates to disengagement and decreased energy (Priskila, Tecoalu, Tj 2021). Researchers cite that EPWB promotes positive emotions in employees. As a result, employees carry out organizational tasks efficiently. Researchers also believe that employees' positive emotions is necessary for employees' mental health and well-being (De-la-Calle-Durán & Rodríguez-Sánchez, 2021).

Several studies have examined the association between EPWB and EF and found they are positively correlated (Tisu et al., 2020). These studies also concluded that EPWB fosters drive, self-reliance, and self-assurance, which increase EE (Priskila, Tecoalu, Tj, 2021; Priskila, Tecoalu, Tj 2021). Moreover, employees with high PWB tend to become more engaged and work better than those with low PWB (De-la-Calle-Durán & Rodríguez-Sánchez, 2021). Researchers also argue that job performance, satisfaction, motivation, and inspiration correlate with high psychological wellness (Imran et al., 2020). Thus, we argue that a high EPWB promotes EE. Conversely, a low EPWB inversely correlates with EE.

*H3: EPWB is positively associated with EE.*

### **Employee Social Media Usage (ESMU), Employee Psychological Well-being (EPWB), and Employee Engagement(EE).**

Companies may achieve their objectives by focusing on EC and EPWB (Nkansah et al., 2022). Conversely, focusing solely on an EPWB will negatively influence their creativity (Imran et al., 2020). EE and EPWB are highly interrelated. EPWB will suffer if the firm pays more attention to EE. (Priskila, Tecoalu, Tj, 2021). For example, when firms focus on involvement, giving less importance to psychological health, it will hurt employees' emotions. If firms focus on psychological health by giving less attention to involvement, it will adversely affect employees' productivity (Elrehail et al., 2019). Thus, we argue that firms must balance PWB and EE (Elrehail et al., 2019).

Literature documents that psychological health affects employees' dedication and

EE (Priskila, Tecoalu, Tj. 2021). Employee involvement can increase if their PWB increases and decrease if their PWB declines. Also, employees with poor PWB tend to be less committed and engaged at work (Imran et al., 2020). Priskila, Tecoalu, and Tj (2021) document that PWB improves employee well-being, which is necessary to deal with challenging situations (Zhang et al., 2023). Koutroubas and Galanaki (2022) suggest work connections, work-family balance, work overload, reward and retention, and job stability relate to EPWB and EE. Studies document that EPSW mediates ESMU and EE. Employees with a high PWB would have better job satisfaction, contentment, happiness, and productivity, whereas those with a low PWB are likely to have lower EPWB and satisfaction levels (Imran et al., 2020). Thus, we argue that employee EPSWB mediates the relationship between employee ESMU and EE (Watt et al., 2007).

*H4: EPWB mediates the relationship between ESMU and EE.*

### **Employee Commitment (EC) and Employee Engagement (EE)**

In the prevailing competitive era of technology diffusion, firms focus on enhancing EC as it promotes EE and sustainability (Kazi, Rind, & Kazi, 2023). Aggarwal, Jaisinghani, & Nobi, (2022) argue that EC and EE have a dyadic relationships. Commitment relates to employees' attachment to organizations. At the same time, EE, besides being attitude, focuses on improving job performance (Kavyashree et al., 2023). Firms spend considerable resources on developing EC and EE as they realize that such employees are critical for sustainable organizational performance (Yadav, Pandita, Singh (2022). Many past studies have documented that "reduced absenteeism, higher retention, enhanced efficiency" are precursors to employee EC and EE (Susanto et al., 2023). Similarly, Kazi, Rind, and Kazi (2023) assert that EC promotes EE, resulting in employee punctuality, job satisfaction, and motivation.

*H5: EC is positively associated with EE.*

### **Social Media Usage (SMU), Climate for Innovation (CFI) and Employee Engagement (EE)**

A culture of innovation among employees and within an organizations encourages creativity and promotes EE. It also fosters a learning environment where employees are eager to learn new skills while working in teams (Malibari & Bajaba, 2022). Wijayati et al. (2022) assert that ESMU, CFI, and EE are highly correlated. Moreover, EE increases in an environment that fosters innovation and offers flexibility, creativity, learning, and innovation (Wijayati et al., 2022). Chaubey and Sahoo (2022) believe that CFI is necessary to engage employees and keep them motivated. Extant literature also documents that firms can increase EE by encouraging employees to share their innovative ideas with

the management and other team members (Ross, 2022). Past studies document that CFI has a varying effect on ESMU and EE. An increase in the CFI will increase the effect on the relationship between ESMU and EE (Demircioglu, 2023). At the same time, a poor CFI will decrease the effect on the relationship between ESMU and EE (Karimi, Malek, & Farani, 2022).

*H6: CFI moderates ESMU and EE.*

## Methodology

### Research Design

Since the study has developed hypotheses based on the literature review, which it tested empirically, it falls into the category of deductive research (Proudfoot, (2023). The study has collected data from the employees of the leading textile units of Karachi based on questionnaire adopted from past studies, as it is a convenient method for collecting data from a large population (Haque, (2022).

### Population and Sample Size

The study has focused on the textile sector of Karachi. Pakistan's textile industry is Asia's eighth-largest exporter of textile goods (Textile Board Investment, 2023). The textile sector's contribution to GDP is about 8.5%, and it employs about 8.5% of the total labor force in Pakistan. Researchers have recommended different methods for calculating sample size. For example, Hair Jr. et al.(2017) suggest using 10 to 30 samples for each indicator in the study to calculate the minimum sample size. Using the suggestion mentioned above, we found that a sample of 330 would be appropriate for this study 330 (33 indicators X 10 samples).

### Respondents Profile

In Table 1, we have presented the summary of respondents' profile regarding gender, age, qualification, and experience.

**Table 1: Demographic Profiles**

Demographics	Classification	Percentage
Gender	Male	52%
	Female	48%
Age	21-30	25%
	31-40	46%
	41-50	30%

Qualification	51 and above	20%
	Bachelors	80%
	Masters	15%
	PHD	5%
Experience	1-5 years	45%
	6-10 years	30%
	11-20 years	18%
	20 and above	7%

### **Instrument Design**

The study has adopted the questionnaire from past studies. Table 2 depicts a summary of constructs and items used in the questionnaire.

**Table 2: Instrumentation**

<b>Constructs</b>	<b>Sources</b>	<b>Items</b>	<b>Cronbach Alpha</b>
Employee Social Media Usage	Ellison, et al. ( 2007).	6	0.730 to 0.780
Employees Psychological Well Being	Ryff, (1989).	6	0.779 to 0.846
Climate for Innovation	Durcikova et. (2011).	4	0.801 to 0.863
Employee Engagement	Schaufeli and Bakker, (2004).	9	0.787 to 0.889
Employees Commitment	Sayed et al. (2021).	8	0.990 to 0.883

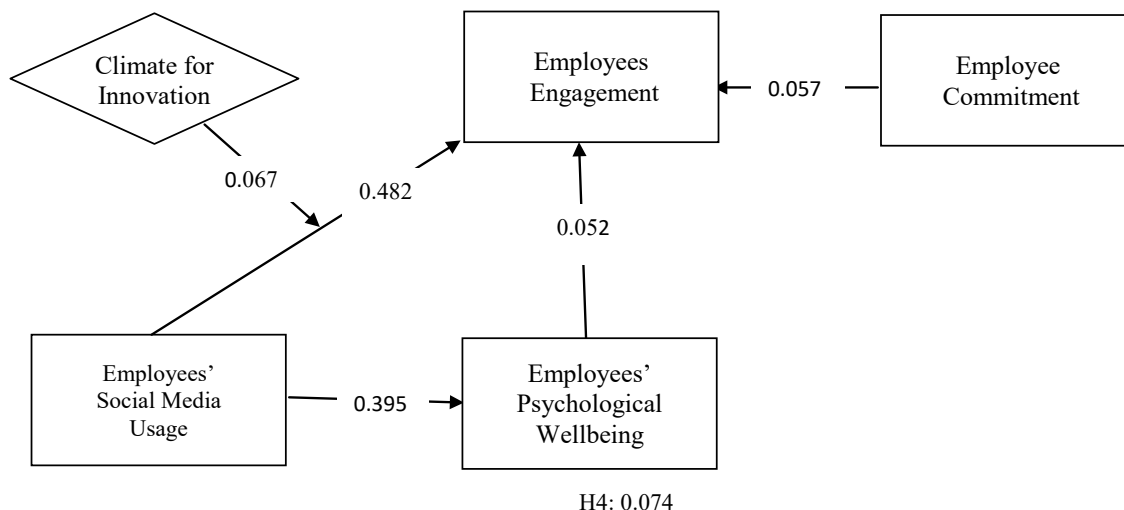
### **Statistical Techniques for Data Analysis**

Following the advice of Wong (2013), the study used Smart PLS’s two-step process. Initially, we developed a measurement model for “reliability and validity,” followed by a structural model for results related to the hypotheses.

## **Results**

### **Measurement Model**

As mentioned earlier, the study has adopted a two-step process. In step one, we used Smart PLS for the measurement model, which the study has presented in Figure 2, followed by related results.



**Figure 2 Measurement Model**

### Convergent Validity

Convergent validity explains the association of a latent variable with its indicator variables. Researchers suggest using composite reliability (Cheah et al., 2020) and Average Variance Extracted (Paclawskyj et al., 2001; Hair Jr et al., 2021) values for assessing convergent validity. Refer to Table 3 for related results.

**Table 3: Construct Reliability and Convergent Validity**

Variables	Cronbach's alpha	Composite reliability)	Average variance extracted (AVE)
Climate for Innovation	0.819	0.825	0.579
Employee Engagement	0.887	0.887	0.690
Employee Usage of Social Media	0.877	0.883	0.561
Employee's Psych. Well-being	0.825	0.848	0.535
Organizational Commitment	0.725	0.714	0.557

The results in Table 3 show that all composite reliability values are at least 0.714, which aligns with the suggestion of Kamis et al. (2020). And AVE values are at least 0.535, which are also in line with the recommendation of Aburumman et al. (2022). Since these values are within the prescribed range, as suggested by Pering (2020), we have inferred that the constructs fulfill the requirements of convergent validity.

## Discriminant Validity

Using Fornell and Larcker Criteria (1981), we found that the constructs are “unique and distinct.” Refer to Table 4 for related results.

**Table 4: Discriminant Validity**

Variables	EI	EE	SM	PWB	OC
Climate for Innovation	0.761				
Employee Engagement	0.474	0.869			
Social Media	0.587	0.633	0.861		
Psyc Well-being	-0.408	-0.377	0.691	0.732	
Organizational Commitment	0.146	0.074	0.234	0.106	0.746

The results show that EE (0.869) has the highest AVE square root value, and the lowest is for EPSW (0.732). Since all “AVE square root values are higher than the Pearson Correlation values,” we can safely assume that the latent variables used in the study are unique and distinct.

## Predictive Power

Smart PLS also measures the predictive power of the measurement model that other software doesn’t. The study used R square values to assess the model’s predictive power. The study has summarized the results in Table 5. Since all “R-square values are greater than 0.20,” we have inferred that the measurement model generated in the study has adequate predictive power.

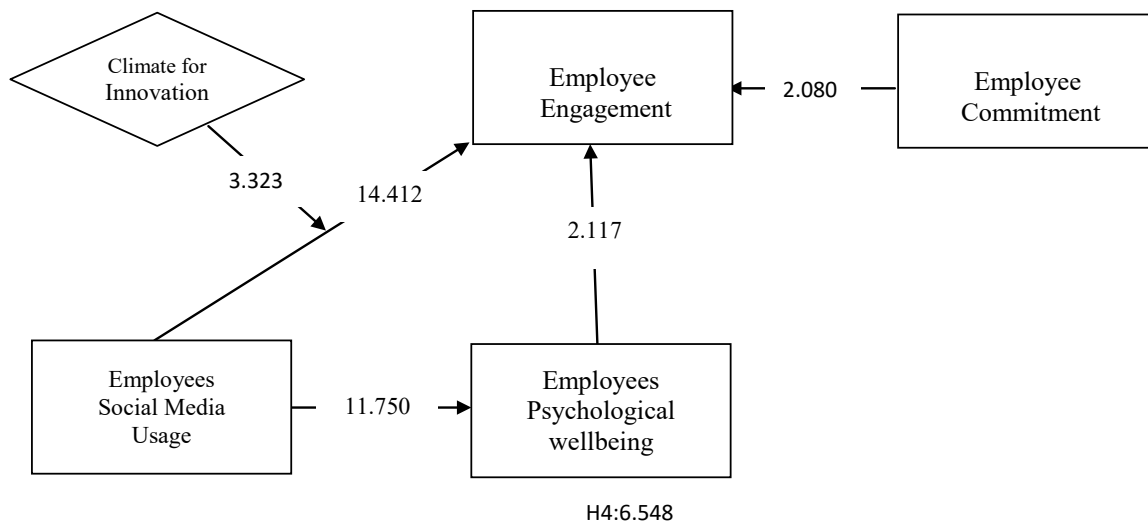
**Table 5: Predictive Power of the Model**

Variables	R-square
Employee Usage of Social Media	0.213
Employee’s Psychological Well-being	0.210
Organizational Commitment	0.202

## Structural Model

Figure 3 depicts the structural model, suggesting an adequate association between

latent variables.



**Figure 3: Structural Model**

### Hypothesis Results

Extending the Social Cognitive Theory (SCT), we proposed a new model. It has four direct, one mediating, and one moderating. Based on the data collected from the leading textile units in Karachi, we empirically tested six proposed hypotheses and found support for all of them. The results are summarized in Table 6.

**Table 6: Hypotheses Results**

Hypotheses	$\beta$	T values	P values	Results
Emp. Social Media Usage -> Emp. Eng.(H1)	0.482	14.412	0.002	Accepted
Emp. Social Media Usage -> Psy. Well-being (H2)	0.395	11.750	0.001	Accepted
Emp. Psy. Well-being -> Employee Eng. (H3)	0.052	2.117	0.012	Accepted
S. M Usage -> E Psy. Well-being -> E. Eng. (H4)	0.074	6.548	0.013	Accepted
Employee Commit -> Employee Engagement (H5)	0.057	2.080	0.000	Accepted
Climate for Innovation x S. Media Usage -> E. Eng. (H6)	0.067	3.323	0.014	Accepted

The results presented in Table 6 show that of the four direct hypotheses, the strongest effect is of Hypothesis 1 ( $\beta = 0.482$ ,  $t = 14.412 < 0.05$ ), followed by Hypothesis 2 ( $\beta = 0.395$ ,  $t = 11.750 < 0.05$ ), Hypothesis 5 ( $\beta = 0.057$ ,  $t = 2.080 < 0.05$ ) and Hypothesis 3 ( $\beta = 0.052$ ,  $t = 2.117 < 0.05$ ).



## Discussion and Conclusion

### Discussion

The study accepted Hypothesis 1, stating “ESMU affects EE” ( $\beta=0.482$ ,  $t=14.412 < 0.05$ ), and it validates many studies, including those of (Nimon et al., 2023). Rossiandy and Indradewa (2023) assert that engaged employees pay more attention to organizational tasks and objectives than others. Social media can be the best tool for bridging the knowledge and information gap (Muna et al., 2022). Using social media at work, such as Facebook, can increase engagement since it fosters worker pleasure, connectivity, affiliation, and engagement (Ndebele, 2019). Conversely, if an organization curtails social media access to the employees, they will become demotivated and disengaged (Kulesza, 2019).

The study accepted Hypothesis 2, stating “ESMU positively affects employee EPWB” ( $\beta=0.395$ ,  $t=11.750 < 0.05$ ), and it validates many studies, including those of De-la-Calle-Durán and Rodríguez-Sánchez( 2021). The Social Cognitive Theory postulates that the human mind can perform numerous functions, including creative, reactive, and proactive thinking (Rodrigues et al., 2023). Moreover, the human mind has two mechanisms. The first is the fundamental mechanism, and the second relates to personal development, advancement, and transformation (Vanderhaeghen & Polleux, 2023). Many researchers believe social media usage affects EPWB (Koutroubas & Galanakis, 2022; Zhang et al., 2023). For example, Huarng, Lee, and Yu (2023) assert that social media improves employees’ output, self-direction, and independence. In contrast, many researchers believe social media usage is not an adequate measure of employee performance, as social media may divert employees’ focus from work, reducing productivity and performance (Zhang et al., 2023).

Hypothesis 3, stating “EPWB affects EE ( $\beta=0.052$ ,  $t=2.117 < 0.05$ ), and the results align with many studies, including those of (Priskila, Tecoalu, and Tj (2021). Several studies have examined the association between EPWB and EF and found they are positively correlated (Tisu et al.. 2020). These studies also concluded that EPWB fosters drive, self-reliance, and self-assurance, which increase EE (Priskila, Tecoalu, Tj. 2021; Priskila, Tecoalu, Tj 2021). Moreover, employees with high PWB tend to become more engaged and work better than those with low PWB (De-la-Calle-Durán & Rodríguez-Sánchez, 2021). Researchers also argue that job performance, satisfaction, motivation, and inspiration correlate with high psychological wellness (Imran et al., 2020).

Hypothesis 4 states, “ PWB mediates employe SMU and EE,” which our results support ( $\beta=0.074$ ,  $t=6.548. < 0.05$ ), and it also validates many studies, including those of Elrehail

et al. (2019). Employee involvement can increase if their PWB increases and decreases if their PWB declines. Also, employees with poor PWB tend to be less committed and engaged at work (Imran et al., 2020). Priskila, Tecoalu, and Tj (2021) document that PWB improves employee well-being, which is necessary to deal with challenging situations (Zhang et al., 2023). Similarly, Koutroubas and Galanaki (2022) suggest work connections, work-family balance, work overload, reward and retention, and job stability relate to EPWB and EE. Studies document that EPSW mediates ESMU and EE. Employees with a high PWB would have better job satisfaction, contentment, happiness, and productivity, whereas those with a low PWB are likely to have lower EPWB and satisfaction levels (Imran et al., 2020).

Our study supports Hypothesis 5, which states, “ EC positively affects E ” ( $\beta=0.057$ ,  $t=2.080 < 0.05$ ). The findings have extended many past studies, including those of Kazi, Rind, and Kazi (2023). Wijayati et al. (2022) assert that ESMU, CFI, and EE are highly correlated. Moreover, employee engagement increases in an environment that fosters innovation and offers flexibility, creativity, learning, and innovation (Wijayati et al., 2022). In the same context, Chaubey & Sahoo (2022) believe that CFI is necessary to engage employees and keep them motivated. Extant literature also documents that firms can increase EE by encouraging employees to share their innovative ideas with the management and other team members (Ross, 2022). Past studies document that CFI has a varying effect on ESMU and EE. An increase in the CFI will increase the effect on the relationship between ESMU and EE (Demircioglu, 2023). Conversely, a poor CFI climate will decrease the effect on the relationship between ESMU and EE (Karimi, Malek, & Farani, 2022).

Hypothesis 6 states that “CFI moderate employee SMU and EE ” ( $\beta=0.067$ ,  $t= 3.323 < 0.05$ ). The findings are consistent with many studies’ results, including those of Wijayati et al. (2022). Wijayati et al. (2022) assert that ESMU, CFI, and EE are highly correlated. Moreover, employee engagement increases in an environment that fosters innovation and offers flexibility, creativity, learning, and innovation (Wijayati et al., 2022). Similarly, Chaubey and Sahoo (2022) believe that CFI is necessary to engage employees and keep them motivated. Extant literature also documents that firms can increase EE by encouraging employees to share their innovative ideas with the management and other team members (Ross, 2022). Past studies document that CFI has a varying effect on ESMU and EE. An increase in the CFI will increase the effect on the relationship between ESMU and EE (Demircioglu, 2023). Conversely, a poor CFI climate will decrease the effect on the relationship between ESMU and EE (Karimi, Malek, & Farani, 2022).

## **Conclusion**

The study has focused on the textile sector of Karachi. Pakistan’s textile industry is

Asia's eighth-largest exporter of textile goods (Textile Board Investment, 2023). The textile sector's contribution to GDP is about 8.5%, and it employs about 8.5% of the total labor force in Pakistan. By extending Bandura's Social Cognitive Theory (1977), we propose a new model containing four direct hypotheses, one mediating relationship and one moderating proposition. Based on the data collected from the targeted textile sector and using smart PLS, we found the study supports all the hypotheses, aligning with the past literature.

The study also documents employee ESMU, EPWB, and EC promote EE. ESMU affects EE. EPWB mediates ESMU and EE. CFI moderates ESMU and EE. Since we found support for all the articulated hypotheses, the study has increased the generalizability of Bandura's Social Cognitive Theory (1977).

### **Implications**

We found that social media is an important precursor of EE and EPWB. Therefore, we suggest the firms encourage employees to use social media. Such a social interaction increases employee involvement and positively affects employee well-being. Also, past studies document social media interaction generates new ideas, resulting in improved business processes and innovative products. We also recommend firms must focus on creating an innovative environment. Employees suggest new ideas about new business processes and innovation in such an environment. New ideas may not result in innovative products all the time, but may increase employee involvement and engagement. Many leading firms have made a policy in which all the employees have to give new ideas perpetually, producing good results. Textile firms in Pakistan may adopt and implement this policy.

### **Limitations and Future Research**

The study has focused on the textile sector of Karachi, Pakistan. Other studies may use other sectors and other cities of Pakistan. A comparative study between the two sectors may bring more insights into the phenomenon. The number of variables used in the study is limited to five. Other researchers may take the holistic approach by incorporating more organizational-related variables in the study. The study has used EPWB as a mediator. Other studies could use spirituality as a mediator. We have used CFI as a moderator, and other studies could use cultural dimensions such as power distance individualism/collectivism as moderators. Demographic factors such as gender, age, and experience do not have the same perception on most organizational-related outcomes. Future studies could use the same as a moderator in their studies.

## Annexure-1

### Constructs and Items Used in the Questionnaire

#### Employee Commitment

EC1. I feel emotionally attached to my current employer.

EC2. I feel a strong sense of belonging to my current employer.

EC3. I feel like a part of the family with my current employer.

EC4. I would happily spend the rest of my career with my current employer.

EC5. I feel as if my current employer's problems are my own.

EC6. My current employer has a great deal of personal meaning to me.

EC7. My life would be disrupted if I decided to stop working for my current employer.

EC8. I have a few options to consider if I leave my current job.

#### Employee Social Media Usage

ESMU1. Social media is part of my everyday activity at work.

ESMU2. I am proud to tell people I use social media at work

ESMU3. Social media has become part of my daily routine at work.

ESMU4. I feel I am part of the social media community at work.

ESMU5. I would be unhappy if I were not allowed to use social media.

ESMU6. I believe social media is a vital source of acquiring knowledge.

#### Employee Psychological Well-being

EPW1. I have confidence in my opinions, even if they differ from others.

EPW2. In general, I feel I have control of the situation in which I live.

EPW3. Having new experiences that challenge me in how I think about myself and the world is important.

EPW4. People would describe me as a person who is willing to give and share time with others.

EPW5. Some people wander through life, but I am not one of them.

EPW6. I like most aspects of my personality.

#### Climate for Innovation

CFI1. My supervisor encourages me to share my ideas with him.

CFI2. My organization rewards employees for developing innovative ideas and products.

CFI3. Employees in my organization try to develop new skills to complete their jobs efficiently.

CFI4. Employees in my organization are not afraid of change management.

**Employee Engagement**

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EE1. At my work, I feel energetic.

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EE2. At my job, I feel strong and vigorous.

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EE3. I look forward to going to work when I get up.

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EE4. My job inspires me.

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EE5. I am enthusiastic about my job.

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EE6. I am proud of the work that I do.

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EE7. I feel happy when I am working intensely.

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EE8. I am engrossed in my work.

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EE9. Time flies when I am working.

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## **Conflict of Interest**

The author (s) declared no conflict of interest and have not received any funds for the project.

# The Impact of Technological Advancement in Airports on Passenger Convenience At Jinnah International Airport Karachi

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## Abstract

In the prevailing technology era, travelers prefer airports that provide self-service and other supportive technologies. These technologies increase travelers' enjoyment and satisfaction and enhance their confidence. Consequently, they develop a positive image of such airports. Given its importance, this study examined the effect of airport self-service technologies (ASSTs) on traveler confidence benefits (TCBs) and the impact of airport-supporting technologies (ASTs) on traveler enjoyment. We also examined the impact of traveler confidence benefits (TCBs) and traveler enjoyment (TE) on traveler satisfaction (TS). The study also explored the effect of traveler satisfaction (TS) on airport image (AI). The study focuses on the local and international passengers traveling from the Jinnah International Airport, Karachi. We distributed 450 questionnaires in the local and international lounges on different days and times, and we received 415 questionnaires. The study found airport self-service technologies (ASSTs) promote traveler confidence benefits (TCBs), and airport supporting technologies (ASTs) positively affect travelers enjoyment. The study also documents that traveler confidence benefits (TCBs) and traveler enjoyment stimulate traveler satisfaction (TS). The study also found traveler satisfaction (TS) positively affects airport image (AI)

**Keywords:** *Airport image (AI), airport self-service technologies (ASSTs), airport supporting technologies (ASTs), traveler enjoyment (TE), travelers confidence benefits (CCBs), customer*

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*satisfaction (TCBs), and Jinnah International Airport.*

## Introduction

Airline careers in the last few decades have adversely suffered due to high operating costs, intensive competition, and low confidence and trust of air passengers (Zhang et al., 2022). Airlines' growth and sustainability profoundly depend on skilled airport staff, and reducing passengers' long waiting times (Rassu, Coni, and Maltinti, 2023). Apart from other measures, this will decrease the consumers' negative perceptions of the airlines, leading to positive trust and confidence (Rengarajan et al., 2021). Air travelers' reliance on technology has increased significantly in this technological era. Therefore, airlines must spend considerable resources on airport self-service and support technologies (Suthatorn & Charoensukmongkol, 2023; Grybauskas, Stefanini, & Ghobakhloo, 2022). Consumers often develop the region's image based on their perception of the airport (Arasli, Saydam, Jafari, & Arasli, 2023). The survival of firms in this competitive era significantly depends on adopting new technologies and implementing and aligning them with their values (Rengarajan et al., 2021; Arasli, Saydam, Jafari, & Arasli, 2023). Nene and Zheku (2023) assert that to promote tourism in a country, policymakers must spend considerable resources to improve the image and décor of the airports. Airports world over offer various services to different stakeholders. They provide many facilities without compromising passengers' safety (Lee-Anant & Monpanthong, 2021). Many researchers found that most passengers consider the airport a shopping paradise due to the availability of duty-free and trendy goods and services and the large retail markets (Sun & Zuo, 2023). Many countries, including Dubai and Hongkong, have promoted tourism in their countries by spending considerable resources on their airports. Tourists in these countries enjoy spending time in the airports famous for shopping, entertainment, and recreational facilities (Lau, 2023).

So, the airport must deliver excellent service, increase customer satisfaction, and enhance the image of the airport to remain competitive in the aviation industry (Bakir et al., 2022). Passengers demand accurate online and self-service alternatives (Pholsook et al., 2023). Besides employees at help desks, consumers also use available technologies in airports (Chonsalasin et al., 2022). Service firms like airports use supportive systems to increase service effectiveness and efficiency (Dalkiran, 2023). Additionally, it focuses on increasing modern and convenient equipments to enhance customer satisfaction and the airports' image (Pamucar, 2021). Researchers believe that all these technologies directly and indirectly affect travelers' confidence (TC), traveler enjoyment (TE), traveler satisfaction (TS), and airport image (AI). Thus, the study objectives are as follows:

- I. To ascertain the impact of airport self-service technologies (ASSTs) on traveler

confidence benefits (TCBs).

- II. To ascertain the impact of Airport-supporting technologies (ASTs) on traveler enjoyment (TE).
- III. To ascertain the effect of traveler confidence benefits (TCBs) and traveling enjoyment (TE) on traveler satisfaction (TS).
- IV. To ascertain the effect of traveler satisfaction (TS) on airport image (AI).

## Literature Review

### Airport Self-Service Technologies (ASSTs)

Airport self-service technologies (ASSTs) enable customers to obtain airport-related services independently without the help of airport or service carrier employees (Al-Raisi & Krishnan 2023). Some examples of airport self-service technologies (ASSTs) are "Automated teller machines (ATMs), automated hotel checkout (AHC), online banking (OB), and Internet-based services (IBs). These discussed technologies in all organizations, including airports, have changed customers' perception of interacting with the organizations (Pamucar et al., 2021). These services are also beneficial to consumers and service providers. Service providers save human resource costs, and customers benefit from efficient services (Omrani, Shamsi, & Emrouznejad, 2023). Due to technological development, travelers in most airports can purchase air tickets, obtain updated information on the status of their flights, select seats, and check baggage through technological interfaces (Soonthodu, Wahab, & Hassan, 2022). Extant literature documents that most passengers enjoy and appreciate airport self-service technologies (ASSTs). As a result check-in, passenger waiting has decreased significantly (Hole et al., 2023).

### Airport Supporting Technologies (ASTs)

Airport supporting technologies (STs) include technological interfaces airport operators use to satisfy their customers, resulting in increased revenue, efficiency, and achieving relevant organizational objectives (Brady & Lin, 2023). Some examples of airport-supporting technologies (AST) include mobile chargers, internet facilities, smartphone apps, tour guides, and business centers. All these facilities enhance the image of an airport and increase passengers' enjoyment (Waris, Adisasmita, & Ramli, 2022). Researchers assert that all these facilities are also important for the tourism and service sectors (Utama, 2023). For example, based on empirical research, Kim, Song, and Lee (2023) found that airport-supporting technologies (ASTs) are important

precursors of guests' behavior attitudes and purchase intentions, including satisfaction. More recent literature documents that guest-related technological amenities such as universal battery chargers (USB) in the guest rooms improve the guest experience (Verma & Thakur, 2022). Many airports provide mobile indoor navigation application that provides terminal maps for the passengers, which helps passengers locate their respective terminals conveniently (Ramesh et al., 2023).

### **Traveler Confidence Benefits (TCBs)**

Traveler confidence benefits (TCBs) reduce passengers' perception of risk and anxiety, resulting in trust, faith, and confidence in service providers (Fakfare, Promsivapallop, & Manosuthi, 2023; Herz et al., 2022). Similarly, Liu-Lastres, Mirehie, and Cecil (2021) document that TCBS reduces customers' risk perception and enhances airline trust. Risk perception is the subjective judgment of consumers about the negative consequences of purchasing goods (Ortega-Egea & García-de-Frutos, 2021). Trust also relates to the service providers' reliability and creditability (Zhuang, Luo, X., & Riaz, 2021). Confidence and trust are important for a sustainable relationship between customers and service providers (Nikbin, Aramo, Iranmanesh, & Ghobakhloo, 2022). Relational benefits are consequences of interaction between service providers and consumers, which are more complex in service industries like airlines (Prentice, Hsiao, Wang, & Loureiro, 2023). Most service providers, including airline, has the facility of self-service technologies (SSTs). As a result, human interaction between customers and employees has decreased considerably, but still, it has not reduced the significance of interpersonal relationships (Kaur, Ali, Hassan, & Al-Emran, 2021).

### **Traveler Enjoyment (TE)**

Air travelers' enjoyment relates to hassle-free traveling without anxiety and tension (Rostamian, Ranjbarian, Shahin, & Ansari, 2023). Researchers believe technology is an important antecedent of enjoyment (Moon & Lee, 2022; Aziza, 2023). In the same context, Gulfranz et al. (2022) assert that enjoyment promotes customer satisfaction (Miao et al., 2022). As a result, it also reduces travelers risk perception (Arpah & Nabella, 2023) and enhances perceived personal control (Han et al., 2023). Air travelers often experience prolonged waits in lounges for the next connecting flights. Therefore, they spend their leisure time using personal and other gadgets in the airport lounge (Arpah & Nabella, 2023). Many researchers believe depriving passengers of technological gadgets may adversely affect their leisure time (Sulu, Arasli, & Saydam, 2021; Moon & Lee, 2022).

### **Traveler Satisfaction (TS)**

Given the importance of satisfaction in service and manufacturing sectors, researchers have extensively examined it in different domains using different antecedents and consequences (Douglas & Weber, 2023). Extant literature documents that consumers'

satisfaction with goods and services depends on their pleasant experience. They will be highly satisfied if their experience exceeds their expectations (Bellizzi et al., 2022). A bad experience with goods and services will result in poor satisfaction (Munoz & Laniado, 2021). Initially, researchers thought satisfaction was a cognitive aspect, but later, they believed it included cognitive and emotional components (Dughi et al., 2023). Airlines in the current era operate at low margins, and the industry is highly competitive. Therefore, besides other factors, airlines must focus on travelers' satisfaction for competitive edge and sustainability (Al-Awadh, 2023). Researchers believe even empathetically listening to customers' complaints helps reduce the impact of low satisfaction (Treen & Yu, 2022). In the present era of social media, if organizations do not amicably resolve customers' complaints, most of them would share their bad experiences in the social media forums, resulting in an adverse brand image (Anastasiu, Dospinescu, & Dospinescu, 2023).

### **Airport Image (AI)**

An airport is a huge setup. Consumers use this setup to travel and collect luggages (Abouseada, Hassan, Saleh, & Radwan, 2023). It is a complex system that demands effective management (Hwang, Kim, Joo, & Lee, 2022), coordination (Usman, Azis, Harsanto, & Azis, 2022), communication (Abdel-Gayed et al., 2023), safety of passengers, and customers satisfaction (Abouseada, Hassan, Saleh, & Radwan, 2023). Besides other factors, these aspects significantly contribute to building airport image (Saut & Song, 2022). Researchers assert that a reputable airport image promotes its reputation, credibility, and performance. Moreover, it attracts more airlines, passengers, and other stakeholders (Hwang, Kim, Joo, & Lee, 2022). To build a strong image, an airport must have a clear mission and vision aligning with its goals, values, and identities (Hwang, Kim, Choe, & Kim, 2023). Moreover, the mission and vision of the airport helps management in strategic planning, decision-making, and communicating with all the stakeholders (Martinez et al., 2021). The mission and vision of the airports must align with the protocols of the aviation industry and customers' needs (Thomas & Scandurra, 2023).

Airport managers must communicate their vision and mission using logos, slogans, and social media (Saut & Song, 2022). Personal interaction is important for building a brand image. Therefore, airports must invest resources in employees' development since they interact with the passengers. Airport management must also develop a culture of professionalism and accountability (Abdel-Gayed et al., 2023). Moreover, the airport management must reward their staff for achievement and contribution. Management can increase staff motivation, morale, and loyalty by developing a reward and achievement policy. All these factors, directly and indirectly, enhance customers' trust, satisfaction, and image of an airport (Usman, Azis, Harsanto, & Azis, 2022).

## Hypothesis Development

### **Airport Self Service Technologies (ASSTs) and Traveler Confidence (TC)**

Due to its many advantages, most banks, retail stores, and lodgings have adopted self-service technologies (SSTs). Some of the advantages of self-service technologies (SSTs) are they reduce labor costs (Moon & Lee, 2022), reduce waiting time (Kim, Park, Uhm, & Lee, 2023), and increase the efficiency of service delivery (Antwi et al., 2021). Researchers have different opinions on the effect of self-service technologies (SSTs) on customer satisfaction (Kim, Song, & Lee, 2023). Some researchers believe that self-service technologies (SSTs) reduce interactions between customers and employees, and this dehumanization may adversely affect customer relational benefits (Moon & Lee, 2022). Extant literature suggests that customers with high anxiety towards technology do not prefer airport self-service technologies (ASSTs). Similarly, many researchers argue that technology reduces the relational benefits between customers and businesses (Hole, Mei, Engh, & Engen, 2023). Moreover, it provides different avenues for developing customer relations (Fakfare, Promsivapallop, & Manosuthi, 2023). For example, confident customers, while using airport self-service technologies (ASSTs), may feel they belong to the modern technological era, and their dependency on others may reduce significantly (Chiu & Nguyen, 2022). Frequent travelers have a complex and diversified need, which, according to many researchers, traditional service counters cannot fulfill (Moon & Lee, 2022).

In contrast, contemporary air travelers can choose their complex traveling plans based on the wide spectrum of airport self-service technologies (ASSTs) options. These options of self-service technologies (SSTs) increase customers' control perception (Kim, Song, & Lee, 2023). Human interaction with service employees is inevitable. Self-service technology (SSTs) reduces unnecessary interactions and long waiting (Antwi et al., 2021). Many past studies found that airport self-service technologies (ASSTs) make the service process more efficient. These studies also show no negative correlation between risk perception and passengers using airport self-service technologies (ASSTs) (Hole, Mei, Engh, & Engen, 2023).

*H1: Air Self-service technologies (ASSTs) positively affect travelers' confidence benefits (TCBs).*

### **Airport Supporting Technologies (ASTs) and Travel Enjoyment (H2)**

Air travelers use many other airport-supporting technologies (ASTs), such as tablet applications, for accessing information related to flight schedules and the status of their flights and managing their traveling requirements (Chatterjee, Kittur, Vishwakarma, &



Dey, 2023). Researchers document that contemporary travelers enjoy using technology-related applications, including internet, mobile chargers, and television, while waiting for their flights or connecting flights. Without airport-supporting technologies (ASTs), air travelers' traveling experience may be unpleasant (Fulghum, 2022; Li, 2023). Abou-Shouk, Gad, and Abdelhakim (2021) assert that passengers use their devices for hedonic purposes such as "reading, video watching, social media, and online chats." At the same time, many passengers used supportive devices for business-related activities, including "checking emails, scheduling activities, or other official work" (Dos-Santos & Edra, 2023). Thus, many researchers argue that airport-supportive technologies (ASTs) allow passengers to perform daily official and social routines leading to enjoyment (Setiawan, Akbardin, & Permana, 2022; Li, 2023).

*H2. Airport-supporting technologies (ASTs) positively affect traveler enjoyment (TE).*

### **Traveller Confidence Benefits (TCBs), Traveler Enjoyment (TE) and Traveler Satisfaction (TS)**

Many past studies have examined the association between TCBs, TE, and TS in different domains and found that they are positively correlated (Chang, Cheng, Kuo, & Cheng, 2023). Extant literature documents that consumers who enjoy shopping are more satisfied with the goods and services than those who do not (Zhou & Yu, 2022). In the context of the air industry, studies found that air travelers who experience positive emotions while traveling are more satisfied than those who experience negative emotions (Dinkoksung et al., 2023). Moreover, Setiawan, Akbardin, and Permana (2022) argue that interacting with service providers develops relational benefits that profoundly increase customer satisfaction (Montes-Guerra, Zapata-Cuervo, & Jeong, 2023). Studies document that traveler confidence benefits (TCBs) are important antecedents of traveler satisfaction (TS). Similarly, traveler enjoyment positively affects satisfaction (Lien, Hsu, Shang, & Wang, 2021).

*H3: Airport traveler confidence (ATCBs) positively affects airport traveler satisfaction (ATS).*

*H4: Traveler enjoyment (TE) positively affects airport traveler satisfaction (ATS).*

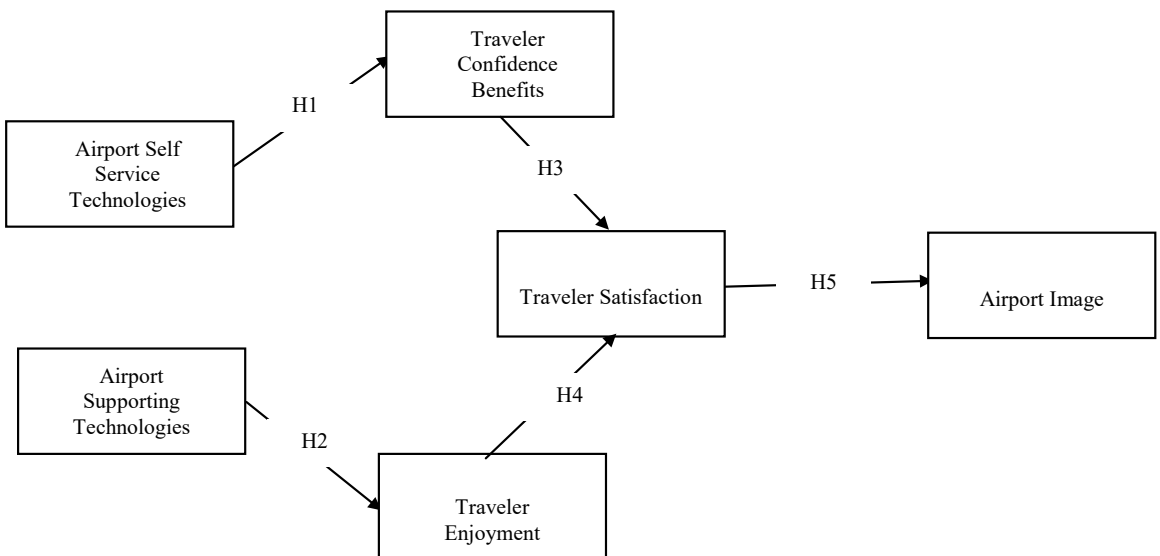
### **Traveler Satisfaction (TS) and Airport Image (AI)**

Satisfaction is the core marketing concept. Researchers have extensively studied it in different contexts and domains (Isyana, 2023). Satisfaction is consumers' perception of what they expect in goods and services and what has been delivered to them (Saut & Song, 2022). Also, if the delivered value proposition exceeds customers' expectations, customers will be highly satisfied (Abdel-Gayed et al., 2023). Zhou and Yu (2022) argue

that satisfaction is consumers' overall evaluation of the entire consumption process, leading to positive attitudes and purchase intentions (Isyana, 2023). From a firm perspective, customer satisfaction is important as it promotes sustainable customer relationships, leading to a large base of loyal customers and firm profitability (Grimonia, Rohman, & Suryadi, 2023).

Many past studies found a positive association between airport customer satisfaction and airport image (AI) (Rita & Odor, 2023). Traveler satisfaction (TS) is an important antecedent to the airport image (Douglas & Weber, 2023). Given its importance, airports spend considerable resources to enhance their image (Zhou & Yu, 2022). Besides other factors, airport image (AI) depends on affective and cognitive components. Both components are important for traveler satisfaction (TS) (Hlee et al., 2023).

*H5: Traveler satisfaction (TS) positively affects airport image.*



**Figure 1: Conceptual Framework**

## Methodology

### Research Design

Research is a blueprint that outlines the methods a study has adopted to collect the data and analysis used in the study. It helps researchers obtain reliable results by defining the research process without biases (Leavy, 2022). The study has adopted

quantitative research as it collected the empirical data based on the questionnaire and analyzed it to obtain the results related to the study's objectives (Cash, Isaksson, Maier, & Summers, 2022). The approach used in the study is deductive, as the study based on literature developed hypotheses that align with the objectives (Fischer, Boone, & Neumann, 2023). Subsequently, we tested the articulated hypotheses based on the data collected from the target population.

### **Population and Sampling**

Population is the number of individuals or elements in a sample frame (Leavy, 2022). The study focuses on the local and international passengers traveling from the Jinnah International Airport, Karachi. We distributed 450 questionnaires in the local and international lounges on different days and times, and we received 415 questionnaires.

### **Pilot Test**

As advised by many researchers, we undertook a pilot test based on 40 respondents. Before the pretest, we explained the aim and purpose of the study to the recruited respondents for the pilot test. The respondents completed the questionnaires in about thirty-five minutes. And they did not face any issues comprehending and understanding the questionnaire's content. Based on data collected through the pilot test, we ascertained the reliability and validity of the constructs and found they were within the prescribed range (Fischer, Boone, & Neumann, 2023).

### **Common Method Bias**

Common method bias can infect the study's results. Either it will give inflated or deflated results. Besides other factors, it occurs if a researcher collects the data of independent and dependent variables from the same respondents (Bozionelos & Simmering, 2022). The study used Harman's single-factor approach to ascertain whether the data set is infected with common method bias. Using this approach, we found that the total variance for a single factor was less than 50%, suggesting the data is not infected with common method bias.

### **Scale and Measures**

The study has adopted the entire questionnaire from different relevant studies. It has six latent variables and 21 indicators. We measured the responses using five Likert scales: five suggest high agreement, and one suggest low agreement. In Table 1, we have summarized constructs, sources, reliabilities in past studies, and items used in each construct.

**Table 1: Scale and Measures**

<b>Constructs</b>	<b>Sources</b>	<b>Reliability</b>	<b>Items</b>
Airport Self-Service Technologies	Bogicevic, et al. (2017).	0.753 to 0.830	3
Airport Supporting Technologies	Antwi et al. (2021).	0.756 to 0.856	3
Passengers Confidence Benefits	Hamdani et al. (2021).	0.787 to 0.845	3
Traveler Enjoyment	Bogicevic, et al. (2017).	0.772 to 0.837	4
Airport Satisfaction	Ryu and Park, (2019).	0.765 to 0.833	4
Airport Image	Ryu and Park, (2019).	0.758 to 0.812	4

## Data Analysis

Researchers suggest using Smart PLS for data analysis as it has several advantages inducing it gives predictive power to the model and solves regression analysis concurrently. Following the advice of the researchers mentioned above, we have used a two-step analysis. In step one, we developed a measurement model (Memon et al., 2022) for the results related to reliability and validity, followed by generating a structural model (Cheah et al., 2020) for the results related to the hypotheses.

## Respondents Profile

The respondents' profile gives readers information on the numbers and types of precipitants so that they can assess to whom the study findings apply. It also helps readers assess the generalizability of the results and find possible limitations. In Table 2, we have presented the summery of respondents' profile.

**Table 2: Respondent Profile**

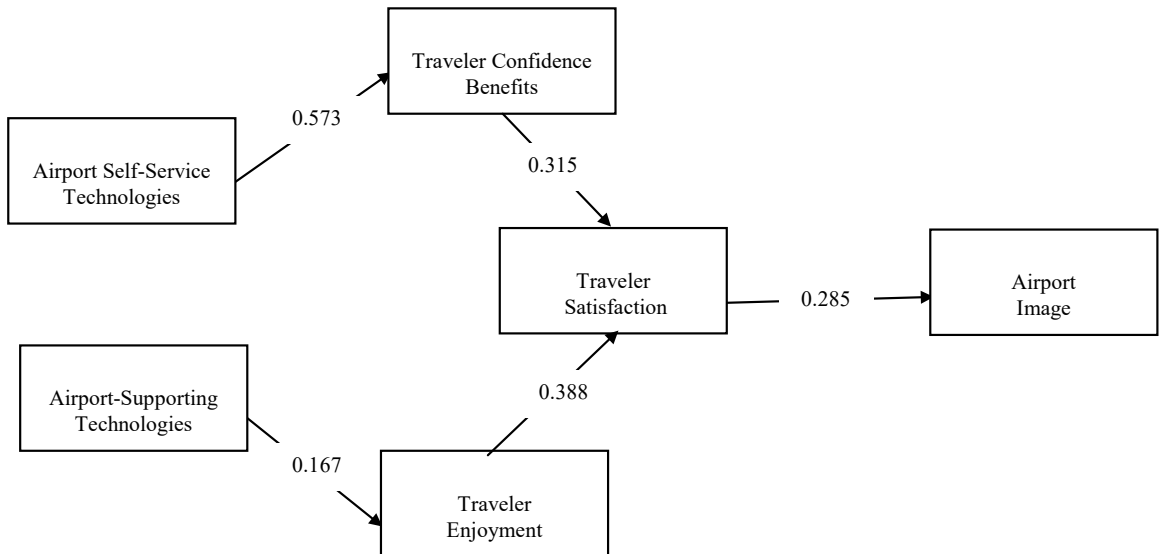
<b>Factors</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Genders</b>		
Males	217	52.29%
Females	198	47.71%
<b>Age Group</b>		
18-24	100	24.09%
25-34	121	29.16%
35-44	110	26.51%
45-54	45	10.84%
55+	39	9.40%
<b>Education Level</b>		
Matric	50	12.05%
Intermediate	140	33.73%
Bachelor's	105	25.30%
Master's	103	24.82%

PhD	17	4.10%
<b>Gender</b>		
Male	200	48.19%
Female	215	51.81%
<b>Employment Status</b>		
Employed	135	32.54%
Unemployed	160	38.55%
Student	96	23.13%
Retired	24	5.78%
<b>Marital Status</b>		
Single	225	54.22%
Married	190	45.78%
<b>Household Income</b>		
Less than 50,000	91	21.93%
50,000 - 100,000	172	41.44%
100,001 - 150,000	82	19.76%
Over 150,000	30	7.23%
Not Disclosed	40	9.64%

## Results

### Measurement Model

The study has adopted a two-step approach for results. Therefore, we initially developed a measurement model (Hair Jr et al., 2021) that shows the association between indicators and latent variables (Hair, 2021). Subsequent sections discuss the results related to reliability (Ahmed, Opoku, Olanipekun, & Sutrisna, 2022), validity (Hair Jr et al., 2021), and other required results. Figure 2 depicts the measurement model.



**Figure 2: Measurement Model**

### Convergent Validity

Trivema (2022) suggests that Cronbach’s Alpha values must be higher than 0.70 for internal consistency of constructs. Composite reliability values must be at least 0.70 (Davari & Rezazadeh, 2013), and AVE values must be at least 0.50 (Trivemap, 2022; Memon et al., 2021). Our results in Table 3 are within the prescribed limits, suggesting that the constructs have adequate convergent validity.

**Table 3: Convergent Validity Analysis**

Construct	Cronbach’s Alpha	Composite Reliability	AVE
Airport Self-Service Technology (ASSTs)	0.742	0.912	0.556
Airport Supporting Technologies (ASTs)	0.775	0.805	0.815
Traveler Confidence Benefits (TCBs)	0.748	0.806	0.505
Traveler Enjoyment (TE)	0.741	0.826	0.678
Traveler Satisfaction(TS)	0.772	0.821	0.508
Airport Image (AI)	0.775	0.812	0.651

### Discriminant Validity

Discriminant validity measures the empirical difference between two constructs (Voorhees, Brady, Calantone, & Ramirez, 2016). Researchers believe the constructs could be conceptually different, but analyzing whether they are empirically different is necessary. As Darwin and Umam (2020) advised, the study has assessed discriminant

validity using Fornell and Larcker’s (1981) criteria and the HTMT ratio presented in the following sections.

### Discriminant Validity (Fornel & Larcker, 1981)

The results related to discriminant validity are presented in Table 4, showing that the correlations between a construct and other constructs are less than the square root of AVE, which is within the prescribed limit, suggesting the constructs are empirically different (Fornell & Larcker, 1981).

**Table 4: Discriminant Validity Fornell and Larcker (1981)**

Constructs	AI	ASSTs	ASTs	TCBs	TE	AS
Airport Image	0.807					
Airport Self-Service Technology	0.175	0.746				
Airport Supporting Technologies	0.422	0.282	0.846			
Traveler Confidence Benefits	0.082	0.198	0.411	0.711		
Traveler Enjoyment	0.311	0.255	0.352	0.308	0.823	
Airport Satisfaction	0.359	0.421	0.386	0.282	0.389	0.807

### Discriminant Validity (HTMT)

The HTMT ratio is an advanced method for assessing the discriminant validity, and it does not have several limitations as found in Fornell and Larcker (1981) Criteria. Table 5 shows that HTMT ratios are less than 0.90, suggesting the constructs are empirically different.

**Table 5: Discriminant Validity (HTMT Ratio)**

Constructs	AI	ASSTs	ASTs	TCBs	TE	AS
Airport Image	-					
Airport Self-Service Technologies	0.189					
Airport Supporting Technologies	0.549	0.415				
Traveler Confidence benefit	0.137	0.388	0.553			
Traveler Enjoyment	0.366	0.330	0.563	0.549		
Airport Satisfaction	0.453	0.541	0.442	0.388	0.633	-

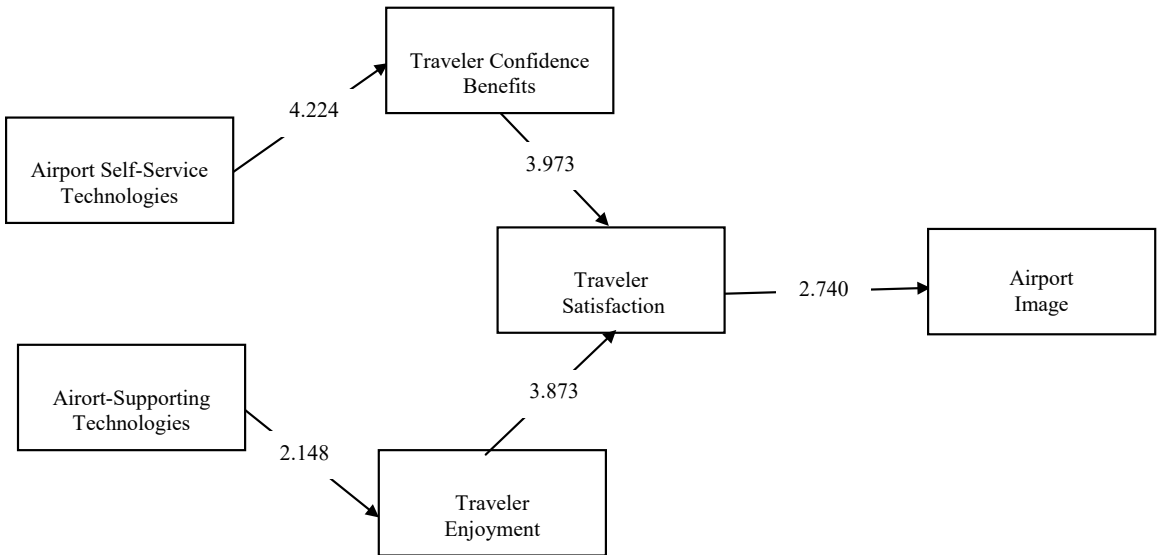
### Hypothesis Results

The study, based on a structural model, tested five proposed hypotheses. We have presented structure model in Figure 3 and summary of results in Table 6.

**Table 6: Hypotheses Results**

Hypothesis	Beta	T values	P values	Results
Airport Self-Serv. Tech. -> Traveler Conf. Benefit (H1)	0.573	4.224	0.000	Accepted
Airport Supporting Technologies -> Traveler Enjoy (H2)	0.167	2.418	0.006	Accepted
Traveler Confidence Benefits -> Traveler Satisfaction (H3)	0.315	3.973	0.000	Accepted
Traveler Enjoyment -> Traveler Satisfaction (H4)	0.388	3.873	0.002	Accepted
Traveler Satisfaction -> Airport Image (H5)	0.285	2.740	0.006	Accepted

We found support for all the hypotheses. The results show that the strongest effect is between airport self-serving technologies (ASSTs) and traveler confidence benefits (TCBs) ( $\beta=0.573$ ,  $t=4.224 < 0.05$ ), followed by the association between traveler enjoyment (TE) and traveler satisfaction (TS) ( $\beta=0.388$ ,  $t=3.873 < 0.05$ ), traveler confidence benefits (TCBs) and traveler satisfaction (TS) ( $\beta=0.315$ ,  $t=3.973 < 0.05$ ), traveler satisfaction (TS) and airport image ( $\beta=0.285$ ,  $t=2.740 < 0.05$ ) and airport supporting technologies (ASTs) and traveler enjoyment (TE) ( $\beta=0.167$ ,  $t=2.418 < 0.05$ ).



**Figure 3: Structural Model**

## Discussion and Conclusion

### Discussion

We proposed five hypotheses and failed to reject all of them. In the following paras, we have presented the results and discussed how they aligned with past literature.



We accepted Hypothesis 1 ( $\beta=0.573$ ,  $t=4.224<0.05$ ), stating airport self-serving technologies (ASSTs) positively affect traveler confidence benefits (TCBs). Frequent travelers have a complex and diversified need, which, according to many researchers, traditional service counters cannot fulfill (Moon & Lee, 2022). In contrast, contemporary air travelers can choose their complex traveling plans based on the wide spectrum of airport self-service technologies (ASSTs) options. This option of self-service technologies (SSTs) increases customers' feelings of control (Kim, Song, & Lee, 2023). Human interaction with service employees is inevitable. Self-service technology (SSTs) reduces unnecessary interactions, long waiting, and service backup (Antwi et al., 2021). Many past studies found that airport self-service technologies (ASSTs) make the service process more efficient. These studies also show no negative correlation between risk perception and passengers using airport self-service technologies (ASSTs) (Hole, Mei, Engh, & Engen, 2023).

Hypothesis 2 proposed that "airport supporting technologies (ASTs) affect traveler enjoyment (TE), which we failed to reject ( $\beta=0.167$ ,  $t=2.418<0.05$ ). Researchers document that contemporary travelers enjoy using technology-related applications, including internet, mobile chargers, and television, while waiting for their flights or connecting flights. Without airport-supporting technologies (ASTs), air travelers' traveling experience may be unpleasant (Fulghum, 2022; Li, 2023). Abou-Shouk, Gad, and Abdelhakim (2021) assert that passengers use their devices for hedonic purposes such as "reading, video watching, social media, and online chats." At the same time, many passengers used supportive devices for business-related activities, including "checking emails, scheduling activities, or other official work" (Dos-Santos & Edra, 2023). Thus, many researchers argue that airport-supportive technologies (ASTs) allow passengers to perform daily official and social routines leading to enjoyment (Setiawan, Akbardin, & Permana, 2022; Li, 2023).

Hypothesis 3 was about the "positive association between traveler confidence benefits (TCBs) and traveler satisfaction (TS)," which we accepted ( $\beta=0.315$ ,  $t=3.973<0.05$ ). Hypothesis 4 proposed that "traveler enjoyment (TE) positively affects traveler satisfaction (TS)," which we accepted ( $\beta=0.388$ ,  $t=3.873<0.05$ ). Extant literature documents that consumers who enjoy shopping are more satisfied with the goods and services than those who do not (Zhou & Yu, 2022). In the context of the air industry, studies found that air travelers who experience positive emotions are more satisfied than those who experience negative emotions while traveling (Dinkoksung et al., 2023). Setiawan, Akbardin, and Permana (2022) argue that interacting with service providers develops relational benefits that profoundly increase customer satisfaction (Montes-Guerra, Zapata-Cuervo, & Jeong, 2023). Studies document that confidence benefits (CFs)

are important antecedents of traveler satisfaction (TS). Similarly, traveler enjoyment (TE) positively affects travelers satisfaction (TS) (Lien, Hsu, Shang, & Wang, 2021).

Hypothesis 5 suggests that “traveler satisfaction (TS) positively affects airport image (AI)” which we accepted ( $\beta=0.285$ ,  $t=2.740<0.05$ ). Zhou and Yu (2022) argue that satisfaction is consumers’ overall evaluation of the entire consumption process, leading to positive attitudes and purchase intentions (Isyana, 2023). From a firm perspective, customer satisfaction is important as it promotes sustainable customer relationships, leading to a large base of loyal customers and firm profitability (Grimonia, Rohman, & Suryadi, 2023). Many past studies found a positive association between airport customer satisfaction and airport image (AI) (Rita & Odor, 2023). Traveler satisfaction (TS) is an important antecedent to the airport image (Douglas & Weber, 2023). Given its importance, airports spend considerable resources to enhance their image (Zhou & Yu, 2022). Besides other factors, airport image (AI) depends on affective and cognitive components. Both components are important for traveler satisfaction (TS) (Hlee et al., 2023).

## **Conclusion**

Airline careers in the last few decades have adversely suffered due to high operating costs, intensive competition, and low confidence and trust of air passengers (Zhang et al., 2022). Airlines’ growth and sustainability profoundly depend on skilled airport staff and technologies reducing passengers’ long waiting times (Rassu, Coni, and Maltinti, 2023). Apart from other measures, this will decrease the consumers’ negative perceptions of the airlines, leading to positive trust and confidence (Rengarajan et al., 2021). Given its importance, this study has focused on Jinnah International Airport. It examined the effect of airport self-service technologies (ASSTs) on traveler confidence benefits (TCBs) and the impact of airport-supporting technologies (ASTs) on traveler enjoyment. We also examined the impact of traveler confidence benefits (TCBs) and traveler enjoyment (TE) on traveler satisfaction (TS). The study also explored the effect of traveler satisfaction (TS) on airport image (AI).

The study found airport self-service technologies (ASSTs) promote traveler confidence benefits (TCBs), and airport supporting technologies (ASTs) positively affect travelers enjoyment (TE). The study also documents that traveler confidence benefits (TCBs) and traveler enjoyment stimulate traveler satisfaction (TS). The study also found traveler satisfaction (TS) positively affects airport image (AI)

## Implications

Airline travelers in the prevailing era prefer using airport self-serving technologies (ASSTs) to increase their enjoyment and confidence. They believe that these technologies are convenient and save a lot of time. Most airports have these facilities, but Jinnah International Terminal, Karachi, needs to provide more technologies for local travelers. Unlike in other countries, many local travelers are uncomfortable using these technologies. Thus, we suggest the airport depute employees to assist the passengers using airport self-service technologies (ASTS). This practice will increase the confidence of passengers who are uncomfortable using technology. Traveler satisfaction enhances the image of the airport. Therefore, the airport must focus on enhancing customer satisfaction.

## Limitations and Future Research

The study has focused on Jinnah International Terminal, Karachi. Future studies may focus on other airports of other cities in Pakistan. The study used six variables in the study: traveler satisfaction (TS), traveler enjoyment (TE), traveler confidence benefits (TCBs), airport image (IA), airport self-service technologies (ASSTs) and airport supporting technologies (ASTs). In addition to the variables used in the study, other studies can also use variables such as perceived waiting time, psychological factors, emotional response, and perceived justice. Traveler satisfaction mediates (i) traveler confidence benefits (TCBs) and airport image (AI) and (ii) traveler enjoyment (TE) and airport image (AI), which other studies can use. Genders and other demographic factors have moderating effects on (i) airport self-service technologies (ASSTs) and traveler confidence and (ii) traveler enjoyment (TE) and traveler satisfaction (TS), which were beyond the scope of this study. Future studies can use them in their conceptual frameworks.

## Annexure-1

### Constructs and Indicators used in the questionnaire

#### Airport Self-Service Technologies

ASST1. The self-check-in kiosks are appropriately designed at Jinnah International Airport.

ASST2. Touch screen information kiosks were helpful to me at Jinnah International Airport.

ASST3. The self-service baggage drops were helpful to me at Jinnah International Airport.

#### Airport Supporting Technologies

AST1. The Terminals of Jinnah International Airport have enough business workstations.

AST2. Jinnah International Airport provides a free tour guide application.

AST3. The terminal seating zones have more than enough charging stations and USB ports.

#### Passengers Confidence Benefits

PCB1. There was less risk of something going wrong in Jinnah International Airport's environment.

PCB2. I trust in traveling from Jinnah International Airport.

PCB3. I know what to expect when I go to Jinnah International Airport.

#### Traveler Enjoyment

TE1. Spending time at Jinnah International Airport was not boring at all.

TE2. I enjoy staying at Jinnah International Airport.

TE3. I enjoy spending my leisure time at Jinnah International Airport.

TE4. Spending time at the Jinnah International Airport would be fun.

#### Airport Satisfaction

AS1. I am satisfied with the overall experience at the Jinnah Airport Terminal.

AST2. Jinnah International Airport was better than what I expected.

AST3. I am more satisfied with the Jinnah International Airport compared to other airports.

AST4. It was a good experience at the Jinnah International Airport.

#### Airport Image

AI1. Jinnah International Airport has a distinct image.

AI2. Jinnah International Airport has a reputable image.

AI3. I prefer traveling from Jinnah International Airport because of its image.

AI4. Jinnah International Airport is different than other airports.

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## **Conflict of Interest**

The author (s) declared no conflict of interest and have not received any funds for the project.

# A Conditional Mediation Analysis of Ad Value Moderated by Time Spent on YouTube

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## Abstract

Social media usage has increased significantly in the last few years due to its easy access and low cost. Besides other social media forums, YouTube usage worldwide has also increased profoundly. A recent decline in the number of advertisements on YouTube has led to YouTube skepticism about its full-fledged operations in Pakistan. Also, many firms in Pakistan have reduced their advertisement budgets on YouTube. Given its importance, the study has examined the factors affecting YouTube ad avoidance. The study also examined the mediating role of ad value and the moderating role of time spent on YouTube. In addition, the study has also examined the conditional indirect effect of time spent on YouTube. We collected data based on an e-questionnaire, in which 457 participants completed the questionnaires. Our study found that perceived ad irritation (PAIR) and perceived ad goal impediment (PAGI) positively affect perceived ad avoidance (PAAV). The study also documents that perceived ad information (PAIN) and perceived Ad entertainment (PAEN) insignificantly affect perceived ad avoidance (PAAV). The study proposed four mediating hypotheses, and we found support for only one hypothesis, stating that perceived ad avoidance (PAAV) mediates perceived ad goal impediment (PAGI) and perceived ad avoidance (PAAV). However, the study found time spent on YouTube (TSOY) moderates perceived ad value (PAVL) and perceived ad

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avoidance (PAAV). We also found that the time spent on YouTube's conditional mediation Index (CoMe Index) is statistically significant.

**Keywords:** *YouTube, advertising ad-value, ad-avoidance, conditional mediation, conditional mediation Index, time spent on YouTube.*

## Introduction

YouTube advertising refers to promoting goods and services via online sharing platforms. The effectiveness of YouTube advertising has increased significantly in recent years since it has a huge following (YouTube Help, 2022). According to an estimate, about two billion YouTube users log in monthly, and about 500 hours of video content are uploaded every minute to the platform (Global Media Insights, 2022). Extant literature also documents that, on average, users spend twelve minutes on YouTube daily, leading to 6.5 page views (Ceci, 2022). As a result, more firms are spending their resources on YouTube advertising (Rizwan, 2019). In the same context, many researchers believe that firms aligning YouTube content with their overall strategies would be more successful than others (Agarwal, 2021). Many factors have a positive or negative impact on perceived Ad avoidance (PAAV), including perceived ad informativeness (PAIN), perceived ad entertainment (PAEN), perceived ad irritation (PAIR), and perceived ad goal impediment (PAGI).

Perceived Ad Informativeness (PAIN) refers to the quality of an advertisement in effectively conveying relevant and persuasive information to the audience, enabling them to make informed decisions (Munawar et al., 2022). It consists of several aspects, including clarity, persuasiveness, and credibility. Perceived Ad Avoidance (PAAV) relates to evading exposure to advertisements (Sifaoui et al., 2023). Consumers believe ads are informative (Kristian et al., 2023), entertaining (Manko, 2023), offensive (Kristiyono et al., 2023), and irritating (Febriyantoro, & Hapsara, 2023). Perceived Ad Entertainment (PAEN) is the belief that ads provide excitement, enjoyment, and pleasure (Williams-Fayne, 2023). Kunert and Kuni (2023) assert that consumers consider advertisements entertaining, which involves and engages consumers in different activities. Perceived Ad irritation (PAIR) refers to the negative aspects or qualities of advertisements that can lead to discomfort or frustration for the audience (Sembiring & Fahlevi, 2023).

A recent decline in the number of advertisements on YouTube has led to YouTube skepticism about its full-fledged operations in Pakistan. Also, many firms in Pakistan have reduced their advertisement budgets on YouTube. Researchers in Pakistan believe that many consumers avoid YouTube advertising by using the skip option, and local firms are reducing their advertising budget on YouTube.

Given its importance, the study has examined the factors affecting YouTube ad avoidance. The study also examined the mediating role of ad value and the moderating role of time spent on YouTube. In addition, the study has also examined the conditional indirect effect of time spent on YouTube.

## Literature Review

### Perceived Ad Value (PAVL)

The degree to which media users believe advertising is advantageous to them (Khofifah & Supriyanto, 2022), or, in other words, the utility of ads for consumers (Syvertsen et al., 2022), is referred to as perceived ad value (PAVL) (Noguti, 2023). Consumers have a high perception of important, useful, and valuable advertisements, due to which they watch the complete advertisement. It also leads to positive attitudes towards purchase intentions (Khofifah & Supriyanto, 2022).

### Perceived Ad Avoidance (PAAV)

Ad avoidance relates to evading exposure to advertisements (Sifaoui et al., 2023). Initially, researchers believed that consumers cognitive and affective behaviors toward Ad Avoidance occur concurrently, but later, researchers asserted that these behaviors occur serially (Dodoo & Wen, 2021). Consumers' responses to YouTube advertising are different. They believe ads are informative (Kristian et al., 2023), entertaining (Manko, 2023), offensive (Kristiyono et al., 2023), and irritating (Febriyantoro, & Hapsara, 2023). Because most consumers avoid YouTube advertising, marketers must develop adequate strategies to attract the target audience (Yoon Huang & Yim, 2023).

### Perceived Ad Informativeness (PAIN)

Ad-informativeness refers to the quality of an advertisement in effectively conveying relevant and persuasive information to the audience, enabling them to make rationale decisions (Munawar et al., 2022). It consists of several aspects, including clarity, persuasiveness, and credibility. Clarity ensures the message is easy to understand. In the context of advertisements, it includes product price information, availability, how it satisfies consumers' needs, and how it differs from competitors (Alam et al., 2023). Persuasiveness goes beyond just sharing information and aims to encourage the audience to buy the goods and services (Fan & Chan, 2023). Creditability refers to the trust consumers have in an advertisement. If there is no or little gap between what a brand claims and what it delivers, it enhances advertisement creditability (Brinson & Lemon, 2023).

### **Perceived Ad Entertainment (PAEN)**

Perceived ad entertainment is the belief that ads provide excitement, enjoyment, and pleasure (Williams-Fayne, 2023). Kunert and Kuni (2023) assert that consumers consider advertisements entertaining, which involves and engages consumers in different activities. Entertaining advertisements evoke consumers' excitement and leave a memorable and lasting impression on the audience's mind (Abbasi et al., 2022). PAEN promotes consumers' positive attitudes toward products and services (Hussain et al., 2022). In summary, ad entertainment (Kunert and Kuni, 2023) focuses on creating ads that convey a message and provide a positive and enjoyable viewing experience (Abbasi et al., 2022). Thus, it enhances, engages, and resonates with the target audience. (Williams-Fayne, 2023).

### **Perceived Ad Irritation (PAIR)**

Ad irritation within the context of advertising refers to the negative aspects or qualities of advertisements that can lead to discomfort or frustration for the audience (Sembiring & Fahlevi, 2023). It encompasses various dimensions: annoying, causing displeasure (Christy et al., 2023) deceptive, conveying misleading information and confusing messages (Le, 2023); nonsensical, lacking coherence or relevance (Amoako et al., 2023).

### **Perceived Ad Goal Impediment (PAGI)**

Ad goal impediment in advertising refers to the adverse effects of advertisements on the audience's intended actions and goals while consuming content (Chen & Zhou, 2023; Khan et al., 2022). It encompasses several aspects: Hinder the user's search for information or content, disrupt the natural flow of the content, divert attention away from the intended content and lead to time wastage (Munawar et al., 2022).

## **Hypothesis Development**

### **Ad Informativeness, Ad value and Ad avoidance**

Advertising enables firms to highlight their unique selling proposition, which helps business entities differentiate themselves from others (Susilo & Santos, 2023). Bähr and Fliaster (2023) assert that these aspects promote market competition and improve product value, translating into improved products at low prices. A study asserts that one euro invested in advertising contributes seven euros to GDP (Value of Advertising, 2022). Advertising value measures an advertisement's effectiveness (Segijn & Van-Ooijen, 2022; Lütjens et al., 2022).

Perceived ad informativeness (PAIN) refers to the degree to which viewers believe

the ad presents accurate, relevant, and timely information (Mo et al.,2023). People who are skeptical of the information offered by commercials value them less (Rajavi et al., 2023). However, ads that add to the knowledge of a product or other information are of higher value (Abbasi et al., 2022). Social media users despise and avoid irrelevant ads (Chaerunnisa, Cross, & Kosasih2023). Moreover, Rajavi et al. (2023) suggest consumers' involvement with a product correlates with the informativeness of web-based ads. Hence, the first set of hypotheses:

*H1A: Perceived ad informativeness (PAIN) positively affects perceived ad avoidance (PAAV).*

*H1B: Perceived ad value (PAVL) mediates perceived ad informativeness (PAIN) and perceived ad avoidance (PAAV).*

### **Ad Entertainment, Ad Value, Ad Avoidance**

Perceived ad entertainment (PAEN) is the belief that ads provide excitement, enjoyment, and pleasure (Abbasi et al., 2022). When social media consumers come across engaging and fulfilling content, they experience pleasure (Williams-Fayne, 2023). Also, emotional appeal (Abbasi et al., 2022) and humorous (Kunert and Kuni, 2023) advertisements increase consumers' engagement. As a result, they do not avoid such advertisements. Users of the Internet and YouTube prefer engaging advertising material (Kunert & Kuni, 2023) compared to memorable and interesting ads (Hussain et al., 2022). Viewers keep watching an ad when they find it entertaining (Williams-Fayne, 2023). Hence, the second set of hypotheses is:

*H2A: Perceived ad entertainment (PAEN) negatively affects perceived ad avoidance (PAAV).*

*H2B: Perceived Ad Value( PAVL) mediates perceived ad entertainment (PAEN) and perceived ad avoidance (PAAV).*

### **Ad Irritation, Ad Value, and Ad Avoidance**

Perceived ad irritation refers to a belief that the ads are deceptive, annoying, excessive, or nonsense (Sembiring & Fahlevi, 2023). The usefulness of YouTube and online advertisements decreases if consumers find them annoying (Singaraju et al., 2022). When viewers have been exposed to advertising before or frequently, they often skip it (Li, Kim, Do, & Choi, 2022) as it leads to ad clutter and ad avoidance (Singaraju et al., 2022). Ad clutter refers to more advertisements in a particular media (Eisend & Tarrahi, 2022). The discussion leads to the third set of hypotheses:

*H3A: Perceived ad irritation (PAIR) positively affects perceived ad value (PAAV).*

*H3B: Perceived ad value (PAVL) mediates perceived ad irritation (PAIR) and perceived perceived ad avoidance (PAAV).*

### **Ad Goal Impediment, Ad Value, and Ad Avoidance**

Perceived goal impediment refers to the belief that the ads hinder the achievement of the goals associated with media use. When people utilize media, they have a specific objective (Singaraju et al., 2022). Because they are goal-oriented, internet users are more irritated by advertisements (Pradhan et al., 2023) than TV viewers (Jin et al., 2022). The reason for a person's visit to an internet-based platform impacts the value they put on the advertising (Hamby & Jones, 2022). Internet surfers avoid advertisements since they obstruct their search results (Purwatiningsih et al., 2022). They ignore advertisements when there is a pressing need for time (Eisend, 2022). Media users avoid ads unrelated to them ( Kelly, Kerr, & Drennan, 2020). Similarly, when individuals believe commercials prevent them from achieving their goals, they avoid them ( Purwatiningsih et al., 2022). Therefore, we propose the following hypotheses.

*H4A: Perceived ad goal impediment( PAGI) positively affects perceived ad avoidance (PAAV).*

*H4B: Perceived ad value (PAAV) mediates perceived ad goal impediment (PAGI) and perceived ad avoidance (PAAV).*

### **Moderation of Time Spent on YouTube**

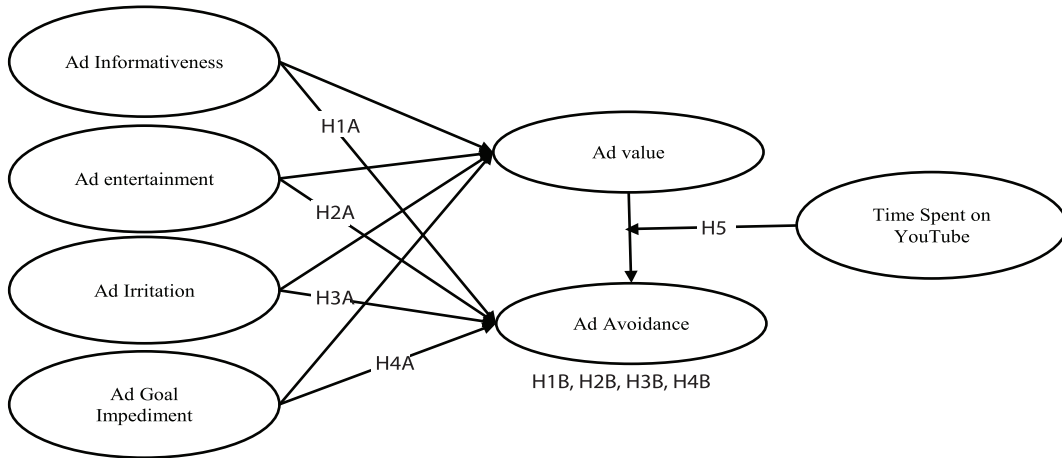
YouTube viewers show a different level of commitment to the platform. The attitude of media users towards the promotions presented on YouTube significantly depends on the time they spend online (Tham and Perreault, 2021). Many researchers believe that the time spent on YouTube has varying effects on perceived ad value (PAVL) and perceived ad avoidance (PAAV) (Munaro et al., 2021). Thus, we have formulated the following hypothesis.

*H5: Time Spent on YouTube (TSU) positively moderates perceived ad value (PAVL) and perceived ad avoidance (PAAV).*

### **Conceptual Framework**

The study's model includes seven constructs based on prior research findings: Perceived ad avoidance (PAAV) (Sifaoui et al., 2023), perceived ad value (PAVL) (Hussain

et al., 2023), perceived ad informativeness (PAIN) (Rajavi et al., 2023), perceived ad entertainment (PAEN) (Noguti, 2023), perceived ad irritation (PAIR) (Hussain et al., 2023), perceived ad goal impediment (PAGI) (Al-Hilal, 2023), and time spent on YouTube (TSOY) (Rizwan, 2019). The model in Figure 1 depicts the link between these factors.



**Figure 1: Proposed Model**

## Research Methodology

### Research Design

This study has used a quantitative mono-method research methodology with a deductive approach to assess the relationship between the independent and dependent variables. The study articulated the hypotheses based on past studies, which we empirically tested based on the data collected through an online questionnaire.

### Data Collection Instruments

The scales for this study have been adapted from previous studies (Refer to Table 1). The researchers supervised the administration of the first five questionnaires as a pretest to ensure the content of the questionnaire was comprehensible. The questionnaire had section breaks to reduce the effect of common method bias (Kock, 2015). The authors of the study shared the link of the questionnaire through social media groups and the comments section of Pakistani drama serials on YouTube.

**Table 1: Scale and Measurement**

Constructs	Sources	Items
Perceived Ad Entertainment (PAEN),	Ducoffe (1996).	5
Perceived ad Irritation (PAIR)	Ducoffe (1996).	6
Perceived Ad Goal Impediment (PAGI)	Cho And Cheon (2004).	5
Perceived Ad Value (PAVL)	Ducoffe (1996).	5
Perceived Ad Avoidance (PAAV)	Baek and Morimoto (2012) and Kim et al.(2010).	5
Perceived Ad Informativeness (PAIN)	Ducoffe (1996) and Kim et al. (2010).	5
Time Spent On YouTube (TSOY)	Ek and Samahita (2023).	6

### Sample and Sampling Technique

This study utilized a strategic sampling method where we selected the respondents who met specific criteria for the survey. To ensure generalizability, we selected a sample size with a G-power of 80% and took ten samples for each indicator. Using this technique, we found a sample size 370 would be appropriate (37 indicators X 10 samples) (Henseler, Ringle, and Sarstedt, 2015; Rahman et al.,2022).

### Data screening

Overall, 506 respondents reached the online questionnaire. Of these, 473 responses crossed the screening questions “Are you a respondent of Pakistan?” and “Do you watch YouTube regularly?” Subsequently, we screened the questionnaire for missing responses. Eventually, we selected 457 responses for analysis. The study regressed all constructs on dependent variables for a full collinearity analysis. All variables’ variance inflation factor is below 3.3, indicating the absence of common method bias (Podsakoff et al., 2003).

### Sample Analysis

Frequency analysis of a sample gives a feel of the data before conducting further analysis (Sekaran and Bougie, 2016). Table 3 reveals that a significant proportion of the sample (63.02%) consists of female respondents compared to 36.98% of male respondents. Almost half of the participants were between 21 and 30 (43.76%). 23.41% were between 15 and 20 years of age. Hence, the sample was more tilted towards the younger age group, which reflects Pakistan’s current population distribution. 21% of the sample consisted of people between 31 and 40 years. And the rest falls in other age groups.

Regarding education, almost half of the respondents have a bachelor’s degree (52.3%). 3.06% had a secondary school certificate, 13.79% had a Higher secondary school certificate, and 29.52% had a master’s degree. Only a meager 1.31% of the sample holds a postgraduate degree. Regarding employment, only 3.28% of respondents are retired,



whereas 6.78% and 12.47% are self-employed and part-time, respectively. 29.32% of the research participants are full-time employees. However, approximately half of the sample respondents are unemployed (48.15%).

**Table 2: Demographic**

	<b>Frequency</b>	<b>Percent</b>
Gender	Male	169 36.98%
	Female	288 63.02%
	Total	457 100 %
Age	15 - 20 years	107 23.41%
	21 - 30years	200 43.76%
	31 - 40 years	96 21.00%
	41 – 50 years	23 5.03%
	51 – 60 years	19 4.17%
	Over 60 years	12 2.63%
	Total	457 100 %
Education	Secondary School Certificate	14 3.06%
	Higher Secondary School Certificate	63 13.79%
	Bachelor's	239 52.30%
	Master's	135 29.54%
	Postgraduate	6 1.31%
	Total	457 100 %
Employment	Not Employed	220 48.15%
	Part-time	57 12.47%
	Self Employed	31 6.78%
	Full Time	134 29.32%
	Retired	15 3.28%
	Total	457 100%

### **Internet and Social Media Usage Pattern**

In Table 3, we have exhibited respondents' social media usage patterns.

**Table 3: Internet and social media usage pattern**

Internet usage	Several times a day	415	90.81%
	Once a day	16	3.50%
	4–5 times per week	10	2.19%
	Once or twice a week	09	1.97%
	Very rarely	07	1.53%
	Total	457	100%
YouTube usage	Several times a day	271	59.30%
	Once a day	103	22.54%
	4–5 times per week	26	5.69%
	Once or twice a week	31	6.78%
	Very rarely	16	3.50%
	Never	10	2.19%
	Total	457	100%

Internet usage of the sample heavily tilted towards one end. Almost 90.81% of the respondents use the internet several times a day, probably because of the everyday use of a smartphone. Most respondents used YouTube several times a day (59.30%). 22.54% of respondents use YouTube daily, and the rest of the respondents' usage frequencies ranged from 2.19% to 6.78%.

### **Cross Tabulation of Gender and YouTube Users**

In Table 4, we have presented cross-tabulation by gender on YouTube users.

**Table 4: Cross Tabulation of Gender and Youtube Users**

		<b>Several times a day</b>	<b>Once everyday</b>	<b>4 - 5 times a week</b>	<b>Once or twice a week</b>	<b>Very rarely</b>
Male	Count	121	25	7	8	7
	% within Gender	72.0%	14.9%	4.2%	4.8%	4.2%
	% of Total	26.5%	5.5%	1.5%	1.8%	1.5%
Female	Count	158	78	19	23	9%
	% within Gender	54.9%	27.1%	6.6%	8.0%	3.1%
	% of Total	34.6%	17.1%	4.2%	5.0%	2.0%
Count		279	103	26	31	16%

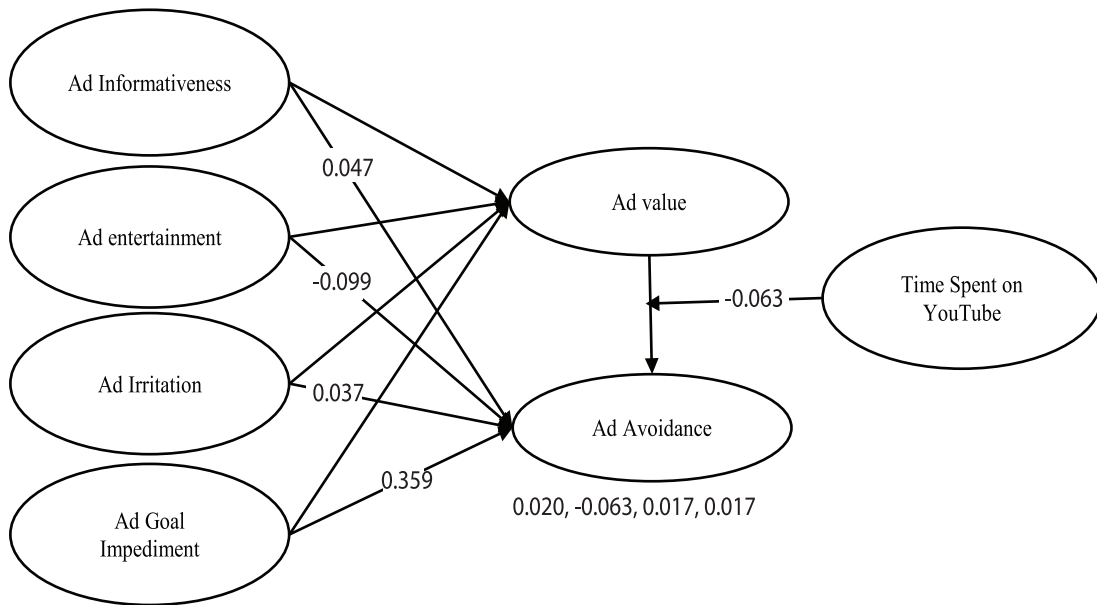
Cross-tabulation of gender with YouTube usage revealed exciting observations. Table 4 indicates that 72% of the males in the sample watch YouTube videos several times a day compared to only 54.9% of the females who reported watching YouTube several

times a day. However, a downward trend can be observed among both males and females from frequent use every day to very occasional use.

## Results

### Measurement Model Assessment

The data collected is analyzed using partial least squares structural equation modeling (PLS-SEM). As a first step, we generated a measurement model for the reliability, composite reliability, convergent validity, and discriminant validity results. Refer to Figure 2.



**Figure 2: Measurement Model**

### Reliability and Convergent Validity

In Table 5, we have presented a summary related to overloading, composite reliability, and AVE. These factors are necessary for assessing convergent validity.

**Table 5 Reliability and convergent validity**

<b>Items</b>	<b>Outer Loading</b>	<b>CR</b>	<b>AVE</b>
PAAV1	0.81	0.887	0.616
PAAV2	0.822		
PAAV3	0.849		
PAAV4	0.847		
PAAV5	0.555		
PAEN1	0.898		
PAEN2	0.914	0.943	0.768
PAEN3	0.912		
PAEN4	0.755		
PAEN5	0.892		
PAGI1	0.506	0.884	0.612
PAGI2	0.829		
PAGI3	0.813		
PAGI4	0.841		
PAGI5	0.865		
PAIN1	0.822	0.900	0.643
PAIN2	0.84		
PAIN3	0.812		
PAIN4	0.774		
PAIN5	0.759		
PAIR1	0.814	0.882	0.559
PAIR2	0.875		
PAIR3	0.724		
PAIR4	0.54		
PAIR5	0.756		
PAIR6	0.735		
PVAL1	0.869	0.909	0.669
PVAL2	0.900		
PVAL3	0.859		
PVAL4	0.627		
PVAL5	0.805		

The summary of results in Table 5 shows composite reliability (CR) values of all the constructs used in the study are at least 0.80, suggesting they have adequate internal consistency (Canatay et al., 2022). The data presented in the same Table also suggests that the constructs have adequate convergent validity (CV), since all the values of average

value extracted (AVE) and composite reliability (CR) values are within the prescribed range as recommended by Guenther et al. (2023).

### Discriminant Validity

The researchers can use Fornell and Larcker (1981) criteria or HTMT ratio to assess discriminant validity. The study has used the HTMT ratio for discriminant validity since it provides a less biased estimation. Refer to Table 6 for the summary of results, which suggests that constructs have discriminant validity as the HTMT ratios are below 0.85 (Henseler, Ringle, & Sarstedt, 2015).

**Table 6 Discriminant Validity - HTMT Ratios**

Constructs	PAAV	PAEN	PAGI	PAIN	PAIR	PVAL	Time
Perc. Ad Avoidance	-						
Perc. Ad Entertainment	0.491						
Perc. Ad Goal Impediment	0.730	0.486					
Perc. Ad In Informativeness	0.342	0.724	0.321				
Perc. Ad Irritation	0.691	0.508	0.751	0.445			
Perc. Ad-Value	0.418	0.750	0.393	0.648	0.321		
Time Spent on YouTube	0.072	0.055	0.039	0.059	0.086	0.089	-

### Structural Model Assessment

After measurement model assessment, we based on boat stepping developed a structural model. The explanatory power of both endogenous variables is moderate. However, most of the effect sizes are small. The model does not have a multicollinearity issue since the VIF values of all the variables are below the cut-off value (Hair et al., 2017). Table 7 shows the summary of results.

**Table 7 Explanatory Power, Effect Size, and Multicollinearity**

DV	Rsq	P Values	Path	f sq	P Values	VIF
PAAV	0.483	0	PAEN -> PAAV	0.007	0.259	2.674
			PAGI -> PAAV	0.139	0.007	1.802
			PAIN -> PAAV	0.002	0.345	1.865
			PAIR -> PAAV	0.092	0.008	1.979
			PAVL -> PAAV	0.013	0.186	2.029
PVAL	0.506	0	PAEN -> PVAL	0.289	0.000	2.033
			PAGI -> PVAL	0.025	0.084	1.742
			PAIN -> PVAL	0.061	0.015	1.757
			PAIR -> PVAL	0.023	0.067	1.861

## Hypotheses Results

We have presented the summary results of the hypothesis in Table 8. The study found support for four hypotheses and rejected five hypotheses.

**Table 8: Hypotheses Results**

	$\beta$	T Stat	P Values	Decision
PAIN -> PAAV (H1A)	0.047	0.959	0.169	Not Supported
PAIN -> PAVL -> PAAV (H1B)	-0.027	1.764	0.039	Not Supported
PAEN -> PAAV (H2A)	-0.099	1.464	0.072	Not Supported
PAEN -> PAVL -> PAAV(H2B)	-0.063	1.636	0.260	Not Supported
PAIR -> PAAV(H3A)	0.307	5.614	0.000	Supported
PAIR -> PAVL -> PAAV (H3B)	0.017	1.676	0.057	Not Supported
PAGI -> PAAV (H4A)	0.359	5.688	0.000	Supported
PAGI -> PAVL -> PAAV(H4B)	0.017	1.998	0.004	Supported
PAVL*Time -> PAAV (H5)	-0.063	1.981	0.003	Supported

The study rejected Hypothesis 1A ( $\beta=0.047$ ,  $t=0.959>0.05$ ), stating that perceived ad information (PAIN) positively affects perceived ad avoidance (PAAV). We rejected Hypothesis H1B ( $\beta=-0.027$   $t=1.764>0.05$ ), stating that perceived ad value (PAVL) mediates perceived ad information (PAIN) and perceived ad avoidance (PAAV). Our study rejected Hypothesis 2A ( $\beta=-0.099$ ,  $t=1.464>0.05$ ), stating that perceived ad entertainment (PAEN) negatively affects perceived ad avoidance (PAAV). We did not find support for Hypothesis 2B ( $\beta=-0.063$   $t=1.636>0.05$ ), stating that perceived ad value (PAVL) mediates perceived ad entertainment (PAEN) and perceived ad avoidance (PAAV). Our study accepted Hypothesis 3A ( $\beta=0.307$ ,  $t=5.614<0.05$ ), stating that perceived ad irritation (PAIR) positively affects perceived ad avoidance (PAAV). We did not find support for Hypothesis 3B ( $\beta=0.017$   $t=1.676>0.05$ ), stating that perceived ad value (PAVL) mediates perceived ad irritation (PAIR) and perceived ad avoidance (PAAV). We accepted Hypothesis 4A ( $\beta=0.359$   $t=5.668<0.05$ ), stating that perceived ad goal impediment (PAGI) positively affects perceived ad avoidance (PAAV). We accepted Hypothesis 4B ( $\beta=0.017$   $t=1.998$ ,  $<0.05$ ), stating that perceived ad value (PAVL) mediates perceived ad goal impediment (PAGI) and perceived ad avoidance (PAAV). The study found support for Hypothesis 5 ( $\beta=-0.063$ ,  $t=1.981<0.05$ ), stating time spent on YouTube (TSOY) moderates perceived ad value (PAVL) and perceived ad avoidance (PAAV).

## Conditional Mediation

This study examined the conditional mediation (CoMe) effect of time spent on YouTube on the mediation of PAVL on the causal effect between the Ad value factor (PAIN, PAEN, PAIR, and PAGI) and PAAV. For this analysis, we used CoMe Model A (Cheah

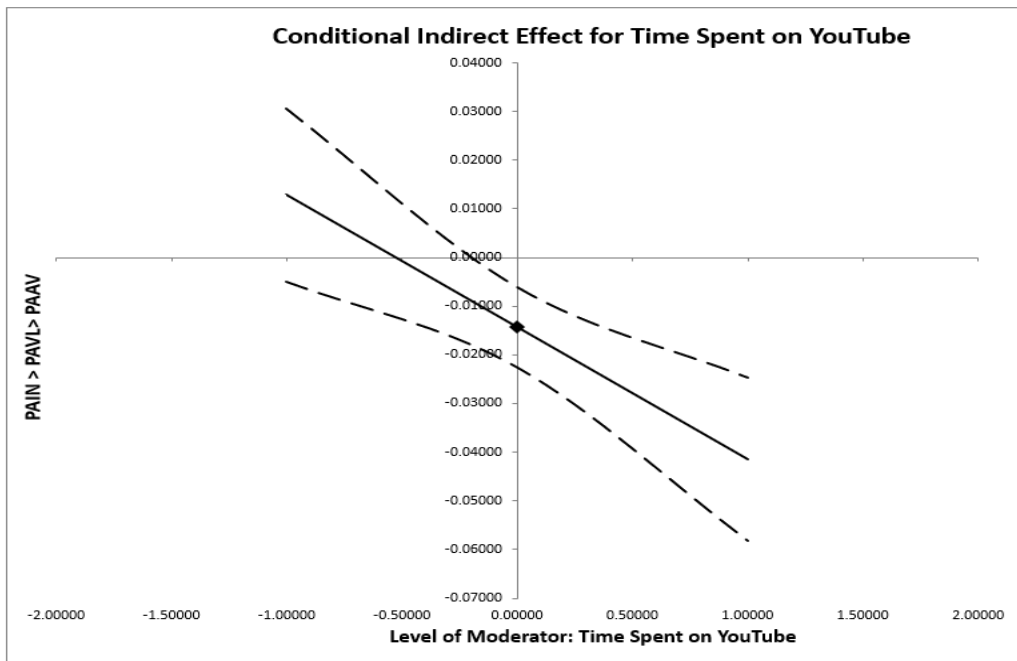
et al., 2021), where the moderator affects only the path between the mediator and the dependent variable. However, the effective index of the moderator for the complete path of mediation is represented by  $\omega$ , which is calculated using the formula below (Cheah et al., 2021).  $\omega = (\rho_1 \times \rho_2) + (\rho_1 \times \rho_5 \cdot W)$ .

**Conditional Mediating Effect (PAIN> PAVL>PAAV)**

The index of CoMe is statistically significant ( $\beta = -0.0413, t = -2.4682 < 0.05$ ) for the conditional effect of time spent on YouTube on the mediating effect of ad value on informativness and ad avoidance. The results also show that CoMe index increases with the increase in time spend on you tube.

**Table 9: Mediation of Ad Value in the relationship between PAIN and PAAV with the Conditional Effect of Time Spent on YouTube**

Conditional Mediation Effect	$\beta$	SE	t	5%	95%
Index of conditional mediation	-0.0413	0.0167	-2.4682	-0.0711	-0.0165
Time Spent on YouTube (W)					
Low (-1.0)	0.0128	0.0178	0.7201	-0.0144	0.0432
Medium (0)	-0.0142	0.0082	-1.7253	-0.0288	-0.0017
High (+1.0)	-0.0413	0.0167	-2.4682	-0.0711	-0.0165



**Figure 3 Conditional Mediating Effect**

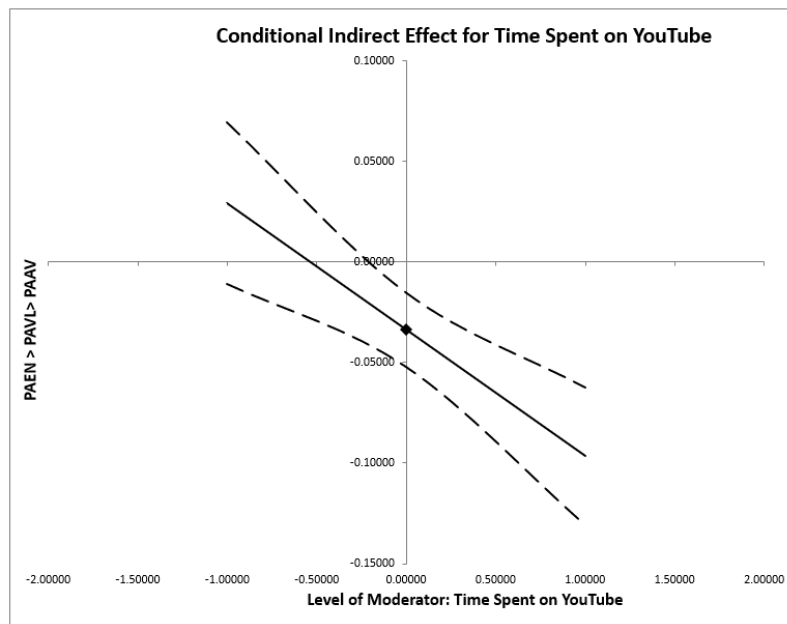


**Conditional Mediating Effect (PAEN > PAVL > PAAV)**

The index of CoMe is statistically significant ( $\beta = -0.0966$   $t = -2.8175 < 0.05$ ) for the conditional effect of time spent on YouTube on the mediating effect of ad value between entertainment and ad avoidance. The results also show that CoMe index increases with the increase in time spend on you tube.

**Table 10 Mediation of Ad Value in the relationship between PAEN and PAAV with the Conditional Effect of Time Spent on YouTube**

Conditional Mediation Effect	$\beta$	SE	t5%	95%	
Index of conditional mediation	-0.0966	0.0343	-2.8175	-0.1545	-0.0431
Time Spent on Youtube (W)					
Low (-1.0)	0.0293	0.0400	0.7318	-0.0346	0.0967
Medium (0)	-0.0336	0.0184	-1.8265	-0.0651	-0.0040
<b>High (+1.0)</b>	<b>-0.0966</b>	<b>0.0343</b>	<b>-2.8175</b>	<b>-0.1545</b>	<b>-0.0431</b>



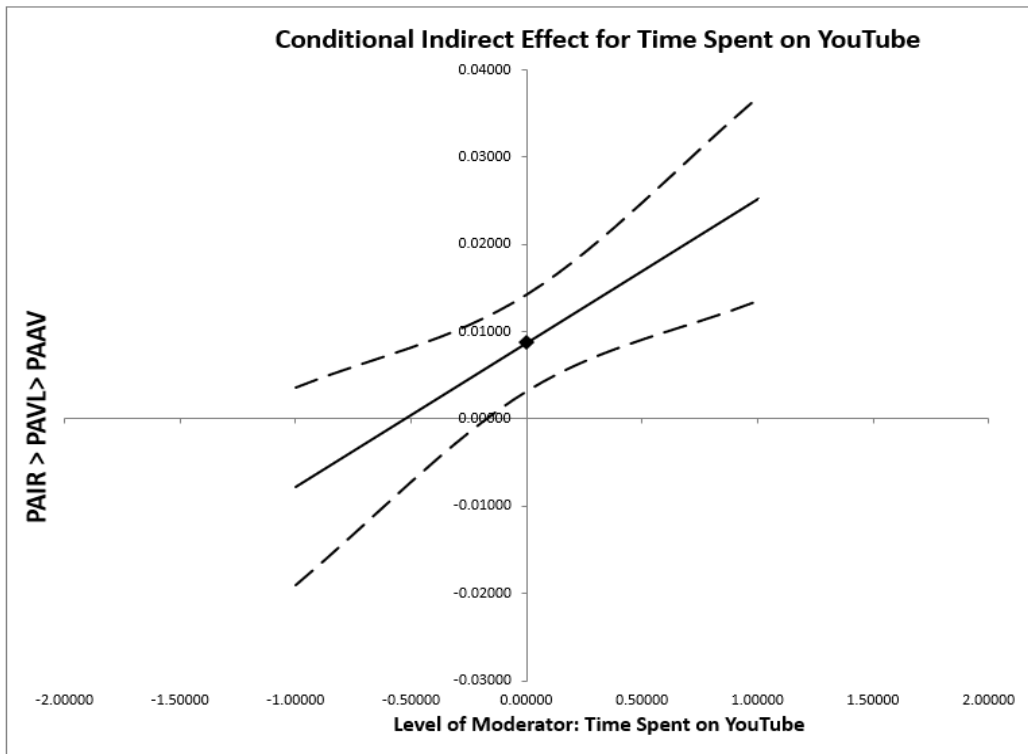
**Figure 4 Conditional Mediating Effect**

**Conditional Mediating Effect (PAIR > PAVL > PAAV)**

The index of CoMe is statistically significant ( $\beta = 0.0252$ ,  $t = 2.1664 < .05$ ) for the conditional effect of time spent on YouTube on the mediating effect of ad value between irritation and ad avoidance. The results also show that CoMe index increases with the time spend on YouTube.

**Table 11: Mediation of Ad Value in the relationship between PAIR and PAAV with the conditional effect of time spent on YouTube**

Conditional Mediation Effect	B	SE	T	5%	95%
Index of conditional mediation	0.0252	0.0116	2.1664	0.0459	0.0084\
Time Spent on YouTube (W)					
Low (-1.0)	-0.0077	0.0113	-0.6822	0.0092	-0.0273
Medium (0)	0.0087	0.0055	1.5791	0.0186	0.0008
High (+1.0)	0.0252	0.0116	2.1664	0.0400	0.0084



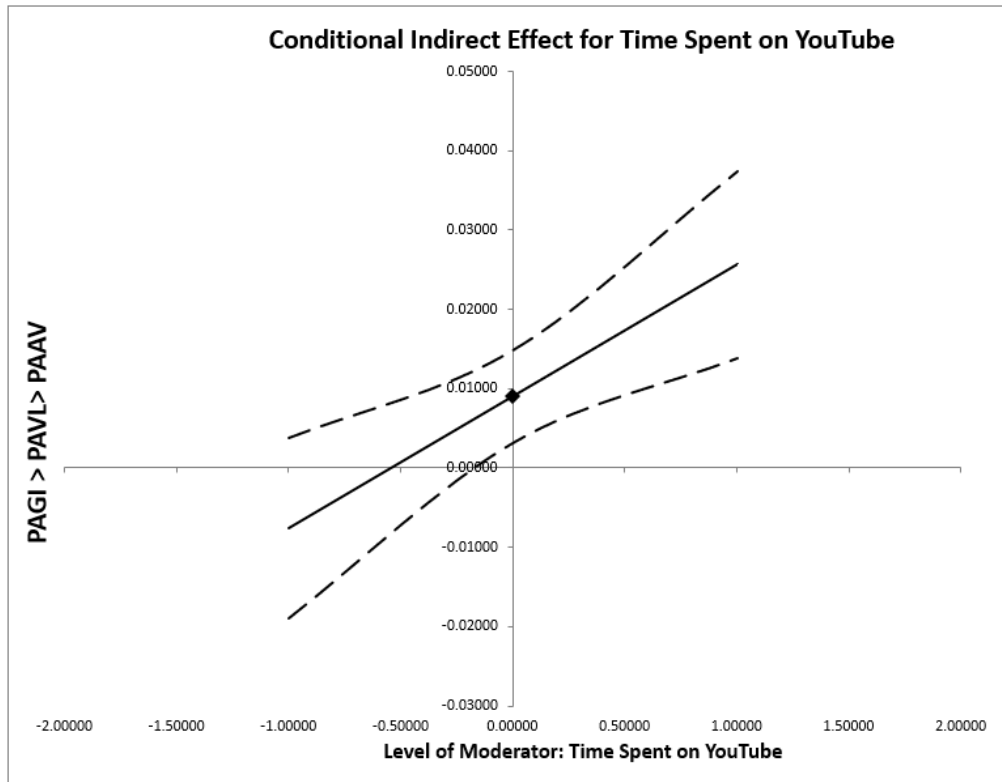
**Figure 5 Conditional indirect effect for time spent on YouTube on PAIR --> PAVL --> PAAV**

**Conditional Mediating Effect (PAGI> PAVL> PAAV)**

The index of CoMe is statistically significant ( $\beta = -0.0256, t=.1784 < 0.05$ ) for the conditional effect of time spent on YouTube on the mediating effect of ad value between goal impendMNNNHent and avoidance. The results also shows that CoMe index increases with the increase in time spent on the YouTube

**Table 12 Mediation of Ad Value in the relationship between PAGI and PAAV with the conditional effect of time spent on YouTube**

Conditional Mediation Effect	B	SE	T	5%	95%
Index of conditional mediation	0.0256	0.0117	2.1784	0.0085	0.0467
Time Spent on Youtube (W)					
Low (-1.0)	-0.0076	0.0113	-0.6678	-0.0269	0.0096
Medium (0)	0.0090	0.0058	1.5425	0.0008	0.0195
High (+1.0)	0.0256	0.0117	2.1784	0.0085	0.0467



**Figure 6 Conditional indirect effect for time spent on YouTube on PAGI --> PAVL --> PAAV**

## Discussion

The results of this study are mostly in line with the previous research. However, some unique contextual findings have emerged through this study. The results suggest that the respondents expressed conflicting views about the informativeness of YouTube ads. Although the mean value of the informative factor tilted towards disagreement, the spread of the responses is wide. However, the findings related to the entertainment factor significantly concentrated toward disagreement.

It shows that most YouTube viewers believe that ads lack the factor of entertainment. On the other hand, the respondents believe that YouTube ads are excessive, irritating, and annoying. The responses of YouTube viewers concentrated on the agreement that the ads lead to irritation. Likewise, viewers strongly believe that YouTube comes in their way of achieving goals. They create hindrances while they are seeking information or searching for videos. The results strongly concentrated toward the highest level of agreement. At the same time, YouTube ads hold a very low value for them. The regression results confirm that the entertainment of the YouTube ads strongly influences YouTube ads' value. In addition, the findings indicate that YouTube ads are not valuable for viewers. Moreover, the study indicates that YouTube viewers who participated in this study intend to skip the ads mentally or behaviorally. The results are highly skewed negatively, suggesting they agree with the belief that they want to skip the ads.

Previous studies indicate that traditional ads with informational value hold more value for the viewers (Obermiller, Spangenberg & MacLachlan, 2005). Similarly, informative electronic media ads (Kim, Kim & Park, 2010), social media ads (Ferreira et al., 2017), and YouTube advertisements (Dehghani et al., 2016; Munawar et al., 2022) are more valuable for the viewer.

This study's results align with the previous research indicating that YouTube ads considered informative are beneficial for viewers, resulting in lesser avoidance. However, the findings lacked evidence that informativeness directly correlates with ad-skipping behavior. There were mixed responses about the advertisements' informativeness and ad avoidance, which aligns with some previous studies (Kim and Seo, 2017). In the context of Pakistan, we can assume that since product information is available through other channels, viewers skip the ads even if they believe that YouTube provides required formation.

In terms of the entertainment factor, this study reveals that viewers do not find YouTube ads entertaining. In such a case, there is a substantial impact on the reduced value of YouTube advertisements for the viewers (Antoniadis, Saprikis & Karteraki, 2019; Munawar et al., 2022). Therefore, they avoid YouTube ads by skipping them or ignoring them. These results align with the previous studies (Kim and Seo, 2017; Antoniadis, Saprikis and Karteraki, 2019). The ad value significantly mediates the impact of entrainment on ad avoidance. However, our sample data does not support the indirect relationship.

The irritation factor has a positive effect on ad avoidance. The findings show that ad irritation positively impacts ad avoidance through ad value. It suggests when media

users feel irritated, they value the ad less, leading to skipping the ads. These results align with previous research. Moreover, the direct relationship between the irritation factor and ad avoidance agrees with the previous research findings, which state that a YouTube viewer skips an ad upon feeling irritated by the advertisement (Park, Kim, & Lee, 2020; Abbasi et al., 2021).

Another factor affecting YouTube viewers' attitude toward the ad is the extent to which the viewer feels their YouTube goals are hindered. If YouTube viewer feels that the ads are creating a barrier to watching the videos, they place a lower value on the ads (Munawar et al., 2022) and avoid the YouTube ad too (Kim and Seo, 2017; Munawar et al., 2022).

## **Conclusion**

A recent decline in the number of advertisements on YouTube has led to YouTube skepticism about its full-fledged operations in Pakistan. Also, many firms in Pakistan have reduced their advertisement budgets on YouTube. Given its importance, the study has examined the factors affecting YouTube ad avoidance. The study also examined the mediating role of ad avoidance and the moderating role of time spent on YouTube. In addition, the study has also examined the conditional indirect effect of time spent on YouTube. We collected data based on an e-questionnaire, in which 457 participants completed the questionnaires. Our study found that perceived ad irritation (PAIR) and perceived ad goal impediment (PAGI) positively affect perceived ad avoidance (PAAV). The study also documents that perceived ad information (PAIN) and perceived Ad entertainment (PAEN) insignificantly affect perceived ad avoidance (PAAV). The study proposed four mediating hypotheses, and we found support for only one hypothesis, stating that perceived ad value (PAV) mediates perceived ad goal impediment (PAGI) and perceived ad avoidance (PAAV). However, the study found time spent on YouTube (TSOY) moderates perceived ad value (PAVL) and perceived ad avoidance (PAAV). We also found that the time spent on YouTube's conditional mediation Index (CoMe Index) is statistically significant.

## **Theoretical Implications**

The existing literature has identified many factors affecting ad avoidance (Munawar et al., 2022). However, this study establishes the conditional effect of time spent on YouTube for the first time. These findings have contributed to the literature on advertising, social media, ad value, and ad avoidance. The influence of time spent on an activity has opened a new avenue of investigation.

### **Managerial Implications**

This study offers several managerial implications and opens avenues for further research. This study has revealed several findings that can serve as a framework for social media, specifically YouTube advertising. Entertainment has emerged as the most potent and significant factor that increases ad value and reduces ad-skipping behavior. Hence, marketers should make YouTube ads more entertaining. Entertainment is positively correlated with a viewer's positive attitude toward ads. Managers can make advertisements entertaining by making the ads more engaging, memorable, and enjoyable. In addition, a marketer should control the frequency of the ads and try to make the ads less irritating. Such techniques will reduce ad-skipping behavior.

Furthermore, the advertisers should select the videos carefully while posting the ads. Most advertisers choose videos that have heavy traffic. However, the videos watched to attain specific goals should not be selected for ad posting. Viewers skip the ads when they feel that ads hinder their goal achievement or break the flow of the video. So, placing an advertisement in the middle of video streaming may not be affective.

### **Limitations and Future Research**

This study used seven variables. Future studies may use more variables to increase the explanatory power of the regression model. The study recommends that other researchers conduct exploratory research to find other factors affecting viewers' attitudes toward ad value and avoidance. They may also arrange focus groups and interviews to find answers to unexplained questions. Moreover, some experiments with the viewers might be helpful, too, where respondents may express their opinions related to variables similar to this study and other aspects. Such an experiment will allow the focus group to share its reactions.

## Annexure :1

### Constructs and Items Used in the Questionnaire

#### Perceived Ad informativeness (PAIN)

PAIN 1. YouTube advertisements provide relevant product information.

PAIN 2. YouTube advertisements provide timely product information.

PAIN 3. YouTube advertisements provide accurate product information.

PAIN 4. YouTube advertisements detailed product information.

PAIN 5. YouTube advertisements provide new product information.

#### Perceived Ad Entertainment (PAEN)

PAEN 1. YouTube advertisements are enjoyable.

PAEN 2. YouTube advertisements are exciting.

PAEN 3. YouTube advertisements are pleasing.

PAEN 4. YouTube advertisements are memorable.

PAEN 5. YouTube advertisements are interesting.

#### Perceived Ad Irritation (PAIR)

PAIR 1. YouTube advertisements are annoying.

PAIR 2. YouTube advertisements are irritating.

PAIR 3. YouTube advertisements are deceptive.

PAIR 4. YouTube advertisements are confusing.

PAIR 5. YouTube advertisements are nonsense.

PAIR 6. YouTube advertisements generate cluttering.

#### Perceived Ad Goal Impediment (PAGI)

PAGI 1. YouTube advertisements create search hindrances.

PAGI 2. YouTube advertisements break the flow of the video being watched.

PAGI 3. YouTube advertisements divert the attention from the video being watched.

PAGI 4. YouTube advertisements waste time while watching videos.

PAGI 5. YouTube advertisements distract YouTube users.

#### Perceived Ad Value (PAVL)

PAVL 1. YouTube advertisements are valuable.

PAVL 2. YouTube advertisements communicate value proposition adequately.

PAVL 3. YouTube advertisements are important.

PAVL 4. YouTube advertisements are of high quality.



PAVL5. YouTube advertisements give a positive feeling.

---

**Perceived Ad Avoidance (PAAV)**

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PAAV 1. I intentionally ignore advertising on YouTube.

---

PAAV 2. I'm not too fond of any advertisements on YouTube.

---

PAAV 3. It would be better if there were no advertisements on YouTube.

---

PAAV 4. I skip advertisements on YouTube immediately without watching them.

---

PAAV 5. I do something else when YouTube ads are streaming.

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**Time Spend on YouTube**

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TSOY1. I spend watching YouTube several times a day.

---

TSOY2. I watch YouTube once a day.

---

TSOY3. I spend, watching YouTube four to five times a week.

---

TSOY4. I spend, watching YouTube once or twice a week.

---

TSOY5. I rarely, watch YouTube.

---

TSOY6. I never watch YouTube.

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## **Conflict of Interest**

The author (s) declared no conflict of interest and have not received any funds for the project.



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# Impact of Social Media Opinion Leaders Influencers on Individual Consumption Decisions of Visually Conspicuous Products

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## Abstract

Social media has completely altered how businesses engage with their customers. Social media influencers have become an essential marketing tool for many industries. The consumption of conspicuous products is growing in today's era. Therefore, most people prefer luxury products as a status symbol, ignoring what brands offer. Consequently, brands spend considerable resources on social media to promote their products and reach a wider audience. However, little research is available on how social media affects customer behavior and how to measure social media effectiveness. This study aims to fill this gap by investigating the influence of social media influencers on customer attitudes, behaviors, and purchase intentions toward the consumption of conspicuous products in Pakistan. The study also examined the mediating effect of brand image on consumer attitude and purchase intention. The study used Smart PLS 4 for data analysis on a data set of 200 respondents. The results indicate that social media Influencer positively affects brand image, consumer attitude and purchase intention.

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The findings also reveal that brand image mediates (i) social media influencer and consumer attitude and (ii) social media influencer and purchase intention. This research contributes to the current reservoir of knowledge by providing insights into the factors that make social media influencer successful in promoting conspicuous products. The study findings can benefit conspicuous/luxury brands in selecting suitable social media influencer and marketing strategies that enhance their brand image.

**KEYWORDS:** *Social media opinion, leaders influencer, credibility, trustworthiness, social attractiveness, brand Image, decision-making style, conspicuous consumption, opinion leaders characteristics, social media platform.*

## Introduction

Social media relates to how people create, share, and transfer thoughts and knowledge through online groups and channels (Tajpour et al., 2022). According to Schaffner et al. (2022), social media users use mobiles, laptops, and desktops to create fully interactive channels where other users share their opinions on the quality of goods and services. It extensively impacts businesses, groups, and individuals relationships (Reddy et al., 2023). According to Fachrurazi et al. (2022), social media promotes social interactions and provides job opportunities. Wahab et al. (2022) assert that social media influences buyer decisions, especially regarding visually conspicuous products. Extant literature suggests that most individuals worldwide connect with social media mediums, including WhatsApp, TikTok, Instagram, Twitter, Facebook, Snapchat. and many others, due to which they get influenced by social media influencers (Alexandre et al., 2022). Social media influencers are popular on social media. They have many followers and are perceived to have know-how in specific areas such as technology, beauty, and fashion (Lee et al., 2023). Followers of social media influencers often seek the opinions of social media influencers on the quality and value proposition of goods and services, especially those related to visually conspicuous products (Niswonger, 2023).

Pangarkar et al. (2023) assert that when buying these products, followers are more likely to believe and adopt the opinions of social media leaders. Therefore, it is essential to understand the impact of social media influencers on individual consumption decisions of visually conspicuous products (Yao et al., 2021; Rossotto et al., 2018 ). Chu et al. (2022) assert that marketers can use social media and opinion leaders to reach their target audience and boost sales. Since social media usage has increased, most businesses also use it as a tool for marketing their products (Ancillai et al., 2020). Apparel retailers initially used social media to promote their brands. As more firms understood the potential of social media, they also started using it as a tool for marketing their products (Alatawy, 2022; Fakhreddin & Foroudi, 2022).

Given the importance of social media influences, the study examines the impact of social media influencer on consumer attitude, brand image, and purchase intention. It also examines the mediating role of brand image on (i) Social media influencer and consumer attitude and (ii) social media influencer and consumer purchase intention.

## Literature Review

### **Credibility (Dimension of Social Media Influencer)**

Credible social media influencers have more impact on the followers than other influencers (Alrwashdeh et al., 2022). Hasan (2023) asserts that influencers' credibility depends on the objectivity of the content they share with their followers. The studies by Kurdi et al. (2022) and Majali et al. (2022) document that influencer credibility significantly affects a consumer's attitude and buying behavior. Therefore, these studies suggest that firms must select credible social media influencers for their target audience. Researchers also believe that consumers follow reliable, honest, and trustworthy influencers and seek their advice when purchasing goods and services (Pradhan et al., 2023).

### **Social Attractiveness (Dimension of Social Media Influencer)**

The influencer's familiarity, preferences, and proximity to followers determine the influencer's attractiveness (Bhattacharya, 2023). The audience or followers are more inclined to adopt the influencer's views, attitudes, and behaviors when they feel they share relevant values or attributes with them (Simay et al., 2023). Consumers compare their and followers' personality traits. If followers find similarities between their and influencers' personalities, their attraction towards the influencers increases (Delbaere et al. 2021). Weismueller et al. (2020) assert that consumers' similarity perception has two categories. They are real- similarity and desired similarity. Real personality refers to consumers' actual personality. The desired personality refers to the personality they want (Hudders et al. 2021). Literature documents that, apart from social media attractiveness, followers expect that social media influencers must be creditable in the relevant domains and have a high reputation in the industry (Koay et al. 2022).

### **Trustworthiness (Dimension of Social Media Influencer)**

Trust is a personal trait that relates to dependability and honesty (Roldan-Gallego et al., 2023). Paul and Nikolaev (2021) assert that social media influencers biased and false feedback adversely affects their trust. Kurdi et al. (2022) believe consumers' perception of social media influencers significantly depends on many traits of influencers, including honesty, integrity, and probity. Thus, we argue that the trustworthiness of social media influencers is important in purchasing and changing followers' attitudes and behaviors (Cayaban et al., 2023).

### **Communication (Dimension of Social Media Influencer)**

The exchange of information and ideas between social media influencers and their followers refers to communication. It has various aspects, including types, language, and tone of posted materials on social media (Dalla-Pria et al., 2022). Communication can influence how followers perceive and respond to social media influencers (Roccapriore & Pollock, 2023). Most researchers endorsed that the quality of influencers' messages is important for a huge following. Moreover, Balaban et al. (2022) believe that social media endorsers use many communication strategies, including endorsements and reviewing products. Similarly, Wentzell et al. (2021) assert that social media influencers use their communication skills to engage and build followers' trust. For example, besides other strategies, they post educational or entertaining content on social media.

### **Respect (Dimension of Social Media Influencer)**

Respect is a consumer's admiration and high opinion of a social media influencer. It encompasses various aspects, such as credibility, expertise, authenticity, professionalism, and likability (Su et al., 2023). Similarly, Schillinger et al. (2020) assert that social media influencers command followers respect by various factors such as the quality and relevance of the content they post, their engagement with their followers, their consistency, and their overall reputation in the industry (Kurdi et al., 2022). Consumers' respect for social media influencers can impact their attitudes towards products (Lou, 2022). Moreover, consumers' perceptions of the influencers' respect depend on critical elements, including perceived knowledge, genuineness, social standing, and the language and tone used by the influencers (Ramzan et al., 2023). These elements can affect consumers' attitudes and purchasing intent toward the marketed products and services (Bhagat & Kim, 2023).

### **Brand Image**

According to Kotler and Pfoertsch (2007), "brand image is the perception and belief made by consumers, which includes associations and built in memory of customers" (Rajasa et al., 2023). Brand image promotes emotional attachment between consumers and brands, an important precursor of consumers' purchase intention (Norvadewi et al., 2023). Similarly, Chen, Hsu, and Lee (2019) believe that brand image is an emotional attachment that persuades consumers to buy products and services. Moreover, Tannady et al. (2022) assert that consumers' purchase decisions significantly depend on a brand's image.

### **Consumer Purchase Intention**

Purchase intention is consumers' willingness to buy goods and services soon. It includes many factors, such as attitudes, cultural aspects, and the influence of family, friends, and colleagues (Parulian & Tannady, 2023). Influencers on social media

significantly affect consumers' purchase intentions (Sharma et al., 2022). Similarly, Weismueller et al. (2020) argue that consumers who follow social media influencers are more likely to purchase goods and services recommended by influencers. In social media, consumers' purchase intentions significantly depend on the trustworthiness and credibility of social media influencers (Gerlich, 2023). Social media users' messages often create a sense of urgency and scarcity, which enhances consumers' purchase intentions (Khan et al., 2023).

### **Consumer Attitude**

Consumers' attitude is their enduring perception of products, services, and people (Bhattacharya, 2023). The Theory of Planned Behavior suggests that religious beliefs and cultural aspects are precursors of consumers' attitudes. Consumers positive attitudes toward a brand is positively correlated with their purchase intentions and purchase behavior (Wang & Li, 2022). Researchers believe that the relationship between attitude and purchase intention is universal. It does not vary from one country to another and from one product to another (Elbarky, 2023). Kurdi et al. (2022) state that social media influencers engage followers, which promotes consumers' positive attitudes toward products and services. Similarly, Hudders and Lou (2022) state that the followers' attitudes toward products or services depend on "opinion leaders' expertise, trustworthiness, and attractiveness." In the same context Delbaere et al. (2021) assert social media influencers promote emotional attachment to brands, which leads to brand loyalty and purchase intentions. Moreover, social media users promote a sense of community in their followers, promoting positive attitudes toward a brand (Lou et al., 2023).

## **Hypothesis Development**

### **Social Media Influencer and Brand Image**

Many researchers have documented that social media influencer enhances brand image. Therefore, they suggest firms must collaborate with social media influencers to achieve their market goals (Armawan et al., 2023). Also, Jasin (2022) stresses that firms ensure that their advertising themes align with the personality of social media influencers. Using the right influencers with appropriate characteristics promotes agent action-psychological event, which triggers a positive response from the audience (Gómez-Rico et al., 2023). Therefore, it will enhance a firm's brand image (Kurdi et al., 2022). Extant literature documents that celebrities are often social media influencers and educate followers about the brand's attributes (Khan & Fatma, 2023). As a result, it enhances followers' perceptions of the brand's quality and performance, enhancing brand awareness (Herrando & Martín-De Hoyos, 2022). Armawan et al. (2023) assert that social media influencers are reliable third-party endorsers in the prevailing era.

Influencers use social media platforms such as Facebook, Instagram, and Twitter to publicize product information and the latest promotions to online followers, enhancing followers' perception of a brand (Azmi et al., 2022). Moreover, Saran and Shokouhyar (2023) assert that social media influencers generate significant buzzwords that enhance brand image, which is more cost-efficient and effective than conventional marketing tools.

*H1: Social media influencer positively affects brand image.*

### **Social Media Influencer, Attitude, and Purchase Intention**

Extant literature documents that social media influencer can change consumers' attitudes and behavior toward a product and service (Lin et al., 2023). Muthaiyah (2023) believes that the informative content of social media influencer enhances followers' trust, leading to positive attitudes and purchase intentions (Ao et al., 2023). However, they observed that the social media influencers' trust significantly depends on their credibility (Kurdi et al., 2022). At the same time, many studies document that apart from trust and credibility, consumer attitude and purchase intention significantly depend on the expertise of social media influencers (Dos-Santos et al., 2023). Self-perception Theory Asserts that the followers take the recommendations of social media influencers at face value, positively affecting consumers' attitudes and purchase intention about a brand or product (Herrando & Martín-De Hoyos, 2022). Yones and Muthaiyah (2023) also observed that the gender of social media influencers moderates the association between social media influencers and consumers' attitudes and purchase intentions. Social comparison suggests that individuals compare themselves with social media influencers (Dinh & Lee, 2022). If consumers find similarities between their and social media influencers' characteristics, their attitudes and purchase intentions towards the brand will increase. In contrast, if consumers find dissimilarity between their personality traits and influencers, their attitudes and purchase intentions about the brand will decrease (Shoenberger & Kim, 2023).

*H2: Social media influencer positively affects consumers' attitudes toward auspiciously visible products.*

*H3: Social media influencer positively affects consumers' purchase intention toward auspiciously visible products.*

### **Mediating Role of Brand Image**

In the above discussions, we found social media influencer affects brand image (Khan & Fatma, 2023), and brand image promotes positive attitude and purchase intention

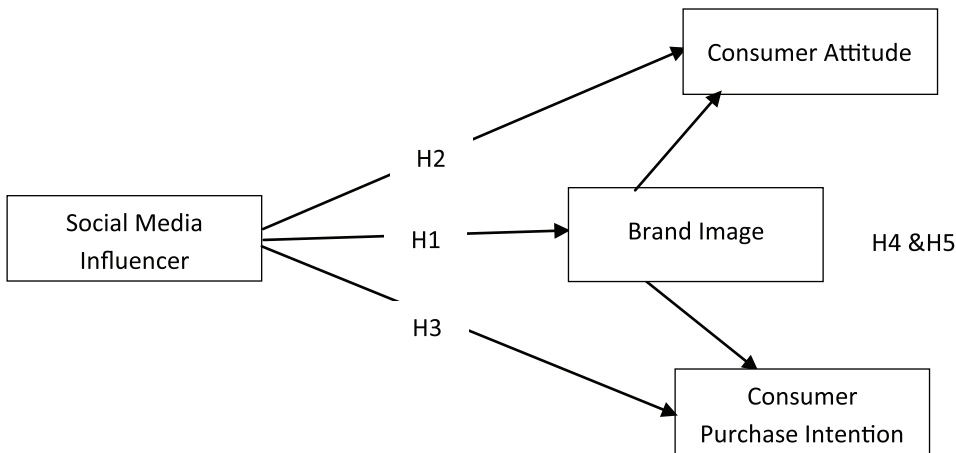
(Gómez-Rico et al., 2023). Therefore, we argue that social media influencers, through brand image, affect attitudes and purchase intentions (Herrando & Martín-De Hoyos, 2022),

*H4: Brand image mediates social media influencer and consumer attitude.*

*H5: Brand image mediates social media influencer and purchase intention.*

### Research Model

Based on theoretical discussions, we have proposed a model (Refer to Figure 1) containing one independent variable (i.e., social media influencer), one mediating variable (i.e., brand image), and two dependent variables (i.e., consumer attitude and purchase intention).



**Figure 1: Conceptual Model**

### Methodology

#### Research Design

This study is “quantitative research,” and it adopted post-positivist philosophy. The approach we used in the study is deductive since we, based on the literature, developed a model that we empirically tested by collecting the data from the target audience. It took us three months to collect the data (i.e., March 2023 to June 2023).

#### Population and Sample Size

According to Casteel and Bridier (2021), a population refers to the number of persons



or elements in a sample frame. The term “target population” refers to the entire group of people the researcher is interested in. The study has collected data from social media users in Karachi. According to many researchers, Karachi represents Pakistan, as all ethnic population resides in this city. The sample size for the study was 200, which many researchers believe is appropriate if a researcher is using Smart PLS for statistical analysis (Aburumman et al., 2022). The study used the snowball sampling technique to collect the data, which researchers recommend if the sample frame for the target population is unavailable.

### Instrument Selection

The studies have adopted the questionnaire from past studies. It has four latent variables: brand image, consumer attitude, consumer purchase, and social media influencer. Social media influencer has five dimensions. We measured the responses on a “five-point Likert scale one, suggesting a low agreement and five a high agreement.” Refer to Table 1 for the summary related to the instrumentation of the study.

**Table 1: Instrumentation**

Construct	Sources	Items
Credibility (Dimension of SMI)	Sundaram and Webster (2000).	3
Trustworthiness(Dimension of SMI)	Sundaram and Webster (2000).	3
Communication (Dimension of SMI)	Sundaram and Webster (2000).	3
Respect (Dimension of SMI)	Sundaram and Webster (2000).	3
Social Attractiveness (Dimension of SMI)	Sundaram and Webster (2000).	3
Brand Image	Putri and Tiarawati (2021).	6
Purchase Intention	Putri and Tiarawati (2021).	9
Consumer Attitudes	Akar and Topçu (2011).	9

### Data Analysis Techniques

PLS is a structural equation modeling technique appropriate for analyzing the complex relationships between the variables. Since the model in the study is complex, we used SMART PLS 4 for data analysis. Another advantage of this software is that it gives predictive power to the model and does regressions concurrently. The analysis includes evaluating the constructs’ reliability and validity and testing the hypotheses.

### Ethical Consideration

In this study, we followed all the relevant ethical rules and principles. Each participant gave their consent before completing the questionnaire. We also informed them that we would maintain their confidentiality and use the data for academic purposes. We also told the respondents they could discontinue filling out the questionnaire anytime.



There is no compulsion from our side.

## Results

### Respondent's Demographic

In Table 2, the study has presented the demographic profiles of the respondents. Two hundred responders from Karachi are of different ages, genders, and educational levels. The respondents' profiles show 47.5 % are females and 52.5% are males. Regarding education, Table 1 shows that 2.5% have completed matriculation, 8% have completed intermediate, 33% have undergraduate degrees, 26% have graduate degrees, 28.5% have Masters degrees, and 2% have a doctorate level of education.

**Table 2: Demographic Profile**

Demographics	Classification	Frequency	Percent
Gender	Female	95	47.5%
	Male	105	52.5%
	Total	200	100%
Age	Less than 21	23	11.5%
	21 to 30	115	57.5%
	31 to 40	47	23.5%
	41 to 50	12	6%
	Above 50	3	1.5%
	Total	200	100%
Education	Matriculation	5	2.5%
	Intermediate	16	8%
	Undergraduate	66	33%
	Graduate	52	26%
	Master	57	28.5%
	Doctorate	4	2%
	Total	200	100%
Occupation	Employee	110	55%
	Own Business	40	20%
	Student	50	25%
	Total	200	100%

### Social Media Usage Pattern

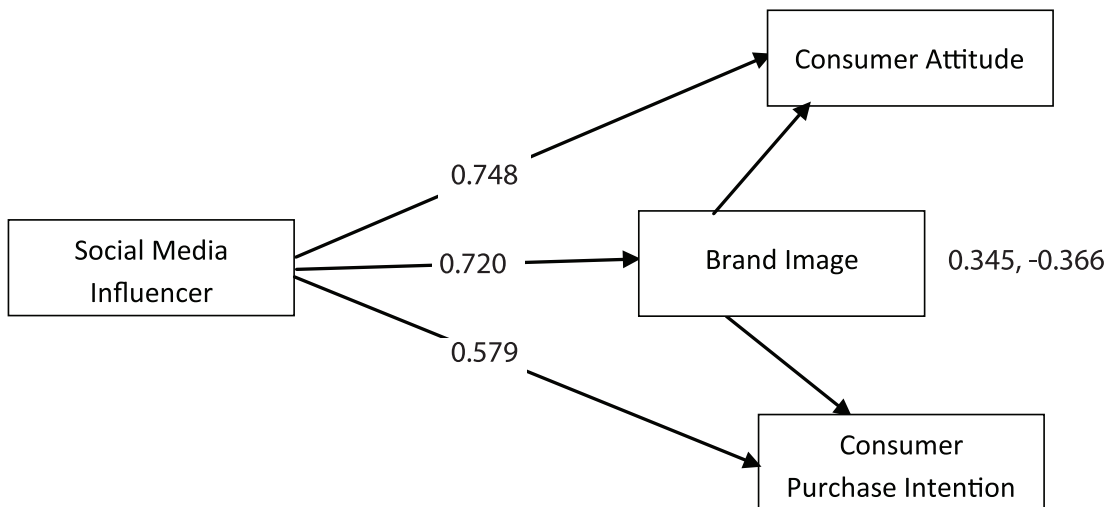
The social media pattern in Table 3 shows that 15.5% of respondents use Facebook, 38 % use WhatsApp, 12% use Twitter, 31% use YouTube, 2.5% use Instagram and 1% other social media platforms. Refer to Table 2 for the summary of the results. Regarding preferred social media before purchase intention.

**Table 3 Social Media Usage**

Frequently used Platform of Social Media	Whatsapp	38%
	YouTube	31%
	Facebook	15.5%
	Twitter	12%
	Instagram	2.5%
	Others	1%
	Total	100%

### Measurement Model Assessment

The study used the statistical software Smart PLS 4 and a two-step approach suggested by Ringle et al. (2015). Initially, we generated a measurement model (Santoso, Sunarjo, & Fadli, 2023) for the relationship between indicator variables and latent variables, followed by a structural Model (Aburumman et al., 2022) showing the association between the latent variables. Figure 2 shows the measurement model followed by other statistical results.



**Figure 2 Measurement Model**

### PLS Path

Outer loadings, average variance extracted (AVE), composite reliability, and Cronbach's Alpha are essential indicators for internal reliability and convergent validity (Hair et al., 2019). Table 4 shows the summary of the results.

**Table 4: Convergent Validity**

Constructs	Item	Outer Loading	Cronbach's Alpha	Composited Reliability	Average Variance Extracted
Communication	CM1	0.717	0.932	0.945	0.538
	CM2	0.720			
	CM3	0.737			
Creditability	CR1	0.746	0.872	0.936	0.638
	CR2	0.751			
	CR3	0.736			
Respect	RS1	0.704	0.865	0.896	0.768
	RS2	0.762			
	RS3	0.743			
Social Attractiveness	SA1	0.746	0.885	0.907	0.764
	SA2	0.737			
	SA3	0.729			
Trust Worthiness	TW1	0.710	0.874	0.889	0.711
	TW2	0.733			
	TW3	0.711			
Brand Image	BI1	0.743	0.880	0.950	0.581
	BI2	0.744			
	BI3	0.776			
	BI4	0.761			
	BI5	0.744			
	BI6	0.759			
Customer Attitude	CA1	0.746	0.898	0.917	0.550
	CA2	0.723			
	CA2	0.752			
	CA4	0.733			
	CA5	0.763			
	CA6	0.718			
	CA7	0.751			
	CA8	0.744			

	CA9	0.742			
Consumer Purchase Int.	P11	0.721	0.907	0.923	0.573
	PI2	0.752			
	PI3	0.738			
	PI4	0.797			
	PI5	0.778			
	PI6	0.704			
	PI7	0.759			
	PI8	0.772			
	PI9	0.793			

The results in Table 4 show that Cronbatch’s Alpha, composite reliability, and AVE values are within the prescribed range suggested by Voorhees et al. (2016). These results also show that the constructs used in the study fulfill the convergent validity requirements (Duffy et al., 2023).

**Discriminant Validity**

Discriminant validity demonstrates that variables used in the study have little or no correlation (Flake et al., 2022). We used the heterotrate-monotrate ratio (HTMT) statistical test for discriminant analysis, which creates a multi-rate, multi-method HTMLT matrix (Patil, Navalgund, & Mahantshetti, 2022). According to Rasoolimanesh (2022), the HTMT ratio not exceeding 0.90 suggests a good discriminant validity. However, a ratio value above 0.90 is considered non-discriminatory. Refer to Table 5 for the summary of results.

**Table 5: Discriminant Validity**

<b>Constructs</b>	<b>BA</b>	<b>CA</b>	<b>PI</b>	<b>SMI</b>
Brand Image	-			
Customer Attitude	0.687			
Purchase Intention	0.815	0.721		
Soial Media Influnce	0.768	0.717	0.861	-

Social media influencer include credibility, trustworthiness, attractiveness, communication, and respect. Table 5 also shows that all HTMT values are less than 0.9, with 0.861 being the highest number and 0.687 being the lowest. It thus has acceptable discriminant validity.

**Coefficient Determination (R<sup>2</sup> Value)**

The coefficient of determination (R<sup>2</sup>) is a tool for examining the variance of the

endogenous variables covered by the structural model.  $R^2$  values for the brand image and the consumer attitude are 0.518 and 0.499 respectively.

### Hypothesis Testing: Structural Model Assessment

After the generation of the measurement model, we found that all the results met the required criteria. Subsequently, the study tested the hypotheses by generating a structural model using Bootstrapping in Smart PLS 4. Table 6 shows the summary of the hypothesis results

### Hypotheses Results

The study has articulated five hypotheses and summarized the results in Table 6.

**Table 6: Hypotheses Results**

Hypotheses	$\beta$	t-Value	P-value	Results
Social Media Influencer -> Brand Image (H1)	0.720	24.036	0.001	Supported
Social Media Influencer -> Cons. Attitude.(H2)	0.748	6.629	0.002	Supported
Social Media Influencer -> Purchase Intention (H3)	0.579	12.113	0.003	Supported
S. M. Influencer ->Brand Image -> Cons. Attitudes (H4)	0.345	16.610	0.000	Supported
S. M. Influencer ->Brand Image -> Purchase Intention (H5)	-0.366	15.229	0.000	Supported

Our results support all five proposed hypotheses. Social media influencer (SMI) positively affects brand image ( $\beta=0.720$ ,  $t=24.036<0.05$ ). Social media influencer (SMI) positively affects consumer attitude ( $\beta=0.748$ ,  $t=6.629<0.05$ ). Social media influencer (SMI) positively affects purchase intention ( $\beta=0.579$ ,  $t= 12.113<0.05$ ). Brand image positively mediates social media influencer (SMI) and consumer attitudes ( $\beta=0.345$ ,  $t= 16.610<0.05$ ). Brand image negatively mediates social media influencer (SMI) and purchase intention ( $\beta= - 0.366$ ,  $t= 15.229<0.05$ ).

## Discussion and Conclusion

### Conclusion

The significance of social media influencer has significantly increased in the prevailing technological and competitive era. Given its importance, the study has examined the effect of social media influencer on (brand image, consumer attitude, and purchase intention) in Karachi, Pakistan. It also examined the mediating role of brand image on consumer attitude and purchase intention. Social media influencers' sub-dimensions are credibility, trustworthiness, social attractiveness, communication, and respect. These are important traits for social media influencer. The study collected a sample of 200 respondents using a snowball sampling technique. We found social media influencers

(SMIs) positively affect brand image, consumer attitude, and purchase intention. The study found that brand image mediates (i) media influencer (SMI) and consumer attitude and (ii) influencer (SMI) and purchase intention.

### **Implications**

The study recommends that conspicuous brands in Pakistan consider partnering with social media influencers with high credibility, trustworthiness, social attractiveness, communication skills, and respect. Social media influencers with these traits can positively impact consumer attitudes toward the brand and increase purchase intention. Additionally, the study found that brand image mediates (i) social media influencers and consumer attitudes and (ii) social media influencers and purchase intentions. Therefore, brands should focus on developing a strong and positive brand image that aligns with the values and image portrayed by the influencers. Furthermore, conspicuous brands may use multiple social media forums to enhance their image. The firms may focus more on those platforms that their target audience uses. Finally, it is important for conspicuous brands to continuously monitor and evaluate the effectiveness of their social media influencer partnerships to make necessary adjustments and improvements. By following these recommendations, brands can enhance the effectiveness of social media influencers.

### **Limitations and Future Research**

First, the sample size of 200 people is relatively small and may not represent the entire population. Secondly, the study focuses on conspicuous products and may not be generalizable to other categories or regions. Thirdly, the study relies on self-reported data from survey respondents, which may be subject to bias and social desirability effects. Fourthly, the research does not focus on the impact of additional marketing strategies or external factors that may influence customer purchase intentions and attitudes. Future research may examine the social media influencers (SMIs) impact on attitudes and purchase intentions in the designer's apparel industry and other cities of Pakistan. Future studies may also examine micro-celebrities' impact on consumers' attitudes and purchase intentions. A comparative study between micro and macro celebrities may bring more insight into the discussed phenomenon.

## Annexure:1

### Constructs and Items Used in the Questionnaire

#### Credibility (Dimension of Social Media Influencer)

CR1. The social media opinion leader is a credible source of information for visually conspicuous products.

CR2. The social media opinion leader provides accurate and reliable information about visually conspicuous products.

CR3. I have confidence in the credibility of the social media opinion leader.

#### Trustworthiness (Dimension of Social Media Influencer)

TW1. The social media influencers are trustworthy.

TW2. I find that opinion leaders in social media are honest and transparent in their recommendations for visually conspicuous products.

TW3. Social media influencers give a positive image to the endorsed brands.

#### Communication (Dimension of Social Media Influencer)

CM1. I believe that social media influencer's communication is authentic.

CM2. I understand what social media influencers deliver in their content.

CM3. The posts of social media influencers are detailed enough to understand.

#### Respect (Dimension of Social Media Influencer)

RS1. I believe they are genuine in their recommendations.

RS2. Social media influencers are convenient sources of information about brands.

RS3. I have positive feelings for brands that influencers advertised.

#### Social Attractiveness (Dimension of Social Media Influencer)

SA1. An influencer's social attractiveness helps me search for and select the right product while shopping online.

SA2. I prefer to buy from that page of social media influencers who provide me with quality information.

SA3. Social media opinion leaders' presentations and styles attract me to buy visually conspicuous products.

#### Brand Image

BI1. A brand endorsed by a social media influencer would be my first choice.

BI2. The likelihood is very high that a brand endorsed by social media influencers would be reliable.

BI3. A brand endorsed by social media influencers is reputable.

BI4. I believe a brand endorsed by a social media influencer is high quality.

BI5. Influencers can explain the relationship between content and brand.

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BI6. I get attached to a brand endorsed by a celebrity or social influencer.

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**Purchase Intention**

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PI1. I seriously consider purchasing the product based on the endorsement of opinion leaders.

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PI2. I usually take lots of time before buying a visually conspicuous product.

---

PI3. I buy products that influencers are promoting to follow them.

---

PI4. The positive impressions towards the influencers enhance my purchase decisions.

---

PI5. I look for the product promoted by the influencers.

---

PI6. I feel that the influencers are addressing my interests.

---

PI7. Influencers affect my purchase decisions more than TV, radio, and newspaper advertisements.

---

PI8. I often make purchase decisions based on the opinions of others and frequently purchase products that influencers review positively.

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PI9. I usually prefer to purchase visually conspicuous products that are popular and unique.

---

**Consumer Attitude**

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CA1. It takes less time to evaluate a product while shopping online.

---

CA2. Influencer marketing has made me look for more information about a product or service.

---

CA3. I intend to buy the product presented by the influencer.

---

CA4. I believe that advertisements through influencers improve the image of companies.

---

CA5. Information and advertisements provided through social influencers are more reliable than TV.

---

CA6. Social influencers affect my thoughts regarding a particular product.

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CA7. I buy a product just because the celebrities are using it.

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CA8. I visit the websites of the sponsored brands by influencers.

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CA9. Social media influencers are effective in creating awareness of brands.

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**Conflict of Interest**

The author (s) declared no conflict of interest and have not received any funds for the project.



# Antecedents to Firm Performance and the Moderating Role of Environment Turbulence

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## Abstract

Innovation is necessary for all industries' growth and sustainability, including the pharmaceutical sector. The study has focused on the pharmaceutical sector of Karachi to examine the impact of product, process, marketing, and organizational innovations on firm performance. It also examined the moderating role of environmental turbulence. The study collected a sample of 423 employees from the target firms. We found: "product innovation, process innovation, marketing innovation, and organizational innovation positively affect firm performance." We also found that (i) environmental turbulence moderates product innovation and firm performance, and (ii) environmental turbulence insignificantly moderates process innovation and firm performance. Past studies exhibit that innovation impacts business performance differently due to intensive competitive markets and environmental influence. Thus, to achieve high business performance, firms must focus on all the dimensions of innovation (i.e., product, process, marketing, and organization). Environmental turbulence, directly and indirectly, affects firm performance. Therefore, firms must deal with it adequately.

**Keywords:** *Environmental turbulence, product innovation, process innovation, market innovation, organizational innovation, and firm performance.*

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## Introduction

Innovation is a key tool for organizations to gain a competitive advantage against their rivals (Cepeda-Carrion et al., 2023). It includes improving marketing, financial, and organizational structures (Dana et al., 2022). Such steps help organizations enhance performance in competitive and uncertain environments (Farida & Setiawan, 2022). It also helps firms enter new markets, enhance market share and ensure long-term success (Suchek et al., 2021). Researchers acknowledge that innovation is important to firms' survival, growth, and sustainability (Wies, Moorman, & Chandy, 2023).

Muneeb et al. (2023) stress that organizations have started spending resources on innovation in the prevailing turbulent and rapidly changing technological environment. Many studies cite that firms face challenges, including international hyper-competition, swift technological changes, and short product life cycles (Crnogaj, Tominc, & Rožman, 2022). Therefore, organizations must focus on innovation to improve performance and sustain their competitive advantage (Farida & Setiawan, 2022). Since the available products and services face vulnerability due to abrupt market changes, manufacturing organizations focus on innovation to cater to customers' needs in a better way (Ahmad et al., 2022; Yahia-Marzouk & Jin, 2022). Organizations and countries with continuous innovativeness are ahead of those who do not invest resources in research and development. Developed countries like Switzerland, Japan, and the USA invest heavily in R&D for economic progress and growth (Blind & Schubert, 2023). Conversely, Pakistan is neither a leader nor an auspicious country in the context of innovativeness (Shahbaz et al., 2022). The severe international competition has motivated organizations to focus on business strategies, particularly innovation (Bähr & Fliaster, 2023). The literature on innovation also claims innovation is vital for the organization's success and sustainability (Elshaer & Marzouk, 2022). Ciasullo and Lim (2022) explain that innovation is a multifaceted phenomenon, and it includes product innovation (Ahsan et al., 2023), process innovation (Chatterjee et al., 2022), marketing innovation (Jeong & Chung, 2023) and organization innovation (Banmairuroy, Kritjaroen, Homsombat, 2022). All these facets, directly and indirectly, affect firms' performance (Farida & Setiawan, 2022). Similarly, Schoemaker and Da (2021) cite that the prevailing turbulent global market environment has forced organizations to evaluate their innovation strategies to gain and sustain their competitive advantage.

Given the importance of innovation, this study examined the impact of product, process, marketing, and organization innovations on firm performance. It also examined the moderating effect of environmental turbulence on (i) product innovation and firm performance and (ii) process innovation and firm promise.

## Literature Review

### Firm Performance

Researchers have conceptualized firm performance from different perspectives (Yu, 2023). However, most researchers have measured it based on market, finance, and production performance (Dvouletý, Srhoj & Pantea, 2021). Market performance is the most important component of organizational performance. It promotes growth and sustainability in an organization. Without sales of goods and services, the financial and production performance would be irreverent (Khan et al., 2023). It provides inputs to the finance department on pricing and the production department on capacity utilization (Ghardallou, 2022). Financial performance is the core indicator to measure firm performance (Zheng & Iatridis, 2022). It has different indicators, including return on investment (ROI), return on assets (ROA), and enhancement in profit share (Korherr & Kanbach, 2023). Production performance relates to all the production output in a business entity (Otto, Szymanski, & Varadarajan, 2020). It includes capacity utilization and the quality of the output. Factors like R&D and new products also affect production performance (Almashhadani & Almashhadani, 2022). Apart from these factors, quality improvement, cost efficiency, flexibility, and production cycle are important components of production performance (Korherr & Kanbach, 2023). An effective supply chain also relates to production performance (Brahma, Nwafor, & Boateng, 2021).

### Product Innovation

Product innovation is necessary for a firm's growth, stability, and competitive advantage (Ahsan et al., 2023). For product innovation, firms must develop an environment that allows employees to give new ideas about changing the specifications of products per customers' needs (Hang et al., 2022). Product innovation also reduces the cost of production (Granja & Moreira, 2023). Many successful firms have a policy that mandates employees to give new ideas about developing new products (Begum et al., 2022). Most of these ideas are often of raw form and have no or little market viability. But, after refinements and discussion, a few turned into viable innovative products (Ali, Wu, & Ali, 2023). Past literature documents that product innovation is positively associated with organizational performance and the motivation of employees (Patmawati, Dewi, & Asbari, 2023). Bhatia and Jakhar (2021) assert that innovation's determinants are efficiency and efficacy, which individuality and collectively affect organizational performance.

### Process Innovation

Process innovation improves production and other related processes (Chatterjee, Chaudhuri, & Vrontis, 2022). It improves firms' operational processes, a precursor

of firm performance (Aliasghar, Sadeghi, & Rose, 2023). Saunila. (2020) asserts that process innovations refer to the changes firms bring in tools and techniques to improve operational activities or the delivery method. Firms adopt process innovation to develop or improve existing products by amending the existing operational process or adopting a new operational process (Fiango et al., 2023). Firms can evaluate the effectiveness of the process innovation by measuring customer satisfaction in terms of delivery time and after-sales service (Beltramino et al. 2021). Reljic et al. (2023) believe that firms must develop new operational procedures to stay competitive in the prevailing turbulent environment and to satisfy customers. Similarly, Perez-Alaniz et al.(2023) assert that equipment, employee skills, and efficiency are precursors of process innovation.

### **Market Innovation**

Market innovation changes marketing strategies by altering a firm's marketing mix (i.e., product, price, place, and promotion) to develop new markets and increase market share (Christofi et al. 2021). Jung and Shegai (2023) stress market innovation also includes brand extension, changing or modifying existing products or packaging, or stretching the product upward or downward (Hanaysha et al. 2022). Endorsing the above authors, Jeong and Chung (2023) argue that market innovation requires improving existing marketing strategies by aligning them with customers' needs and firms' long-term objectives. The key to innovative marketing is to keep changing the strategies according to the changes in the business environment and customers' needs (Mabenge, Ngorora-Madzimure, & Makanyeza, 2022). Firms with dynamic and innovative marketing will always have a competitive edge over others and achieve sustainable growth (Henao-García & Cardona-Montoya, 2023). Many past studies show that market innovation and firms' performance positively correlate (Ucm et al., 2022).

### **Organizational Innovation**

Organizational innovation is developing and implementing new business practices and realigning them with external stakeholders' requirements. As a result, it reduces cost and increases efficiency (Heredia et al., 2022; Sonmez-Cakir & Adiguzel, 2023). These new methods and practices are either developed within the organization internally or procured from external sources (Banmairuroy, Kritjaroen, & Homsombat, 2022). Organizational innovation allows firms to compete in a turbulent competitive environment. Farrukh, Raza, and Waheed (2023) believe organizational innovation also aims to cater the needs and demand of customers. As a result it helps firms develop loyal customer base.

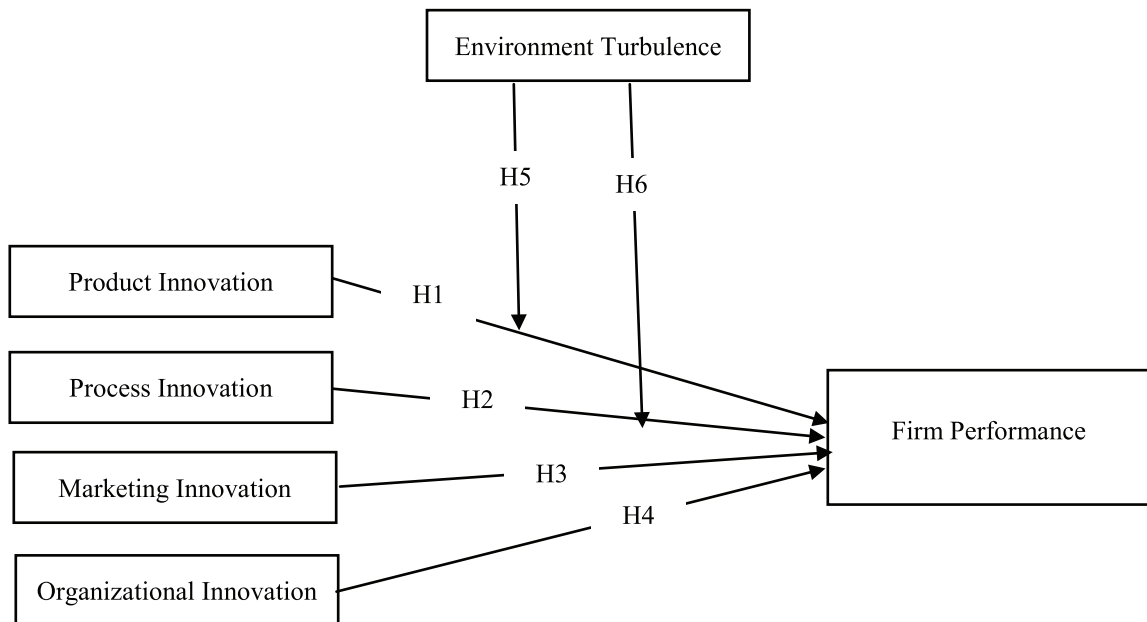
### **Environment Turbulence**

In the present era, industries operate in a highly unpredictable environment, which many researchers named environment turbulence. Environment turbulence directly and

indirectly affects firm performance (Zhang et al., 2023). Researchers have categorized environmental turbulence into three sub-dimensions: marketing, technology, and competitive intensity (Ojha et al., 2021). Market turbulence refers to customers' dynamic changes in their product preferences. Consequently, customers' demands for new products have increased immensely (Rajala & Hautala-Kankaanpää, 2023). Technological turbulence refers to technological changes in producing goods and services (Arias-Pérez & Vélez-Jaramillo, 2022). Competitive intensity refers to increased competition due to competitors' promotional and price strategies and new firms' entrance into the market (Gemici & Zehir, 2023).

### Conceptual Framework

The study has adopted the conceptual framework of Turulja and Bajgoric (2019), containing six variables presented in Figure 1.



**Figure 1 Conceptual Framework**

### Hypothesis Development

#### Product Innovation and Firm Performance

Product innovation refers to the changing characteristics of a product and packaging to improve production efficiency and costs (Patroni, Von-Briel, & Recker, 2022; Farrukh,

Raza, & Waheed, 2023). Consequently, it improves sales, market share, and financial performance (Abduvakhidovna, 2023). The prevailing market is dynamic; therefore, consumers' tastes and demands keep changing. The firms need to cater to the changing demands of consumers by launching new and innovative products in the market. This product innovation strategy makes customers happy and they remain loyal to the firms (Banmairuoy, Kritjaroen, & Homsombat, 2022).

Moreover, launching new products in addition to existing customers attracts new customers, increasing the firms' customer base (Sonmez-Cakir & Adiguzel, 2023). A large customer base enhances market share and reduces marketing, production, and other costs. All these factors, individually and collectively, improve firms' performance (Ayinaddis, 2023). Motivation and employee performance are essential precursors of firm performance. In this context, many studies, including Erena, Kalko, and Debele (2023), believe launching new products improves employee engagement and productivity.

*H1: Product innovation "positively affects firm performance."*

### **Process Innovation and Firm Performance**

Process innovation focuses on improving internal business processes and the quality of goods and services (Tsou & Chen, 2023). Del-Carcio-Gallegos & Miralles (2023) argue process innovation focuses on aligning the production with lean and peak sales, improving total quality management practices. All these factors are essential precursors of firm performance (Junaid, Zhang, & Syed, 2022). Process innovation has a broad horizon, effectively improving all aspects of firm performance, including manufacturing, marketing, and finance (Tsou & Chen, 2023). Compared to other innovations, competitors may find process innovation difficult to copy and imitate. Therefore, performance based on process innovation has more sustainability than other types of innovations (Tariq et al., 2023). Many researchers argue that process innovation continuously improves technological and administrative processes. As a result, it gives a competitive advantage to firms in a dynamic and fast-moving environment (Zheng & Iatridis, 2022). Many researchers, including Cirillo et al. (2023), believe since process innovation is difficult to implement properly, it could have a negative or positive association with the firm performance (Montani et al., 2023). At the same time, many researchers believe that long-term innovativeness improves firm performance, but in the short run, it may cause losses (Adomako & Tran, 2022).

*H2: Process innovation "positively affects firm performance."*

## Marketing Innovation and Firm Performance

The firms must monitor marketing performance continuously. Otherwise, they will lag (Jung & Shegai, 2023). Many past studies found a positive association between marketing innovation and firm performance and suggested business entities must spend resources on innovative marketing to increase their performance (Zheng & Iatridis, 2022). Similarly, other studies have cited that market innovation helps firms create product differentiation, cost efficiency, and long-term competitive advantage (Wang, Guo, & Zhang, 2023). Extant literature also documents that marketing innovations help medium-sized service industries identify and target profitable market segments to increase sales, yielding additional profit (Bhat & Sharma, 2022).

Similarly, market-driven innovation allows firms to modify existing products and services according to customers' needs (Henao-García & Cardona-Montoya, 2023). Familiarity with the target segments enables firms to curtail promotional and other marketing expenses, resulting in customer retention and increased performance (Jeong & Chung, 2023). Researchers believe that short and long-term marketing innovation generates stable returns and steady growth (Montani et al., 2023). Researchers assert that successful firms keep themselves updated on the development of the market and continuously launch innovative products to increase their market share and performance (Tsou & Chen, 2023).

*H3: Market innovation "positively affects firm performance."*

## Organizational Innovation and Firm Performance

Many researchers believe that organizational innovation strongly affects firm performance compared to other innovations (Singh et al. 2022). Similarly, other studies found that organizational innovativeness focuses on management practices. Therefore, it impacts firm performance more than other innovations (Zhong, Sukpasjaroen & Pu, 2023). Extant literature documents that organizational innovation amalgamates technical and non-technical innovational activities (Sonmez-Cakir & Adiguzel, 2023). As a result, firms achieve growth and sustainability (Cao, Le, & Nguyen, 2022; Farrukh, Raza, and Waheed, 2023). Researchers believe firms can handle environmental challenges by incorporating technical and non-technical innovations to achieve organizational goals and sustainability (Barlatier et al., 2023). Similarly, Zhang (2023) argues that organizational innovation gives a competitive advantage to firms, resulting in increased organizational performance (Chaubey, Sahoo, & Das, 2022). Also, organizational innovation promotes novelty in organizational methods and practices, which positively impacts firm performance (Sonmez-Cakir & Adiguzel, 2023).

*H4: Organizational innovation "positively affects firm performance."*



## Moderating Role of Environment Turbulence

Product innovation refers to the changing characteristics of a product and packaging to improve production efficiency and costs (Granja & Moreira, 2023). Consequently, it improves sales, market share, and financial performance. In the present era, industries operate in a highly unpredictable environment, so their performance immensely suffers (Naderpour, 2023). Extending the Contingency Theory, Calantone et al. (2003) and Turulja and Bajgoric (2019) found that environmental turbulence moderates product innovation and business performance. Past studies suggest that innovation impacts business performance differently due to intensive competitive markets and environmental influence. Others, including Zulu-Chisanga et al. (2016), also endorsed that environmental turbulence inversely affects product success and financial performance. Fu et al. (2021), while explaining the association between innovation and firm performance, stress that this association significantly depends on the external environment. Thus, to achieve high business performance, firms must focus on product innovation, process innovation, and environmental turbulence (Zhang, Teng, Le, & Li, 2023).

*H5: Environmental turbulence “moderates product innovation and firm performance.”*

*H6: Environmental turbulence “moderates process innovation and firm performance.”*

## Methodology

### Research Design

The research design used in the study is descriptive and cross-sectional. It is deductive since we, based on the literature, developed the hypotheses, which we tested by collecting data from the pharmaceutical sector of Karachi. Since this study involves the development of research questions and the formation of the hypotheses that we tested through statistical analysis, the current study’s philosophical approach is positivism.

### Sampling and Population

The population for the current study included all the manufacturing units of the pharmaceutical industry in Karachi, Sindh. We obtained the list of the pharmaceutical industry from the Drug Regulatory Authority of Pakistan (DRAP), sub-office Karachi. It includes the names of operating pharmaceutical units and addresses that help us to distribute the questionnaires. We distributed 500 questionnaires and received 423 with a response rate of 89%, which is appropriate in quantitative research like ours.



## Scale and Measures

The study has six latent variables, each with various indicators, discussed in the following section. We measured the responses on “Five Point Likert Scale, with five showing high agreement and one showing low agreement. A summary narration about the scales and measures we adopted are as follows.

### Product Innovation Scale

Product innovation refers to the changing characteristics of a product and packaging to improve production efficiency and costs (Granja & Moreira, 2023). Consequently, it improves sales, market share, and financial performance. It has five items adopted from the study of Ellonen et al. (2008).

### Process Innovation

Process innovation focuses on improving internal business processes for producing goods and services efficiently (Chatterjee, Chaudhuri, & Vrontis, 2022). Reljic et al. (2023) argue process innovation focuses on aligning production with lean and peak sales, improving total quality management practices. All these factors are essential precursors of firm performance (Aliasghar, Sadeghi, & Rose, 2023). This scale has five items adopted from West and Farr (1990).

### Market Innovation

Market innovation changes marketing strategies by altering a firm’s marketing mix (i.e., product, price place, promotion) to identify new markets and increase market share (Mabenge, Ngorora-Madzimure, & Makanyeza, 2022). Jeong and Chung (2023) stress market innovation also includes brand extension, changing or modifying existing products or packaging, or stretching the product upward or downward (Hanaysha et al. 2022). It has five items adapted from Kmiecik et al.( 2012).

### Organization Innovation

Organizational innovation is developing and implementing new business practices and realigning relationships with external stakeholders to reduce costs and increase efficiency (Heredia et al., 2022). Organizational innovation is necessary for the growth and sustainability of business and non-business entities (Sonmez-Cakir & Adiguzel, 2023). It has nine items adopted from Chen et al. (2016).

### Environment Turbulence

In the present era, industries operate in a highly unpredictable environment, so their performance immensely suffers (Zhang et al., 023). Researchers have categorized environmental turbulence into three sub-dimensions: marketing technology and competitive intensity (Ojha et al., 2021). We adopted seven items to measure environment

turbulence based on the study of Sun (et al., 2023).

### **Firm Performance**

Researchers have conceptualized organizational performance differently (Dvouletý, Srhoj & Pantea, 2021). However, most researchers have measured it based on market, finance, and production performance (Ahsan et al., 2023). The firm performance scale has three sub-dimensions: Production (4 items), Marketing (3 items) and finance (4 items). We adopted these constructs and items based on the study of Gunday et al. (2011).

### **Pilot Testing**

We adopted the questionnaire from previous research work. Therefore, we conducted a pilot study to find the reliability and validity before administering the questionnaire to the target population. The study distributed 20 questionnaires to the respondents in the pharmaceutical industry for the pilot test. We found that the respondents selected for the pilot test did not have difficulty reading and comprehending the wording of the questionnaires. Subsequently, we assessed the instruments' reliability values and found them to be more than 0.70, which is within the acceptable (Aburumman et al., 2022).

### **Ethical Guidelines**

Before administering the survey, we briefed the respondents about the study's objective. We explained the data collection and analysis procedures to the respondents so that they had clarity in responding to the questions in the questionnaire. We also assured the respondents that we would maintain anonymity and confidentiality. We also told the respondent that we would use the data for educational research purposes and would not share the data with any third person. In addition, the respondents used pseudonyms instead of original names to maintain privacy, anonymity, and confidentiality.

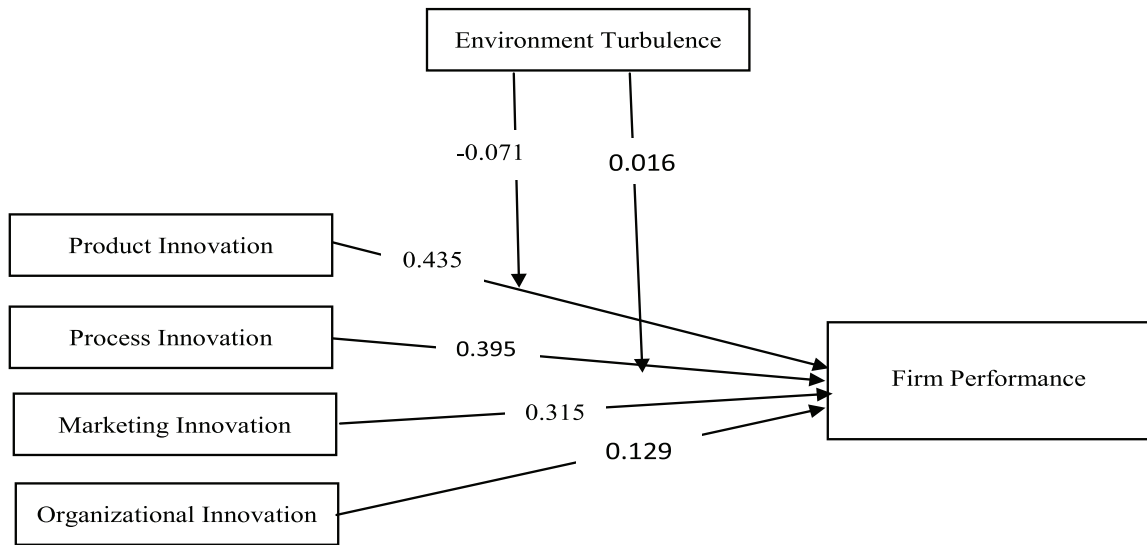
### **Statistical Analysis**

Researchers suggest a two-step approach (Santoso, Sunarjo, & Fadli, 2023) in SMART PLS, which is more appropriate than a one-step approach. Following the suggestions of the researcher mentioned above, we adopted a two-step approach (Wong, 2013). First, we generated a measurement model (Ringle et al., 2015) for the results related to reliability and validity (Wong, 2013), followed by the generating structural model (Santoso, Sunarjo & Fadli, 2023) for the hypotheses results.

## Results

### Measurement Model

Since the study has adopted a two-stage analysis (Wong, 2013), we initially developed a measurement model (Santoso, Sunarjo, & Fadli, 2023), presented in Figure 2, for relevant statistical results.



**Figure 2: Measurement Model**

### Convergent Validity

Convergent validity explains the convergence of indicator variables into their respective latent variable. The results presented in Table 1 show that outer loadings, Cronbach's Alpha values, composite reliability values, and AVE values are within the prescribed range as recommended by Aburumman et al. (2022), suggesting the constructs meet the requirements of internal consistency and convergent validity.

**Table 1: Convergent Validity Analysis**

Constructs	Items	Outer Loading	Cronbach's Alpha	Composited Reliability	Average Variance Extracted
Product Innovation	PRI1	0.581	0.735	0.805	0.697
	PI2	0.489			
	PI3	0.645			
	PI4	0.816			
	PI5	0.835			

Process Innovation	PI1	0.575	0.735	0.799	0.699
	PI2	0.602			
	PI3	0.765			
	PI4	0.689			
	PI5	0.768			
Marketing Innovation	MI1	0.531	0.769	0.815	0.796
	MI2	0.764			
	MI3	0.769			
	MI4	0.801			
	MI5	0.774			
Organizational Innovation	OI1	0.631	0.701	0.787	0.869
	OI2	0.731			
	OI3	0.635			
	OI4	0.571			
	OI5	0.663			
	OI6	0.771			
	OI7	0.645			
	OI8	0.628			
	OI9	0.641			
Firm Performance					0.887
Firm Production Performance	FPP1	0.743	0.709		0.603
	FPP2	0.633			
	FPP3	0.782			
	FPP4	0.736			
Firm Market Performance	FMP1	0.743	0.771		0.776
	FMP2	0.744			
	FMP3	0.776			
Firm Financial Performance	FFP1	0.725	0.743		0.865
	FFP2	0.709			
	FFP3	0.834			
	FFP4	0.769			
Firm Turbulence	FT1	0.877	0.805	0.889	0.775
	FT2	0.774			
	FT3	0.649			
	FT4	0.655			
	FT5	0.711			

### Discriminant Validity

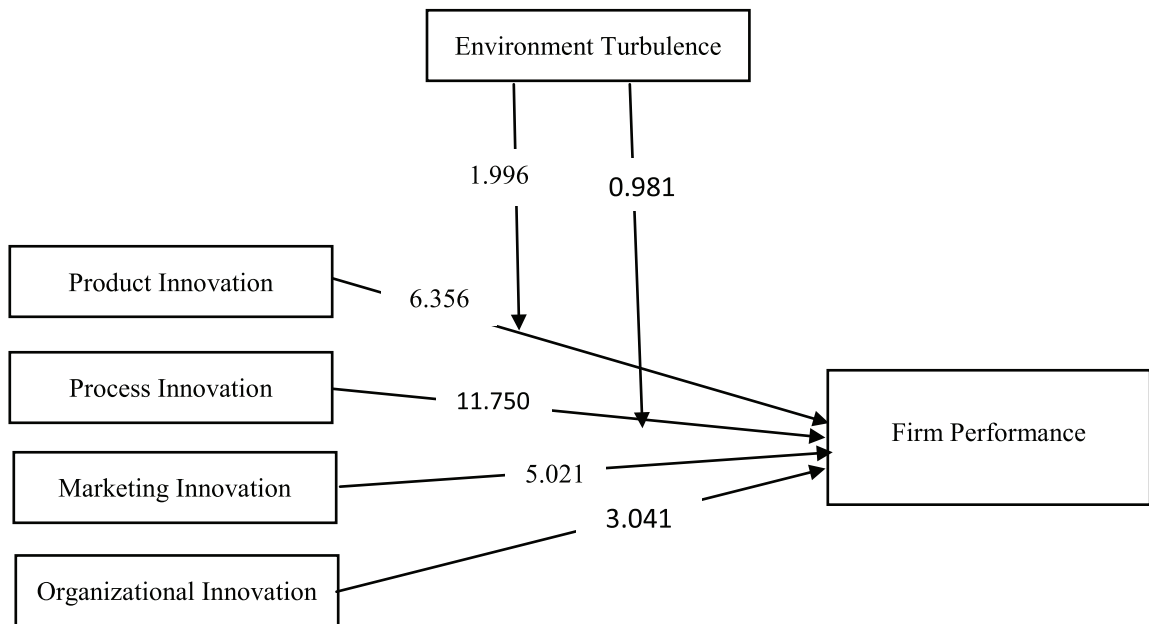
Discriminant validity suggests how unique (Richter et al., 2023) and distinct (Aburumman et al., 2022) the latent variables used in the study are. The results presented in Table 2 show the summary of the results. The results in Table 2 show that the constructs have acceptable discriminant validity since “Ave Square roots values are more than the Pearson Correlation values.”

**Table 2: Discriminant Validity**

Constructs	PI	PRI	MI	OI	FP	ET
Product Innovation	0.881					
Process Innovation	0.347	0.835				
Marketing Innovation	0.681	0.345	0.885			
Organizational Innovation	0.305	0.514	0.329	0.881		
Firm Performance	0.429	0.309	0.565	0.527	0.884	
Environment Turbulence	0.541	0.468	0.468	0.315	0.502	0.880

### Structural Model

In step two, we generated a structural model for the association between latent variables. Refer to Figure 3 for the structural model showing that the study supports four direct and two moderating hypotheses.



**Figure 3 Structural Model**

## Hypothesis Results

We have summarized the hypothesis results in Table 3, which we proposed based on past theoretical support.

**Table 3: Hypotheses Results**

Hypotheses	B	T-value	P-value	Results
Product Innovation -> Firm Performance(H1)	0.435	6.365	0.002	Accepted
Process Innovation -> Firm Performance (H2)	0.395	11.750	0.001	Accepted
Marketing Innovation -> Firm Performance (H3)	0.315	5.021	0.003	Accepted
Organization Innovation -> Firm Performance (H4)	0.129	3.014	0.001	Accepted
Product Innovation* Env. Turbulence -> Firm Per. (H5)	-0.071	1.996	0.047	Accepted
Process Innovation* Env. Turbulence -> Firm Per. (H6)	0.016	0.981	0.328	Rejected

The results show that our study supports four direct hypotheses and one moderating hypothesis. However, we rejected 5, which states environmental turbulence moderates process innovation and firm performance.

## Discussion and Conclusion

### Discussion

The focus of the study was on the pharmaceutical industry in Pakistan. To achieve the study objectives, we proposed six hypotheses and failed to reject five, and rejected one. We have presented hypotheses results and their alignment with past studies in the following paras.

The study accepted Hypothesis 1 ( $\beta = 4.35$ ,  $t = 6.35 < 0.05$ ), stating product innovation positively affects firm performance. The firms need to cater to the changing demands of consumers by launching new and innovative products in the market. This product innovation strategy makes customers happy and they remain loyal to the firms (Banmairuoy, Kritjaroen, & Homsombat, 2022). Moreover, launching new products in addition to existing customers attracts new customers, increasing the firms' customer base (Sonmez-Cakir & Adiguzel, 2023). A large customer base enhances market share and reduces marketing, production, and other costs. All these factors, individually and collectively, improve firms' performance (Ayinaddis, 2023). Motivation and employee performance are essential precursors of firm performance. In this context, many studies, including Erena, Kalko, and Debele (2023), believe launching new products improves employee engagement and productivity.

The study supported Hypothesis 2 ( $\beta = 0.395$ ,  $t = 11.75 < 0.05$ ), which states, "Process

innovation positively affects firm performance." Process innovation has a broad horizon, effectively improving all aspects of firm performance, including manufacturing, marketing, and finance (Tsou & Chen, 2023). Compared to other innovations, competitors may find process innovation difficult to copy and imitate. Therefore, performance based on process innovation has more sustainability than other innovations (Tariq et al., 2023). Many researchers argue that process innovation continuously improves technological and administrative processes. As a result, it gives a competitive advantage to firms in a dynamic and fast-moving environment (Zheng & Iatridis, 2022). Many researchers, including Cirillo et al. (2023), believe since process innovation is difficult to implement properly, it could have a negative or positive association with the firm performance (Montani et al., 2023). At the same time, many researchers believe that long-term innovativeness improves firm performance, but in the short run, it may cause losses (Adomako & Tran, 2022).

The study accepted Hypothesis 3 ( $\beta=0.315$ ,  $t=5.021 < 0.05$ ), stating, "Market innovation positively affects firm performance." Extant literature documents that market innovations help medium-sized service industries identify and target profitable market segments to increase sales, yielding additional profit (Bhat & Sharma, 2022). Similarly, market-driven innovation allows firms to modify existing products and services according to customers' needs (Henao-García & Cardona-Montoya, 2023). Familiarity with the target segments enables firms to curtail promotional and other marketing expenses, resulting in customer retention and increased performance (Jeong & Chung, 2023). Researchers believe that short and long-term marketing innovation generates stable returns and steady growth (Montani et al., 2023). Researchers assert that successful firms keep themselves updated on the development of the market and continuously launch innovative products to increase their market share and performance (Tsou & Chen, 2023).

Hypothesis 4 states that "organizational innovation positively affects firm performance," which the study's results support ( $\beta=0.129$ ,  $t=3.014 < 0.05$ ). Extant literature documents that organizational innovation amalgamates technical and non-technical innovational activities (Sonmez-Cakir & Adiguzel, 2023). As a result, firms achieve growth and sustainability (Cao, Le, & Nguyen, 2022; Farrukh, Raza, and Waheed, 2023). Researchers believe firms can handle environmental challenges by incorporating technical and non-technical innovations to achieve organizational goals and sustainability (Barlatier et al., 2023). Similarly, Zhang (2023) argues that organizational innovation gives a competitive advantage to firms, resulting in increased organizational performance (Chaubey, Sahoo, & Das, 2022). Also, organizational innovation promotes novelty in organizational methods and practices, which positively impacts firm performance (Sonmez-Cakir & Adiguzel, 2023).

The study supported Hypothesis 5: "Environment turbulence moderates product innovation and firm performance" ( $\beta = -0.071$ ,  $t = 1.996 < 0.05$ ). At the same time, the study rejected Hypothesis 6: "Environment turbulence moderates process innovation and firm performance" ( $\beta = 0.016$ ,  $t = 0.981 > 0.05$ ). Extending the Contingency Theory, Calantone et al. (2003) and Turulja and Bajgoric (2019) found that environmental turbulence moderates product innovation and business performance. Past studies exhibit that innovation impacts business performance differently due to intensive competitive markets and environmental influence. Others, including Zulu-Chisanga et al. (2016), also endorsed that environmental turbulence inversely affects product success and financial performance. Fu et al. (2021), while explaining the association between innovation and firm performance, stress that this association significantly depends on the external environment. Thus, to achieve high business performance, firms must focus on product innovation, process innovation, and environmental turbulence (Zhang, Teng, Le, & Li, 2023).

## **Conclusion**

Innovation is necessary for all industries' growth and sustainability. The study has focused on the pharmaceutical sector of Karachi to examine the impact of product, process, marketing, and organizational innovations on firm performance. It also examined the moderating role of environmental turbulence. Based on a sample of 423 from the target firms, we found: "product innovation, process innovation, marketing innovation, and organizational innovation affect firms' performance." We also found that (i) "environmental turbulence moderates product innovation, and (ii) environmental turbulence insignificantly moderates process innovation and firm performance.

## **Managerial Implications**

In today's turbulent market environment, corporate managers focus on reducing costs and enhancing productivity to generate value propositions for their customers to sustain and maintain a competitive advantage. Based on our results, we recommend that business managers pay extra attention to different innovation types for achieving high performance of organization. In addition, the study further recommends that business managers must involve all the employees to implement innovation strategies. We also suggest that firms must create an environment that encourages employees to share their innovative ideas with all the employees. Such an environment enhances the motivation and engagement of employees and generates positive results in the context of innovation.

## **Limitations and Future Research**

The study focuses on the pharmaceutical industries of Karachi, Pakistan. We invite others to examine the innovational aspects in other industries and cities of Pakistan. A comparative study between the two sectors may bring more insight into the discussed



phenomenon. The study has examined the impact of sub-dimensions of innovation on firm performance. Other studies may examine the indirect effects of these dimensions on firm performance. This study used environmental turbulence as a moderator, which future studies may use as an antecedent to firm performance. The study has examined the moderating role of environmental turbulence on the two sub-dimensions of innovation (i.e., product and process innovations) and firm performance. Future studies may examine the moderating role of environmental turbulence on all innovation factors and firm performance.

## Annexure-1

### Constructs and Items Used in the Questionnaire

#### Product Innovation

PI1. Increasing manufacturing quality in components and materials of current products.

PI2. Decreasing manufacturing costs in components and materials of current products.

PI3. Developing newness for current products leads to improved customer satisfaction.

PI4. Developing new products with technical specifications and functionalities differing from the current ones.

PI5. Developing new products with components and materials differing from the current ones.

#### Process Innovation measure

PI1. Determining and eliminating non-value-adding activities in the production process.

PI2. Decreasing variable cost components in manufacturing processes, techniques, machinery, and software.

PI3. Increasing output quality in manufacturing processes, techniques, machinery, and software.

PI4. Periodically checking whether a firm strategy aligns with the business environment.

PI5. Determining and eliminating non-value-adding activities in the delivery-related process.

#### Marketing Innovation

MI1. Renewing the design of the current or new products through changes.

MI2. Renewing the distribution channels without changing the logistics processes related to product delivery.

MI3. Renewing the product promotion techniques employed to promote the current or new products.

MI4. Renewing the product pricing techniques employed to promote the current or new products.

MI5. Renewing general marketing management activities.

#### Organization Innovation

O1. Renewing the routines, procedures, and processes employed to execute firm activities innovatively.

OI2. Renewing the supply chain management system.

OI3. Renewing the production and quality management systems.

OI4. Renewing the human resource management systems.

OI5. Renewing the in-firm management information system and information-sharing

practice.

O16. Renewing the organizational structure to facilitate teamwork.

O17. Renewing the organizational structure to facilitate coordination between different functions, such as marketing and manufacturing.

O18. Renewing the organizational structure to increase organizational performance.

O19. Renewing the organizational structure to facilitate strategic partnerships and long-term business collaborations.

### **Firm Performance**

#### **Production Performance**

FPP1. Conformance quality.

FPP2. Production cost.

PPP3. Production (volume) flexibility.

FPP4. Production and delivery speed.

#### **Market Performance**

FMP1. Customer Satisfaction.

FMP2. Total sales.

FMP3. Market share.

#### **Financial Performance Measure**

FPP1. Return on sales (profit/total sales).

FPP2. Return on assets (profit/total assets).

FPP3. General profitability of the firm.

FPP4. Cash flow excluding investments.

#### **Environmental Turbulence**

ET1. In our business, customers' product preferences change significantly over time.

ET2. Our customers tend to look for new products all the time.

ET3. Technological changes provide big opportunities in our industry.

ET4. The technology in our industry is changing rapidly.

ET5. Competition in our industry is cutthroat.

ET6. Rating realized profits compared to its main competitors in the past three years.

RT7. Rating realized sales compared to its main competitors in the past three years.

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