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Title: The Effect of Social Media Influencers on Brand Trust and the Moderating Role of Brand Reputation on Brand Commitment and Brand Loyalty

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

Social Media Influencers on Brand Trust and the Moderating Role of Brand Reputation on Brand Commitment and Brand Loyalty

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Abstract

Firms need help retaining and attracting new customers in the prevailing competitive era. Therefore, besides other strategies, they have started using social media influencers to enhance their brand image and trust. Given its importance, the study has examined the impact of social media influencers (expertise, authenticity, attractiveness, and homophily) on brand trust. It also examined the effect of brand trust on brand commitment and loyalty. The study also examined the moderating effect of brand reputation on brand commitment and loyalty. The study collected data from Karachi's social media users. The study found that the social media influencer's expertise and homophily positively affect brand trust. Social media influencer authenticity and attractiveness insignificantly affect brand trust. Brand trust promotes brand commitment and brand loyalty. Brand reputation significantly moderates brand trust and brand commitment. However, brand reputation insignificantly moderates brand trust and brand loyalty. We recommend that firms select authentic and attractive influencers while selecting social media influencers. We also suggest that firms confirm that their recruited social media share entertaining content and keep the followers engaged. Brand trust promotes brand commitment and brand loyalty. Therefore, we suggest that firms focus on increasing brand trust through adequate marketing strategies.

Keywords: *Social media influencers, expertise, authenticity, attractiveness, brand trust, brand reputation, brand loyalty, and brand commitment.*

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Introduction

Social media marketing has gained profound popularity in the last few decades since it is cost-effective and efficient. Moreover, due to the effectiveness of social media influencers, firms are using them to market their goods and services (Infante & Mardikaningsih). The size of the social influencer market was 21.1 billion US dollars in 2022, which is expected to increase with a phenomenal growth rate due to increased internet access (Statistica, 2023). Social media influencers have sizeable followers and are often domain experts (Malik et al., 2023). Social media can potentially engage followers by sharing interesting content and selling goods and services to the target audience (Nurudeen et al., 2023). Besides endorsing and recommending goods and services to the followers, social media influencers increase word-of-mouth, brand loyalty, commitment, and trust (Filieri et al., 2023). Malik, Thapa, and Paswan (2023) assert that because of the effectiveness of social media influencers, many brands now have long-term partnerships with them (Kim & Kim, 2021; Ouvrein et al., 2021). Moreover, researchers believe that firms must ensure that social media influencers share content that aligns with their market strategies. Voorveld (2018) reports that 92% of social media users trust social media influencers more than conventional marketing channels. Similarly, another study reports that 46% of the respondents do not trust "newspapers, magazines, TV." The rest, 64%, give more importance to the recommendation of social media influencers than advertisements relayed through conventional media (Akoyeva et al., 2019).

Researchers believe that in the prevailing technological environment, social media influencers have built new marketing competencies and knowledge, increasing followers' trust in social media influencers (Vaidya & Karnawat, 2023). However, this study addresses a significant research gap in understanding the relationship between social media influencers and trust. Past studies have mostly focused on transactional outcomes, including followers' perceptions, attitudes, and behavioral intentions (Apasrawirote & Yawised, 2022). Moreover, past studies have found inconclusive results on the association between trust and its outcomes, including brand commitment and loyalty (Ballester et al., 2023).

Given the above gaps and discussions, this study has extended Social Exchange Theory and formulated the following research questions:

1. *What is the impact of "influencers' expertise, authenticity, and homophily" on brand trust?*

2. *How does brand trust affect (i) brand commitment and (ii) brand loyalty?*

3. *What is the moderating role of brand reputation on (i) brand trust and brand commitment and (ii) brand trust and brand loyalty?*

Literature Review

Theoretical Grounding

Social Exchange Theory and Interpersonal Communication

Social exchange Theory (Homans, 1961) helps researchers understand the social interaction of two or more parties. Many studies have extended the Social Exchange Theory to understand social interaction between two or more social media users (Zheng et al., 2023). The theory postulates that when individuals invest in a relationship, they expect the other partners to reciprocate positively. Thus, the relationship between two partners significantly depends on their mutual trust. In influencer marketing, social media users share enjoyable, entertaining, and engaging content on social media. If the followers find the content as per expectation, they share, like, and give comments on the content, suggesting that followers are satisfied and appreciative of the social media influencers (Wang & Chan-Olmsted, 2023).

Similarly, social media influencers sharing valuable information leads to social interaction among followers (Yahya et al., 2023). Thus, followers' dependency on social media influencers gives them social power. However, this social power significantly depends on social media influencers' expertise, authenticity, and homophily. In the same context, many researchers document that social exchange benefits social media users and influencers (Yahya et al., 2023). Social media users benefit by accessing valuable information. Social media influencers benefit from increased following.

Hypothesis Development

Expertise and Trust

Source expertise refers to a social media influencer's technical knowledge (Kim & Kim, (2021). Expert sources influence social media users more than non-experts. As a result, social media followers are more willing to accept the content shared by expert sources (Jin et al., 2019). Many researchers believe that besides other aspects, source expertise has two dimensions: speaker expertise and intent (Tikochinski & Babad, 2022). Speaker expertise has various dimensions: education, professional achievement, and objectivity (Vrontis et al., 2023). The intent of the source expertise relates to the "degree of confidence and the skills for pursuing" (Hovland & Janis, 1952).

Content shared by credible and expert sources is more effective in changing the attitudes and behaviors of the followers (Zhang, 2022). Similarly, the source intent profoundly depends on the ability of the social media influencers to persuade and manipulate followers (Zhang, 2022). Moreover, extant literature documents that social media influencers who share information about goods and services have lower intent than the sources that share persuasive messages to the followers (Ermeç, 2022). Extant literature also believes that social media influencers' intent profoundly depends on their authenticity (Antonopoulos, 2021). Meanwhile, authenticity implies "sincerity, genuineness, truthfulness, and originality" (Zniva et al., 2023). Similarly, researchers argue that authenticity also depends on "whether the practitioner is willing to openly, publicly, and personally be identified as the persuader" (Baker & Martinson, 2002). Conversely, researchers argue that consumers often ignore the persuasive content of social media influencers sponsored by firms (Koch & Schulz-Knappe, 2021).

H1: Social media influencers' expertise positively affects brand trust.

Influencer Authenticity and Brand Trust

Influencer authenticity refers to the rationality and objectivity of their shared content. Therefore, authentic messages are more persuasive and effective and lead to brand advocacy (Malik et al., 2023). On the other hand, when social media users believe that the content shared by social media influencers is not authentic and credible, they do not trust such influencers. Similarly, many researchers argue that authentic content shared by social media influencers enhances message receptivity and promotes a positive attitude towards goods and services (Saulīte et al., 2022; Ong et al., 2022). Moreover, content shared by an authentic source expert in a relevant domain attracts more followers than content shared by others who are not experts in the relevant domain (Feng et al., 2021; Kamboj & Sharma, 2023). Furthermore, past literature also documents that Instagram users are more attentive and trust sources that are competent, knowledgeable, and experts in specific domains (Connell, 2023). Given the above theoretical discussions, we argue that authentic social media influencer' content promote brand trust.

H2: Social media influencer authenticity positively affects brand trust.

Source Attractiveness and Trust

Content shared by an attractive source enhances social interaction between followers and users and increases followers' engagement (Mir& Salo, 2023). Similarly, many researchers, including those of Bowden (2022), argue that followers are more receptive to the content an attractive source shares. In the context of attractiveness, Manchanda, Arora, and Sethi (2022) assert that attractions are not restrictive to physical attractiveness

but include personality traits like honesty and reliability (Damirchi et al., 2022). Moreover, the Source Attractiveness Model (McGuire, 1985) postulates that source attractiveness includes "familiarity, similarity, likability, physical attractiveness and homophily" (Gupta et al., 2023). Also, the literature cites that social media users draw judgment based on the source's physical attractiveness (Margom & Amar, 2023). Because they perceive the source's attractiveness as "interesting, sociable, strong, modest, and responsive" (Kim & Kim, 2021). In the same context, Van-der-Meer, Hameleers, and Kroon (2020) state that these traits of source attractiveness increase the creditability and acceptance of the shared content and messages (Mir& Salo, 2023). Thus, we argue that social media users develop positive attitudes towards a brand that an attractive social media influencer recommends.

H3: The attractiveness of social media influencers positively affects brand trust.

Homophily and Trust

Homophily refers to the similarity between social media influencers and users regarding values, experiences, and lifestyles (Khanam et al., 2023). The Social Comparison Theory also states that while comparing themselves with others, individuals are more attractive and receptive to those whose personality traits align with theirs (Kim & Kim, 2023; Ki et al., 2022). As a result, followers develop positive attitudes, confidence, and trust towards such social media influencers (Leonhardt et al., 2020). Moreover, many studies found that when social media users find similarities between themselves and social media influencers, they develop an impression that social media influencers' backgrounds are similar to their backgrounds. Therefore, followers' trust in social media influencers increases (Ertug et al., 2022). Apart from the similarity, if social media users find that the shared content of social media influencers is consistent and reliable, trust in them will further increase. As a result, consumers develop a positive attitude toward the brand recommended by source homophily (Cho et al., 2022).

H4: Homophily positively affects followers ' brand trust.

Brand Trust and Brand Commitment

Brand trust is consumers' confidence that the brand will consistently deliver the promised value proposition (Valette-Florence & Valette-Florence, 2020). It also helps consumers make their buying decisions. Moreover, consumers with strong brand trust believe there is no risk while purchasing such a brand (Iqbal et al., 2023). Many past studies, including Rachmawati, Sutrisno, and Saiful (2023), document that brand trust is an important precursor of brand commitment. Moreover, the literature also documents that when a brand meets consumers' expectations, it enhances their trust, leading

to brand commitment (Arshad, 2023). Similarly, many studies found that consumer trust is an important antecedent to brand commitment, leading to a sustainable relationship between consumers and brands (Yousaf et al., 2020; Nadeem et al., 2020). Moreover, brand commitment relates to consumers' dedication to a brand. A consumer committed to a brand would have a more positive attitude toward it than consumers with a low commitment would. Furthermore, past studies document that brand trust, commitment, and performance are highly correlated (Zeren et al., 2020). Thus, we argue that it is important for a brand to increase its performance (Arshad, 2023). We also argue that consumers' positive experience and brand image are highly correlated (Fatma et al., 2021). Researchers believe that brand image is consumers' perception of a brand. Apart from other factors, brand trust also depends on consumer experience and a brand's reputation (Le, 2023). Similarly, Parris and Guzmán (2023) argue that consumers' brand trust is an important precursor of brand commitment. At the same time, many studies found that brand commitment mediates brand trust and loyalty (Atulkar, 2020).

H5: Brand trust positively affects brand commitment.

Trust and Loyalty

Trust is essential in developing and sustaining the relationship between two exchange partners (Cardoso et al., 2022). Many researchers believe the three important components of brand trust are "credibility, integrity, and benevolence" (Hussein et al., 2023). All of them directly and indirectly affect brand loyalty. There are many definitions of brand loyalty. However, most researchers believe it relates to sustainable relationships between brands and consumers. Consumers who trust a brand are more loyal to it than those who do not (Alnaim et al., 2022). Moreover, Mansouri et al.(2022) suggest that consumers who strongly trust a brand are confident that it will deliver what they expect from it and that there will be no financial or other risks when purchasing it (Suhan et al., 2022). As a result, they become loyal to the brand and often become its spokesperson (Juwaini et al., 2022).

H6: Brand trust positively influences brand loyalty.

The Role of Brand Reputation

Extant literature documents that brand reputation builds a brand identity but has no association with the physical composition of a product (Shafiq et al., 2023). Past studies also suggest that brand reputation is not static. It keeps changing due to the exchange of information between brands and consumers (Ali, 2022). Similarly, Rivaldo, Kamanda, and Yusman (2022) assert that brand reputation depends on the perception of all the stakeholders of companies, including employees, suppliers, competitors, and customers.

Given its importance, firms focus on enhancing the brand reputation since it makes the brand more competitive, allowing firms to sell the brand at higher prices (Quaye et al., 2022). In the same context, Shafiq et al. (2023) argue that brand reputation depends on customers' perceptions based on firms' communication with consumers (Konuk, 2023). Studies also cite that brand reputation has a varying effect on the relationships between (i) brand trust and brand commitment and (i) brand trust and brand loyalty (Kwan et al.,2019; Burhanudin, 2022). Thus, a strong brand reputation enhances the relationship between brand trust and commitment. We also argue that a strong brand reputation increases the association between brand trust and loyalty.

H7: Brand reputation moderates brand trust and brand commitment.

H8: Brand reputation moderates brand trust and brand loyalty.

Conceptual Framework

Given the above discussions, the study proposes a conceptual framework containing one moderating, four independent, and three dependent variables. Refer to Figure 1.
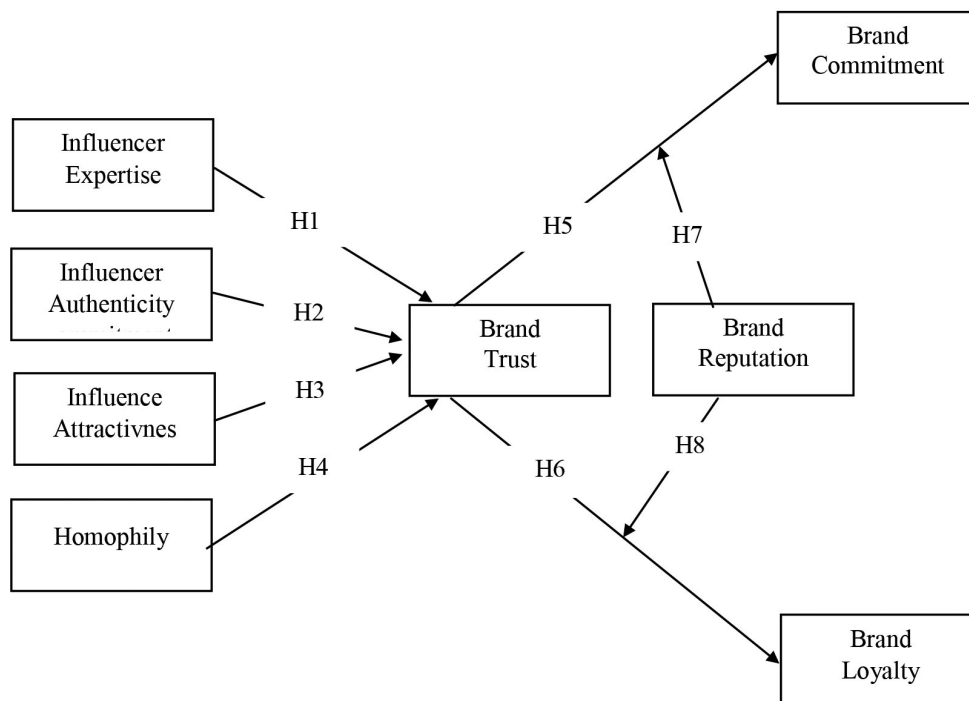
Figure 1: Conceptual Framework

Research design

A Research design is a plan that helps researchers achieve their objectives. It has several steps, including the purpose of a study, how a researcher would collect the data, and the type of study (Salter et al., 2023). This study is descriptive (Siedlecki, 2020) because it has collected data from the target population based on a questionnaire adopted from earlier studies and used Smart PLS for statistical analysis. Moreover, this study has adopted a deductive approach (Casula et al., 2021) and empirically tested the proposed hypotheses using Smart PLS. Also, this study used a non-probability sampling technique (Proudfoot, 2023), since the sample frame of the target population was not available.

Population and Sampling

The target population for this study was Pakistani social media users. Despite being a developing country, Pakistan has seen significant social media and internet users growth in the last few years. According to an estimate, there were 87.35 million internet users and 71.70 million social media users in Pakistan in 2023. Also, in 2023, there were about 191.8 million active cellular mobile phone users in Pakistan (Data Report, 2023). Based on the population of 71.70 million, the study has calculated a minimum sample of 385. The study used an online method for collecting the data. About 500 respondents filled out the questionnaire, of which 476 cases were completed and used in the study for statistical analysis.

Pilot Test

Many researchers, including Kalkbrenner (2023), recommend pilot tests for studies that have adopted earlier-developed questionnaires. Since the study adopted the questionnaire from past studies, it recruited 45 MBA students from a local university for the pilot test. Initially, the recruited respondents filled out the questionnaires and reported that all the questions were non-ambiguous and none had the issue of social desirability. Subsequently, the study calculated the reliability of the constructs used in the questionnaire and found them within the acceptable range.

Instrumentation

The questionnaire used in the study has eight latent and 30 indicator variables. Table 1 shows the constructs, their sources, and the number of items. It also shows the reliability of the constructs in past studies.

Table 1: Instrumentation

Construct	Sources	Items	Reliability in Earlier Studies
Expertise	Ohanian (1990)	4	0.733 to 0.833
Authenticity	Ohanian (1990)	4	0.749 to 0.800
Attractiveness	Ohanian (1990)	4	0.766 to0.831
Homophily	Ohanian (1990)	3	0.786 to 0.824
Brand Commitment	Gurviez, and Korchia (2003)	3	0.755 to 0.826
Brand Loyalty	Delgado-Ballester et al. (2003)	5	0.718 to 0.834
Brand Trust	Delgado-Ballester et al. (2003)	4	0.774 to 0.825
Brand Reputation	Lau and Lee (1999).	3	0.713 to 0.843

Result

Respondents Profile

The respondents' profile is important for generalizing the study (Santoso et al., 2023). It helps other firms identify the segments to target their value proposition. Table 2 presents the demographic profile of the respondents.

Table 2: Respondents Profile

Demographic	Category	Percentage
Age	16 to 25 Years	15%
	26 to 35 Years	28%
	36-45 Years	22%
	46-55 Years	20%
	56 Plus	15%
Gender	Male	63%
	Female	37%
Marital Status	Singe	63%
	Married	37%
Education	Intermediate	44%
	Bachelor Degree	30%
	Master Degree	23%
	Post-Graduation Degree	3%
Income Level	Up to Rs.50000	27%
	Rs.51000 to Rs.75000	23%
	Rs.76000 to Rs.100000	17%
	Rs.101000 to Rs.125000	19%
	Rs.126000 plus	14%

Measurement Model

The study generated a measurement model (Cheah et al., 2020) for results related to reliability (Santoso et al., 2023), validity (Moscato, 2023), and other required results. Figure 2 exhibits the measurement model.
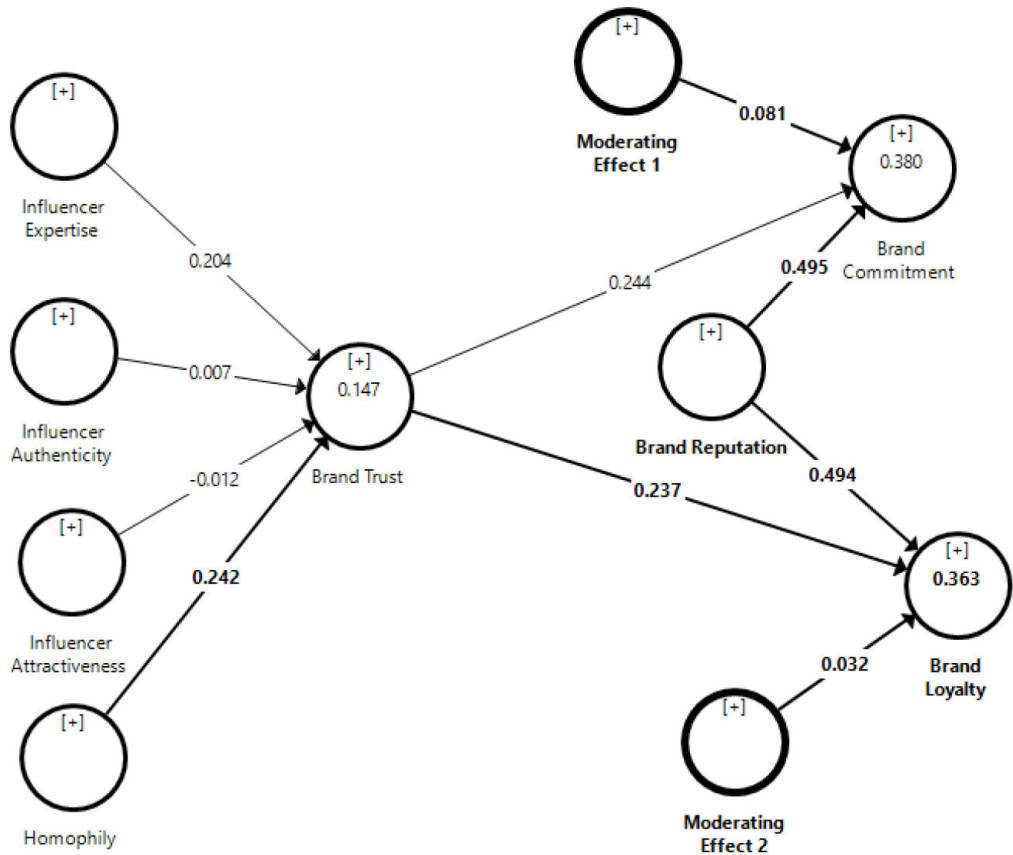
Figure 2: Measurement Model

Descriptive Analysis

We have presented results related to internal consistency, mean, standard deviation, Skewness and Kurtosis values in Table 3.

Table 3: Descriptive Analysis

Constructs	Cronbach's Alpha	Mean	Standard Dev	Kurtosis	Skewness
Brand Commitment	0.716	4.286	1.308	1.383	1.734
Brand Reputation	0.826	4.476	1.463	1.651	1.444
Brand Trust	0.828	4.070	1.406	1.396	1.036
Brand Loyalty	0.859	3.819	1.882	1.127	1.966
Homophily	0.882	4.159	2.473	1.743	2.210
Influence Attractiveness	0.880	4.621	1.831	2.037	2.255
Influencer Authenticity	0.848	3.840	2.061	1.415	1.661
Influencer Expertise	0.835	4.645	1.701	1.713	2.267

For internal consistency, Cronbach's Alpha values must be at least 0.700 (Kalkbrenner, 2023). Our results in Table 3 show that Cronbach's Alpha values are within the prescribed range, suggesting that the constructs have adequate internal consistencies. Additionally, we found that the constructs used in the study have adequate univariate normality (Korkmaz & Demir, 2023) since all the Skewness (Loperfido, 2024) and Kurtosis values (Korkmaz & Demir, 2023) are between ±3.5.

Convergent Validity

Convergent validity is a theoretical association (Cheung et al., 2023) between a construct and its indicators. Table 4 shows the results related to composite reliability and AVE values necessary for ascertaining convergent validity.

Table 4: Convergent Validity

Constructs	rho_A	Composite Reliability	AVE
Band Commitment	0.752	0.836	0.631
Brand Reputation	0.828	0.885	0.66
Brand Trust	0.828	0.897	0.744
Brand Loyalty	0.86	0.904	0.703
Homophily	0.885	0.927	0.709
Influencer Attractiveness	0.888	0.926	0.806
Influencer Authenticity	0.868	0.907	0.765
Influencer Expertise	0.878	0.886	0.661

Researchers suggest that for convergent validity, the composite validity values must be greater than 0.700 (Amora, 2021), and AVE values must be at least 0.600 (Cheung et al., 2023). Our results fulfill both the requirements of convergent validity, suggesting the constructs have acceptable convergent validity.

Predictive Power of the Measurement Model

As suggested by many researchers, we have ascertained the predictive power of the measurement model (Hair et al., 2020) based on R-squared (Juwaini et al., 2021) and Q-squared values (Cheung et al., 2023). Table 5 shows the summary of results.

Table 5 R Square Values and Q Square Values

Construct	R Square	R Square Adjusted	SSO	SSE	Q^2 (=1-SSE/SSO)
Brand Commitment	0.381	0.379	3594	2782.791	0.226
Brand Trust	0.147	0.143	3594	3211.675	0.106
Brand _Loyalty _	0.363	0.362	4792	3596.062	0.250

The results show that brand trust has the lowest R square value (R^2=0.147) and the lowest Q square value (Q^2= 0.106), "suggesting that the measurement model has adequate predictive power."

Discriminant Validity (Fornell & Larcker, 1981)

Before testing the proposed hypotheses, it is necessary to ascertain the uniqueness of the construct used in the study. Results presented in Table 6 show that "AVE square values are greater than Pearson Correlation values," suggesting that the constructs used in the study are unique and empirically different."

Table 6: Discriminant Validity (Fornell & Larcker, 1981)

Constructs	BC	BR	BT	BL	HM	I.ATR.	I.AUT	I. Expt.
Br. Commitment	0.794							
Br. Reputation	0.566	0.813						
Br. Trust	0.366	0.252	0.863					
Br. Loyalty	0.644	0.557	0.36	0.839				
Homophily	0.64	0.712	0.339	0.555	0.842			
Inf. Attractiveness	0.536	0.739	0.243	0.559	0.656	0.898		
Inf. Authenticity	0.454	0.679	0.215	0.434	0.512	0.591	0.875	
Inf. Expertise	0.621	0.447	0.322	0.467	0.496	0.451	0.444	0.813

Discriminant Validity

Discriminant validity based on Fornell and Larckher (1981) criteria has certain limitations (Rönkkö & Cho, 2022). Therefore, we have ascertained the uniqueness of the construct using the HTMT ratio. The results in Table 7 show that all the HTMT ratio values are less than 0.90, suggesting the constructs are unique and have no collinearity issue (Rasoolimanesh, 2022).

Table 7: Discriminant Validity HTMT Ratio

Constructs	BC	BR	BT	BL	HM	I.ATR.	I.AUT	I. Expt.
Br. Commitment	--							
Br. Reputation	0.708							
Br. Trust	0.447	0.303						
Br. Loyalty	0.795	0.658	0.424					
Homophily	0.785	0.831	0.396	0.634				
Inf. Attractiveness	0.651	0.868	0.282	0.64	0.741			
Inf. Authenticity	0.561	0.816	0.251	0.5	0.592	0.692		
Inf. Expertise	0.818	0.52	0.365	0.54	0.577	0.509	0.523	--

Structural Model

We generated a structural model for the hypotheses results after ensuring reliability, construct validity, and discriminate validity are within the prescribed limit. Figure 3 exhibits the structural model.
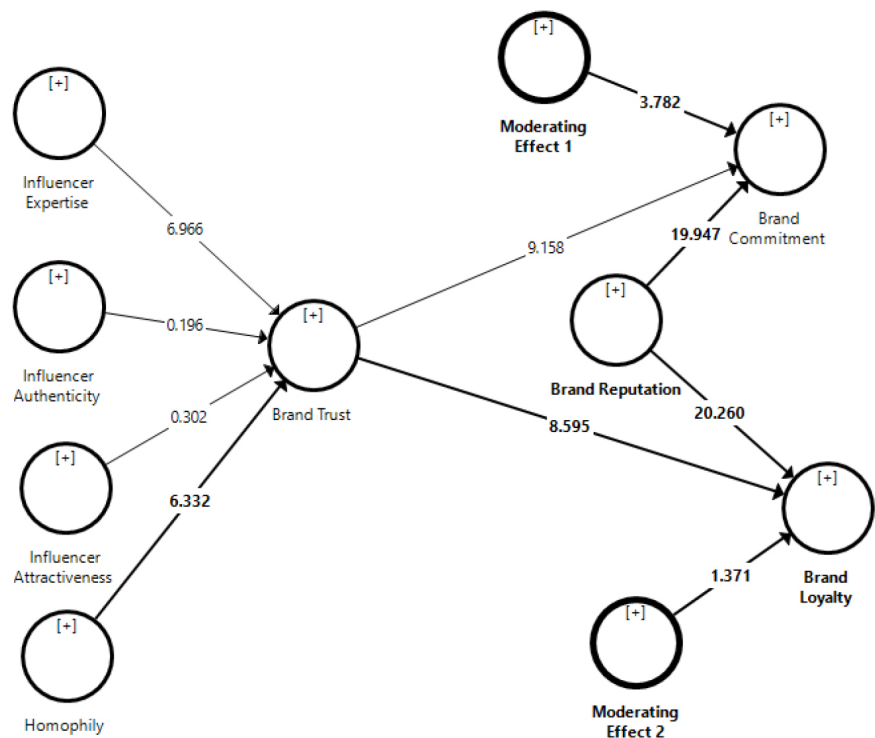
Figure 3: Structure Model

Results

The study used bootstrapping to test the proposed hypotheses. Table 8 shows the summary of results.

Table 8: Hypothesis Results

Hypothesis	β	T Stat.	P Values	Results
Influencer Expertise -> Brand Trust (H1)	0.204	6.966	0.000	Accepted
Influencer Authenticity -> Brand Trust (H2)	0.007	0.196	0.845	Rejected
Influencer Attractiveness -> Brand Trust (H3)	-0.012	0.302	0.763	Rejected
Homophily -> Brand Trust (H4)	0.242	6.332	0.000	Accepted
Brand Trust -> Brand Commitment (H5)	0.244	9.158	0.000	Accepted
Brand Trust -> Brand Loyalty (H6)	0.237	8.595	0.000	Accepted
Brand Reputaiton*Brand trust -> Brand Commitment (H7)	0.081	3.782	0.000	Accepted
Brand Reputaiton*Brand trust -> Brand Loyalty (H8)	0.032	1.371	0.171	Rejected

Our study accepted four direct hypotheses (i.e., H1, H4, H5, and H6) and rejected two direct hypotheses (i.e., H2 and H3). Regarding moderating relationships, we accepted H7 and rejected H8.

Discussion and Conclusion

Discussion

Hypothesis 1 states that "influencer expertise positively affects brand trust," which we accepted (β=0.204, t=6.966, < 0.05). Many researchers believe that besides other aspects, source expertise has two dimensions: speaker expertise and intent (Tikochinski & Babad, 2022). Speaker expertise has various dimensions: education, professional achievement, and objectivity (Vrontis et al., 2023). The intent of the source relates to the "degree of confidence and the skills for pursuing" (Hovland & Janis, 1952). Content shared by credible and expert sources is more effective in changing the attitude and behavior of the followers (Zhang, 2022). The source intent profoundly depends on the ability of the social media influencers to persuade and manipulate followers (Zhang, 2022). Moreover, extant literature documents that social media influencers who share information about goods and services have lower intent than the sources that share persuasive messages to the followers (Ermeç, 2022). Furthermore, extant literature also believes that social media influencers' intent profoundly depends on their authenticity (Antonopoulos, 2021). Meanwhile, authenticity implies "sincerity, genuineness, truthfulness, and originality" (Zniva et al., 2023). Similarly, researchers argue that authenticity depends on "whether the social media influencer is willing to openly, publicly, and personally be identified as a firm-sponsored persuader" (Baker &

Martinson, 2002). Conversely, researchers argue that consumers ignore the messages of a firm-sponsored social media influencer (Koch & Schulz-Knappe, 2021).

Hypothesis 2 states that "influencer authenticity positively affects brand trust," which we rejected (β=0.007, t=0.196, > 0.05). Authentic messages are more persuasive and effective and lead to brand advocacy (Malik et al., 2023). On the other hand, when social media users believe that the content shared by social media influencers is not authentic and credible, they do not trust such influencers. Similarly, many researchers argue that authentic content shared by social media influencers enhances message receptivity and promotes a positive attitude toward goods and services (Saulīte et al., 2022; Ong et al., 2022). Moreover, content shared by an authentic source expert in a relevant domain attracts more followers than content shared by others who are not experts in the relevant domain (Feng et al., 2021; Kamboj & Sharma, 2023). Furthermore, past literature also documents that Instagram users are more attentive and trust sources that are competent, knowledgeable, and experts in specific domains (Connell, 2023).

Hypothesis 3 states that "influencer attractiveness positively affects brand trust," which we rejected (β= - 0.012, t=0.302, > 0.05). Many researchers, including those of Bowden (2022), argue that followers are more receptive to the content an attractive source shares. In the context of attractiveness, Manchanda, Arora, and Sethi (2022) assert that attractions are not restrictive to physical attractiveness but include personality traits like honesty and reliability (Damirchi et al., 2022). Moreover, the Source Attractiveness Model (McGuire, 1985) postulates that source attractiveness includes "familiarity, similarity, likability, physical attractiveness and homophily (Gupta et al., 2023). Also, the literature cites that social media users draw judgment based on the source's physical attractiveness (Margom & Amar, 2023). Because they perceive the source's attractiveness as "interesting, sociable, strong, modest, and responsive" (Kim & Kim, 2021).

Hypothesis 4 states that "homophily positively affects brand trust," which we accepted (β= 0.242, t=6.332, < 0.05). Homophily refers to the similarity between social media influencers and users regarding values, experiences, and lifestyles (Khanam et al., 2023). The Social Comparison Theory also states that while comparing themselves with others, individuals are more attractive to those whose personality traits align with theirs (Kim & Kim, 2023; Ki et al., 2022). As a result, followers develop positive attitudes, confidence, and trust towards such social media influencers (Leonhardt et al., 2020). Moreover, many studies found that when social media users find similarities between themselves and social media influencers, they develop an impression that social media influencers' backgrounds are similar to their backgrounds. Therefore, followers trust brands recommended by them (Ertug et al., 2022).

Hypothesis 5 states that "brand trust positively affects brand commitment," which we accepted (β= 0.244, t=9.158, < 0.05). Brand trust is consumers' confidence that the brand will consistently deliver the promised value proposition (Valette-Florence& Valette-Florence, 2020). It also helps consumers in their buying decisions. Moreover, consumers with strong brand trust believe there is no risk while purchasing such a brand (Iqbal et al., 2023). Furthermore, many past studies, including Rachmawati, Sutrisno, and Saiful (2023), document that brand trust is an important precursor of brand commitment. Literature also documents that when a brand meets consumers' expectations, it enhances their trust, leading to brand commitment (Arshad, 2023). Similarly, many studies found that consumer trust is an important antecedent to brand commitment, leading to a sustainable relationship between consumers and brands (Yousaf et al., 2020; Nadeem et al., 2020).

Hypothesis 6 states that "brand trust positively affects brand loyalty," which we accepted (β= 0.237, t=8.595 < 0.05). Many researchers believe the three important components of brand trust are "credibility, integrity, and benevolence" (Hussein et al., 2023). All of them directly and indirectly affect brand loyalty. There are many definitions of brand loyalty. However, most researchers believe it relates to sustainable relationships between brands and consumers. Consumers who trust a brand are more loyal to it than those who do not (Alnaim et al., 2022). Moreover, Mansouri et al.(2022) suggest that consumers who strongly trust a brand are confident that it will deliver what they expect from it and that there will be no financial or other risks when purchasing it (Suhan et al., 2022). As a result, they become loyal to the brand and often become its spokesperson (Juwaini et al., 2022).

Hypothesis 7 states that "brand reputation moderates trust and brand commitment," which we accepted (β= 0.081, t=3.782 < 0.05). Hypothesis 8 states that brand reputation moderates trust and brand loyalty," which we rejected (β= 0.0032, t=1.371 >0.05). Past studies suggest that brand reputation is not static. It keeps changing due to the exchange of information between brands and consumers (Ali, 2022). Similarly, Rivaldo, Kamanda, and Yusman (2022) assert that brand reputation depends on the perception of all the stakeholders of companies, including employees, suppliers, competitors, and customers. Given its importance, firms focus on enhancing the brand reputation since it makes the brand more competitive, allowing firms to sell the brand at higher prices (Quaye et al., 2022). In the same context, Shafiq et al. (2023) argue that brand reputation depends on customers' perceptions based on firms' communication with consumers (Konuk, 2023). Studies also cite that brand reputation has a varying effect on the relationships between (i) brand trust and brand commitment and (i) brand trust and brand loyalty (Kwan et al.,2019; Burhanudin, 2022).

Conclusion

Given technological diffusion, social media usage and internet connectivity have increased significantly in recent years. Moreover, individuals' reliance on the internet and social media to seek information about goods and services has also increased. The literature documents that consumers follow credible and reliable social media influencers for advice and comments on goods and services. Given its importance, the study has examined the impact of social media influencers on brand trust. The study also examined the antecedents and consequences of brand trust. It collected data from social media users in Karachi. The study found that the influencer's expertise and homophily positively affect brand trust. Influencer authenticity and attractiveness insignificantly affect brand trust. Brand trust promotes brand commitment and brand loyalty. Brand reputation significantly moderates brand trust and brand commitment. However, brand reputation insignificantly moderates brand trust and brand loyalty.

Implications

Social media influencers in the present era have become an essential tool for marketers to promote their goods and services. However, the influence of social media on the followers significantly depends on the influencers' expertise and homophily. However, we did not find support for the association between (i) influencers' authenticity and brand trust and (ii) attractiveness and brand trust. Authenticity and attractiveness are important traits of social media influencers. While selecting social media influencers, firms must also select authentic and attractive influencers. We also suggest that firms confirm that their recruited social media share entertaining content and keep the followers engaged. Brand trust promotes brand commitment and brand loyalty. Therefore, we suggest that firms focus on increasing brand trust through adequate marketing strategies.

Limitations and Future Research

This study has focused on social media users of one city, i.e., Karachi. Other studies may focus on other cities of Pakistan. The study did not use any stimulus. Other studies may use a reputable brand as a stimulus for seeking social media users' opinions. The study has examined the impact of influencers' expertise, creditability, and attractiveness on brand trust. Other studies may examine the impact of these factors on attitude and purchase intention. We have used brand reputation as a moderator between (i) brand trust and commitment and (ii) brand trust and brand loyalty. Future studies may use Hofstede's cultural dimensions as moderators between antecedents of brand brand trust and its consequences.

<div align="right">

Annexure: 1

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Constructs and Items Used in the Questionnaire

Expertise

EX1. Social media influencers are knowledgeable.

EX2. Social media influencers are qualified.

EX3. Social media influencers have the required skills.

EX4. Social media influencers are experts in their domain.

Authenticity

ATH1. Social media influencers are dependable.

ATH2. Social media influencers are honest.

ATH3. Social media influencers are reliable.

ATH4. Social media influencers are sincere.

Attractiveness

ATR1. Social media influencers are attractive.

ATR2. Social media influencers are beautiful.

ATR3. Social media influencers are sexy.

ATR4. Social media influencers are elegant.

Homophily

HM1. My social media influencer interest is similar to my interest.

HM2. My Social media influencer is as enthusiastic as I am.

HM3. My social media influencer values are similar to my values.

Brand Commitment

BC1. If necessary, I would make a few small sacrifices to continue using this brand.

BC2. I tend to praise and defend this brand.

BC3. I think I will appreciate this brand for a long time

Brand Loyalty

BL1. I consider myself loyal to the brand I use.

BL2. Under extreme circumstances, I would consider purchasing another brand.

BL3. If the store does not have my brand, I would go to another store to buy my brand.

BL4. The brand I use gives the best value than other brands.

BL5. I recommend others to buy the brand I use.

Brand Trust

BT1. The brand I use meets my expectations.

BT2. I have confidence in the brand I use.

BT3. The brand I use never disappoints me.

BT4. The brand I use guarantees satisfaction.

Brand Reputation

BR1. The brand I use has a reputation for being good.

BR2. Other people have told me that the brand I use is good.

BR3. The brand I use is reputed to perform well.

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Title: Antecedents to Para Social Relationship and its Moderating Effect on Purchase Intention and eWOM

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Antecedents to Para Social Relationship and its Moderating Effect on Purchase Intention and eWOM

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Abstract

Our study extended the UGT Theory and proposed seven direct and two moderating hypotheses. The study focused on the upper-middle-class segment of Karachi. It examined the effects of self-esteem, loneliness, and introversion on parasocial relationships. The impact of persuasion knowledge on purchase intention and negative eWOM communication and the effect of the parasocial relationship on purchase intention and negative eWOM communication. The study also examined the moderating role of parasocial relationships on purchase intention and negative eWOM communication. The study found that self-esteem, loneliness, and introversion positively affect parasocial relationships. Persuasion knowledge significantly affects purchase intention and negative eWOM communication. However, the directions in these hypotheses are positive compared to the negative directions proposed in the hypotheses. Parasocial relationships positively affect purchase intention and negative eWOM intention. Contrarily, the study proposed that these relationships are negatively associated.

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The study also documents that parasocial relationships insignificantly moderate (i) persuasion knowledge and purchase intention and (ii) persuasion knowledge and negative eWOM communication. These findings suggest that social media influencers can significantly improve consumers' attitudes towards a brand by enhancing parasocial relationships. This, in turn, enhances purchases and reduces negative eWOM intentions. We suggest that when collaborating with digital celebrities, marketers must ensure that the firm's image aligns with the celebrities' image. We also recommend that marketers develop long-term associations with celebrities rather than short-term relationships. We also found that individuals with low self-esteem, loneliness, and introversion are more comfortable interacting on social media. Thus, we propose that social media influencers target individuals with these characteristics.

Keywords: *Parasocial knowledge, persuasion knowledge, purchase intentions, eWOM intentions, Self-esteem, loneliness, and introversion.*

Introduction

In the prevailing digital era, the number of social network sites has increased significantly, and many researchers believe that they are essential tools for digital advertisement (Xue et al., 2023). Consumer perception of online advertising is that it is more informative and trustworthy than conventional advertising. As a result, it positively affects consumer attitudes and purchase intentions towards goods and services (Nazir et al., 2023). Similarly, Gambo and Özad (2020) assert that the growth of Social Network Sites (SNS) have significantly increased in recent years due to easy internet access worldwide (Gambo& Özad, 2020). Furthermore, Zaib-Abbasi et al. (2023) argue that SNS directly connects with consumers. Therefore, firms worldwide have started investing significant resources in social media (Alghizzawi et al., 2023).

Extant literature documents that with the growth of SNS, new types of celebrity groups have emerged, including "bloggers and Instagram-celebrities" (Kujur & Singh, 2020). The conceptualization of traditional and digital celebrities differs (Nazir et al., 2023). Tradition celebrities gained fame and popularity by appearing in conventional mediums, while digital celebrities became famous using "online blogging and vlogging on SNS" (Zaib-Abbasi et al., 2023). Moreover, Gawer (2022) asserts that digital celebrities are those individuals who have profound social influence due to large numbers of followers (Purohi & Arora, 2022).

In developing and developed countries, digital influencers like "bloggers, self-made anchors, YouTubers, and TikTokers have grown significantly in recent years. These digital influencers compete for attention, views, likes, and comments (Boerman et al.,

2023). In this context, researchers believe that digital platforms provide diverse, useful information to consumers. On the other hand, consumers often, without verifying the information, create stories that adversely affect the reputation of individuals, institutions, and political parties (Al-Billeh, 2023). Moreover, social media have made it convenient for individuals to become content creators and broadcasters for sharing their diverse perceptions about goods and services and individuals (Balaban & Szambolics, 2022). This empowerment allows individuals to influence other social media users' attitudes and behaviors. Furthermore, Jumah and Nthiga (2022) assert that with this discussed power also comes great responsibility, which many social media influencers are not adhering to by following ethical standards (Servaes, 2022).
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Researchers assert that celebrity endorsement through social media is more efficient in changing consumers' attitudes and behavior toward a brand (Jin et al., 2019). Therefore, firms collaborate with social media influencers to market their products and services to the target segments (Tanwar et al., 2022). Unlike celebrities, social media influencers develop trustful and sustainable relationships with followers (Hudders et al., 2021). As a result, their followers are attentive to the brands they recommend. Since social media influencers are domain experts (Ye et al., 2021), social media users contact them for advice on goods and services. Besides creating brand awareness, social media influencers help increase brand awareness, commitment, and sales revenue (Zhou et al., 2021). Many past studies on influencer marketing are available, which helps in understanding how consumers respond to the persuasive content of social media influencers (Nafees et al., 2021). Moreover, extant literature suggests that social media influencers' "trustworthiness, expertise, attractiveness and homophily" positively affect brand trust (Reinikainen et al., 2020). In the same context, researchers believe the parasocial relationship promotes engagement and purchase intention and generates word-of-mouth communication (Onofrei et al., 2022). Although firms realize the importance of integrating SNS into their marketing strategies, for many firms, it is a big challenge (Wei et al., 2022).

We found a dearth of literature on the effects of parasocial relationships on purchase intention and word-of-mouth communication (Zhou et al., 2023). In the same context, we found limited studies on the effect of persuasion knowledge on purchase intention and word-of-mouth communication. Moreover, we found of a few studies examining the effect of three social media characteristics (i.e., self-esteem, loneliness, and introversion) on parasocial relationships (Yuan & Lou, 2020).

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

1. How does "self-esteem, loneliness, and introversion affect parasocial relationships?"

2. How does "persuasion knowledge affect purchase intention and negative eWOM communication?"

3. How does a "parasocial relationship affect purchase intention and negative eWOM communication?"

4. What is the moderating effect of the "parasocial relationship on (i) persuasion knowledge and purchase intention and (ii) persuasion knowledge and negative eWOM intention?"

Literature Review

Parasocial Relationship

The parasocial relationship is a "unilateral relationship which social media users develop with celebrities (Grech & Ellul, 2021). This imaginary relationship resembles real-world interpersonal relationships (Kim et al., 2023). A parasocial relationship is a pseudo-friendship, which many researchers believe is more of a convenience companionship (Lacap et al., 2024). However, many consumers in this social relationship consider television and social media celebrities as friends or colleagues (Tatem& Ingram, 2022). Since this relationship is an essential concept in media literature, many studies have examined it with different antecedents and consequences in different domains (Baek et al., 2013). Moreover, many studies are available on parasocial relationships in conventional media like television and radio, but a few are available on parasocial relationships in social media (Venciute et al., 2023). Furthermore, extant literature highlights that the parasocial relationship between social media users and celebrities helps understand the attitudes and behaviors of SNS users (Flecha-Ortiz et al., 2023; Nah, 2022).

Similarly, Sharabati et al. (2022) assert that online communities and search engines help SNS users identify celebrities with similar personalities and interests. Therefore, they develop friendships and intimacy with such personalities (Venciute et al., 2023). The influence of these parasocial relationships is not limited to emotional connections but also extends to cognitive behavior. Moreover, researchers believe celebrities' recommendations of goods and services affect followers' attitudes and behaviors toward such goods and services (Molano-Acevedo et al., 2022).

Purchase Intention

Purchase intention is a consumer's intention to buy a good or service shortly. Consumer purchase intention is often their qualitative and subject judgment, which may vary from consumer to consumer (Narayanan et al., 2022). It is also an essential precursor of purchase behavior (Jung et al., 2022). Many factors influence consumer purchase intentions, including the quality of content shared by celebrities, users' trust, and the similarity between users and social media celebrities (Onofrei et al., 2022). Moreover, Dalziel (2024) argues that compared to conventional celebrities, digital celebrities have a stronger influence on female consumers aged 18 to 30 years because these female perceive that SNS celebrities are trustworthy and are socially close to them. Furthermore the Theory of Reasoned Action postulates that purchase intention significantly depends on consumers' subjective norms and attitudes. Subjective norms relate to the influence of peers and families, while attitude is consumers' enduring perception of a good, service, or person (Van-Nguyen et al., 2024).

eWoM

Word-of-mouth communication is the oldest way to convey information (Rani et al., 2022). Researchers have operationalized WOM differently from different perspectives (Roy et al., 2023). For example, many researchers believe that it relates to the exchange of market-related information between consumers. This exchange process changes consumers' attitudes and behaviors (Nilashi et al., 2022). With the advent and popularity of the internet and social media forums, a new form of online communication, commonly known as electronic word of mouth (eWOM) (Gvili & Levy, 2023), has emerged. Like word of mouth, researchers have operationalized eWOM differently (Duffett, 2022). One commonly accepted definition of eWOM is all information and communication shared on social media that could influence consumers' attitudes and behaviors toward goods, services, and persons (Xiao et al., 2022). One of the advantages of this marketing tool is that all consumers with internet access can share and access information related to goods and services (Verma et al., 2023). Given its importance, many firms now use eWOM to market their products and services because it is efficient, less costly, and has a wider reach than conventional marketing tools (Nilashi et al., 2022). Researchers have divided online consumers into active and passive users (Roy et al., 2023). Active consumers are more involved in sharing their views about goods and services in social media, while passive consumers focus on accessing information others post in social media forums (Duffett, 2022).

Self Esteem

The Sociometer Theory of Self-Esteem postulates that self-esteem helps individuals understand how others socially accept them (Mukhopadhyay et al., 2023; Pang et al.,

2024). The theory postulates that individuals have the natural urge to develop and maintain social relationships. Moreover, Brown et al. (2015) argue that self-esteem tracks the individual's relational value (i.e., value to other people) and motivates them to enhance it. Furthermore, extant literature cites that individuals with low social acceptance often have low self-esteem (Mukhopadhyay et al., 2023). Thus, we argue that individuals with high self-esteem are highly motivated, and their quality of life is better than low self-esteem individuals (Abbas et al., 2023). In the same context, researchers believe a balance between low and high self-esteem is desirable (Susilowati & Tukiran, 2024). Individuals with low self-esteem are unsure about their abilities and often have low motivation to try new things and reach their goals (Salmiah et al., 2024). In contrast, individuals with high self-esteem overestimate their abilities and often fail to achieve their goals (Qahri-Saremi & Montazemi, 2019). Such individuals struggle with relational issues and block themselves from improving because they are too myopic (Pang et al., 2024).

Introversion

Carl Jung coined introversion, which suggests "an inwards orientation to one's mental life rather than the outward orientation to social life" (Dadaian, 2022). Introversion is a personality trait that focuses on "inner thought rather than what is happening externally" (Liegl & Furtner, 2023). The big five dimensions, besides other traits, include "introversion and extroversion, which are two extremes on a continuum" (Akbari et al., 2023). Unlike extroverts, introverts "enjoy subdued and solitary experiences" (Zulfiqar et al., 2023). Introverts prefer one-to-one interaction and avoid crowds (Sharma & Behl, 2022). Moreover, extant literature documents that introverted brains are not receptive to new and novel ideas, which leads to "dopamine," a physiological term associated with rewards (Zhou et al., 2022). Furthermore, extant literature suggests most individuals are neither purely introverts nor purely extroverts (Liegl & Furtner, 2023) but have the characteristics of both traits, known as "ambiverts" (Akbari et al., 2023). Thus, we argue that individuals adopt introvert traits in one situation and extrovert traits in another.

Loneliness

Loneness is "a distressing feeling of being alone or separated" (Mann et al., 2022). Barreto et al. (2022) suggest that some individuals, despite being with others throughout the day, still experience loneliness (Houghton et al., 2022). Researchers have divided loneliness into social and emotional categories (Akhter-Khan et al., 2023). Individuals have little social contact and few people to interact with in social loneliness. Such individuals often feel alone despite being with other people. At the same time, emotional loneliness refers to a "perception of the lack of a close, intimate attachment to another person" (Houghton et al., 2022).

Persuasion Knowledge

Persuasion knowledge refers to "consumers' knowledge and beliefs of various advertising-related issues." It also helps consumers understand how marketers try to persuade them to buy a product or service. Consequently, consumers learn how to "cope with the persuasion tactics used by marketers" (Boerman et al., 2017). Regulations mandate that all commercials provide explicit information to consumers (Filieri et al., 2023). Thus, disclosing all the information related to advertising in social and conventional media increases consumers' persuasion knowledge (Tabassum et al., 2020). As a result, consumers are in a better position to cope with the persuasion tactics of marketers. Moreover, many researchers believe that firm-sponsored social network content is less persuasive, negatively affecting consumers' purchase intention and eWOM communication (Zhai et al., 2022).

Hypothesis Development

Self-Esteem and Parasocial Relationship

Self-esteem is about an individual's self-worth (Khan et al., 2023). Unlike past studies, this study has used self-esteem as an antecedent to parasocial relationships (Weru, 2023). For example, Paravati et al. (2022) found that parasocial interaction enhances self-esteem. Similarly, Hua and Xiao (2023) maintain that parasocial relationships shape individuals' self-esteem (Stein et al., 2022). There are many studies on self-esteem and parasocial relationships, but they found inconclusive results (MacNeill & DiTommaso, 2023). For example, some studies found a positive association between self-esteem and parasocial relationships, while others documented an insignificant association between self-esteem and parasocial relationships (Khan et al., 2023). Arakaki, 2022). Similarly, Hua and Xiao (2023) assert that parasocial relationships and self-esteem are bi-directional. That is, parascoal relationships promote self-esteem, and self-esteem enhances parasocial relationships (Abbasi et al., 2023). The existing literature also points out that individuals' self-esteem can influence their perception of parasocial relationships (Lacap et al., 2024). Moreover, many studies have extended the Self-Verification Theory and concluded that self-esteem promotes parasocial relationships (Koay et al., 2024; Arakaki, 2022).

H1. Self-esteem is "positively related to parasocial relationships with celebrities."

Loneliness and Parasocial Relationship

Loneliness is "a distressing feeling of being alone or separated" (Mann et al., 2022). Individuals with high social loneliness often have non-satisfactory relationships with individuals and the community (Andriani et al., 2023). As a result, they use social

media to compensate for their social needs (Stein et al., 2022). Similarly, extant literature cites that lonely individuals perceive SNS as a useful medium for satisfying their interpersonal needs. Consequently, lonely individuals become obsessive users of SNS (Bond, 2022). Moreover, lonely individuals are more comfortable on social media (Arora, 2022). Therefore, they are likelier to develop parasocial relationships with social media influencers. Furthermore, studies cite that lonely adolescents use parasocial relationships to compensate for their social isolation (Woznicki et al., 2021). Similarly, studies on old consumers reveal that old consumers are often lonely. Therefore, they develop parasocial relationships with social media influencers to compensate for the loneliness (Hu et al., 2022). Furthermore, research on females and males indicates that older females and young males are often lonely and are more susceptible to forming parasocial relationships (Sherrick et al., 2022; Yang et al., 2023).

H2: Loneliness positively affects parasocial relationships with digital celebrities.

Introversion and Parasocial Relationship

Introversion and extroversion are two personality traits (Gao et al., 2023). Introversion persons are "inwardly oriented." Such individuals are often quiet, prefer solitary activities like social media, and do not enjoy social interaction with crowds (Naidu et al., 2022). In contrast, extroverts "are oriented toward the world outside themselves" (Javed et al., 2022). Such individuals are "optimistic, enjoy noise and activity, and are not prone to self-reflection" (McLaughlin & Wohn, 2021). Moreover, extant literature cites that introverted persons, due to shyness, are more attractive to parasocial relationships, as these relationships require few social demands (Ly et al., 2022).

Furthermore, studies cite that shy and lonely people in parasocial relationships do not experience discomfort interacting with others in SNS (Ermeç, 2022). Thus, we argue that isolated and lonely persons fulfill their social interaction needs by developing intimate relationships with celebrities on social media forums (Gao et al., 2023). Past and existing literature found contradictory results on the association of "introverts and parasocial relationships." Past studies indicate a weak association between loneliness and parasocial relationships, but recent literature documents a significant positive association "between loneliness and parasocial relationships" (Jones et al., 2022).

H3: Introversion is "positively associated with the parasocial relationship."

Persuasion Knowledge Purchase Intention

Persuasion knowledge is not a new concept; it was developed by Friestad and Wright (1994) about two decades ago (Myers et al., 2024). Many past studies have examined

persuasion knowledge from different perspectives. For example, some researchers examined how consumers develop persuasion knowledge (Alhaidar & Xue, 2023), while other studies examined how consumers use persuasion knowledge. Researchers believe that persuasion knowledge increases "consumers' coping responses and leads to less favorable evaluations" (Huang et al., 2023). In the context of persuasion knowledge, researchers found mixed results regarding its direction and strength (Myers et al., 2024). For example, a few studies found that, in some cases, persuasion knowledge promotes positive evaluations, while other studies document that persuasion knowledge leads to negative evaluations (Huang et al., 2023; Myers et al., 2024). Moreover, studies have also found that a better understanding of persuasion knowledge benefits consumers and marketers (Alhaidar & Xue, 2023). It helps consumers make the right decisions and helps marketers develop appropriate marketing strategies (Huang et al., 2023).

H4: Persuasion knowledge "negatively affects followers' purchase intention."

Persuasion Knowledge and eWOM Intention

Many studies have examined the association between persuasion knowledge and eWOM intention, with varying results. For example, Rani et al. (2022) found that persuasion knowledge reduces the effectiveness of persuasive messages, leading to negative effects on consumers' eWOM communication. Thus, we argue that consumers with high persuasive knowledge understand firms' strategies and tactics in social media communication (Yones & Muthaiyah, 2023). Therefore, they buy less and are unwilling to generate positive eWOM communication (Ermeç, 2022). Similarly, many researchers assert that consumers do not generate negative eWOM communication if they believe that social media forums are trustworthy and have high persuasion skills (Putri, 2022).

Moreover, studies document that advertisement that use "creative or non-traditional" strategies in their messages enhance consumers' persuasion knowledge (Upadhyay & Tripathi, 2023). As a result, they generate negative eWOM communication. Furthermore, Alhaidar and Xue (2023) assert that social media influencers mix commercial and non-commercial content in their messages, which consumers often cannot distinguish. As a result, such content adversely affects users' persuasion knowledge, leading to negative eWOM communication (Putri, 2022).

H5: Persuasion knowledge" negatively affects followers' negative eWOM intention."

Parasocial Relationship, Purchase Intention, and eWOM Intention

A parasocial relationship is a "unilateral relationship which social media users develop with celebrities (Grech & Ellul, 2021). This imaginary relationship resembles real-world

interpersonal relationships like pseudo-friendship (Kim et al., 2023). Researchers believe a pseudo-friendship significantly affects purchase intention and eWOM communication (Lacap et al., 2024). Moreover, many consumers in this social relationship consider television and social media celebrities as their friends or colleagues. Therefore, their recommendation affects their purchase and eWOM intentions (Tatem & Ingram, 2022). Furthermore, many studies found that when social media influencers share their personal information, it enhances parasocial relationships, positively affecting purchase and eWOM intentions (Shen et al., 2022). Similarly, many studies document that social media influencers' contents promote the parasocial relationship between "social media users and followers" (Balaban et al., 2022). As a result, consumers' purchase intention and eWOMs increase profoundly. Thus, we argue that consumers often perceive social media influencers as trustworthy and credible, so they develop parasocial relationships with the consumers, leading to positive attitudes toward recommended brands.

H6: Parasocial Relationship "positively affects followers' purchase intention."

H7: Parasocial Relationship" positively affects followers' negative eWOM intention."

Moderating Effects

Followers of digital celebrities are friendlier with celebrities, which leads to strong parasocial relationships (Klostermann et al., 2023). Therefore, they find it difficult to distinguish between commercial and non-commercial content (Nepomuceno et al., 2020). As a result, it has varying effects on purchase intention and eWOM communication. On the contrary, some followers perceive digital celebrities as authentic. Therefore, such followers are more satisfied with the products and services recommended by celebrities (Fan et al., 2023). Moreover, Odoom (2023) asserts that parasocial relationships increase the effects of persuasion. In contrast, researchers believe that disclosure of content in advertisements reduces consumers' persuasion, leading to negative attitudes toward the brands recommended by social media influencers. At the same time, researchers believe that when celebrities disclose information about being sponsored by a brand and firm in their SNS posts, consumers' trust in those celebrities increases. In such cases, consumers believe the celebrities are authentic and credible (Klostermann et al., 2023). In this context, past studies document that most consumers believe those celebrity advertisements are non-commercial because of their parasocial relationship with celebrities (De Keyzer, 2023).

H8: Parasocial relationship "moderates persuasion knowledge and purchase intention."

H9: Parasocial relationship "moderates persuasion knowledge and negative eWOM intention."

Conceptual Framework

We have depicted the conceptual framework in Figure 2. It has nine relationships, seven direct and two moderating.
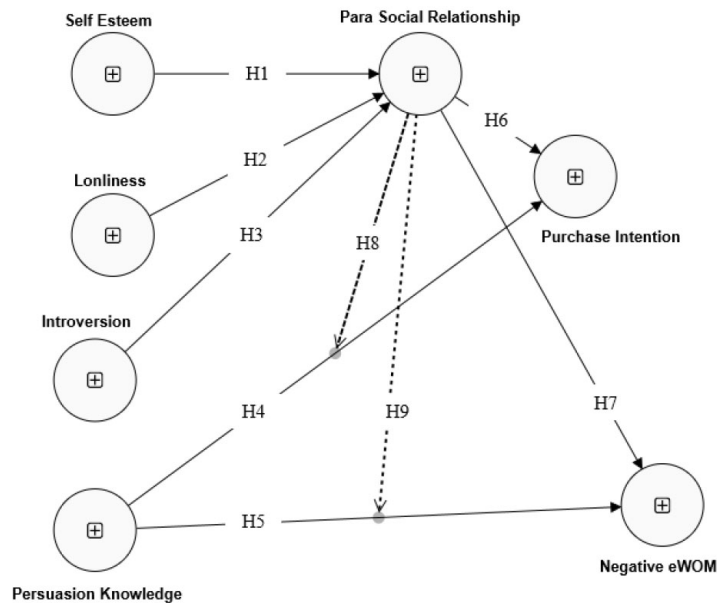
Figure 2: Conceptual Framework

Methods

Research Design

A research design helps researchers achieve research objectives. It includes how researchers have collected the data and the scales and measures used for collecting the data. It also includes the type of research and statistical analysis researchers have adopted to achieve their research objectives. The study is cross-sectional since it collected the data from the respondents only once.

Population and Sample Size

Lakens (2022) suggests that in large-scale studies, the researchers must first identify the target population, calculate an appropriate sample size, and use the right sampling technique to draw the sample. The study found that the minimum sample size of 320 would be appropriate for the study (32 indicators X 10 cases) (Hair Jr et al., 2017). However, to increase the generalizability of the study, we distributed 450 questionnaires and received 435. A sample frame is necessary for probability sampling. Since it was unavailable, we used the mall intercept method to collect the data. We intercepted the respondents in the four leading malls of Karachi on different days and times. Since our

target audience is well conversant in English, we did not translate the questionnaire into our local language, *Urdu*.

Pilot Test

The study adopted questionnaires developed in Western countries. Therefore, it is necessary to pre-test it to ascertain whether any of the items used in the scales are contrary to Pakistan's cultural values. As suggested by Lakens (2022), we recruited 30 respondents non-randomly for the pilot test. The recruited respondents filled out the questionnaire and observed that none of the items contradicted Pakistan's cultural values. The recruited respondents also reported that they did not face any issues in understanding the content and wording of the questionnaire. Based on the data for the pilot study, we examined the reliability and validity of the adopted scales and found they were within the acceptable range.

Scales and Measures

The questionnaire in this study has two sections. Section 1 relates to demographics. All the items in this section are based on a nominal scale (Hair et al., 2020). Section 2 relates to the main study. The items used in this section are based on the "Five-point Likert Scale (Sarstedt et al., 2020), with five suggesting a high agreement and one depicting a low agreement." Table 1 depicts the constructs, the sources of each construct, and the number of items in each construct.

Table 1: Scales and Measures

Constructs	Source	Items
Loneliness	Pittman and Reich (2016)	3
Self Esteem	Heatherton and Polivy (1991)	7
Par Social Relationship	Kim et al. (2015)	6
Persuasion Knowledge	Vashisht and Royne (2016)	5
Purchase Intention	Van Reijmersd al et al.(2016)	4
EWOM	Su et al. (2016)	3
Introversion	Mowen (2000)	4

Statistical Analysis

Various statistical tools are available for analysis, including SPSS and Smart PLS. Both tools have different benefits (Manley et al., 2020). We have used Smart PLS Version 4.1, which is more user-friendly and can test different regression equations simultaneously. As suggested, we adopted a two-step approach in the Smart PLS. We initially "generated a measurement model for results related to reliability and validity. In step two, we generated a "structural model for hypotheses results."

Results

Respondents Profile

This study collected data from 435 respondents using the mall intercept method. Table 2 shows the profile of the respondents.

Table 2: Respondents Profile

Demographic	Category	Percentage
Age	16 to 25 Years	18%
	26 to 35 Years	25%
	36-45 Years	24%
	46-55 Years	13%
	56 Plus	20%
Gender	Male	67%
	Female	33%
Marital Status	Singe	65%
	Married	45%
Education	Intermediate	42%
	Bachelor Degree	32%
	Master Degree	25%
	Post-Graduation Degree	1%
Income Level	Up to Rs.50000	26%
	Rs.51000 to Rs.75000	20%
	Rs.76000 to Rs.100000	19%
	Rs.101000 to Rs.125000	18%
	Rs.126000 plus	17%

Measurements Model

Figure 3 depicts the measurement model showing the regression weight of the articulated hypotheses.
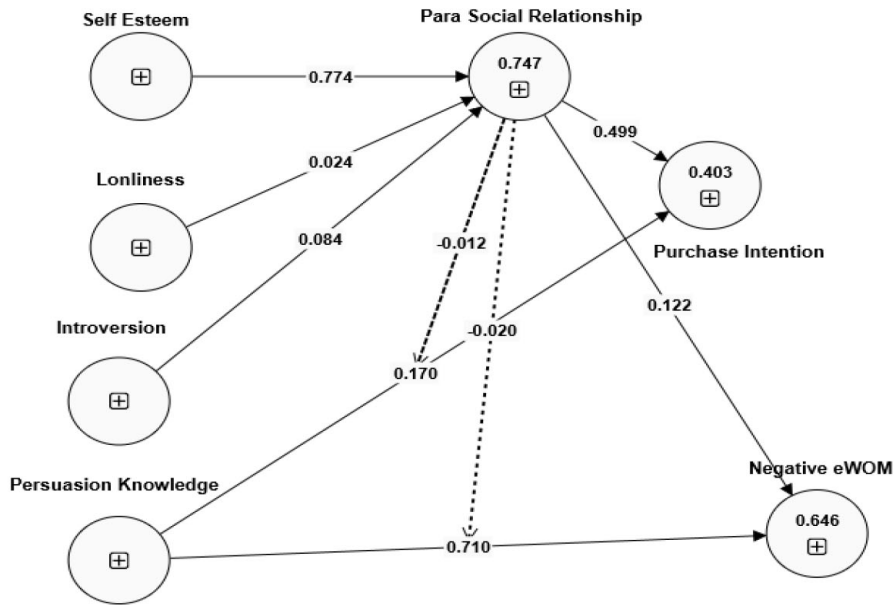
Figure 2: Measurement Model

Descriptive Analysis

In descriptive analysis (Manley et al., 2020), we have examined the "internal consistency of the constructs based on Cronbach's Alpha values and univariate normality (Cheung et al., 2023) based on Skewness (Demir, 2022) and Kurtosis values (Jammalamadaka et al., 2021). Table 3 depicts the summary of the results.

Table 3: Descriptive Analysis

Constructs	Cronbach's Alpha	Mean	SD	Skewness	Kurtosis
Introversion	0.770	3.682	1.444	1.349	2.250
Loneliness	0.856	3.801	1.092	1.285	1.924
Negative eWOM	0.841	4.180	1.860	1.430	2.046
Para Social Relationship	0.871	3.867	1.493	1.198	2.203
Persuasion Knowledge	0.815	4.172	1.828	1.299	1.428
Purchase Intention	0.701	4.039	1.034	1.428	1.362
Self Esteem	0.840	4.112	1.791	1.362	1.999

The results show that all the Cronbach's Alpha (Mator & Khairani, 2020) values are at least 0.701, "suggesting acceptable internal consistency." We also found that all the Skewness and Kurtosis "values are between ± 3.5, suggesting the constructs have adequate univariate normality" (Cheung et al., 2023).

Convergent Validity

Convergent validity (Cheung et al., 2023) shows the "theoretical association between constructs and their indicators." Table 4 shows that all the "composite reliability values are at least 0.704, and AVE values are greater than 0.626, "suggesting that constructs have adequate convergent validity"

Table 4: Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability (rho_a)	The Average Variance Extracted (AVE)
Introversion	0.770	0.795	0.677
Loneliness	0.856	0.857	0.777
Negative eWOM	0.841	0.844	0.759
Para Social Relationship	0.871	0.874	0.722
Persuasion Knowledge	0.815	0.829	0.643
Purchase Intention	0.701	0.704	0.626
Self Esteem	0.840	0.849	0.683

Predictive Power of the Model

Compared to other software, Smart PLS also shows the model's predictive power (Khanthachai & Ringle, 2014). Results in Table 5 show that "R^2 values of the model are at least 0.20, suggesting adequate predictive power of the model."

Table 5: Predictive Power

Constructs	R-Square	R-Square Adjusted
Negative eWOM	0.646	0.644
Para Social Relationship	0.747	0.744
Purchase Intention	0.403	0.401

Discriminant Validity

Researchers suggest that the constructs used in a study must be "conceptually and empirically different" (Sabol et al., 2022). We have ascertained the discriminant validity using Fornell and Larcker's (1981) criteria and HTMT ratio. The results in Table 6 show that "AVE square values exhibited in diagonal lines are greater than Pearson correlation values" (Fornell & Larcker, 1981). Similarly, "Results in Table 7 show HTMT values are less than 0.90 (Demir, 2022). Thus, the discriminant validity of both methods suggests that the "constructs used in the study are unique and empirically different."

Table 6: Discriminant Validity (Fornell & Larckher, 1981)

Constructs	INT	LN	EWOM	PSR	PK	PI	SE
Introversion	1						
Loneliness	0.566	1					
Negative eWOM	0.521	0.418	1				
Para Social Relationship	0.622	0.583	0.542	1			
Persuasion Knowledge	0.592	0.371	0.667	0.604	1		
Purchase Intention	0.471	0.519	0.36	0.489	0.402	1	
Self Esteem	0.685	0.653	0.548	0.743	0.647	0.546	1

Table 7: Discriminant validity HTMT Ratio

Constructs	INT	LN	EWOM	PSR	PK	PI	SE
Introversion	-						
Loneliness	0.566	0.881					
Negative e WOM	0.521	0.418	0.871				
Para Social Relationship	0.622	0.583	0.542	0.849			
Persuasion Knowledge	0.592	0.371	0.667	0.604	0.802		
Purchase Intention	0.471	0.519	0.36	0.489	0.402	0.791	
Self Esteem	0.685	0.653	0.548	0.743	0.647	0.546	-

Fit Indices

As Khanthachai and Ringle (2014) suggested, we assessed the model's fitness based on "SMR and NFI values." Table 8 shows that "SRMR value is less than 0.08, and NFI value is greater than 0.800, suggesting the measurement model have acceptable fitness" (Bentler, 1990).

Table 8: Fit Indices

Indices	Saturated model	Estimated model
SRMR	0.076	0.079
d_ULS	1.734	2.279
d_G	0.7	0.731
Chi-square	4684.659	4783.486
NFI	0.841	0.832

Structural Model

For structural model, we used bootstrapping by drawing 5000 subsamples randomly from the observed data set. Figure 3 depicts the structural model showing the significance of the articulated hypotheses.
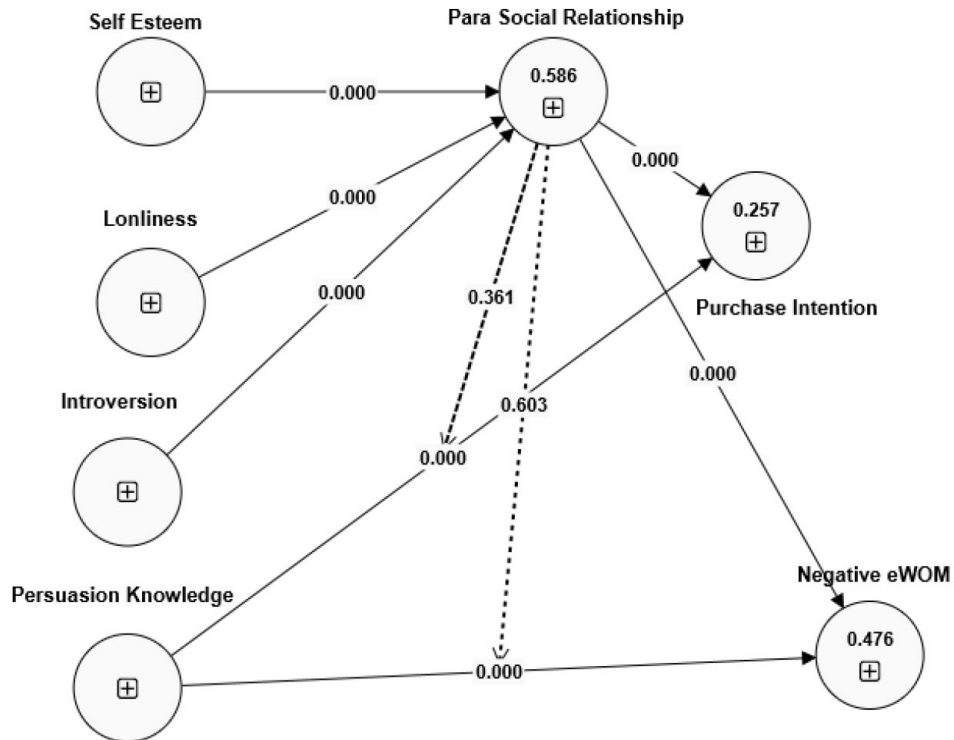
Figure 3: Structural Model

Hypotheses Results

The results in Table 9 show that our study supports five direct hypotheses but does not support two. We did not find support for the two articulated moderating hypotheses as well.

Table 9: Hypothesis Results

Relationships	β statistics	T values	P values	Results
Self Esteem -> Para Social Relationships (H1)	0.774	18.853	0	Accepted
Loneliness -> Para Social Relationship (H2)	0.024	5.135	0	Accepted
Introversion -> Para Social Relationship (H3)	0.084	6.911	0	Accepted
Persuasion Knowledge -> Purchase Intention (H4)	-0.20	5.075	0	Rejected*
Persuasion Knowledge -> Negative eWOM (H5)	0.710	16.876	0	Rejected*
Para Social Relationship -> Purchase Intention (H6)	0.499	11.613	0	Accepted
Para Social Relationship -> Negative eWOM (H7)	0.122	8.698	0	Accepted
Para Soc. Relationship x Pers. Know. -> Pr. Intention (H8)	-0.012	0.914	0.361	Rejected
Para Soc Relationship x Per. Knowledge -> Neg. eWOM (H9)	-0.020	0.520	0.603	Rejected

*Significant, but rejected as the effect is positive contrary to articulated hypotheses

In the context of accepted direct hypotheses, we found that the strongest effect is for Hypothesis 1(β= 0.774, t=18.853< 0.05), followed by Hypothesis 6 (β= 0.499, t=11.613< 0.05), Hypothesis 7(β= 0.122, t=8.698< 0.05), Hypothesis 3 (β= 0.084, t=6.911< 0.05), and Hypothesis 2(β= 0.024, t=5.135< 0.05). Although Hypothesis 4 (β= 0.074, t=5.075< 0.05) and Hypothesis 5 (β= 0.710, t=16.86779< 0.05) have a significant relationship, we have rejected them because the directions in these hypotheses were positive, contrary to what we have hypothesized.

Discussion and Conclusion

Discussion

We accepted Hypothesis 1 (β= 0.774, t=18.853< 0.05), stating, "Self-esteem promotes parasocial relationship." Paravati et al. (2022) found that parasocial interaction enhances self-esteem. Similarly, Hua and Xiao (2023) maintain that parasocial relationships shape individuals' self-esteem (Stein et al., 2022). There are many studies on self-esteem and parasocial relationships, but they found inconclusive results (MacNeill & DiTommaso, 2023). For example, some studies found a positive association between self-esteem and parasocial relationships, while others documented an insignificant association between them (Khan et al., 2023; Arakaki, 2022). Similarly, Hua and Xiao (2023) assert that parasocial relationships and self-esteem are bi-directional. That is, parascoal relationships promote self-esteem, and self-esteem enhances parasocial relationships (Abbasi et al., 2023). The existing literature also points out that individuals' self-esteem can influence their perception of parasocial relationships (Lacap et al., 2024). Moreover, many studies have extended the Self-Verification Theory and concluded that self-esteem promotes parasocial relationships (Koay et al., 2024; Arakaki, 2022).

We accepted Hypothesis 2 (β= 0.024, t=5.135< 0.05), stating, "loneliness positively affects parasocial relationships." Extant literature cites that lonely individuals perceive SNS as a useful medium for satisfying their interpersonal needs. Consequently, lonely individuals become obsessive users of SNS (Bond, 2022). Moreover, lonely individuals are more comfortable on social media (Arora, 2022). Therefore, they are likelier to develop parasocial relationships with social media influencers. Furthermore, studies cite that lonely adolescents use parasocial relationships to compensate for their social isolation (Woznicki et al., 2021). Similarly, studies on old consumers reveal that old consumers are often lonely. Therefore, they develop parasocial relationships with social media influencers to compensate for the loneliness (Hu et al., 2022). Furthermore, research on females and males indicates that older females and young males are often lonely and are more susceptible to forming parasocial relationships (Sherrick et al., 2022; Yang et al., 2023).

The study supported Hypothesis 3(β= 0.084, t=6.911< 0.05), stating, "introversion positively affects the parasocial relationships." Introversion persons are "inwardly oriented." Such individuals are often quiet, prefer solitary activities like social media, and do not enjoy social interaction with crowds (Naidu et al., 2022). In contrast, extroverts "are oriented toward the world outside themselves" (Javed et al., 2022). Such individuals are "optimistic, enjoy noise and activity, and are not prone to self-reflection" (McLaughlin & Wohn, 2021). Moreover, extant literature cites that introverted persons, due to shyness, are more attractive to parasocial relationships, as these relationships require few social demands (Ly et al., 2022). Furthermore, studies cite that shy and lonely people in parasocial relationships do not experience discomfort interacting with others in SNS (Ermeç, 2022). Thus, we argue that isolated and lonely persons fulfill their social interaction needs by developing intimate relationships with celebrities on social media forums (Gao et al., 2023).

The study rejected Hypothesis 4 (β= 0.074, t=5.075< 0.05), stating, "Persuasion knowledge negatively affects purchase intention." Although this relationship is significant, we have rejected it because its positive direction is contrary to what we proposed in the hypothesis. Many past studies have examined persuasion knowledge from different perspectives. For example, some researchers examined how consumers develop persuasion knowledge (Alhaidar & Xue, 2023), while other studies examined how consumers use persuasion knowledge. Researchers believe persuasion knowledge increases "consumers' coping responses and leads to less favorable evaluations" (Huang et al., 2023). In the context of persuasion knowledge, researchers found mixed results regarding its direction and strength (Myers et al., 2024). For example, a few studies found that, in some cases, persuasion knowledge promotes positive evaluations, while

other studies document that persuasion knowledge leads to negative evaluations (Huang et al., 2023; Myers et al., 2024). Moreover, studies have also found that a better understanding of persuasion knowledge benefits consumers and marketers (Alhaidar & Xue, 2023). It helps consumers make the right decisions and helps marketers develop appropriate marketing strategies (Huang et al., 2023).

Similarly, we rejected Hypothesis 5 (β= 0.710, t=16.976) < 0.05), stating, "Persuasion knowledge negatively affects eWOM intention." We rejected this hypothesis as its direction is contrary to what we have articulated. Many studies have examined the association between persuasion knowledge and eWOM intention, with varying results. For example, Rani et al. (2022) found that persuasion knowledge reduces the effectiveness of persuasive messages, leading to negative effects on consumers' eWOM communication. Thus, we argue that consumers with high persuasive knowledge understand firms' strategies and tactics in social media communication (Yones & Muthaiyah, 2023). Therefore, they buy less and are unwilling to generate positive eWOM communication (Ermeç, 2022). Similarly, many researchers assert that consumers do not generate negative eWOM communication if they believe that social media influencers are trustworthy and have high persuasion skills (Putri, 2022).

The study accepted Hypothesis 6 (β= 0.499, t=11.613< 0.05), stating that "parasocial relationship positively affects purchase intention." Similarly, we accepted Hypothesis 7 (β= 0.122, t=8.698< 0.05), stating "parasocial relationship positively affects negative eWOM." A parasocial relationship is a "unilateral relationship which social media users develop with celebrities (Grech & Ellul, 2021). This imaginary relationship resembles real-world interpersonal relationships like pseudo-friendship (Kim et al., 2023). Researchers believe a pseudo-friendship significantly affects purchase intention and eWOM communication (Lacap et al., 2024). Moreover, many consumers in this social relationship consider television and social media celebrities as their friends or colleagues. Therefore, their recommendation affects their purchase and eWOM intentions (Tatem & Ingram, 2022). Furthermore, many studies found that when social media influencers share their personal information, it enhances parasocial relationships, positively affecting purchase and eWOM intentions (Shen et al., 2022). Similarly, many studies document that social media influencers' contents promote the parasocial relationship between "social media users and followers" (Balaban et al., 2022). As a result, consumers' purchase intention and eWOMs increase profoundly. Thus, we argue that consumers often perceive social media influencers as trustworthy and credible, so they develop parasocial relationships with the consumers, leading to positive attitudes toward recommended brands.

The study rejected Hypothesis 8 (β= -0.012, t=0.914> 0.05), stating that "parasocial

relationship moderates persuasion knowledge and purchase intention." The study also rejected Hypothesis 9 (β= -0.020, t=0.520> 0.05), stating that "parasocial relationship moderates persuasion knowledge and negative eWOM intention." Followers of digital celebrities are friendlier with celebrities, which leads to strong parasocial relationships (Klostermann et al., 2023). Therefore, they find it difficult to distinguish between commercial and non-commercial content (Nepomuceno et al., 2020). As a result, it has varying effects on purchase intention and eWOM communication. On the contrary, some followers perceive digital celebrities as authentic. Therefore, such followers are more satisfied with the products and services recommended by celebrities (Fan et al., 2023). Moreover, Odoom (2023) asserts that parasocial relationships increase the effects of persuasion. In contrast, researchers believe that disclosure of content in advertisements reduces consumers' persuasion, leading to negative attitudes toward the brands recommended by social media influencers. At the same time, researchers believe that when celebrities disclose information about being sponsored by a brand and firm in their SNS posts, consumers' trust in those celebrities increases. In such cases, consumers believe the celebrities are authentic and credible (Klostermann et al., 2023). In this context, past studies document that most consumers believe those celebrity advertisements are non-commercial because of their parasocial relationship with celebrities (De Keyzer, 2023).

Conclusion

With the popularity of social media, digital celebrities have become an important tool for changing consumers' attitudes and behaviors toward goods and services. Digital social media influencers promote parasocial relationships and knowledge of persuasion, affecting purchase intention and eWOM communication. The study examined the effects of self-esteem, loneliness, and introversion on parasocial relationships. The effect of persuasion knowledge on purchase intention and eWOM communication. The impact of the parasocial relationship on purchase intention and negative eWOM communication. The moderating effect of parasocial relationship. The study found that self-esteem, loneliness, and introversion positively affect parasocial relationships. Persuasion knowledge significantly affects purchase intention and negative eWOM communication. However, the directions in these two hypotheses are positive, contrary to what we proposed in the hypotheses. We also found parasocial relationships significantly affect purchase intention and negative eWOM intentions. Parasocial relationships insignificantly moderate (i) persuasion knowledge and purchase intention and (ii) persuasive and negative eWOM communication.

Implications

SNS users often cannot distinguish between the firms' sponsored and non-commercial shared content. Therefore, we suggest that regulations related to "disclosure of advertisements or sponsorship in SNS" be enforced. Marketers must provide relevant information related to products and services, as it enhances parasocial relationships. Moreover, it increases the credibility of social media influencers, enhancing purchase and eWOM intentions. The marketers, while recruiting digital celebrities, must ensure that the brand image of the brands aligns with the celebrities' image.

Furthermore, we advocate for marketers to establish long-term associations with celebrities, a strategy that can instill confidence and strategic planning. We also posit that social media provides a comfortable platform for individuals with low self-esteem, loneliness, and introversion to interact. Such interactions, as researchers suggest, can significantly boost the confidence levels of these individuals.

Limitation and Future Research

The study used the mall intercept method for collecting the data, which may reduce the generalizability. Future studies may use probability sampling to increase the generalizability. The study focused on one city, Karachi. Others may enhance their scope of work to other cities in Pakistan. Pakistan is a dualistic society, and other studies may extend our conceptual framework to individualistic societies. We have examined the impact of introverted persons on parasol relationships. We suggest others include introverts and extroverts in their conceptual framework. We have adopted the quantitative approach in this study. Besides several advantages, quantitative studies have several limitations. Therefore, we recommend that others use qualitative or mixed methodology.

Annexure 1

Constructs and Items Used in the Questionnaire

Loneliness

L1. In general, I feel like I lack companionship.

L2. I feel like I am often left out of social situations.

L3. In general, I feel isolated from others.

Self Esteem

SE1. I am worried about whether I am regarded as a success or a failure.

SE2. I feel self-conscious.

SE3. I feel displeased with myself.

SE4. I am worried about what other people think of me.

SE5. I feel inferior to others at this moment.

SE6. I feel concerned about the impression I am making.

SE7. I am worried about looking foolish

Par Social Relationship

PSR1. I feel close enough to use my favorite digital Apps.

PSR2. I feel comfortable with a digital celebrity's message on digital Apps.

PSR3. I can rely on the information I get from my favorite digital Apps.

PSR4. I am fascinated by my favorite digital celebrity apps.

PSR5. In the past, I pitied my favorite digital celebrities when they made a mistake on their digital Apps.

PSR6. My favorite digital celebrity Apps are helpful for my interests (in fashion and others).

Persuasion Knowledge

PK1. The digital celebrity tries to manipulate the audience in ways I do not like.

PK2. I was annoyed by the ad that the digital celebrity sent because it seemed to be trying to manage or control the consumer audience inappropriately.

PK3. When I read the ad the digital celebrity sent, I thought it was trying to persuade me to buy the products.

PK4. I noticed tricks in this ad that the digital celebrity sent to promote the product.

PK5. The ads that the digital celebrity sends are meant to sell the products.

Purchase Intention

PI1. I will buy the product that the digital celebrity sent through digital Apps.

PI2. I intend to buy the product that the digital celebrity sent through digital Apps.

PI3. I am interested in buying the product the digital celebrity sent through digital Apps.

PI4. I will likely buy products that the digital celebrity sends through digital Apps in the future.

eWOM

EW1. I will likely say positive things about the product that the digital celebrity sends to others through digital Apps,

EW2. I would recommend the product that the digital celebrity sends through digital Apps to my friends and relatives.

EW3. If my friends were looking for the product the digital celebrity sends through digital Apps, I would recommend it.

Introversion

IN1. I am quiet with others.

IN2. I prefer to be alone.

IN3. I am shy.

IN4. I am bashful.

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Market Forces

Title: Gender Differences in Response to Digital Marketing: Analyzing Purchase Intentions and Behaviors

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Gender Differences in Response to Digital Marketing: Analyzing Purchase Intentions and Behaviors

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Abstract

Social media in the prevailing era has changed the attitudes and lifestyles of all individuals, especially university students. Given its importance, this study examines the impact of discount pricing, bundle pricing, and purchase intention on consumer buying behavior. It also examines the impact of social media influencers and awareness on purchase intention and the moderating effect of gender on purchase intention. The study extended the Theory of Planned Behavior and Social Comparison Theory to develop a model. We empirically tested the model based on 385 responses collected from the target population. The study found that discount pricing, bundle pricing, and purchase intention promote consumer-buying behavior. It also documented that social media influencers and awareness positively affect purchase intention. We also found gender moderates (i) social media influencer and purchase intention and (ii) awareness and purchase intention. The study's contribution to the body of knowledge is that it has extended the Theory of Planned Behavior and Social Comparison Theory to develop a new model. Since the "results support all the articulated hypotheses, the study has increased the generalizability of these theories." The study recommends that firms spend resources and recruit social media influencers to promote their goods. It

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also proposes that firms must select credible and trustworthy social media influencers. Female perceptions and attitudes toward social media influencers differ from males. Therefore, we recommend that firms select social media influencers based on the product categories.

Keywords: *Consumer buying behavior, purchase intention, bundling pricing, discount, gender, Theory of Planned Behavior, and Theory of Social Comparison.*

Introduction

The use of the Internet has grown significantly compared to the past years, and now billions of people have access to it via mobile phones and other related devices (Jacobs, 2023). With the growth of social media platforms, including Facebook and Instagram, individuals' social connections have also increased profoundly (Bintaro et al., 2022). Social media has become a platform for information (Sinha & Fung, 2021). In this digital era, the role of social media influencers in shaping consumer-buying behavior has become increasingly significant. With their massive following, these influencers have become a powerful marketing tool for many firms, enhancing their brand image and promoting their products (Nugroho et al., 2022). Researchers have segmented social media influencers into three categories based on the number of followers (Nugroho et al., 2022). The first category is Nano influencers, with followers of IK to 10K. The second category is Micro-influencers, with followers of 10K to 100K followers. The third and last category is Macro influencers, with 100K to one million followers. Karell, Linke, Holland, and Hendrickson (2023) assert that social media influencers create and share content of goods and services. Consequently, it promotes the "purchase intention of the goods and services" for the followers. Furthermore, researchers believe that social media followers correlates with influencers' credibility and trust (Pittman & Abell, 2021).

Apart from other pricing strategies, many firms use discount pricing, which, according to many researchers, is very effective in stimulating buying behavior (Tan, 2023). Tumundo, Kindangen, and Tumewu (2022) assert that companies extensively attract customers when offering discounts in sales or promotions. Discounts excite consumers, prompting them to consider buying the product or services at lower prices instead of the original prices. Consumers believe buying goods and services at discounts results in savings (Rahmadina et al., 2023). Discount pricing helps firms deplete excess inventory and increase sales (Tan, 2023). Bundle pricing is similar to discount pricing for increasing sales and depleting excess inventory. Bundle pricing is adding multiple products or services in a bundle or package and selling them at a reduced price (Kim et al., 2023). Consumers often feel bundle pricing is a good option to buy goods and services, as they perceive they are getting more for lower prices (Raditya et al., 2022). Moreover, it

relates to consumer purchases (Mehraj & Qureshi, 2022). Past studies also document that social media influencers and brand awareness affect purchase intention. Social media influencers are reputable and experts in their domains. They regularly share expert opinions about goods and services on social media (Kurdi et al., 2022). As a result, it increases the purchase intention of social media followers. Similarly, brand awareness is vital to enhance the purchase intention of goods and services (Machi et al., 2022). A high brand awareness will stimulate positive buying behavior. At the same time, low or poor brand awareness may not promote sales (Fathima et al., 2023). Many factors affect purchase intention, including social media influencers, brand reputation, and sales and promotions (Asif et al., 2023).

With its unique focus, this study delves into the unexplored territory of the impact of discount pricing, bundle pricing, and purchase intention on consumer buying behavior. It also investigates the influence of social media influencers and awareness on purchase intention and the potential moderating effect of gender on purchase intention.

Literature Review

Purchase Intention

Purchase intention means buying goods in the future. Many factors affect purchase intention, including consumer attitudes toward a product or service, peers' and friends' influence, and cultural norms (Asif et al., 2023). Researchers believe purchase intention is a significant precursor of actual buying behavior. Purchase intention, in most cases, varies from one product category to another or from one culture to another culture (Le & Nguyen, 2022). The Theory of Planned Behavior postulates that precursors of purchase intention are attitudes, subjective norms, and perceived behavior control (Canova et al., 2023). The theory also asserts that purchase intention positively affects consumers' buying behaviors (Hagger et al., 2022). Consumers with a high purchase intention toward a product or service are likelier to purchase that product or service (Hagger et al., 2022). Given its importance, marketers focus on increasing consumers' purchase intention of their goods and services (Aji et al., 2020). Moreover, researchers believe that consumers' high purchase intention will only translate into actual purchases subject to the availability of goods, services, and resources (Khan et al., 2023).

Consumer Buying Behavior

Consumer buying behavior relates to consumers' actual purchases. If consumers have a pleasant experience when consuming goods and services, they will develop a positive attitude towards them, leading to repurchasing the same goods and services (Mehraj & Qureshi, 2022). Thus, successful firms deliver what they promised and often

deliver more (Freeman et al., 2023). The Theory of Planned Behavior postulates that the precursors of buying behaviors are attitudes, subjective norms, and perceived behavior control (Jose & Sia, 2022). These factors directly and through purchase intention affect buying behavior (Centeno, 2023). There are millions of buyers globally, but not all of them buy the same products or services since they all have different needs. Researchers have different perspectives on consumer buying behavior and have segmented it into four categories: Variety-seeking, complex buying, habitual buying, and dissonance-reducing (Xu et al., 2020). Many models have focused on understanding consumers' buying behavior, including buyers' black box, which assumes researchers know little about what goes into consumers' minds when buying goods and services (Khegay, Aubakirov, 2021).

Discount Pricing

Discounting pricing is an important promotional strategy for attracting customers. In this strategy, firms reduce a good or service's original price to improve sales (Nugroho et al., 2023). As a result, it increases traffic, depletes inventory, and enhances sales (Ittaqullah et al., 2020). Wang, Liu, and Yang (2023) assert that people are attracted to discount pricing as they feel they are saving money. Also, in discount pricing, consumers show a sense of urgency as they feel that the stock of discounted goods will be depleted soon (Prabowo et al., 2021).

Social Media Influencer

In the last few decades, social media usage has increased significantly (Ao et al., 2023). According to an estimate, social media users in 2023 were 4.89 billion, and researchers believe it will grow by 6.5% in the next few years (Weismueller et al., 2020). Social media influencers are reputable and experts in their domains. They regularly share their expert opinions about goods and services on social media. Consequently, they attract and engage many social media followers (Kurdi et al., 2022).

Awareness

Firms must create brand awareness to develop sustainable consumer relationships in this competitive world. Brand awareness is an essential precursor to a consumer's purchase intention. Given its importance, brands allocate and invest significant resources to create brand awareness (Mukherjee, Das & Chakraborty, 2023). Firms use different strategies to create brand awareness, including mass marketing, target marketing, sponsoring events, and product placement.

Bundle Pricing

Bundle pricing is adding multiple products or services in a bundle or package and selling them at a reduced price (Kim et al., 2023). Consumers often feel bundle pricing

is a good option to buy goods and services as they perceive they are getting more for lower prices (Raditya et al., 2022). Song, Noone, and Mattila (2023) assert that in bundle pricing, consumers buy additional products they may not in normal circumstances. Bundle pricing is beneficial for consumers and firms. Consumers often buy products that they need but never think about it. On the other hand, firms deplete the inventory of unsold products (Kim et al., 2023).

Theoretical Grounding

Social Comparison Theory (SCT)

Festin (1954) introduced the Social Comparison Theory. The theory postulates that individuals compare themselves with others. If they find others more attractive than themselves, they develop complex and start following them (Wang et al., 2023). At the same time, when individuals find others less attractive, it increases their self-esteem, and they do not follow those (Tariq et al., 2021). The theory asserts that individuals, while comparing the physical attractiveness of others, also look into their personality traits, including integrity and dignity. The theory also asserts that individuals compare and follow those with similar characteristics and traits (Maier et al., 2022). Many researchers have used Social Comparison Theory in different domains, including body image (Shen et al., 2022), brand endorsers (Dinh & Lee, 2022), and social media followers (Scully et al., 2023).

Theory of Planned Behavior

The Theory of Planned Behavior extends the Theory of Reasoned Action (Ajzen, Icek, 1991). It has certain limitations, including time and resources. Therefore, the Theory of Reasoned Action authors added another variable, perceived behavior control, and renamed it the Theory of Planned Behavior (Wongsaichia, 2022). The Theory of Planned Behavior has five components: Actual behavior, intention, attitudes, subject norms, and perceived behavior control (Asif et al., 2023). Purchase intention is the consumers' intention to buy a product (Kumar et al., 2022). Attitudes are an enduring perception of consumers for a product, service, or person (Ahmed et al., 2021). Subjective norms are the influence of peers, friends, and culture (Khan et al., 2023). Perceived behavior control is a control mechanism of individuals that helps them decide whether to adopt a behavior (Asif et al., 2023). Precursors of behavior and purchase intentions are attitudes, subjective norms, and perceived behavior control.

Conceptual Framework

Based on the theoretical discussions, the study has proposed seven hypotheses: "five direct, and two moderating hypotheses." Figure 1 shows the conceptual framework.
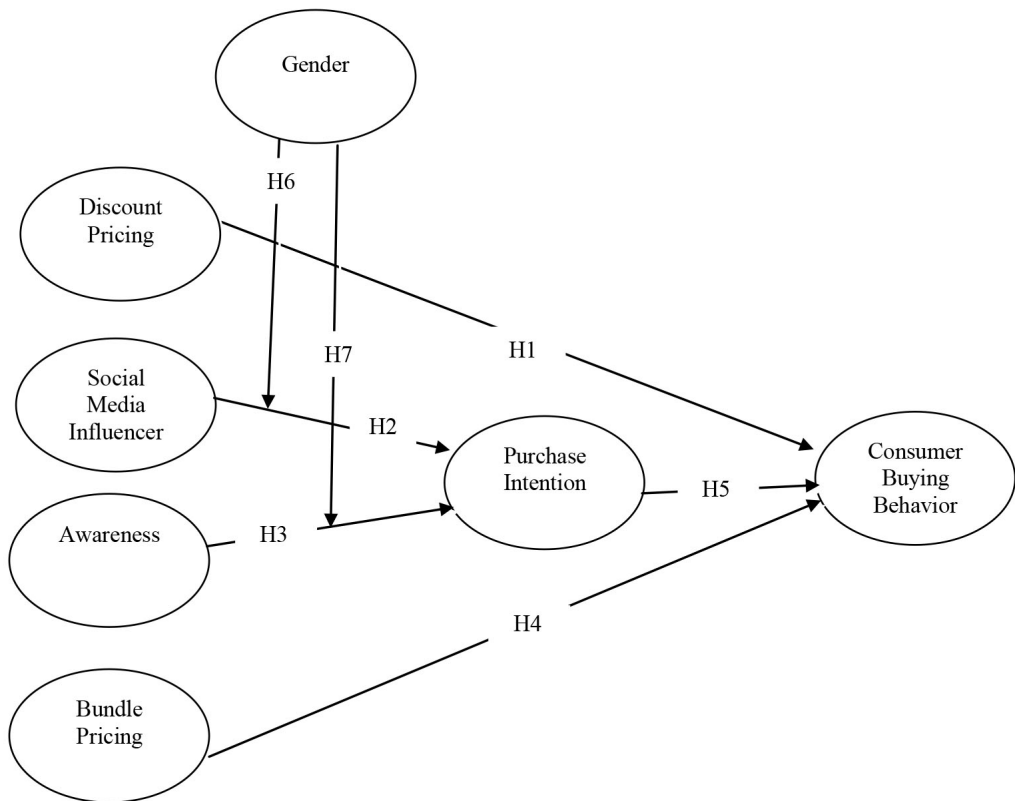
Figure 1: Conceptual Framework

Hypothesis Development

Discount Pricing and Consumer Buying Behavior

Pricing is consumers' cost or value for any product or service (Nugroho et al., 2023). The right price set for any product can greatly affect a company's success, generating revenue and building its name in the market (Ittaqullah et al., 2020). Thus, pricing strategies are highly valued, and firms must base them on their short and long-term goals (Wang et al. (2023). Companies mainly launch products according to consumer behavior and their prevailing and future needs. Marketing strategies depend on the 4Ps of marketing. Of the four marketing mix components, pricing is an important determinant (Prabowo et al., 2021). Apart from other pricing strategies, many firms use discount pricing, which, according to many researchers, is very effective in stimulating buying behavior (Tan, 2023). Tumundo et al. (2022) assert that companies extensively attract customers when offering discounts. Discounts excite consumers, prompting them to consider buying the product or services at lower prices instead of the original

prices. Consumers believe buying goods and services at discounts results in savings (Rahmadina et al., 2023). Discounts enhance the perceived value of products. Some companies often have time-limited discounts, which creates urgency in customers to buy the product quickly before it gets sold out (Sari et al., 2022). Discount pricing mainly attracts price-sensitive customers who always look for sale promotions (Risal et al., 2023). These types of consumer responses are always positive toward discount pricing. Most importantly, offering discount pricing creates a sense of loyalty and attachment to existing and new customers.

H1. Discount pricing positively affects consumer-buying behavior.

Social Media Influencer and Purchase Intention

Gani et al. (2023) document that "social media influencers create trends and promote goods and services." The followers perceive social media influencers as unbiased and domain experts." Therefore, followers seek the advice of the influencers before purchasing goods and services (Jones & Muthaiyah, 2023). Researchers have divided social media influencer into different types based on the content, level of influence, and number of followers (Pop et al., 2022). Firms, while selecting social media influencers, also focus on these types. Social media influencers share content on Facebook and Instagram that generates interaction with followers (Khan et al., 2023). Besides social networking, social media influencers promote positive purchase intention in consumers (Yones & Muthaiyah, 2023). Social media influencers collaborate with firms and share content about the firms and their products. As a result, social media users develop positive attitudes toward the products and services recommended by social media influencers (Erlangga, 2021). Given its importance, firms recruit celebrities as influencers to promote their products (Dinh & Lee, 2022). Many past studies document that social interaction generated by social media influencers positively affects consumers' attitudes and behaviors toward goods and services (Shoenberger & Kim, 2023). Social media influencers' credibility, expertise, and trustworthiness are important to motivate consumers to listen to their advice about goods and services (Sharma et al., 2022).

H2. The social media influencer positively affects purchase intention.

Awareness and Purchase Intention

There are hundreds of brands in the market. Therefore, firms must increase brand awareness to attract customers (Machi et al., 2022). A high brand awareness stimulates positive buying behavior. At the same time, low or poor brand awareness may not promote sales (Fathima et al., 2023). Öztürk (2022) asserts that high brand awareness is positively associated with trust and credibility, promoting brand loyalty and purchase intention. Similarly, Mukherjee et al. (2023) assert that consumers' positive brand

perception enhances customer loyalty. Consumers prefer to buy well-known brands, believing such brands have a lower risk than unknown brands. At the same time, brands with strong awareness evoke and raise emotions and build strong relationships with consumers (Akbar et al., 2023). Emotionally attached consumers generate positive word of mouth and often become brand advocates (Öztürk, 2022).

H3. Awareness positively affects purchase intention.

Bundle Pricing and Consumer Buying Behavior

Bundle pricing is adding multiple products or services in a bundle or package and selling them at a reduced price (Kim et al., 2023). Consumers often feel bundle pricing is a good option to buy goods and services as they perceive they are getting more for lower prices (Raditya et al., 2022). Song, Noone, and Mattila (2023) assert that in bundle pricing, consumers buy additional products they may not in normal circumstances. As a result, firms sell more, which improves their revenues (Liu et al., 2022). Bundle pricing allows firms to sell premium products in packages (Abbas et al., 2022). Tosun and Tosun (2023) believe pricing allows firms to differentiate their value proposition from the competitors, giving them a competitive edge (Tosun& Tosun, 2023). Bundle pricing also allows consumers to buy products they may otherwise forget to buy (Raditya et al., 2022).

H4: Bundle pricing has a significant impact on consumer buying behavior.

Purchase Intention and Consumer Buying Behavior

Purchase intention is an important precursor of consumer buying behavior (Abdelkhair et al., 2023). Firms often use it to measure consumer responses to newly launched products and services in selected segments. The test results may help firms decide whether the launched product and services need further development before launching them on a full scale in target segments (Azizah et al., 2022). Song, Noone, and Mattila (2023) believe purchase intention directly affects consumer-buying behavior. Therefore, understanding its antecedents is vital for enhancing consumer-buying behavior (Azizah et al., 2022; Um, Chung, & Steinmetz, 2023). Many past studies also "found a significant association between purchase intentions and consumer buying behavior" in many domains, including luxury brands (Golalizadeh et al., 2023), counterfeit luxury products (Shan et al. et al., 2022), green marketing (Alhamad et al., 2023), online purchases (Amaral, & Djuang, 2023; Tanveer et al., 2022).

H5: Purchase intention positively affects consumer-buying behavior.

Moderating Role of Gender

Researchers, including Kang and Kim (2023), assert that gender has a varying impact on the association between social media influencers and purchase intention. For example, a study found that "gender moderates awareness and purchase intention" (Yap & Ismail, 2022). The Theory of Social Roles postulates that females' perception of social media influencers differs entirely from that of males (Forgas-Coll et al., 2022; Zahra et al., 2022). Moreover, content shared by an influencer would be perceived differently by genders (Rifon et al., 2023). Similarly, extant literature also documents that male and female social influencers could have different followings (Costello et al., 2023). Thus, we argue that gender has a varying impact on purchase intention.

H6. Gender moderates social media influencer and purchase intention.

H7. Gender moderates awareness and purchase intention.

Methodology

Sampling and Sample Size

The study targeted students from the leading universities in Karachi due to their prior experience in online shopping. Six "enumerators visited the target universities," distributed 415 questionnaires, and received 385 questionnaires. Prior studies have collected respondents' opinions without the stimulus (Othman et al., 2023). In line with past research, we did not use any stimuli for collecting the responses.

Common Method Bias

Common method bias can adversely affect the results of survey-based studies. Researchers have suggested techniques to "reduce the adverse effect of common method bias" (Ding et al., 2023). Following Ding, Chen, and Jane's (2023) advice, we developed the conceptual framework based on established theories and literature. Also, the study "adopted the questionnaire" from past studies whose context was similar to ours. In addition, we assessed the reliability and validity of the scales in two stages. We ascertained reliability and validity based on a small sample at the pretest stage. In the second stage, we examined the reliability and validity of the constructs after administering the questionnaire to the target population.

Pretest

Large-scale surveys are expensive and time-consuming. Many researchers, including Roth (2022), suggest undertaking a pretest "before administering the questionnaire to

the target population." Following the advice of the researcher mentioned above, we also conducted a pretest. In the pretest, we recruited 50 university students for the pilot test. After explaining the study's objective and purpose, the students completed the questionnaires. They reported no issues in understanding and comprehending the questions in the instrument. Subsequently, we generated "results related to reliability and validity" and found them within the prescribed range.

Scales and Measures

The questionnaire in this research has two parts. The first is demographic data based on a nominal scale. The second part is "related to the main study." It has "six factors and 25 items" based on a 5-point rating scale: "Five suggesting high agreement and one low agreement." We adopted the questionnaire from past studies. Table 1 exhibits the constructs' sources and items. The study has attached the questionnaire as Annexure 1.

Table 1: Scale and Measures

Constructs	Sources	Items
Purchase Intention	Yoo, Donthu and Lee (2001)	3
Social Media Influencers	Ohanian (1990) and Jansom and Pongsakornrungsilp (2021)	9
Discount Pricing	Al-Salamin and Al-Hassan (2016)	3
Bundle Pricing	Dominique-Ferreira and Antunes (2019).	2
Consumer Buying Behavior	Doe and Asamoah (2022)	5
Awareness	Weidman and Von- Mettenheim (2020)	3

Statistical Analysis

Data analysis is cleaning (Clark et al., 2021), transforming (Ghauri et al., 2020), and modeling data (Bougie & Sekaran, 2019) that helps in concluding. Various software, including SPSS and Smart PLS, are available for data analysis (Santoso et al., 2023). This study used Smart PLS for statistical analysis as it can deal with the complex model and generates regression results simultaneously.

Respondents' Characteristics

The study collected data from "five leading business universities in Karachi." The recruited enumerators distributed 415 questionnaires and received 385 questionnaires. Table 2 depicts the respondents' profile.

Table 2: Respondents Characteristics

Factors	Frequency	Percentage (%)
Age Group		
18-28	85	22.07%
29-39	120	31.17%
39-49	95	24.68%
49-59	45	11.69%
59 Plus	40	10.39%
Education Level		
Pursuing Bachelor's Degree	185	48.05%
Pursuing a Graduate's Degree	170	44.16%
Pursuing Post Graduate Degree	30	7.79%
Gender		
Male	180	46.75%
Female	205	53.25%
Employment Status		
Employed Student	245	63.64%
Unemployed Student	140	36.36%
Marital Status		
Single	250	64.94%
Married	135	35.06%
Household Income		
Less than 50,000	75	19.48%
50,000 - 100,000	130	33.77%
100,001 - 150,000	90	23.38%
Over 150,000	60	15.58%
Not Disclosed	30	7.79%

Of 385 survey respondents, 22.07% are between 18- 28 years age group, 31.17% between 29-39 years age group, 24.68% in the age group of 39 to 49 years, 11.69% are between 49 to 59 years age group, and 10.39% are older than 59 years. Regarding education, 48.05% of students are pursuing bachelor's degrees, 44.16% are pursuing graduate-level degrees, and 7.79% are pursuing post-graduate-level degrees. Regarding gender, the results show that 46.75% are males, and 53.25% are females. Employment status shows 63.46% are employed students and 36.36% are unemployed students. Marital status shows that 64.94% of respondents are single, and 35.06% are married. Income strata show that 19.48% of respondents' households' income is less than Rs.50,000, 33.77% of respondents households' income is between Rs.51,000 and Rs.100,000, 23.38% respondents households' income is between Rs.100,001 and Rs.

150,000, 15.58% respondents households' income is at more than Rs.150,000, and 7.79% respondents did not disclose their household income.

Results and Findings

Measurement Model

As advised by many, the study includes a two-step analysis in Smart PIS (Santoso et al., 2023). First, we developed a measurement model, presented in Figure 2, for initial results, including reliability (Bougie & Sekaran, 2019) and validity (Bougie & Sekaran, 2019).
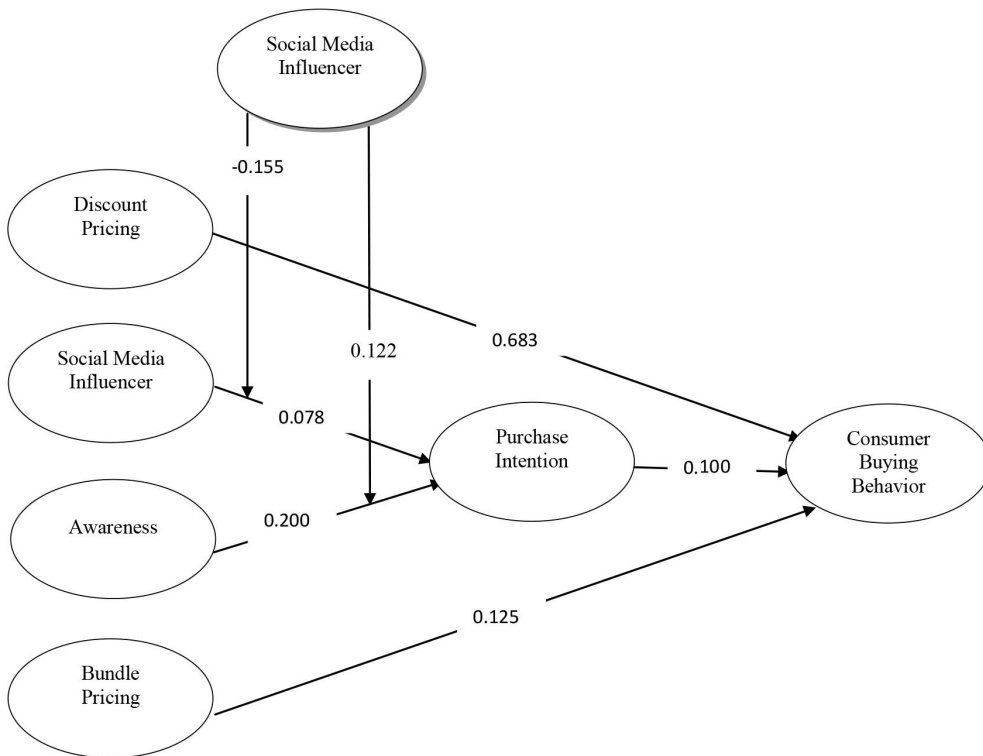
Figure 2 Measurement Model

Descriptive Analysis

The study has summarized the results of Cronbach Alpha, composite reliability, and AVE in Table 3. The summary of results shows that the highest Cronbach's alpha value is for gender (α = 0.881), and the smallest is for purchase intention (α =0.759). The results suggest that the constructs have acceptable internal consistency since all Cronbatch's

Alpha values are at least 0.759 (Mohajan, 2017). Similarly, all the composite values are > 0.800, and the AVE values are > 0.600, suggesting that constructs meet the requirement of convergent validity (Sarstedt et al., 2019).

Table 3: Descriptive Analysis

Constructs	Cronbach's Alpha	Composite Reliability	AVE
Awareness	0.854	0.911	0.774
Bundle Pricing	0.875	0.923	0.800
Consumer Buying Behavior	0.801	0.883	0.717
Discount Pricing	0.780	0.872	0.696
Gender	0.881	0.926	0.808
Purchase Intention	0.759	0.862	0.677
Social Media Influencers	0.760	0.862	0.676

Discriminant Validity

Discriminant validity shows the "uniqueness and distinctness" of the constructs used in a study (Bougie & Sekaran, 2019). We have used Fornell and Larcker's (1981) criteria to assess discriminant validity. The summary of the results in Table 4 "shows that the square root of AVE values is greater than Pearson Correlation values, suggesting that all the constructs used in the study are empirically different" (Memon et al., 2021).

Table 4: Discriminant Validity

Constructs	AWR	BP	CBB	DP	Gender	PI	SMI
Awareness	0.880						
Bundle Pricing	0.728	0.894					
Con. Buying Behavior	0.078	0.738	0.847				
Discount Pricing	0.019	0.766	0.044	0.834			
Gender	0.813	0.634	0.810	0.820	0.899		
Purchase Intention	0.801	0.725	0.822	0.775	0.078	0.823	
Soc. i Media Influencers	0.815	0.821	0.798	0.779	0.711	0.738	0.822

Effect Size of the Model (R and F Square Values)

F square suggests a change in R^2 when an exogenous variable is removed from the model. According to Cheah et al. (2020), F-square is the effect size (>=0.020 is small; >=0.150 is medium; >=0.350 is large). Refer to Table 5 for a summary of the results.

Table 5: Effect Size

Relationships	F-square	Effect
Awareness -> Purchase Intention	0.001	Small
Bundle Pricing -> Consumer Buying Behavior	0.030	Small
Discount Pricing -> Consumer Buying Behavior	0.690	Large
Purchase Intention -> Consumer Buying Behavior	0.017	Medium
Social Media Influencers -> Purchase Intention	0.014	Small
Gender x Social Media Influencers -> Purchase Intention	0.085	Small
Gender x Awareness -> Purchase Intention	0.040	Small

The results in Table 5 show that the model has five small F effect sizes, one large effect size, and one medium effect size.

Hypotheses Results

The study extended the Theory of Reasoned Action and the Theory of Social Comparison and tested seven proposed hypotheses. Table 6 summarizes the results and Figure 3 depicts structure model.

Table 6: Hypotheses Results

Hypotheses	Path coefficients	P-values	Results
Discount Pricing -> Consumer Buying Behavior (H1)	0.683	0.001	Accepted
Social Media Influencers -> Purchase Intention (H2)	0.078	0.037	Accepted
Awareness -> Purchase Intention (H3)	0.200	0.001	Accepted
Bundle Pricing -> Consumer Buying Behavior(H4)	0.125	0.004	Accepted
Purchase Intention -> Consumer Buying Behavior (H5)	0.100	0.014	Accepted
Gender x Social Media Influencers -> Purchase Intention(H6)	-0.155	0.000	Accepted
Gender x Awareness -> Purchase Intention (H7)	0.122	0.000	Accepted

The results support Hypothesis 1, which states, "Discount pricing positively affects consumer buying behavior" (β=0.683, p=0.001<0.05). We supported Hypothesis 2, which states, "Social media influence positively affects consumer buying behavior" (β=0.078, p=0.037<0.05). We accepted Hypothesis 3, which states that "Awareness positively affects consumer buying behavior (β=0.200, p=0.0.001<0.001). We accepted Hypothesis 4, which states, "Bundle pricing positively affects consumer buying behavior" (β=0.125, p=0.004<0.05). We accepted Hypothesis 5, stating that purchase intention positively affects consumer buying behavior (β=0.100, p=0.014<0.05). Our result supported Hypothesis 6, which states that "Gender moderates social media influencer consumer and purchase intention" (β=-0.155, p=0.000<0.05). The study supported Hypothesis

7, which states that "Gender moderates awareness and purchase intention" ($\beta=-0.122$, $p=0.000<0.05$).
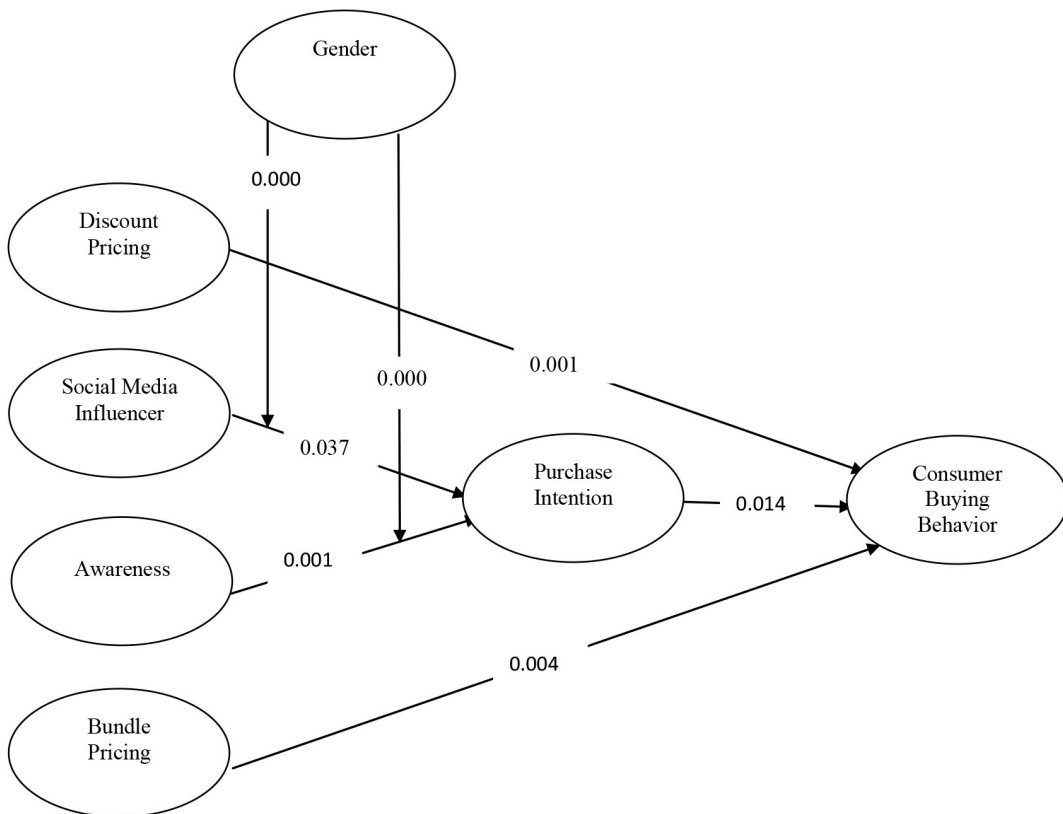
Figure 3: Structural Model

Discussion and Conclusion

Discussion

Extending The Theory of Planned Behavior and Social Comparison, "we empirically tested seven hypotheses and found support for all of them." The findings are consistent with past studies. The following sections compare the results with the past literature.

The results support Hypothesis 1: "Discount pricing positively affects consumer buying behavior" ($\beta=0.683$, $p=0.001$). Discounts excite consumers, prompting them to consider buying the product or services at lower prices instead of the original prices. Consumers believe buying goods and services at discounts results in savings (Rahmadina et al., 2023). Discounts enhance the perceived value of products. Some companies often

have time-limited discounts, which creates urgency in customers to buy the product quickly before it gets sold out (Sari et al., 2022). Discount pricing mainly attracts price-sensitive customers who always look for sale promotions (Risal et al., 2023). These types of consumer responses are always positive for discount offers. Most importantly, offering discount pricing retains existing customers and attracts new ones.

We supported Hypothesis 2: "Social media influence positively affects purchase intention" (β=0.078, p=0.037). Social media influencers share content on Facebook and Instagram that generates interaction with followers (Khan et al., 2023). Besides social networking, social media influencers promote positive purchase intention in consumers (Yones & Muthaiyah, 2023). Social media influencers collaborate with firms and share content about the firms and their products. As a result, social media users develop positive attitudes toward the products and services recommended by social media users (Erlangga, 2021). Given its importance, firms recruit celebrities as influencers to promote their products (Dinh & Lee, 2022). Many past studies document that social interaction generated by social media influencers positively affects consumers' attitudes and behaviors toward goods and services (Shoenberger & Kim, 2023). Social media influencers' credibility, expertise, and trustworthiness are important to motivate consumers to listen to their advice about goods and services (Sharma et al., 2022).

We accepted Hypothesis 3: "Awareness positively affects purchase intention (β=0.200, p=0.001). Öztürk (2022) asserts that high brand awareness is positively associated with trust and credibility, promoting brand loyalty and purchase intention. Similarly, Mukherjee, Das, and Chakraborty (2023) assert that consumers' positive brand perception enhances customer loyalty. Consumers prefer to buy well-known brands, believing such brands have a lower risk than unknown brands. At the same time, brands with strong awareness evoke and raise emotions and build strong relationships with consumers (Akbar et al., 2023). Emotionally attached consumers generate positive word of mouth and often become brand advocators (Öztürk, 2022).

The results support Hypothesis 4: "Bundle pricing positively affects consumer buying behavior" (β=0.125, p=0.004). Consumers often feel bundle pricing is a good option to buy goods and services, as they perceive they are getting more for lower prices (Raditya et al., 2022). Song, Noone, and Mattila (2023) assert that in bundle pricing, consumers buy additional products that they may not buy in normal circumstances. As a result, firms sell more, which improves their revenues (Liu et al., 2022). Bundle pricing allows firms to sell premium products in packages (Abbas et al., 2022). Tosun and Tosun (2023) believe pricing allows firms to differentiate their value proposition from the competitors, giving them a competitive edge (Tosun& Tosun, 2023). Bundle pricing also allows consumers

to buy products they may otherwise forget to buy (Raditya et al., 2022).

The results support Hypothesis 5: "Purchase intention positively affects consumer buying behavior" (β=0.100, p=0.014). Purchase intention is an important precursor of consumer buying behavior (Abdelkhair et al., 2023). Firms often use it to measure consumer responses to newly launched products and services in selected segments. The test results may help firms decide whether the launched product and services need further development before launching them on a full scale in target segments (Azizah et al., 2022). Song, Noone, and Mattila (2023) believe purchase intention directly affects consumer-buying behavior. Therefore, understanding its antecedents is vital for enhancing consumer-buying behavior (Azizah et al., 2022; Um, Chung, & Steinmetz, 2023). Many past studies also "found a significant association between purchase intentions and consumer buying behavior" in many domains, including luxury brands (Golalizadeh et al., 2023), counterfeit luxury products (Shan et al. et al., 2022), green marketing (Alhamad et al., 2023), online purchases (Amaral, & Djuang, 2023; Tanveer et al., 2022).

We accepted Hypothesis 6: "Gender moderates social media influencer and purchase intention" (β=-0.155, p=0.000). We also accepted Hypothesis 7, which states that gender moderates awareness and purchase intention (β=0.122, p=0.000). The Theory of Social Roles postulates that females' perception of social media influencers differs entirely from that of males (Forgas-Coll et al., 2022; Lzahrani et al., 2022). Researchers document that male and female interpretations of the same content differ (Rifon et al., 2023). Extant literature also documents that male and female social influencers could have different followings (Costello et al. 2023). Researchers, including Kang and Kim (2023), assert that gender has a varying impact on the association between social media influencers and purchase intention. Another research document shows that gender moderates awareness and purchase intention (Yap & Ismail, 2022).

Conclusion

Social media in the prevailing era has changed the attitudes and lifestyles of all individuals, especially university students. Given its importance, this study examines the impact of discount pricing, bundle pricing, and purchase intention on consumer buying behavior. The effect of social media influencers and awareness on purchase intention. The moderating effect of gender on purchase intention. The study extended the Theory of Planned Behavior and Social Comparison Theory to develop a model that we tested based on 385 responses from targeted university students. The study found that discount pricing, bundle pricing, and purchase intention promote consumer-buying behavior. Social media influencers and awareness promote purchase intention.

Gender moderates (i) social media influence and purchase intention and (ii) awareness and purchase intention.

Theoretical Implications

The study has developed a model by extending the Theory of Planned Behavior and Social Comparison Theory, which have seven hypotheses. Since "all our results support all the hypotheses," we argue that both theories have assimilated adequately to predict consumers' purchase intentions and buying behaviors. Thus, we have contributed to the body of knowledge by enhancing the generalizability of the Theory of Reason Action and Social Comparison Theory.

Managerial Implications

In this competitive world, retaining and attracting new customers has become difficult. Social media influencers significantly affect consumers' buying behaviors and purchase intentions. The firms must spend adequate resources and recruit reputable social media influencers. While selecting social media influencers, firms must ensure that social influencers have credibility and a reputable image. Female perceptions and attitudes toward social media influencers differ from males. Therefore, while selecting social media influencers, we recommend that firms recruit male or female social media influencers depending on the product category. Discount pricing attracts consumers as they feel they are getting more than they are paying. However, firms must not use this strategy frequently, as it may not be effective in the long- run. Bundling pricing helps firms sell products that consumers often ignore. It is a good strategy, and the firm can use it for the long term.

Limitations and Future Recommendations

Like most studies, this study also has several limitations. The study has focused "on the leading universities of Karachi." Other studies may extend the model to other cities and sectors. Future studies may explore whether the results are the same in a comparative study of two sectors and cities. The study has "examined the moderating effect of gender on purchase intent." Other studies may use other demographic variables as moderators. Pakistan has a diversified ethical culture. The results may vary from one ethical group to another. A comparative study between two or more ethnical groups may bring "more insight into the discussed phenomenon."

Annexure 1

Construct and Items Used in the Questionnaire

Purchase Intention

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

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

PI3. I buy products that social media influencers are promoting.

PI4. The positive recommendation of social media influencers enhances my purchase decision.

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

PI6. I feel that the influencers focus on my interests.

PI7. Social media influencers affect my purchase decisions more than conventional advertisements.

PI8. I often make purchase decisions based on influencers' positive reviews.

Credibility (Dimension SMI)

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

CR2. The social media opinion leader provides accurate and reliable information.

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

Trustworthiness (Dimension of SMI)

TW1. The social media influencers are trustworthy.

TW2. Social media influencers share honest opinions.

TW3.Social media influencers help in enhancing brand image.

Social Attractiveness (Dimension of SMI)

SA1. An influencer's social attractiveness recommendation helps me search for the right product.

SA2. I prefer to buy products and services recommended by attractive social media influencers.

SA3. Social media influencer presentations and styles motivate me to buy recommended products.

Discount Pricing

DP1. I am always attracted to discount pricing as I pay less than the product's value.

DP2. I like discount pricing as it adds up to many savings.

Bundle Pricing

BP1. I like bundle pricing as it often helps identify the products I never thought I would need.

BP2. In bundle pricing, I get more than the value of money.

Consumer Buying Behavior

CBB1. I buy mostly from the shop that is closest to me.

CBB2. I buy mostly from a shop that offers fair prices and high-quality products.

CBB3. I buy mostly from shops that sell current and fashionable or trendy goods.

CBB4. I buy mostly from shops that give adequate services.

CBB5. I buy mostly from the shop that offers rewards for loyal customers.

Awareness

AW1. Advertisements help me to know about new products.

AW2. I give due attention to the advertisements before I buy the products.

AW3. I regularly watch, read, and listen to advertisements to keep myself updated about the products.

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Market Forces

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Title: The Effects of Social Media Influencers' Self-Disclosure, Source Credibility, and Parasocial Relationships on Brand Trust and its Consequences

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The Effects of Social Media Influencers' Self-Disclosure, Source Credibility, and Parasocial Relationships on Brand Trust and its Consequences

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Abstract

The availability of social media to most of the population has significantly increased in the present era. Social media users now have many options to access personal and job-related information. Many users seek opinions from social media influencers about goods and services because of their parasocial relationships. Past studies document that, besides other factors, an essential precursor of social media influencers is "intimate relationships between social media users and followers." Thus, the study has examined the effect of "self-disclosure on parasocial relationships and source credibility." It also examined the effect of "parasocial relationship and source credibility on brand trust." In addition, it examined the effect of "brand trust on commitment and brand loyalty." The study has collected a sample of 472 students from leading local universities in

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Karachi. It focused on them because the students are active users of social media. The study documents that self-disclosure positively affects parasocial relationships and source credibility. Parasocial relationships and source credibility promote brand trust. In addition, brand trust positively effects commitment and brand loyalty. These findings are crucial for understanding the dynamics of social media influencers and their impact on brand trust and loyalty. It also provides valuable insights for marketers and researchers in the domain of social media influencers.

Keywords: Parasocial relationship and source credibility, brand trust, commitment, and brand loyalty.

Introduction

Social media influencers develop likable personalities by sharing informative content on social media forums (Vrontis et al., 2021), revolutionizing how individuals share and interact (Masuda et al., 2022). Their popularity has led most firms worldwide to use social media as a platform to connect with their target audience (Hudders, De-Jans, & De-Veirman, 2021). Balaban and Szambolics (2022) assert that with the rise of social media influencers, they have assumed the crucial role of intermediaries between brands and consumers. Furthermore, Pei and Mayzlin (2022) argue that social media influencers command respect and credibility from their followers by sharing their personal information (Ooi et al., 2023). This underscores the significant influence that social media influencers wield in shaping consumer attitudes and behaviors, making them a key focus of our study.

Moreover, social media influencers create a conducive social environment for their followers by sharing personal information that significantly changes their attitudes and behaviors toward goods and services (Pop et al., 2022). As a result, it promotes personal and intimate relationships between social media users and followers, leading to successful endorsement strategies (Lee et al., 2022). Thus, it is important to understand how followers react to social media influencers' self-disclosure (Masuda et al., 2022). Studies suggest self-disclosure enhances social media influencers' credibility and promotes parasocial relationships (Gammoudi et al., 2022). Depending on the social media reputation and relationships, followers develop a positive or negative perception about social media influencers (Cheung et al., 2022). If consumers feel that the social media influencer's content is honest, candid, and truthful," they perceive them as credible (Borges-Tiago et al., 2023).

Consequently, it enhances trust in the brands recommended by social media influencers. A parasocial relationship develops between followers and social media

influencers when social media influencers share intimate personal information with the followers (Koay et al., 2923). As a result, it promotes "one-to-one relationships," an essential precursor of "pseudo-relationships." (Alcántara-Pilar et al., 2024). Like source credibility, parasocial relationships also promote trust toward the brand recommended by social media influencers (Saini et al., 2023). Furthermore, literature also documents that brand trust promotes "commitment and brand loyalty" (Lacap et al., 2024). Given the above discussions, we have examined the "effect of self-disclosure on parasocial relationships and source creditably." We also examined the "effect of "parasocial relationship and source creditably" on brand trust. Moreover, the study has examined the effect of "brand trust on commitment and brand loyalty."

Literature Review and Hypothesis Development

Self-Disclosure and Parasocial Relationship

Many consumers use social media to develop social relationships as an alternative to real relationships. Mostly, such consumers are uncomfortable interacting in real relationships (Koay et al., 2023). When social media influencers share their personal information with their followers, which they normally would share with their close friends, the followers perceive that social media influencers trust them and consider them as close friends (Lu et al., 2023). Similarly, Lacap et al. (2024) argue that when social media users receive personal information from social media influencers, they perceive that they know them personally, resulting in intimate relationships. Furthermore, the frequent social and personal interaction between social media users and followers further enhances intimate relationships (Xu et al., 2024).

Researchers believe two relationships exist between "social media users and influencers" (Zafina & Sinha, 2024). A low level of relationship develops when "social media users and influencers" share content related to hobbies, attitudes, and behavior toward a product or service. At the same time, a high relationship develops when they share interpersonal information, which they only share with close friends (Lim & Lee, 2023). For example, they share issues and problems at work and home (Wang & Liao, 2023). Thus, we argue that sharing such information promotes one-to-one relationships, an essential component of "pseudo-relationships" (Chantokul & Chantamas. 2023).

H1: The "social media influencer's self-disclosure promotes parasocial relationship."

Self-Disclosure and Source Credibility

Marin and Gabbert (2023) assert that social media influencers often disclose personal information to develop sustainable and intimate relationships with social media users.

As a result, it increases their credibility and familiarity. Similarly, the Self-Disclosure Theory also endorses that the norms of reciprocity enhance the relationship between social media users and followers (Leite et al., 2022). As a result, it promotes sustainable and intimate relationships (Qiu et al., 2023; Lee & Johnson, 2022). Furthermore, extant literature also highlights that followers believe endorsers who share their personal information are more credible and honest than those who do not share their personal information (Nah, 2022).

Source credibility relates to social media users' perception of social media influencers. If social media influencers are well-reputed in their domains and share honest and credible content, social media users' perception of their credibility increases significantly (Koay et al., 2023). Past studies cite that source credibility positively relates to the effectiveness of celebrity endorsements (Zhang & Lu, 2023). Moreover, source credibility has three components: "attractiveness, truthfulness, and the degree of confidence" (Cao et al., 2023). Attractiveness refers to the "physical attractiveness of the endorsers" (Van-der, Schyff, and Flowerday, 2023). Truthfulness refers to endorsers' "honesty and integrity" (Yuen et al., 2023). Expertise relates to "endorsers' knowledge and skills" in their domains (Filieri et al., 2023). Researchers believe that self-disclosure affects source credibility and its sub -sub-dimensions.

H2: Self-disclosure "positively affects source credibility."

Parasocial Relationships and Brand Trust

Social media influencers develop and maintain a parasocial relationship with followers, which increases the trust in the brands they recommend to the followers (Lacap et al., 2024). Moreover, the parasocial relationship is an essential precursor of brand trust (Shuliakouskaya, 2023). Furthermore, the "consumer-brand relationship" promotes a perception in consumers that the brand will deliver what it promised and that there will be no or little risks associated with it (Chaihanchanchai et al., 2024). Similarly, Zha et al. (2023) assert that parasocial and brand trust relationships have stemmed from the "Uncertainty Reduction Theory (Berger & Calabrese, 1975) and the Meaning-Transfer Model" (McCracken, 1989), giving credence to the association between "parasocial relationship and brand trust." At the same time, Leite and Baptista (2022) argue that a brand alone cannot command consumers' trust. A parasocial relationship between social media influencers and followers is needed (Bashokouh et al., 2020). Moreover, extant literature highlights that a vast amount of information is available on social media, but most consumers seek advice from social media influencers they trust (Aw & Labrecque, 2023). Thus, we argue that a parasocial relationship is a significant precursor of brand trust (Burnasheva & Suh, 2022). In the same context, studies argue that a parasocial

relationship reduces the buyers' uncertainty about the brand endorsed by social media influencers. Furthermore, extant literature also highlights that the personality traits of endorsers transfer to the brands that promote positive attitudes and behaviors towards such brands (Zhong et al., 2021).

H3: Parasocial relationship "positively affects brand trust"

Source Credibility and Brand Trust

Many past studies using the Uncertainty Theory (Berger & Calabrese, 1975) and Meaning Model (Bergkvist & Zhou, 2016) document that source credibility and brand trust are positively associated. Similarly, Akram et al. (2023) argue that consumers develop positive trust towards a brand if a credible source recommends it. However, if consumers perceive social media influencers as not credible, it may adversely affect their attitudes and behaviors toward a brand (Roy et al., 2023). Moreover, Agusiady, Saepudin, and Aripin (2024) argue that source credibility has three components: "expertise, trustworthiness, and attractiveness." All these dimensions individually and collectively affect brand trust (Ahmadi & Ataei, 2024). Furthermore, Baidoun and Salem (2024) assert that when a credible source endorses a brand, it promotes a perception that the brand will perform well, thus reducing psychological risk. Similarly, consumers develop sustainable relationships with credible sources and follow their recommendations (Hussain et al., 2024). In this context, Rathee and Milfeld (2024) assert that social media influencers develop and project creditable and appealing personas that translate into endorsed brands.

H4: Source "Credibility positively affects brand trust."

Brand Trust Commitment and Loyalty

Brand trust, commitment, and loyalty are crucial elements in brand management (Tiep et al., 2023). Different researchers have defined the concept of brand trust in various ways (Akoglu & Özbek, 2022). For instance, Puspaningrum (2020) defines it as a consumer's perception of a brand's reliability and ability to deliver what it promised (Tiep et al., 2023). Moreover, brand trust is consumers' belief that the brand contains specific traits and is competent and credible (Kwon et al., 2021). As a result, it enhances consumers' commitment and loyalty. Extant literature highlights that consumers develop brand trust and loyalty based on their past interactions and experiences with a brand (Sohaib et al., 2023). Many studies have endorsed this phenomenon (Salsabila & Hati, 2024). Similarly, many researchers believe that to increase commitment and loyalty, brands need to involve and engage consumers (Na et al. 2023). Furthermore, Kwon et al. (2021) assert that brand trust promotes brand loyalty and a sustainable relationship

between the brand and consumers. In the same context, Puspaningrum (2024) argues that consumers perceive that a trusted brand will deliver what it promises and that there will be no or little risk involved. As a result, it will promote repeat purchases and promote brand loyalty (Anggraini & Marsasi, 2024).

H5: Brand trust positively affects commitment.

H6. Brand trust positively affects brand loyally.

Conceptual Framework
Given the above discussions, we have developed a new model depicted in Figure 2.
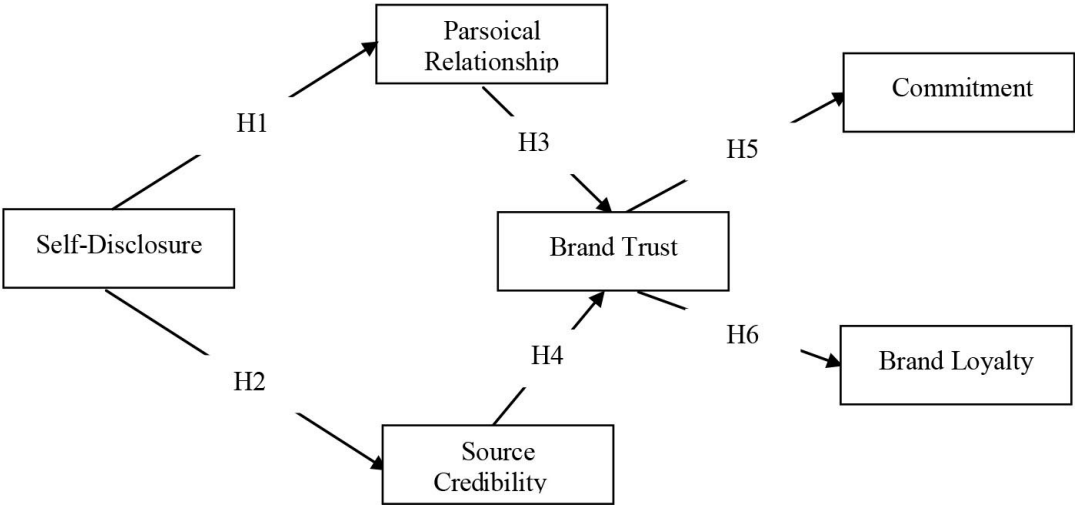
Figure 2: Conceptual Framework

Methodology

Population and Sampling
The study has focused on social media users in Pakistan as it is now easily accessible to most of the population. There are about 72 million social media users in Pakistan, increasing exponentially. However, we have focused on the students of the leading business universities of Karachi. We have selected this segment because students are active social media users, and most follow social media influencers. The study used Rao soft to calculate the sample size, which is 387. However, to increase generalizability, we

distributed 550 questionnaires and received 472 usable questionnaires.

Data Collection Procedure

The study used quota sampling to collect samples from the targeted universities. Following the research protocol, we obtained permission from the management of the selected universities and then contacted the students. We also told the respondents they only needed to complete these questionnaires if they were comfortable with them and assured them that we would not share their data with others. Table 1 shows the allocated quotas for selected universities, responses received, and response rates.

Table 1: Samples Allocated and Collected

Universities	Quota	Responses	Response Rate
IQRA University	135	117	86.67%
IOBM	125	101	80.80%
SZABIST	110	101	91.82%
KIET	90	75	80.33%
KASBIT	90	78	86.67%
	550	472	85.81%

Instrumentation

The study's questionnaire has six latent and 28 indicator variables. Table 2 shows the sources from where the study adopted the constructs used in the questionnaire and reliability values in the past studies.

Table 2: Instrumentation

Construct	Sources	Items	Reliability
Brand Loyalty	Delgado-Ballester et al. (2003)	5	0.744 to 0.876
Brand Trust	Delgado-Ballester et al. (2003)	4	0.759 to 0.803
Parasocial Relationship	Kim et al. (2015)	5	0.789 to 0.843
Credibility	Sundaram and Webster (2000)	3	0.746 to 0.888
Disclosure	Leite and Baptista (2022)	8	0.753 to 0.876
Brand Commitment	Feick, Coulter, and Price (2003)	3	0.738to 0.787

Statistical Analysis

We used Smart PLS version 4.1 for data analysis. As suggested by Hakiki et al. (2023), before testing the hypotheses, we examined the "reliability, convergent validity, and discriminant validity" and found them within the acceptable range.

Result

Respondents Profile

We did not use the demographic profile for statistical analysis. We collected it to help readers determine whether it relates to other studies in educational institutions. The demographic profile we collected, presented in Table 3, is similar to other past studies in educational institutions.

Table 3: Respondents Profile

Demographic	Category	Percentage
Age	16 to 25 Years	13%
	26 to 35 Years	29%
	36-45 Years	35%
	56-55 Years	17%
	55 Plus	6%
Gender	Male	57%
	Female	43%
Marital Status	Singe	53%
	Married	47%
Education	Perusing Bachelor Degree	58%
	Perusing Master Degree	40%
	Post-Graduation Degree	02%
Income Level	Up to Rs.50000	29%
	Rs.51000 to Rs.75000	21%
	Rs.76000 to Rs.100000	19%
	Rs.101000 to Rs.125000	15%
	Rs.126000 plus	16%

Results

Measurement Model

Figure 2 depicts the measurement model (Ghauri, Grønhaug, & Strange, 2020), and the results related to "reliability, convergent, and discriminant validity are presented in the following sections."
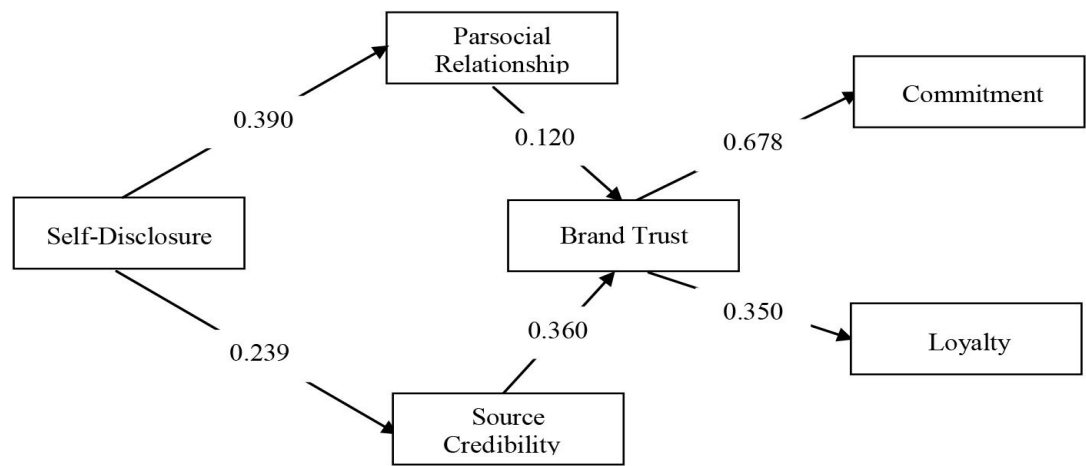
Figure 2 Measurement Model

Descriptive Analysis

The study conducted descriptive analyses for univariate normality (Hakiki et al., 2023). Hair et al. (2021) suggest that the Skewness and Kurtosis values must be at ± 3.5 for univariate normality. The results related to Skewness and Kurtosis are within the prescribed range, suggesting that "constructs fulfill the requirement of univariate normality" (Welch et al., 2020). Also, "Cronbach's Alpha values are within the prescribed limits, confirming the constructs have acceptable internal consistency" (Easterby-Smith et al.,2021;Sürücü & Maslakci, 2020).

Table 4: Descriptive Analysis

Constructs	Mean*	SD	Cronbach's Alpha	Skewness	Kurtosis
Self-Disclosure	3.770	1.590	0.820	0.830	0.539
Source Credibility	6.099	0.998	0.850	0.860	0.580
Parasocial Relationship	2.770	1.449	0.775	0.779	0.550
Brand Trust	5.210	1.450	0.030	0.860	0.670
Commitment	5.464	1.532	0.822	0.839	0.639
Loyalty	5.360	1.425	0.820	0.837	0.734

*Based on seven point Likert scale.

Convergent Validity

Convergent validity "is a theoretical association between latent variables and their indicators." Table 5 shows that all composite reliability (CR) values are greater than 0.70 and AVE values are more than 0.60, confirming that the constructs fulfill the requirement of convergent validity (Ghauri et al., 2020).

Table 5: Convergent Validity

Constructs	Mean	SD	CR	AVE
Self-Disclosure	3.770	1.59	0.809	0.639
Source Credibility	6.099	0.998	0.799	0.680
Parasocial Relationship	2.770	1.449	0.779	0.650
Brand Trust	5.210	1.450	0.860	0.670
Commitment	5.464	1.532	0.839	0.639
Loyalty	5.360	1.425	0.835	0.697

Discriminant Validity

Researchers, including Rönkkö and Cho (2022), suggest that before testing the hypotheses, it is necessary to ensure that the constructs used in studies are conceptually and empirically different. Following the advice of the above researcher, we have ascertained the discriminant validity using Fornell and Larcker (1981) criteria. The results depicted in Table 6 show that "the square root of AVE values are greater than Pearson Correlation Values, suggesting the constructs are empirically different" (Fornell & Larcker, 1981).

Table 6: Discriminant Validity

Constructs	SD	SC	PR	BT	CM	LY
Self-Disclosure	0.799					
Source Credibility	0.409	0.826				
Parasocial Relationship	0.399	0.359	0..809			
Brand Trust	0.490	0.749	0.579	0.819		
Commitment	0.407	0.616	0.712	0.799	0.799	
Loyalty	0.406	0.614	0.713	0.787	0.705	0.835

Hypotheses Results

The study, based on bootstrapping, generated results related to the hypotheses. Table 7 shows the hypotheses' results, and Figure 3 depicts the structural model.

Table 7 Estimation Results for Path Coefficient

Direct Path	β	p-value	Results
Self-disclosure -> Parasocial Relationship (H1)	0.390	0 .001	Accepted
Self-disclosure -> Source Credibility (H2)	0.239	0.001	Accepted
Parasocial Relationship -> Brand Trust (H3)	0.120	0.004	Accepted
Source Credibility -> Brand Trust (H4)	0.360	0.001	Accepted
Brand Trust -> Commitment (H5)	0.678	0.002	Accepted
Brand Trust -> Brand Loyalty (H6)	0.350	0.003	Accepted

We found that our study supports all the proposed Hypotheses. We found the highest effect is for Hypothesis 5 (β=0.678, p=.002<0.05), stating, "Brand trust positively affects commitment." On the other hand, the lowest effect is for Hypothesis 3 (β=0.120, p=0.004<0.05), stating, "parasocial relationship positively affects brand trust."
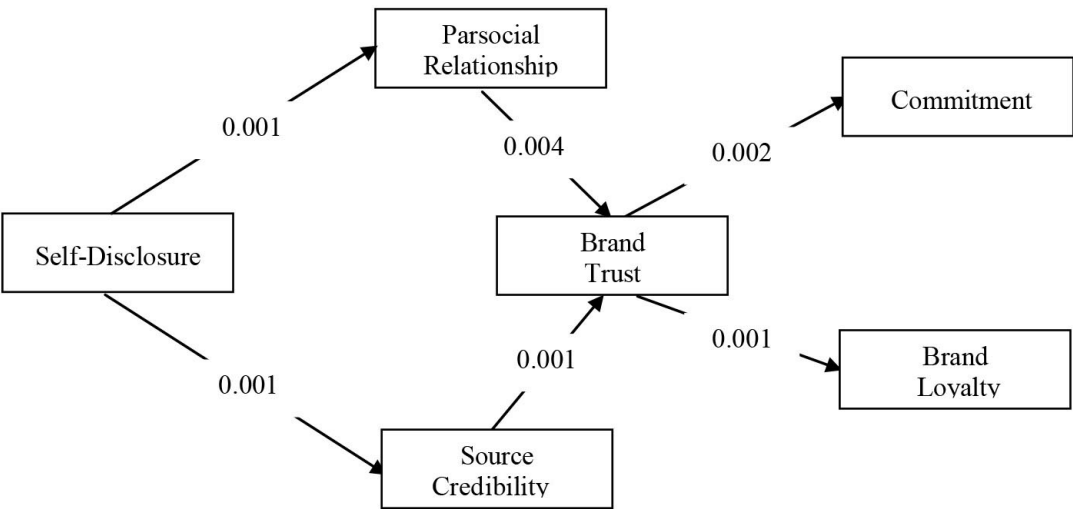
Figure 1 Structural Model Path Coefficient

Discussion and Conclusion

Discussion

We accepted Hypothesis 1 (β=0.390, p=0.001<0.05), which states, "Self-disclosure positively affects the parasocial relationship." When social media influencers share their personal information with their followers, which they normally would share with their close friends, the followers perceive that social media influencers trust them and consider them as close friends (Lu et al., 2023). Similarly, Lacap et al. (2024) argue that when social media users receive personal information from social media influencers, they perceive that they know them personally, resulting in intimate relationships. Furthermore, the frequent social and personal interaction between social media users and followers further enhances intimate relationships (Xu et al., 2024). Researchers believe two relationships exist between "social media users and influencers" (Zafina & Sinha, 2024). A low level of relationship develops when social media users and influencers share content related to hobbies, attitudes, and behavior toward a product or service. At the same time, a high relationship develops when they share interpersonal information, which they only share with close friends (Lim & Lee, 2023).

We accepted Hypothesis 2 (β=0.239, p=0.001<0.05), which states, "Self-disclosure positively affects the source creditability." Marin and Gabbert 2023) assert that social media influencers often disclose personal information to develop sustainable intimate relationships with social media users. Similarly, the Self-Disclosure Theory also endorses that the norms of reciprocity enhance the relationship between social media influencers and followers (Leite et al., 2022). As a result, it enhances the credibility of the endorsers (Qiu et al., 2023). Moreover, extant literature also documents that followers perceive endorsers who share their personal information as more credible than those who do not share their personal information (Nah, 2022; Lee & Johnson, 2022).

We accepted Hypothesis 3 (β=0.120, p=0.004<0.05), which states, "Parasocial relationship positively affects the brand trust." A parasocial relationship is an essential precursor of brand trust (Shuliakouskaya, 2023). Moreover, the "consumer-brand relationship" promotes a perception in consumers that the brand will deliver what it promised and that there will be no or little risks associated with it (Chaihanchanchai et al., 2024). Similarly, Zha et al. (2023) assert that parasocial and brand trust relationships have stemmed from the "Uncertainty Reduction Theory (Berger & Calabrese, 1975) and the Meaning-Transfer Model" (McCracken, 1989), giving credence to the association between "parasocial relationship and brand trust." At the same time, Leite and Baptista (2022) argue that a brand alone cannot command consumers' trust. A parasocial relationship between social media influencers and followers is needed (Bashokouh et al., 2020). Moreover, extant literature highlights that a vast amount of information is available on social media, but most consumers seek advice from social media influencers they trust (Aw & Labrecque, 2023). Thus, we argue that a parasocial relationship is a significant precursor of brand trust (Burnasheva & Suh, 2022). In the same context, studies argue that a parasocial relationship reduces the buyers' uncertainty about the brand endorsed by social media influencers. Furthermore, extant literature also highlights that the personality traits of endorsers transfer to the brands that promote positive attitudes and behaviors towards such brands (Zhong et al., 2021).

We accepted Hypothesis 4 (β=0.360 p=0 .001<0.05), which states, "Source credibility positively affects brand trust." Akram et al. (2023) argue that consumers develop positive trust towards a brand if a credible source recommends it. However, if consumers perceive social media influencers as not credible, it may adversely affect their attitudes and behaviors toward a brand (Roy et al., 2023). Moreover, Agusiady, Saepudin, and Aripin (2024) argue that source credibility has three components: "expertise, trustworthiness, and attractiveness." All these dimensions individually and collectively affect brand trust (Ahmadi & Ataei, 2024). Furthermore, Baidoun and Salem (2024) assert that when a credible source endorses a brand, it promotes a perception that the brand will perform

well, thus reducing psychological risk. Similarly, consumers develop sustainable relationships with credible sources and follow their recommendations (Hussain et al., 2024).

We accepted Hypothesis 5 (β=0.678 p=0 0.002<0.05), which states, "Brand trust positively affects commitment." We also accepted Hypothesis 6, which states, "Brand trust positively affects brand loyalty." Brand trust, commitment, and loyalty are crucial elements in brand management (Tiep et al., 2023). Different researchers have defined the concept of brand trust in various ways (Akoglu & Özbek, 2022). For instance, Puspaningrum (2020) defines it as a consumer's perception of a brand's reliability and ability to deliver what it promised (Tiep et al., 2023). Moreover, brand trust is consumers' belief that the brand contains specific traits and is competent and credible (Kwon et al., 2021). As a result, it enhances consumers' commitment and loyalty. Extant literature highlights that consumers develop brand trust and loyalty based on their past interactions and experiences with a brand (Sohaib et al., 2023). Many studies have endorsed this phenomenon (Salsabila & Hati, 2024). Similarly, many researchers believe that to increase commitment and loyalty, brands need to involve and engage consumers (Na et al. 2023). Furthermore, Kwon et al. (2021) assert that brand trust promotes brand loyalty and a sustainable relationship between brand and consumers. In the same context, Puspaningrum (2024) argues that consumers perceive that a trusted brand will deliver what it promises and that there will be no or little risk involved. As a result, it will promote repeat purchases and promote brand loyalty (Anggraini & Marsasi, 2024)

Conclusion

Social media usage and influencers have become important tools in the prevailing technological era. Brands recommended by social media influencers play an important role in changing consumers' attitudes and behaviors. Past studies document that the effectiveness of social media influencers significantly depends on "many factors, including the intimate relationships between social media users and followers." Given its importance, the study has examined the effect of self-disclosure on "parasocial relationships and source creditably." It also examined the effect of "parasocial relationship and source creditably" on brand trust." Moreover, it also examined the "effect of brand trust on commitment and brand loyalty." The study has collected a sample of 472 students from leading local universities in Karachi. We focused on them because the students are active users of social media. The study documents that self-disclosure positively affects parasocial relationships and source credibility. Parasocial "relationship and source credibility affect brand trust." At the same time, we found that brand "trust is a significant precursor of commitment and brand loyalty."

Implications

Given the importance of social media influencers, we suggest that firms use them to market their brands and enhance brand trust. Consumers' brand trust also promotes commitment and brand loyalty. Therefore, we suggest that the firms focus on enhancing brand trust. Social media influencers who share personal information develop intimate relationships with followers. Thus, we recommend that firms ensure their social media influencers are comfortable sharing personal information with their followers. Such attitudes and behaviors of the endorsers are more effective than those who are uncomfortable sharing their information with their followers. Social media personality transfers into the brand. Therefore, while recruiting social media influencers, firms must ensure that their personality traits align with their intended brand positioning.

Limitation and Future Research.

The study focused on university students in Karachi. Other studies may target other segments and cities. We have examined the effect of parasocial relationships, self-disclosure, and source credibility on brand trust. Other studies may examine these antecedents' effects on purchase and behavioral intentions. Our model measured the relationship between brand trust, commitment, and loyalty. Other studies may explore the mediating role of brand trust between (i) Parasocial relationships and brand loyalty and (ii) Source credibility and commitment. We also recommend that others examine the indirect effect of self-disclosure on brand trust.

Annexure 1

Constructs and Items Used in the Questionnaire

Brand Loyalty

BL1. I consider myself loyal to the brand I use.

BL2. Under extreme circumstances, I would consider purchasing another brand.

BL3. If the store does not carry my brand, I would go to another store to buy it.

BL4. The brand I use gives the best value than other brands.

BL5. I recommend that others buy the brand I use.

Brand Trust

BT1. The brand I use meets my expectations.

BT2. I have confidence in the brand I use.

BT3. The brand I use never disappoints me.

BT4. The brand I use guarantees satisfaction.

Parasocial Relationship

PSR1. I feel close enough to use my favorite digital celebrity Apps.

PSR2. I feel comfortable with a digital celebrity's message.

PSR3. I can rely on the information I get from my favorite digital celebrity.

PSR4. I am fascinated by my favorite digital celebrity Apps.

PSR5. In the past, I pitied my favorite digital celebrity when they made a mistake on their Apps.

Self-Disclosure

SD1. The celebrities I follow share information about themselves.

SD2. The celebrities I follow share their feelings.

SD3. The celebrities I follow share their emotions.

SD4. The celebrities I follow share their desires.

SD5. The celebrities I follow share their moods.

SD6. The celebrities I follow share their thoughts.

SD7. The celebrities I follow share their opinions.

SD8. The celebrities I follow share their beliefs.

Credibility

CRI. 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.

Brand Commitment

BC1. I am attached to the brand I use.

BC2. I stick with my usual brand because I know it is best for me.

BC3. I am committed to my brand.

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Title: Antecedent to Green Creativity and the Moderating Role of Green Intrinsic Motivation and Green Autonomony

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Antecedent to Green Creativity and the Moderating Role of Green Intrinsic Motivation and Green Autonomy

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Abstract

Concern about the green environment has increased significantly in recent years. Regulators now have strict policies and regulations for firms to reduce pollution by recycling water and other industrial waste. However, policies and regulations may not reduce environmental decay unless all the stakeholders, including employees and management of the firms, actively contribute to making the environment sustainable. Given its importance, the study has focused on Pakistan's chemical sector, which significantly contributes to environmental decay. The study has three independent variables (i.e., green intrinsic motivation, green transformation leadership, and green innovation climate), one dependent variable (i.e., green creativity), and two moderators (i.e., green extrinsic motivation and green autonomy). The study collected a sample of 460 from the target sector and found that our results support five hypotheses but do not support one. The results show that "green intrinsic motivation and green innovation climate significantly affect green creativity." However, "green innovative climate insignificantly affects green creativity." We also found that "green transformational leadership positively affects green creativity and green intrinsic motivation." The study also documents that "green extrinsic motivation moderates green intrinsic motivation and green creativity." Moreover, "green autonomy moderates the green innovation climate and green creativity."

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Keywords: *Green intrinsic motivation, transformation leadership, innovative climate, green creativity, green extrinsic behavior, and green autonomy.*

Introduction

Various theories, including Resource-Based Theory, underscore the pivotal role of business entities' future in adopting and practicing policies and procedures related to a sustainable environment (Panda, 2023). As per the Paris Accord, the global community has committed to phasing out manufacturing units that harm the green environment (Qin & Yu, 2023). Consequently, such units will be transformed into green firms (Zuhaida & Alkazahfa, 2023). Numerous researchers advocate that green production enhances efficiency and reduces environmental pollution (Ren et al., 2022). Green creativity refers to developing innovative green products and environmentally friendly services (Ogbeibu et al., 2021). Several factors influence green creativity, including green passion (Shah et al., 2023), green intrinsic motivation, green extensive motivation (Faraz et al., 2021), and green autonomy (Tian et al., 2020).

Notably, many scholars argue that green visionary leaders contribute significantly to developing and marketing green products (Begum et al., 2022). For instance, the CEO of Good Energy's green vision translated into supplying 100% electric devices and equipment in Britain (Maitlo et al., 2022). Moreover, the CEO of Tesla has shared his green vision with the employees. As a result, it launched innovative green products, including electric cars and solar energy solutions for homes and offices (Townsend, 2018). In contrast, leaders in developing Asian countries are less green visionary than those in developed countries (Tian et al., 2020).

The Theory of Creativity postulates that individuals' positive attitude toward green sustainability promotes green creativity (Shah et al., 2023). Thus, we argue that organizational climate stimulates employees' green-creative behavior, especially if they are motivated and have relevant skills (Abualigah et al., 2023). Extant literature maintains that a green-innovative climate empowers employees and gives them the freedom to practice and implement green innovation (Tuan, 2023). Building on the Creative Theory, we argue that a green-innovative climate is an important precursor of green innovative activities (Ogbeibu et al., 2021). Besides other benefits, a green-innovative environment rewards employees for creative ideas and provides all the necessary resources to support green creativity (Mansoor et al., 2021).

The literature also argues that organizations that adopt green creativity and innovation will have a competitive edge over firms that do not practice them.

Supporting these discussions, we argue that firms that practice green practices would positively affect their brand image (Qayyum et al., 2023). Thus, we also argue that green visionary leaders promote an environment that motivates and inspires employees to create environmentally friendly products (Luu, 2023). Extending this argument, we believe that transformational leaders promote green creative behavior, a precursor of environmental sustainability (Samad et al., 2023). Although green transformational leadership is instrumental in promoting a green environment, its success significantly depends on the intrinsic and extrinsic motivation of the employees (Awan et al., 2023).

Given the above discussion, the study examines the "impact of green intrinsic motivation, green transformational leadership, and green innovation climate on green creativity." It also examines the effect of green transformational leadership on green creativity and green intrinsic motivation. Furthermore, it also examines the moderating role of green intrinsic motivation and green autonomy on green creativity.

Literature Review and Hypotheses Development

Green Intrinsic Motivation and Creativity

Employees' motivational orientation is not uniform. It varies from employee to employee (Hu et al., 2022). Researchers believe that intrinsically motivated individuals find work assignments interesting. Therefore, they take more interest in job-related assignments (Fishbach & Woolley, 2022). Such employees develop new skills, resulting in high motivation and engagement (Bougie & Ichise, 2020; Haddad et al., 2023). Moreover, creative, challenging, and interesting jobs increase intrinsic motivation (Baluarte et al., 2023). Furthermore, extant literature highlights that intrinsic motivation positively correlates with green creativity (Yesuf et al., 2023).

We found no empirical evidence on the relationship between green intrinsic motivation and green creativity (Emami et al., 2023). However, past studies based on theoretical support have inferred that green intrinsic motivation promotes green creativity. For example, extending motivation and creativity theories, many researchers argue that individuals with a high orientation toward the environment are green-creative (Tuan, 2023). Moreover, many researchers assert that employees with low passion and interest in the green environment have low attitudes and behaviors toward the green environment (Shah et al., 2023). Furthermore, many researchers argue that green-intrinsic-motivated employees are passionate about green environments and often have hobbies related to green plantations and gardening (Conrad & Fehlings, 2023).

H1. Green intrinsic motivation "positively affects green creativity."

Green Transformational Leadership and Green Creativity

Transformational leaders guide employees to achieve firm vision (Awan et al., 2023). Such leaders motivate and inspire employees by treating all employees fairly and without discrimination (Cui et al., 2023). They also empower employees and are concerned about their well-being (Pham et al., 2023). As a result, it enhances employees' creativity and promotes "inspirational motivation, intellectual stimulation, charisma, and individualized consideration" (Odugbesan et al., 2023). Similarly, Hameed et al. (2022) argue that leaders enhance employee creativity through inspirational motivation. As a result, employees solve job-related and personal problems by looking at them from different perspectives. Leaders with charismatic personalities are concerned about the employees. They also share their vision and expectations with the employees, enhancing employee commitment (Zhang et al., 2020. Ahmad, Ullah, & Khan, 2022).

As Begum et al. (2022) emphasize, Green transformational leaders are at the forefront of promoting environmental sustainability. They motivate and inspire employees to be more green-creative, focusing on green environmental goals and encouraging the generation of novel ideas for environmental sustainability (Mansoor et al., 2021). Arici and Uysal (2022) further assert that these leaders must guide, inspire, and motivate employees to adopt and practice green creativity, as supported by the works of Ahmad et al. (2022), Çop et al. (2021), and Pham et al. (2023).

H2. Green transformational leadership "positively affects green creativity."

Green Innovation Climate and Green Creativity

Organizational climate is the perception and attitudes of individuals about an organization (Abbas & Khan, 2023). Song, Wang, and Ma (2020) assert that in an innovative organizational climate, management encourages employees to share their creative ideas with the management and other employees of the organization (Peng & Jia, 2023). Similarly, the employees in green organizations receive explicit and implicit signals from the management about focusing on green creativity (Shah et al., 2023). When employees receive these signals, they often respond positively by sharing their creative ideas with management, resulting in increased self-satisfaction of the employees (Alyahya et al., 2023).

Many researchers believe that the three components of organizational climate are support for innovation (Önhon, 2019), search for creative innovative ideas, and resource supply (Shafiq et al., 2023). Support for innovation allows employees to

work independently (Allan & Meckling, 2023). Search for creative and innovative ideas (Abualigah et al., 2023), enable employees to understand the diversity of work in an organization (Shafiq et al., 2023). Resource supply provides employees with materials, information, and finances for creative and innovative ideas (Abualigah et al., 2023). Moreover, extant literature documents that employees in those organizations are more creative, where they receive bonuses and rewards for creativity, than the employees of the organizations that do not reward employees for creativity and innovation (Allan & Meckling, 2023).

Extending the concept of organizational climate, researchers have developed the concept of green organizational climate (Zafar et al., 2023). A green organizational climate allows employees to focus on green products and practices (Ma et al., 2023). Moreover, such an organization provides materials and finances to the employees for developing green products and practices, resulting in green creativity (Jayaraman et al., 2023). Similarly, Aftab et al. (2024) cite that many studies have examined the association between green organizational climate and green creativity in different domains and found a positive correlation between them. Furthermore, Usman et al. (2023) assert that when employees receive support and encouragement from the management about developing and implementing green practices, their motivation for green products and services increases significantly.

H3. A green, innovation climate "promotes green creativity."

Green Transformational Leadership and Green Intrinsic Motivation

Intrinsically motivated individuals are obsessed with work and are least bothered about rewards (Awan et al., 2023). Similarly, other researchers believe that intrinsic employees' love and passion for work keep them focused on work, promoting creative behavior (Du & Yan, 2022). Many researchers believe that green intrinsic motivation stems from green motivation (Faraz et al., 2021). These researchers argue that intrinsically motivated green employees are more concerned about a sustainable environment than others (Farrukh et al., 2022). Moreover, extant literature documents that compared to other leaders, green transformational leaders promote intrinsic motivation in employees by sharing their professionalism and green vision (Rizvi & Garg, 2021).

Furthermore, researchers believe idiosyncratic leadership is an essential precursor of green intrinsic motivation (Odugbesan et al., 2023). However, past studies have mainly focused on identifying the association between transformational leadership and intrinsic motivation and found they are positively associated (Hameed et al., 2022).

While reviewing the past literature, we found limited studies on the association of "green transformational leadership and intrinsic motivation." (Tosun et al., 2022). Thus, we argue that green transformational leadership intrinsically motivates employees to adopt green environmental behavior (Pham et al., 2023). Moreover, researchers maintain that green transformational leaders encourage and motivate employees to focus on a green environment, enhancing green intrinsic motivation (Xi, Fang, & Feng, 2023). Similarly, Zhu et al. (2022) believe such leaders significantly increase employees' love and passion for pro-environmental issues.

H4: Green transformational leadership "promotes green intrinsic motivation."

Green Extrinsic Motivation as a Moderator

Extrinsically motivated employees' job satisfaction and commitment significantly depend on monetary rewards, including salaries and bonuses (Li et al., 2020). At the same time, researchers believe that contingent rewards decrease the intrinsic interest of the employees (Saether et al., 2020). Similarly, many studies found that employees' motivation decreases when leaders regulate their behavior with extrinsic rewards (Zhang & Liu, 2022). In the same context, Yang et al. (2023) argue that intrinsic motivation decreases when leaders focus more on extrinsic rewards. Similarly, extant literature also cites that individuals with higher green extrinsic motivation exhibit pro-environmental behavior if they believe they will be appropriately rewarded (Ojo, 2022). However, such rewards may decrease the intrinsic motivation of the employees. Moreover, many researchers maintain that external factors, including tangible rewards, punishments, and negative feedback, are inversely associated with employees' creativity (Saintilan & Schreiber, 2023). In the same context, many researchers believe excessive control adversely affects employees' self-determination and creative behavior (Huyghebaert-Zouaghi et al., 2023). Thus, we argue that extrinsic motivation has a varying effect on green motivaton and green creativity.

H5: Green extrinsic motivation moderates green intrinsic motivation and green creativity.

Green Autonomy as a Moderator

Green autonomy refers to empowering employees to perform green tasks (Alsetoohy et al., 2020). In this context, the Self-Determination Theory postulates that the need for autonomy refers to individuals' inherent desire for psychological and physical freedom to carry out their routine activities at work (Haw (2022). Thus, many researchers believe autonomy allows employees to be creative and innovative (Shakil et al., 2023). They also argue that a conducive autonomy-supported environment increases employees'

intrinsic motivation. As a result, they become more creative at work (Santiago-Torner, 2023).

On the contrary, reducing employee empowerment may adversely affect their creativity (Aulia et al., 2024). Similarly, many scholars maintain that the low empowerment of the employees may reduce their innovative and creative behavior (Zhang et al., 2023). Thus, we argue that extending green autonomy to employees may enable them to be creative in green performance (Shafiq et al., 2023). Moreover, scholars argue that a "positive relationship exists between green innovation climate and green creativity" (Arici & Uysal, 2022). Furthermore, many researchers believe green autonmy has a varying effect on the relationship between green innovation climate and creativity (Abbas & Khan, 2023).

H6: Green autonomy "moderates the green innovation climate and green- creativity."

Conceptual Framework
Given the above discussion, the study proposes a model depicted in Figure 1. It has three independent variables, one dependent variable, and two moderating variables.
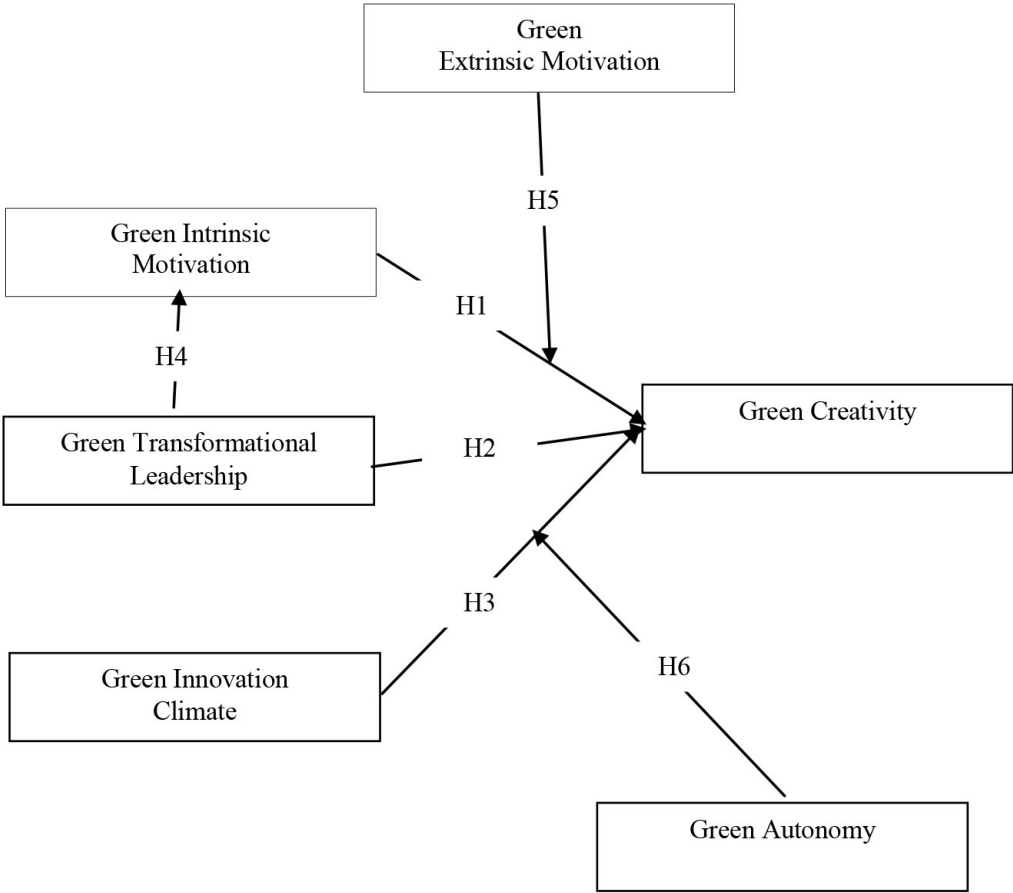
Figure 1: Conceptual Framework

Methodology

Research Design

Research design is the road map for achieving the research objectives (Nayak & Singh, 2021;. Molina-Azorin & Fetters, 2022). The approach used in this study is deductive since, based on the theory, we proposed a model containing six hypotheses, which we empirically tested using Smart PLS (Mello, 2021). The number of elements or individuals refers to a population. The target population for this study is the chemical sector in Pakistan. The study has focused on this sector as it contributes significantly to pollution and environmental decay. Additionally, it is a key sector of Pakistan's economy, and its contribution towards GDP is about 3%. Moreover, it significantly contributes to

employment generation.

Population and Sample Size

Collecting data from the whole population is time-consuming and inefficient. Therefore, the researchers suggest drawing a sample for the study. Researchers also believe that the drawn sample would represent the population provided researchers draw an appropriate sample size and use the right sampling technique (Nayak & Singh, 2021). The study calculated the minimum sample size following Hair Jr. et al. (2017) suggestion. The researchers mentioned above suggest using five to thirty cases for each indicator variable. The number of indicators in this study is 29. Therefore, a sample of 435 (29 indicator variables X 15 cases) will be appropriate for the study. According to the Pakistan Stock Exchange, there are 24 listed chemical industries in Pakistan. Of this total, we randomly selected ten chemical industries and distributed 50 in each. However, we received 460 complete questionnaires.

Ethical Consideration

Before collecting the data from the employees of targeted chemical industries, we obtained permission from the management. Subsequently, we approached the employees non-randomly since the management did not provide us with a sample frame. We also told the respondents that they had no compulsion to fill out the questionnaires. We also explained the study's objectives and informed them that we would use the collected data only for academic purposes. We also told the respondents that we would not share the data with any third party.

Scale and Measures

The study has adopted the questionnaire from past studies. The questionnaire used in the study has two sections. Section one relates to demographics, containing five questions based on a nominal scale. The second part of the questionnaire has six variables and 29 indicators. The study measured the response of the target population using the Five Point Liker Scale, with one suggesting low agreement and five indicating high agreement. Table 1 exhibits a summary of the constructs used in the questionnaire.

Table 1: Scales and Measures

Constructs	Sources	Items
Green Creativity	Chen and Chang (2013)	6
Green Transformational Leadership	Chen and Chang (2013)	6
Green Intrinsic Motivation	Amabile et al. (1994)	6
Green Extrinsic Motivation	Amabile et al. (1994)	5
Green Innovation Climate	Maitlo et al. (2022)	3
Green Autonomy	Maitlo et al. (2022)	3

Results

Respondents Profile

The respondents' profile, besides other aspects, helps readers and future researchers ascertain the generalizability of a study. This study has focused on the chemical sector, and Table 2 exhibits the respondents' classification and frequency in percentage terms.

Table 2: Respondents Profile

Demographic	Classification	Percentage
Gender	Male	65%
	Female	35%
Age Group	Below 30	30%
	30-35	25%
	36-40	20%
	41-50	15%
	50 & Above	10%
Education	Intermediate	16%
	Graduate	65%
	Masters & Above	16%
	Diploma/Others	3%
Employment Structure	Non-Management Cadre	81%
	Middle Management Cadre	13%
	Upper Management Cadre	6%
Income Range	Less than Rs 35,000	32%
	Rs.36,000 – 50,000	29%
	Rs. 51,000 – 75,000	16%
	Rs 76,000 – 90,000	19%
	Rs 91,000 – 120,000	4%

Measurement Model

Researchers suggest using two stages in Smart PLS (Hair Jr et al., 2020). Following the advice of the researchers mentioned above in step one, we developed a measurement model (Hair et al., 2019) for results related to reliability (Spuling et al., 2020), validity (Hair Jr et al., 2020), and other statistical results. Figure 2 exhibits the measurement model.
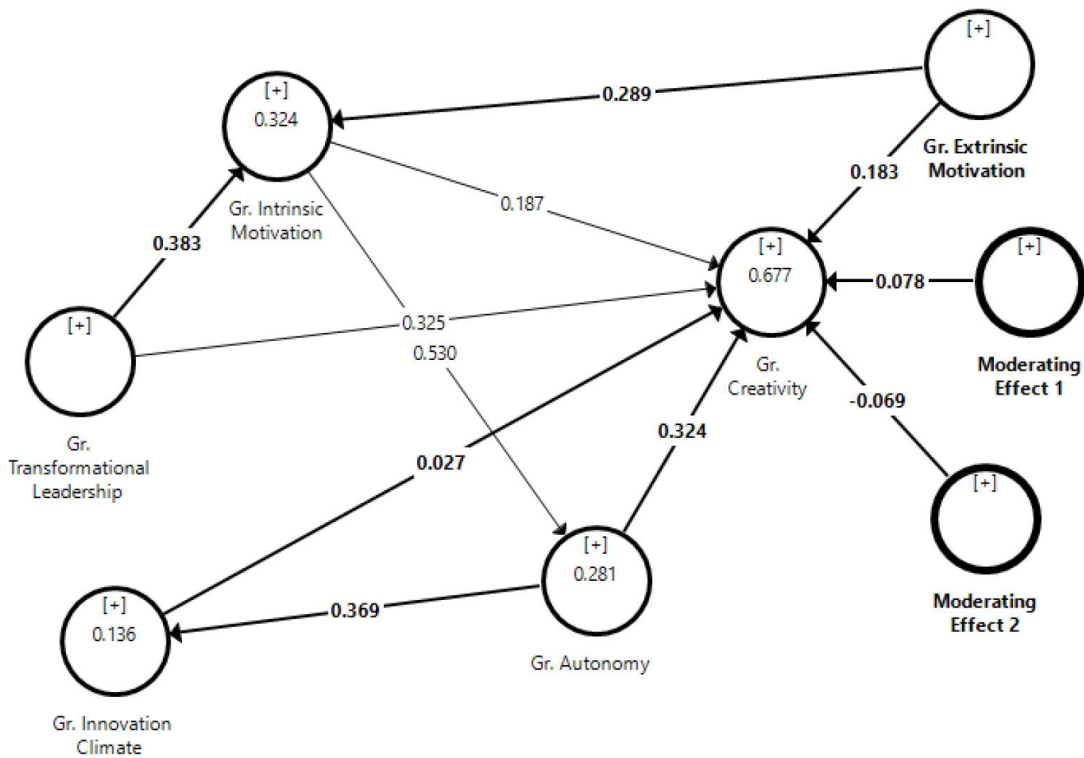
Figure 2: Measurement Model

Descriptive Analysis

Descriptive analysis summarizes the results to draw meaningful conclusions (Nayak & Singh, 2021). It generally includes results related to internal consistency (Sarstedt et al., 2020), Mean, Skewness (Hair Jr et al., 2020), and Kurtosis (Nayak & Singh, 2021). Table 3 exhibits the related results.

Table 3: Descriptive Analysis

Constructs	Cronbach's Alpha	Mean	Std.Dev.	Skewness	Kurtosis
Gr. Autonomy	0.862	3.863	1.537	1.708	1.759
Gr. Extrinsic Motivation	0.894	3.946	1.006	1.363	1.517
Gr. Intrinsic Motivation	0.848	3.954	2.062	2.145	2.105
Gr. Creativity	0.882	3.878	2.188	1.233	2.175
Green Innovation Climate	0.843	3.722	1.766	2.481	1.717
Green Transformational Leadership	0.896	3.723	1.417	2.123	1.902

Hair Jr et al. (2020) suggest that Cronbach's values of the latent variables must "be at least 0.70 for internal consistency." Our results align with the recommendations of the researchers above. Our results also show that the latent variables have adequate univariate normality (Sarstedt et al., 2020) since "Skewness and Kurtosis values are between ±3.5."

Convergent Validity

Hair et al. (2019) suggest using composite reliability and AVE values for convergent validity analysis. Table 4 summarizes the results exhibiting composite reliability and AVE values.

Table 4: Convergent Validity

Constructs	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Gr. Autonomy _	0.874	0.900	0.643
Gr. Extrinsic _Motivation _	0.895	0.919	0.654
Gr. Intrinsic Motivation_	0.853	0.908	0.768
Gr. _Creativity	0.885	0.914	0.682
Green Innovation Climate	0.853	0.894	0.679
Green Transformational Leadership	0.898	0.928	0.763

Spuling et al. (2020) suggest that for convergent validity, the "composite reliability must be at least 0.70, and AVE values must be more than 0.60." The results are within the recommended suggestions, which endorse acceptable convergent validity for the constructs used in the study.

Discriminant Validly

Discriminant validity determines whether the variables used in the study are "unique and distinct." The study ascertained discriminant validity using the criteria of Fornell and Larcker (1981). Table 5 exhibits the results related to discriminant validity.

Table 5: Discriminant Validity

Constructs	GA	GEM	GIM	GC	GIC	GTL
Gr. Autonomy	0.802					
Gr. Extrinsic Motivation	0.635	0.809				
Gr. Intrinsic Motivation	0.53	0.451	0.876			
Gr. Creativity	0.695	0.618	0.606	0.826		
Green Innovation Climate	0.369	0.383	0.233	0.359	0.824	
Green Transformational Leadership	0.453	0.424	0.506	0.653	0.309	0.873

The results in Table 5 show that "AVE square root values exceed Pearson Correlation Values." Thus, it is safe to assume the "constructs used in the study are unique and distinct"(Fornell & Larcker, 1981).

Discriminant Validity using HTMT Criterion

Many researchers, including Ab Hamid, Sami, and Sidek (2017), believe that discriminant validity based on Fornell Larcker's (1981) criteria has certain limitations. Therefore, they suggest using two methods for ascertaining discriminant validity. Following the advice of the researchers above, the study used the HTMT criterion for discriminant validity in addition to Fornell and Larcker's (1981) criterion. Table 6 shows results related to the HTMT criterion.

Table 6: Discriminant Validity (Heterotrait and Montrait Ratio)

Constructs	GA	GEM	GIM	GC	GIC	GTL
Gr. Autonomy						
Gr. Extrinsic Motivation	0.719					
Gr. Intrinsic Motivation	0.614	0.516				
Gr. Creativity	0.776	0.694	0.698			
Green Innovation Climate	0.418	0.439	0.271	0.409		
Gr. Transformational Leadership	0.494	0.466	0.572	0.731	0.347	

The results show that all HTMT values are below the threshold of "0.850, suggesting that the constructs used in the study are unique and distinct."

Predictive Power of the Model

One of the benefits of using Smart PLS is that it gives "the predictive power of the measurement model" (Wong, 2013). Table 7 shows that all the "R square values are greater than 0.20, and Q square values are greater than zero." Thus, we have inferred that the "measurement model has adequate predictive power."

Table 7: R Square Value and Q Square Value

Constructs	R Square	R Square Adjusted	SSO	SSE	Q^2 (=1-SSE/SSO)
Gr. Autonomy	0.281	0.280	5990	4935.213	0.176
Gr. Intrinsic Motivation	0.324	0.323	3594	2709.313	0.246
Gr. Creativity	0.677	0.675	5990	3262.557	0.455
Green Innovation Climate	0.136	0.135	4792	4370.234	0.088

Fit Indices

The results in Table 8 show that the "SRMR value is less than 0.08, and NFI value is

greater than 0.800," suggesting the model has adequate fitness.

Table 8: Fit Indices

	Saturated Model	Estimated Model
SRMR	0.065	0.752
NFI	0.808	0.802

Structural Model

The study generated a structural model for the results related to the hypotheses. The structural model in Figure 3 shows that all the t-values are greater than ± 1.96, except Hypothesis 3, which suggests that "green innovation climate positively affects green creativity." Thus, we have accepted all the hypotheses except Hypothesis 3.
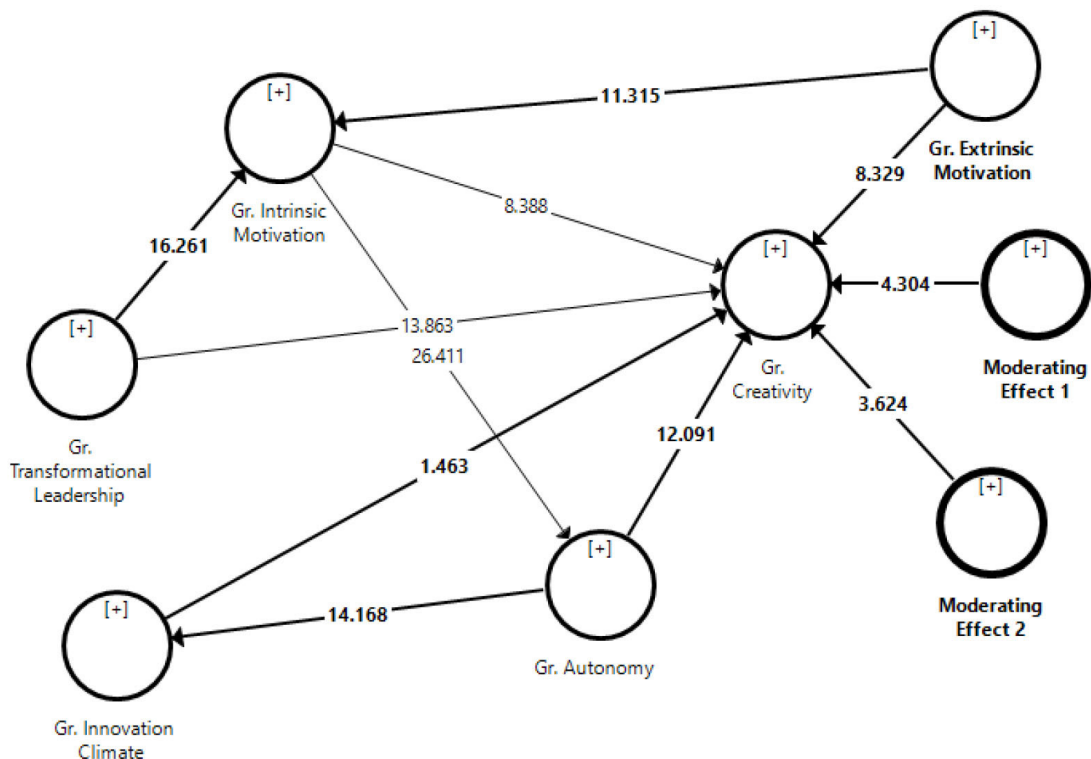

Figure 3: Structural Model

Hypothesis Results

In Table 9, we have presented results related to articulated hypotheses.

Table 9: Hypotheses Results

Hypotheses	B	T Statistics	P Values	Results
Gr. Intrinsic Motivation_ -> Gr. Creativity (H1)	0.187	8.388	0.000	Accepted
Green Transformational Leadership -> Gr. Creativity (H2)	0.325	13.863	0.000	Accepted
Green Innovation Climate -> Gr. Creativity (H3)	0.027	1.463	0.072	Rejected
Green Trans. Leadership -> Gr. Intrinsic Motivation (H4)	0.383	16.261	0.000	Accepted
Gr. Extirnsic Mot. * Gr. Ext, Mot. -> Gr.Creativity (H5)	0.078	4.304	0.000	Accepted
Gr. Autonomy* Gr, Innov. Climate-> Gr. _Creativity (H6)	-0.069	3.624	0.000	Accepted

The results presented in Table 9 show that our study has supported all the hypotheses except Hypothesis 3 (β= 0.027, t=1.463>0.05) which states, "Green innovative climate positively affects green creativity. "

Discussion and Conclusion

Discussion

The study supported Hypothesis 1 (β= 0.187, t=8.388<0.05), stating, "Green intrinsic motivation positively affects green creativity." Extant literature highlights that intrinsic motivation positively correlates with green creativity (Yesuf et al., 2023). We found no studies empirically proving that intrinsic motivation promotes green creativity (Emami et al., 2023). However, past studies based on theoretical support have inferred that green intrinsic motivation promotes green creativity. For example, extending motivation and creativity theories, many researchers argue that individuals with a high orientation toward the environment are green-creative (Tuan, 2023). Moreover, many researchers assert that employees with low passion and interest in the green environment have low attitudes and behaviors toward the green environment (Shah et al., 2023). Furthermore, many researchers argue that green-intrinsic-motivated employees are passionate about green environments and often have hobbies related to green plantations and gardening (Conrad & Fehlings, 2023).

The study supported Hypothesis 2 (β= 0.325, t=13.863<0.05), stating, "Green transformational leadership positively affects green creativity." Hameed et al. (2022) argue that leaders enhance employee creativity through inspirational motivation. As a result, employees solve job-related and personal problems by looking at them from different perspectives. Leaders with charismatic personalities are concerned about the employees. They also share their vision and expectations with the employees, enhancing employee commitment (Zhang et al., 2020; Ahmad, Ullah, & Khan, 2022). Green transformational leaders are concerned about the sustainability of the environment, and they motivate and inspire employees to be more green-creative (Begum et al., 2022). Such leaders motivate employees to focus on green environmental

goals and encourage them to generate novel ideas for environmental sustainability (Mansoor et al., 2021). Extending this argument, Arici and Uysal (2022) assert that green transformational leaders must guide, inspire, and motivate employees to adopt and practice green creativity (Ahmad et al., 2022; Çop et al., 2021; Pham et al., 2023).

The study rejected Hypothesis 3 ($\beta= 0.027$, t=1.463>0.05), stating, "Green innovation climate positively affects green creativity." The employees in green organizations receive explicit and implicit signals from the management about focusing on green creativity (Shah et al., 2023). When employees receive these signals, they often respond positively by sharing their creative ideas with management, resulting in increased self-satisfaction of the employees (Alyahya et al., 2023). Many researchers believe that the three components of organizational climate are support for innovation (Önhon, 2019), search for creative innovative ideas, and resource supply (Shafiq et al., 2023). Support for innovation allows employees to work independently (Allan & Meckling, 2023). Search for creative and innovative ideas (Abualigah et al., 2023), enable employees to understand the diversity of work in an organization (Shafiq et al., 2023).

Resource supply provides employees with materials, information, and finances for creative and innovative ideas (Abualigah et al., 2023). Furthermore, extant literature documents that employees in green organizations are more creative, where they receive bonuses and rewards for creativity, than the employees of the organizations that do not reward employees for creativity and innovation (Allan & Meckling, 2023). Extending the concept of organizational climate, researchers have developed the concept of green organizational climate (Zafar et al., 2023). A green organizational climate allows employees to focus on green products and practices (Ma et al., 2023). Moreover, such an organization provides materials and finances to the employees for developing green products and practices, resulting in green creativity (Jayaraman et al., 2023). Similarly, Aftab et al. (2024) cite that many studies have examined the association between green organizational climate and green creativity in different domains and found a positive correlation between them.

The study accepted Hypothesis 4 ($\beta= 0.383$, t=16.261< 0.05), stating, "Green transformation leadership positively affects green creativity." Researchers believe idiosyncratic leadership is an essential precursor of green intrinsic motivation (Odugbesan et al., 2023). However, past studies have mainly focused on identifying the association between transformational leadership and intrinsic motivation and found they are positively associated (Hameed et al., 2022). While reviewing the past literature, we found limited studies on the association of "green transformational leadership and intrinsic motivation." (Tosun et al., 2022). Thus, we argue that green transformational leadership intrinsically motivates employees to adopt green pro-environmental

behavior (Pham et al., 2023). Moreover, researchers maintain that green transformational leaders encourage and motivate intrinsically motivated employees to focus on a green environment, enhancing green intrinsic motivation (Xi, Fang, & Feng, 2023). Similarly, Zhu et al. (2022) believe such leaders significantly increase employees' love and passion for pro-environmental issues.

The study accepted Hypothesis 5 (β= 0.078, t= 4.304< 0.05), stating, "Green extrinsic motivation moderates green motivation and green creativity." Many studies found that employees' motivation decreases when leaders regulate their behavior with extrinsic rewards (Zhang & Liu, 2022). In the same context, Yang et al. (2023) argue that intrinsic motivation may decrease when leaders focus more on extrinsic rewards. Similarly, extant literature also cites that individuals with higher green extrinsic motivation exhibit pro-environmental behavior if they believe they will be appropriately rewarded (Ojo, 2022). However, such rewards may decrease the intrinsic motivation of the employees. Moreover, many researchers maintain that external factors, including tangible rewards, punishments, and negative feedback, are inversely associated with employees' creativity (Saintilan & Schreiber, 2023). In the same context, many researchers believe excessive control adversely affects employees' self-determination and creative behavior (Huyghebaert-Zouaghi et al., 2023).

The study accepted Hypothesis 6 (β= -0.069, t= 3.634< 0.05), stating, "Green autonomy moderates the green innovation climate and green creativity." Many researchers believe autonomy allows employees to be creative and innovative (Shakil et al., 2023). They also argue that a conducive autonomy-supported environment increases employees' intrinsic motivation. As a result, they become more creative at work (Santiago-Torner, 2023). On the contrary, reducing employee empowerment may adversely affect their creativity (Aulia et al., 2024). Similarly, many scholars maintain that the low empowerment of the employees may reduce their innovative and creative behavior (Zhang et al., 2023). Thus, we argue that extending green autonomy to employees may enable them to be creative in green performance (Shafiq et al., 2023). Furthermore, scholars argue that a "positive relationship exists between green innovation climate and green creativity" (Arici & Uysal, 2022). Many researchers believe green motivation has a varying effect on the relationship between green innovation climate and creativity (Abbas & Khan, 2023).

Conclusion

Concerns about global warming and environmental decay have significantly increased in recent years. Besides other industries, the textile, leather, and chemical sectors profoundly contribute to environmental decay. Given its importance, the study has focused on Pakistan's chemical sector. The study has examined the impact of green intrinsic motivation, transformation leadership, and innovative climate on green creativity. The impact of green transformational leadership on green intrinsic motivation.

It also examined the moderating effect of green extrinsic motivation and green autonomy on green creativity. The study collected a sample of 460 from the target sector and found that our results support five hypotheses but do not support one. The results show that green intrinsic motivation and green transformation leadership significantly affect green creativity. Green innovation climate insignificantly affects green creativity. Green transformational leadership positively affect green creativity and green intrinsic motivation. Green extrinsic motivation moderates green intrinsic motivation and green creativity. Green innovation climate moderates the green innovation climate and green creativity.

Implications

To develop a green image and contribute towards a green environment, the firms must incorporate factors such as green transformation leadership, green creativity, and green innovation in their long-term corporate strategies. The firms should have a green vision, which they should share with all the stakeholders, including employees, management, and supply chain members. The firms must empower the employees to share their views on green ideas with the management and other employees. We also suggest that HRM focus on rewarding the employees who contribute towards green products and services. Management must also organize seminars and counseling sessions for all the firm's stakeholders, including employees, management, and suppliers. Firms may also make it mandatory for the employees to share the green creative ideas with the management. Some ideas may not be viable, but a few could be viable and implementable. Firms must also provide financial and other resources to employees to experiment with green products and services.

Limitations and Future Research

This study has focused on the chemical sector in Pakistan. Other studies may extend their scope to the textile, spinning, and leather sectors, as they also significantly contribute to pollution and environmental decay. Besides the manufacturing sector, future studies may also explore service sectors such as hotels and tourism. We focused on all the employees of the target chemical industries. However, we advised others to collect the data from research and development departments of the target industries. We collected the data using cross-sectional. Future studies may use longitudinal and multilevel approaches to understand the discussed phenomenon. Quantitative studies have several limitations. Therefore, we recommend that others adopt the mixed methodology. This study used extrinsic motivation and green autonomy as moderators; other studies may use them as mediators. Demographics often have varying effects on antecedents and dependent variables. Therefore, we recommend that others use demographics as moderators.

Annexure 1

Constructs and Items Used in the Questionnaire

Green Intrinsic Creativity

GIC1. I suggest new ways to achieve environmental goals.

GIC2. I propose new green ideas to improve environmental performance.

GIC3. I promote and share green ideas with others.

GIC4. I develop adequate plans for the implementation of new green ideas.

GIC5. I developed new skills for green creativity.

GIC6. I would find creative solutions to environmental problems.

Green Transformational Leadership

GTL1. The leader provides a clear environmental vision for the employees to follow.

GTL2. The leader inspires employees with environmental plans.

GTL3. The leader gets the employees to work together for the same environmental goals.

GTL4. The leader encourages employees to achieve environmental goals.

GTL5. The leader acts by considering the environmental beliefs of the employees

GTL6. The leader stimulates employees to think about green ideas.

Green Intrinsic Motivation

GIM1. I enjoy coming up with new green ideas.

GIM2. I enjoy trying to solve environmental tasks on the job.

GIM3. I enjoy tackling completely new environmental tasks.

GIM4. I enjoy improving existing green ideas at my job.

GIM5. I feel excited when I hear new green ideas.

GIM6. I engage myself in developing green ideas.

Green Extrinsic Motivation

GEM1. My motivation increases when I receive recognition from my organization.

GEM2. Salary and promotion increase my motivation.

GEM3. I want others to know how good I am at environmental tasks.

GEM4. I feel that I am earning something for my environmental tasks.

GEM5. I am concerned about how other people will react to my environmental ideas.

Green Innovation Climate

JIC1. My organization encourages employees to give feedback on improving green performance.

JIC2. My organizations adopt green policies and procedures used by other industries.

JIC3. My organization is willing to implement policies and procedures related to a sustainable environment.

Green Autonomy

GSC1. My organization gives full autonomy to develop green products and practices.

GSC2. My organization allows employees to exchange and share policies related to green products.

GSC3. My organization allows employees to criticize policies that are not aligned with a sustainable environment.

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Market Forces

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Title: The Impact of International Trade on Income   Inequality: The Case of Germany

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The Impact of International Trade on Income Inequality: The Case of Germany

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Abstract

This study investigated how international trade (IT) influenced Germany's income inequity (IINQ) between 1990 and 2021. It used time series data to achieve its objectives. The study performed a series of tests to demonstrate that the unit root and cointegration tests can address non-stationary (NS) problems and verify relationships across time. The study used Augmented Dickey-Fuller and Phillips-Perron tests and found that all variables used in the study integrated at the first difference. Moreover, the Johansen Cointegration test "suggests a long-term association between the variables" used in the study. The study also employed the Vector Error Correction Model (VECM) to "determine the long and short-term" consequences of international trade (IT) on income inequality (IINQ). The study found a long-term and short-term association between international trade (IT) and income disparity (ID) in Germany. Using the GINI index, the study documents that the effect on international trade (IT) has diverse impacts on different income strata. Moreover, we found that increasing Exports (EXPs) exacerbate economic disparity (DS), and increasing imports (IMPs) promote income inequality (IINQ). Aside from that, test coefficients have revealed that exports (EXPs) and imports (IMPs) promote income inequality (IINQ) via the Gini index. Furthermore, the "CUSUM and LM tests" have shown that the model is stable and has no serial correlation. Germany's policymakers can use the findings to reduce income disparity (IDS) caused by international trade (IT).

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Introduction

International trade (IT) is important for the global economic system (GLC). Its openness significantly affects all countries globally (Luo, 2022). Extant literature suggests that international trade (IT) volume has significantly increased in the last four decades (Vătămănescu et al., 2020). According to an estimate, aggregate exports were 1.97 trillion USD in 1980, which reached 17.73 trillion USD in 2020 (World Bank data). Moreover, in the prevailing era of the global economy, it has become convenient to export and import goods and services virtually (Sampson, 2023). In this context, extant literature cites that International trade (IT) has multiple effects on a country's and global economies (GLEs) (Nathaniel et al., 2021). According to Yu (2023), international trade (IT) insignificantly affects economic growth in the short term. In the long term, it adversely affects economic growth (EG) and promotes income disparity (ID). In contrast, other researchers believe international trade (IT) positively affects economic growth (EG) and reduces income disparity (ID) (Kumari et al., 2023). Thus, we argue that a country's growth and sustainability profoundly depend on balancing international trade.

Furthermore, Semieniuk and Yakovenko (2020) observed that economic growth (EG) fluctuated significantly between 1980 and 2020. They found that the bottom 50% of economies captured 9% of global economic growth (GEG), while the top 1% captured 23% of global economic growth (GEG). Despite the benefits of international trade (IT), income inequality (IINQ) has become a serious issue in most countries (Takim & Gültekin, 2022). For example, current literature argues that the volume of international trade (IT) promotes problems of income inequality (IINQ) (Naanwaab, 2022). In contrast, Akyuz, Gueye, and Karul (2022) argue that the effect of international trade (IT) on different income strata is different. Generally, higher-income strata benefit more from income disparity (IND) than lower-income ones (Gordon, 2023; Engler & Weisstanner, 2021).

Many past studies have examined the association between international trade (IT) and income distribution (IND) and found inconsistent results (Ratnawati, 2020; Hussain et al., 2023). For example, many studies found that openness to international trade (IT) increases income inequality (IINQ) (Fatima et al., 2020). In contrast, other studies have identified that "international trade (IT) reduces inequality (IINQ). Moreover, past studies have also related the association between "international trade (IT) and income inequality (IINQ)" with talents in a country. For example, Flaherty and Rogowski (2021) found that international trade (IT) exacerbates income disparity (IND) in nations where talent is rare. However, countries with abundant skilled labor do not face the problem of income inequality (IINQ) (Dorn et al., 2022). Similarly, while examining the

association between international trade (IT) and income disparity (IND), many studies have related this association to the political system in a country. For instance, Ghauri et al. (2021) highlighted that the political system is critical in determining the impact of "international trade (IT) on income inequality (IINQ)." Their research documents that international trade (IT) increases economic disparity (IND) in autocratic regimes. In contrast, the literature documents that in democratic societies, "international trade (IT) reduces income inequality (IINQ)" (Ratnawati, 2020). Moreover, Amar and Pratama (2020) maintain that increased "foreign trade in short-term increases income inequality (IINQ) and in the long-term it decreases income inequality (IINQ)."

Despite the availability of an abundance of research on the Impact of "international trade (IT) on income inequality (IINQ)," this research significantly differs from many past research studies:

1. It presents how international trade (IT) influences "income inequality (IINQ) in a high-income (IN) country," Germany.

2. Secondly, this study employs the innovative Vector Error Correction Model (VECM). This sophisticated analytical tool provides a comprehensive understanding of the long-term and short-term consequences of international trade (IT) on income inequality (IINQ).

3. Lastly, this study takes a comprehensive approach by examining the association between international trade (IT) indicators and income disparities (INDs). This analysis is based on data collected over a period from 1990 to 2021, allowing for a thorough understanding of the trends and patterns in the relationship between international trade (IT) and income disparities (INDs).

Literature Review

Several esteemed scholars have dedicated their research to examining the intricate relationship between "income inequality (IINQ) and trade openness (TO)." Their work, which we will now summarize, is a testament to the importance and complexity of this topic.

Aradhyula et al. (2007) examined the influence of "international trade (IT) on income (IN) and income inequality (IINQ)." They found that international trade (IT) has a diverse impact on a country's different income strata. It increases income inequality, and the standard of living of poor income strata goes beyond the subsistence level. On the contrary, the affluent class benefits more as their disposable income significantly

increases. Their Panel Data Model comprised developed and developing countries between 1985 and 1994. The results indicate that "international trade (IT) increases income inequality (IINQ)" in both types of countries. However, income inequality (IINQ) in developing countries would be high and nominal in developed countries. In contrast, Wan, Lu, and Chen (2007) found that "foreign trade affects income inequality (IINQ)" in China. The article examined "income distribution (ID) and international trade (IT) data" from 1978 to 2005. The study documents that both imports (IMPs) and exports (EXPs) reduce income inequality (IINQ). The study also underlined that exports (EXPs) reduce "income inequality (IINQ) more profoundly than imports (IMPs)."

Based on the dynamic specification, Meschi and Vivarelli (2009) have examined the "impact of income inequality (IINQ) in 65 developing countries". The study used a data set of 19 years (i.e., 1980 to 99). It documented that imports (IMPs) and exports (EXPs) from developed countries adversely affect income distribution (ID) in developing countries. Similarly, other studies exploring the association between international trade (IT) and income distribution (ID) have highlighted the complex role of skilled labor (Liang, 2024). These studies underscore that the prevalence of skilled labor in developed countries, and to a lesser extent in middle-income countries, contributes to their relatively lower income inequality (IE). This complexity underscores the need for further research and understanding.

Bensidoun et al. (2011) investigated "the relationship between international trade (IT) and income inequality (IINQ)." They used GINI fluctuation at 4-year intervals (not overlapping) corresponding to variations in trade factor composition. The study did not consider production elements such as non-educated workers, other workers, and physical capital. The study cites that the consequences of trade openness (TO) on income inequality (IINQ) are trade factors, including the country's endowment. Moreover, researchers assert that skilled labor is an important antecedent to income disparity (IND) (Ghosh et al., 2023). The number of skilled laborers in developed countries is higher than in developing countries. Therefore, income disparity in developed countries is lesser than in developing countries (Liang, 2024). Furthermore, these studies argue that skilled labor in middle-income (MI) countries is comparatively higher than in the lower economies. Therefore, income disparity (IND) in middle-income (MI) countries is lower than in lower-income economies (Erkisi, 2023).

In this context, extant literature cites that raising the capital content of trade (CCT) reduces income disparity (IND) in developed countries and increases in developing countries (Chen et al., 2023). Thus, we argue that changes in the "capital content of trade (CCT) have different effects on income disparities (INDs) of developed and developing

countries (Zreik, 2023). Moreover, Demir et al. (2012) maintain that past studies found inconclusive results on the association of "trade openness (TO) and income inequality (IINQ) in developing countries." For example, some studies found that when exports (EXPs) exceed a threshold level, it reduces income inequality (IINQ) (Makhlouf, 2023). On the contrary, when the exports (EXPs) of a country are below the threshold level, it enhances income inequality (IINQ) (Nam et al., 2024). Franco and Gerussi (2013) explored the impact of "direct investment inflows on income inequality (IINQ)" in 17 transition countries using a 16-year data set (i.e., between 1990 and 2006). The authors used fixed-effect and random-effect models in their study. The study cites that trade with industrialized nations has a greater impact on income distribution in transition countries than foreign direct investment (FDI). Similarly, Kim et al. (2021) believe that market institutions and macroeconomic variables "impact income disparity (IND)." Reyes-Heroles et al. (2020) maintain that reducing tariffs and other trading barriers is important for increasing global trade (GT). However, trade liberalization (TL) has different impacts on different countries on different aspects of the economy, including inequality (IE) indicators (Muradovna, 2020). Given its importance, many past studies have examined the effect of "distribution of income (IN) and economic growth (EG)" on global trade (GT) (Ghodsi, 2020). For example, some studies document that apart from trade barriers, increasing GDP also significantly contributes to global trade (GT) (Dhingra et al., 2023). Moreover, Wang, He, and Chen (2023) believe trade liberalization (TL), high-income growth (HING), and literacy are significant precursors of income inequality (IINQ). An increase in these factors individually and collectively reduces income inequality (IINQ) (Jin et al., 2024).

Pradhan and Mahesh (2016) investigated the effects of "trade openness (TO) on income inequality (IINQ)" in "BRIC countries, specifically Brazil, the Russian Federation, China, and India." The study documents that increased trade as a percentage of GDP contributes to "income inequality (IINQ)" in these nations. Similarly, Meschi and Vivarelli (2009) utilized an LSDV (Least Square Dummy Variable) in a sample of 65 developing nations from 1980 to 1999. The findings support that potential and technological advancement differences affect international trade (IT). Barusman and Barusman (2017) investigated "how trade openness (TO) affects income distribution (IND) in the United States." The study used "import/GDP, export/GDP, and trade volume and time series data from 1970 to 2014." The study utilized two OLS estimations, one highlighting income disparity (IND) using the GINI index and the other focusing on the top 10% income share (IS). The study documented that international trade (IT) exacerbates income disparity (IND). It was also found that increased trade volume, in particular, contributes to income disparity (IND), as the top 10% of the wealthiest individuals earn more.

Furthermore, Agusalim and Pohan (2018) "examined the impact of international trade (IT) on income distribution (IND) in both the long and short term." The study used secondary data, with the GINI index as the measure of international trade and the Vector Error Correction Model (VECM). The study documents that trade openness (TO) has a small and negative impact on "short-run income inequality (IINQ)" in Indonesia. It also found that income disparity (IND) significantly reduces over time. Based on the "Forecast Error Variance Decomposition (FEDV), a study "established that trade openness (TO) insignificantly affects income disparity (IND) in Indonesia," but economic development promotes income disparity (IND). While examining how globalization affects poverty and income inequality (IINQ), Koffi et al. (2018) utilized the percentage of GDP represented by total imports (IMPs) and exports (EXPs) to gauge openness to international trade (IT) and the Gini index to measure income inequality (IINQ). They developed three models (a Naïve model, a Standard model, and an improved standard model) to assess the impact of each variable. The study found inconclusive results on the association between poverty and trade openness (TO). It also found that globalization promotes income disparity (IND). Moreover, the study documents that increased openness to international trade (IT) reduces poverty and income inequality (IINQ). However, the extent of this impact depends on the factors used in the models.

Xiong and Sun (2021) investigated the potential effect of "international trade (IT) on income inequality (IINQ) in China." The author used "home panel data and provincial statistics from 1988 to 2009" to study income inequality (IINQ) changes over time and estimate the effect of "international trade (IT) on income inequality (IINQ) with dynamic panel data." The study documents that foreign trade considerably influences income (IN) distribution among Chinese regions. The study also found that higher GDP and factor endowments are associated with lower income inequality (IINQ). In comparison, higher levels of exports (EXPs) and imports (IMPs) are associated with higher income disparity (IND). The study also shows that global trade (GLT) affects income disparity (IND). Wang et al. (2020) investigated the impact of "international trade (IT) on income disparity (IND)" in developing economies. The authors employed econometric estimates to determine the relationship between exports (EXPs) and imports (IMPs), foreign direct investment (FDI), GDP, unemployment, and income inequality (IINQ). The study used the Vector Error Correction (VEC) model to determine the "association between these antecedents and international trade (IT)." The study documents that a high import and export ratio of GDP has a smaller influence on income inequality (IINQ) in industrialized countries than in developing countries. International trade (IT) has a stronger impact on "income disparity (IND) in developing countries than developed countries."

Furusawa (2020) examined how "international trade (IT) affects wage and job

polarization." The study selected two countries with different abilities. They selected one country that has a high number of knowledgeable workers who can develop differentiated products. The other country it selected has a bulk of workers engaged in production. The study documents that in equilibrium, "ex-ante symmetric firms attract knowledgeable workers," which creates "heterogeneity in product quality." The study also asserts that firms producing high-quality products can benefit from market integration. Hartmann and Jüpner (2020) analyzed data from 116 nations' exports (EXPs) and imports (IMPs) from 1970 to 2010 to evaluate the relationship between import, export, and Gini. The selected countries' global trade (GT) and GDP in 2008 were 97.45% and 86.67%, respectively. The study documents that the types of products these countries traded promoted income inequality (IE). It also suggested that the core-periphery structure of global trade (GLT) affects income disparity (IND) between and within countries. It also cites that some middle-income (MIN) countries have benefitted from outsourcing products, resulting in significant income disparity (IND). It also found that successfully developed economies have high volumes of imports (IMs) and exports (EXs), which leads to significant income inequality (IIE). On the contrary, the study asserts that emerging countries face a twin development trap that prevents them from achieving equitable growth.

Lin and Fu (2016) regressed two trade cost variables (the Baltic Dry Index and the Price Index) and the GINI index, using data ranging from 1985 to 2012. The study used the "GINI index to assess income inequality (IINQ)." The authors argue that foreign direct investment (FDI) is low in autocratic countries. Democratic systems, on the other hand, attract a large amount of foreign direct investment (FDI) from developed countries and export more food and manufacturing products. As a result, there are low-income disparities (INDs) in the autocratic setup and high in the democratic setup. The authors also underscore that income disparities (INDs) significantly depend on the system's efficiency. Thus, we argue that income distribution (IND) across countries depends on the elements that produce the general equilibrium of production. Differences in the factors of production explain the income disparities (INDs) between countries. Ogundari and Onyeaghala (2021) investigated the impact of trade liberalization (TL) on income inequality (IINQ) in Africa. The study using a panel data model from 26 African countries over 14 years (1996-2010) concluded that trade liberalization (TL) has improved African income inequality (INQ).

Extant literature documents that 25% of global production (GLP) is exported to different countries in the prevailing era. Khan et al. (2023) assert that all nations can benefit from international trade (IT) by specializing in producing goods and services based on their unique factor endowments and strengths. Moreover, natural resources, land, labor, capital, technological development, and political considerations justify

international trade (IT), as these factors are distinct for each nation due to their differing characteristics (Alvarado et al., 2023). Consequently, international trade (IT) enables businesses to discover potential global markets (PGLs) for distributing their products and services (Appiah et al., 2024). It also allows consumers to access goods and services that are not locally available but obtainable from abroad. Even when goods and services are accessible locally, consumers may find optimal satisfaction through those obtained from abroad (Khan et al., 2023).

Growth of International Trade (GIT)

Figure 1 depicts imports (IMPs) and exports (EXPs) of goods and services as a percentage of Germany's GDP.
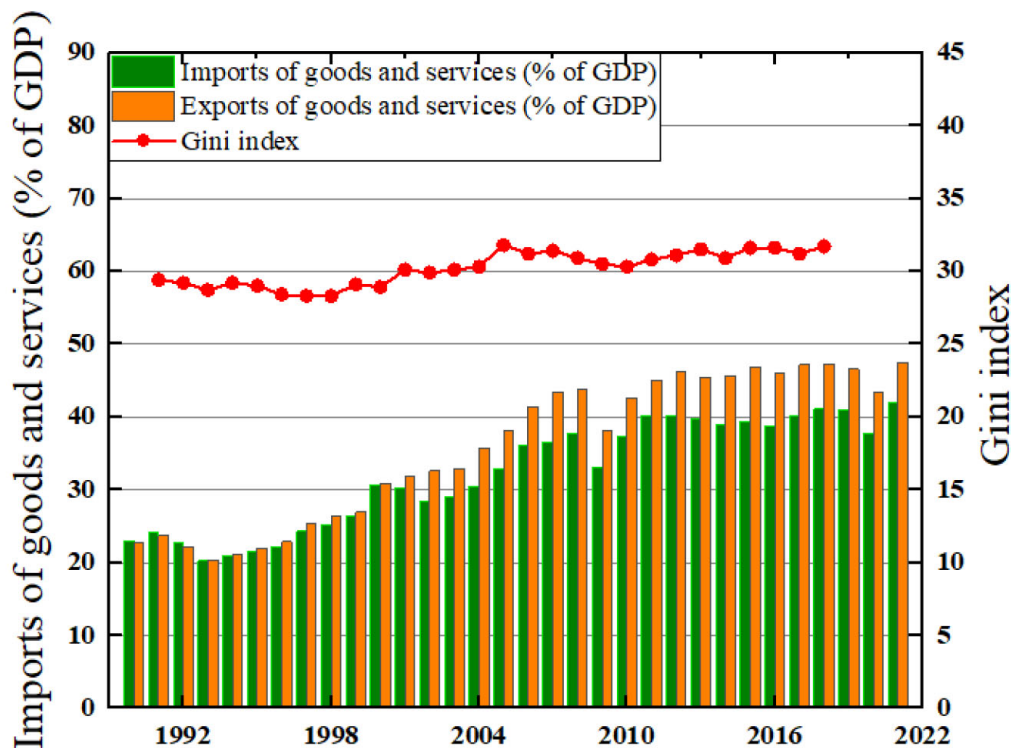
In 2021, Germany was the "world's fourth-largest economy" in terms of GDP (current USD). In the same year, Germany was the third-largest country in terms of imports (IMP) and exports (EXPs). Germany was the largest vehicle exporter in 2021, with a value of 117.6 billion euros, and the top importer of nitrogen heterocyclic compounds, with a value of 12.7 billion USD. Its trade in 2021 was 89% of the GDP, compared to 81% of GDP in the previous year. Germany's trade balance has been constantly positive in recent

years. Moreover, Germany's membership in international economic organizations such as the World Trade Organization (WTO) and the European Union (EU) supports and controls international trade (IT) through trade agreements. Germany has several trading partners worldwide, the most important of which are China and the United States.

Results and Discussion`

Descriptive Analysis

As previous studies suggested, the study performed descriptive analysis before empirical estimations (George & Mallery, 2018). The analysis is useful for identifying the research variables' properties and their statistical features. Table 1 depicts the summary of the results.

Table 1: Descriptive Statistics

	Exports (EXPs)	Imports (IMPs)	GINI
Mean	35.37649	31.74210	30.19286
Median	36.88647	31.76875	30.30000
Max	47.30105	41.13336	31.80000
Min	20.31344	20.26329	28.30000
Std. Dev.	9.904445	7.257865	1.153394
Skewness	-0.198311	-0.167930	-0.231266
Kurtosis	1.442874	1.507395	1.685442
Jarque-Bera	3.227439	2.925838	2.265664
Prob	0.199145	0.231559	0.322120
Sum	1061.295	925.2631	845.4000
Sum Sq. Dev	2844.843	1527.621	35.91857

The results indicate that the mean values of exports (EXPS), imports (IMPs), and GINI are 33.37649, 31.74210, and 30.19286, respectively. Considering these and other descriptive statistics, we have inferred that there are no issues related to the outliers and univariate normality.

ADF and PP Unit Root Tests

The review of prior literature suggests that examining the data's stationarity is appropriate, especially in a time series dataset (Mukhtarov et al., 2020). We applied the DF test (Dickey & Fuller, 1981) and the PP Test (Phillips & Perron, 1988) to identify the stationarity among variables, as recommended by Mukhtarov et al. (2019). Table 2 depicts ADF Unit Root Test results, and Table 3 depicts Phillips Perron Unit Root results.

Table 2. ADF Unit Root Test

Variable	ADF at Level			ADF at First Difference		
	Values	**T-stat**	**Prob**	**Test Values**	**T-stat**	**Prob**
Gini 1%	-3.699871			-3.711457		
Gini 5%	-2.976263	-0.964488	0.7511	-2.981038	-6.456093	0.0000*
Gini 10%	-2.627420			-2.629906		
EXPORT 1%	-3.679322			-3.689194		
EXPORT 5%	-2.967767	-0.675254	0.8377	-2.971853	-5.061645	0.0003*
EXPORT10%	-2.622989			-2.625121		
IMPORT 1%	-3.679322			-3.689194		
IMPORT 5% level	-2.967767	-0.620673	0.8510	-2.971853	-5.137833	0.0003*
IMPORT 10% level	-2.622989			-2.625121		

Table 3. Phillips Perron Unit Root Test

Variable	PP at Level			PP at First Difference		
	Values	T-stat	Prob	Values	T-stat	Prob
Gini 1% level	-3.699871			-3.711457		
Gini 5% level	-2.976263	-0.791666	0.8055	-2.981038	-6.459023	0.0000*
Gini 10% level	-2.627420			-2.629906		
EXPORT 1% level	-3.679322			-3.689194		
EXPORT 5% level	-2.967767	-0.641335	0.8460	-2.971853	-5.058552	0.0003*
EXPORT 10% level	-2.622989			-2.625121		
IMPORT 1% level	-3.679322			-3.689194		
IMPORT 5% level	-2.967767	-0.375684	0.9008	-2.971853	-5.466886	0.0001*
IMPORT 10% level	-2.622989			-2.625121		

The ADF Unit Root test results in Table 2 suggest that our variables are non-stationary at their levels but stationary at the first difference, supporting the null hypotheses. In addition, the results of the Philips-Perron Unit Root test presented in Table 3 also suggest that GINI, imports (IMPs), and exports (EXPs) are non-stationary at their levels but stationary at the first difference.

Lag Selection Criteria

Prior literature suggests selecting the number of lags before applying the Johansen Co-integration test. For this purpose, we applied the VAR Model to determine a suitable lag length based on the various lag length criteria (Agusalim & Pohan, 2018). Our results suggest that the best lag number is four.

Table 4: Lag Selection Criteria

VAR Lag Order Selection Criteria

Endogenous variables: GINI EXPORT IMPORT

Exogenous variables: C

Period: 1990 to 2019

Number of obs: 24

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-129.5559	NA	12.58918	11.04632	11.19358	11.08539
1	-85.93779	72.69684	0.709828	8.161482	8.750509*	8.317751
2	-79.54808	9.052084	0.920993	8.379007	9.409804	8.652478
3	-67.82032	13.68239	0.818707	8.151693	9.624260	8.542366
4	-44.38997	21.477828*	0.308696*	6.949164*	8.863502	7.457039*

*Indicates lag order selected

Cointegration Test

Prior studies suggest using a cointegration test to ensure "two or more non-stationary time series integrates and reach equilibrium in the long-term." The test also identifies "the degree of sensitivity of the two variables over a specified period." Refer to Table 5 for the results.

Table 5: Cointegration Test

Period (adjusted) : 1996 -2018
Number of obs: 23 after adjustments
Series: GINI EXPORTS (EXPS) IMPORTS (IMPS)

 Interval of lags (At the first differences): 1 to 4

Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace test Statistic	0.05 Critical Value	Prob. **
None	0.823219	63.35182	29.79707	0.0000
At most 1	0.561580	23.49639	15.49471	0.0025
At most 2	0.178813	4.531114	3.841466	0.0333

 3 cointegration equation at the 0.05 level is obtained from trace test
 * indicates a non-acceptance of the hypothesis at 0.05 level
 **indicates the probability of MacKinnon-Haug-Michelis (1999)

Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob. **
None	0.823219	39.85544	21.13162	0.0001
At most 1	0.561580	18.96528	14.26460	0.0084
At most 2	0.178813	4.531114	3.841466	0.0333

 3 cointegration equation at the 0.05 level is obtained from the trace test
  * * indicates a non-acceptance of the hypothesis at a 0.05 level
 ** indicates the probability of MacKinnon-Haug-Michelis (1999)

1 Cointegrating Equation(s):		Log-likelihood	-35.44615

Normalized Cointegrating coefficients (standard error in parentheses)

LOG(GDP)	LOG(EXPORT)	LOG(IMPORT)
1.000000	0.874629	-1.439503
	(0.27179)	(0.37955)

Majavu and Kapingura (2016) and Chamalwa and Bakari (2016) used Cointegration Tests to demonstrate the long-term association between the variables. Table 5 utilizes the same strategy to show the long-term association between international trade (IT) and income inequality (IINQ). After confirming the presence of cointegration and a long-term association between the variables, we developed a Vector Error Correction Model (VECM), for the following three equations.

$$(1) \Rightarrow \Delta Gini_t = -0{,}419 ECT_{t-1} - 0{,}336 \Delta Gini_{t-1} - 0{,}211 \Delta Gini_{t-2} - 0.688 \Delta Gini_{t-3} -$$
$$0.662 \Delta Gini_{t-4} + 0.834 \Delta ExP_{t-1} + 0.411 \Delta ExP_{t-2} + 0.761 \Delta ExP_{t-3} + 0.459 \Delta ExP_{t-4} -$$
$$0.782 \Delta ImP_{t-1} + 0.394 \Delta ImP_{t-2} - 0.782 \Delta ImP_{t-3} - 0.376 ImP_{t-4} - 0.599$$

$$(2) \Rightarrow Y_t = \beta_0 + \beta_1 X_t + \varepsilon_t$$

From that, we have: $Gini_t = 0{,}875 ExP_t - 1{,}439 ImP_t - 15{,}404 + \varepsilon_t$

$$(3) \Rightarrow ECT_{t-1} = 1{,}0000 Gini_{t-1} + 0.875 EXP_{t-1} - 1{,}439 ImP_{t-1} - 15{,}404$$

Vector Error Correction Estimates

The Vector Error Correction (VEC) is similar to VAR for variables that are stationary in their differences. VAR also considers cointegrating relationships between two or more series variables. Table 6 summarizes the results.

Table 6: Vector Error Correction Estimates

Period: 1996 2018			
Obs: 23 after adjustments			
Standard errors in ( ) & t-stat in [ ]			
Cointegrating Equations:	**Cointegrating Equation1**		
GINI(-1)	1.000000		
EXP(-1)	0.874629		
	(0.27179)		
	[3.21807]		
IMP(-1)	-1.439503		
	(0.37955)		
	[-3.79263]		
	-15.40414		
Error Correction:	D(GINI)	D(EXP)	D(IMP)
CointEq1	-0.419216	1.159099	0.923058
	(0.09783)	(0.48862)	(0.47106)

	[-4.28509]	[2.37219]	[1.95954]
D(GINI(-1))	-0.335859	1.613842	0.621166
	(0.18406)	(0.91930)	(0.88625)
	[-1.82471]	[1.75552]	[0.70089]
D(GINI(-2))	-0.210618	0.303359	-0.454026
	(0.15769)	(0.78756)	(0.75925)
	[-1.33569]	[0.38519]	[-0.59799]
D(GINI(-3))	-0.688556	-0.570319	-1.697773
	(0.20291)	(1.01343)	(0.97701)
	[-3.39342]	[-0.56276]	[-1.73773]
D(GINI(-4))	-0.661883	-2.900398	-3.273507
	(0.21761)	(1.08686)	(1.04780)
	[-3.04157]	[-2.66859]	[-3.12417]
D(EXP(-1))	0.834198	0.111849	0.467078
	(0.15179)	(0.75811)	(0.73086)
	[5.49579]	[0.14754]	[0.63908]
D(EXP(-2))	0.410981	-1.569658	-0.812045
	(0.15898)	(0.79403)	(0.76549)
	[2.58510]	[-1.97683]	[-1.06082]
D(EXP(-3))	0.761593	0.357252	0.731774
	(0.12895)	(0.64402)	(0.62088)
	[5.90626]	[0.55472]	[1.17861]
D(EXP(-4))	0.459590	-0.546466	0.247904
	(0.16026)	(0.80040)	(0.77163)
	[2.86784]	[-0.68274]	[0.32127]
D(IMP(-1))	-0.782531	0.269212	-0.191609
	(0.16064)	(0.80230)	(0.77346)
	[-4.87144]	[0.33555]	[-0.24773]
D(IMP(-2))	-0.394561	1.336034	0.624329
	(0.14872)	(0.74279)	(0.71609)
	[-2.65302]	[1.79867]	[0.87185]
D(IMP(-3))	-0.781732	-0.374336	-0.566904
	(0.12499)	(0.62424)	(0.60181)
	[-6.25456]	[-0.59966]	[-0.94200]
D(IMP(-4))	-0.376365	1.097828	0.168058
	(0.16268)	(0.81251)	(0.78331)
	[-2.31351]	[1.35115]	[0.21455]
	-0.599320	1.206539	0.561169
	(0.16616)	(0.82987)	(0.80004)

As shown in Table 6, one of the most important values of the study is C (1), which represents the speed of adjustment. This value satisfy two conditions: (i) the equilibrium has be reached in the long run, and (ii) C (1) is negative and statistically significant. The results meet both discussed conditions. Thus, we have inferred that the equilibrium will be reached in the long run, along with two consequences. First, about 41% of the disequilibrium is corrected each period. Second, because C (1) is statistically significant, indicating that export (EXP) and import (IMP) Granger cause Gini in the long term, providing evidence of Granger causality between the independent regressors and the dependent variable. The long-run estimators indicate that exports (EXPs) boost Gini but reduce imports (IMPs).

Wald Test

Besides "the Lagrange Multiplier Test and the Likelihood-Ratio Test," the Wald test is an effective tool for hypothesis testing. Unlike the other two tests, it requires unrestricted model estimation. Table 7 depicts the Wald Test results.

Table 7. Wald Test

Wald Test				
T-Stat	Value	Df		Prob
F-stat	6.847772	(9,9)	0.0042	
Chi-sq	61.62995	9	0.0000	
H0 : C6=C7=C8=C9=C10=C11=C12=C13=C14=0				
Restriction(= 0)		Value		Std. Err.
C6		0.834198		0.151789
C7		0.410981		0.158981
C8		0.761593		0.128947
C9		0.459590		0.160256
C10		-0.782531		0.160637
C11		-0.394561		0.148722
C12		-0.781732		0.124986
C13		-0.376365		0.162682
C14		-0.599320		0.166157
Restrictions are linear in coefficients.				

As shown in Table 7, the null hypothesis states that exports (EXPs) and imports (IMPs) do not contribute to Gini. The chi-square statistic is significant at 5%, so we can reject the null hypothesis. Thus, there is evidence of short-run causality linking exports (EXPs) and imports (IMPs) to Gini using short-term VECM estimation. Agusalim and Pohan (2018)

argue that international trade (IT) has a considerable short-term impact on income inequality (IINQ). Imports (IMPs) negatively influence Gini, whereas exports (EXPs) have a favorable effect, consistent with Franco and Gerussi (2013).

Serial Correlation

We performed the serial correlation test to determine whether there is a correlation between the error term in the current period and the error term in some previous period. Table 8 summarizes the results of the Breusch Godfrey Serial Correlation LM test. The Serial Correlation Test Statistic is insignificant at the 5% level, implying that we cannot reject the null hypothesis. Therefore, we conclude that the serial correlation does not affect our empirical model.

Table 8: Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic Obs*R-squared	0.111505	Prob. F(4,5)	0.9730
	1.883657	Prob. Chi-Square(4)	0.7571

Dependent Variable: RESID Method: Least Squares
Period:1996 2018
Number of Obs: 23

Variable	Coef	Std. Er	T-Stat	Prob.
C1	-0.053913	0.167055	-0.322729	0.7600
C2	-0.132537	0.365925	-0.362198	0.7320
C3	0.037606	0.218093	0.172431	0.8699
C4	0.000151	0.298725	0.000504	0.9996
C5	0.032275	0.321305	0.100450	0.9239
C6	0.002724	0.233933	0.011645	0.9912
C7	0.060280	0.270720	0.222665	0.8326
C8	-0.003366	0.173741	-0.019375	0.9853
C9	0.110178	0.308847	0.356740	0.7358
C10	-0.037241	0.253086	-0.147148	0.8888
C11	-0.049720	0.244506	-0.203350	0.8469
C12	-0.004024	0.169116	-0.023792	0.9819
C13	-0.123708	0.316024	-0.391453	0.7116
C14	-0.012731	0.256172	-0.049699	0.9623
RESID(-1)	0.355199	0.679821	0.522489	0.6236
RESID(-2)	0.071621	0.594566	0.120460	0.9088
RESID(-3)	0.123120	0.597427	0.206083	0.8449
RESID(-4)	-0.238786	0.573222	-0.416568	0.6943
R-squared	0.081898	Mean dependent var		2.58E-16
Adjusted R-squared	-3.039648	SD dependent var		0.186510
SE of regression	0.374864	Akaike info criterion		0.914653
Sum squared resid	0.702615	Schwarz criterion		1.803301
Loglikelihood	7.481486	Hannan-Quinncriter.		1.138146
F-statistic	0.026236	Durbin-Watson stat		1.900831
Prob(F-statistic)	1.000000			

CUSUM Stability Test

The study used the CUSUM test to assess the stability of the coefficients of the multiple regression models. The result depicted in Figure 2 indicates that the blue line remains within the 95% confidence level thresholds and does not breach them. Therefore, the CUSUM test suggests that the model and parameters are stable during the sample period.
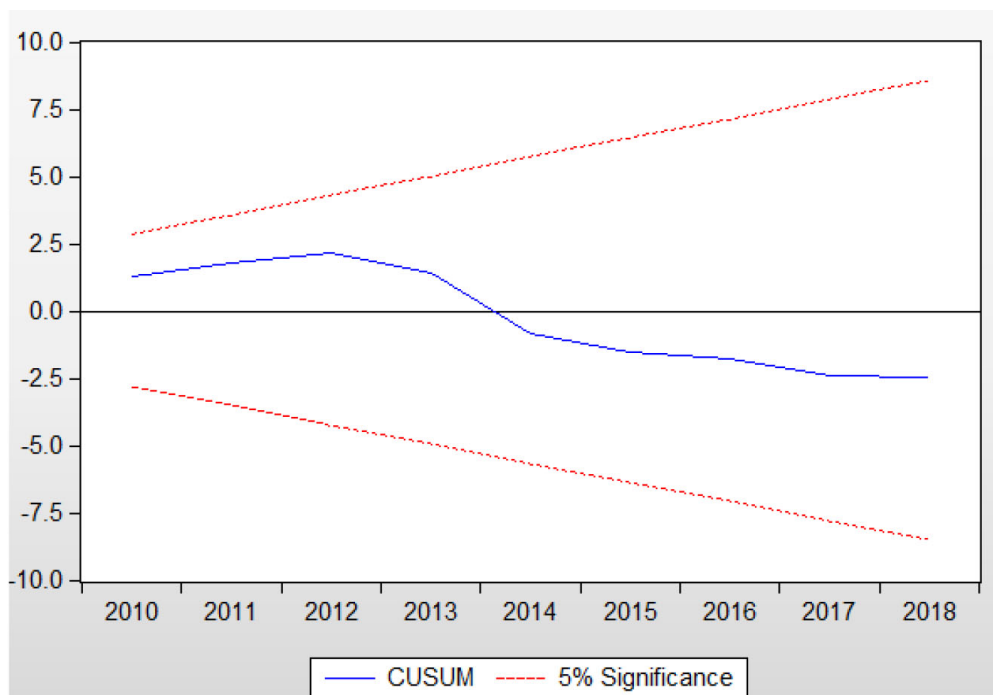
Figure 2. Cusum stability test

Discussion and Conclusion

International trade (IT) affects income inequality (IINQ) in several ways. For example, international trade (IT) helps economic development and generates economic activities, reducing income inequality (IINQ). Literature suggests that the major beneficiaries of exports (EXPs) are the upper-income (UIN) strata. In contrast, employees in lower-income (LIN) strata receive little or no benefits due to exports (EXPs) (Cabelkova et al., 2021). Moreover, professional competencies in an economy promote income disparity (IND) (Jeong, 2020).

Furthermore, Li and Zhu (2020) assert that due to the concentration of export-oriented firms in an economy, the wages for skilled workers are significantly higher than for low-skilled labor, promoting income inequality (IINQ). The above-discussed arguments align

with many past studies. For example, Helpman et al. (2017) and Aman et al. (2021) found that increasing exports (EXPs) reduces income inequality (IINQ). At the same time, many researchers believe that the effect of exports (EXPs) on income inequality (IINQ) may vary on many factors, including the nature of the goods exported, taxes, and policies.

Literature documents that an increase in the quantum of imports (IMPs) reduces income inequality (IINQ) (Kazemzadeh et al., 2022). Developed countries like China and the USA have a comparative advantage due to the size of the manufacturing units, which reduces their production cost. Thus, importing goods and services from such countries creates new markets and jobs, decreasing unemployment and income disparity (IND) (Carvalho & Gabriel, 2023).

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Conflict of Interest
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Tourism in Pakistan is not Achieving Its Real Potential Due to a Lack of Infrastructure and Promotion

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Abstract

Tourism is one of the fastest-growing industries in the world. However, in Pakistan, it is facing many problems. Pakistan has many natural and cultural resources that it can use to promote tourism. The country has the potential to attract visitors from all around the globe. Unfortunately, the government's lack of resources and dedication has led to the country's underutilization of tourism's potential. Given its importance, the study has examined the impact of traveler constraints, traveler anxiety, tourism distribution channels, and product offering on travel intention. It also examined the moderating effect of the usefulness of advertising content on traveler intention. The study collected the sample data from travelers at Jinnah International Airport. The study found that traveler constraints and traveler anxiety negatively affect traveler intention. It also found that tourism distribution channels and product offerings positively affect travel intention. The study also supported the moderating effect of the usefulness of advertising content between product offering and travel intention. Social media and conventional news channels have distorted the country's image, and many travelers perceive it as not a safe place to visit. Tourism Bureau and the government must spend

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considerable resources to improve its image.

Keywords: *Travel intention, travel constraints, travel anxiety, travel distribution, product offering, the usefulness of advertising content.*

Introduction

Many tourists from around the world regularly visit countries that are attractive to them. Tourism is a growing and dynamic industry, significantly contributing to employment generation and GDP (Irfan et al., 2023). The economy profoundly depends on tourism in many countries like Singapore, Thailand, and Dubai (Alnaser, 2023). These countries use different marketing tools to attract tourists, including brochures, guidebooks, and social media (Allmark, 2023). Pakistan has natural beauty and a rich historical and cultural heritage, which it can use to attract tourists (Hayat et al., 2021). Despite all these attractive resources, Pakistan has not exploited them to increase tourism in Pakistan (Gul et al., 2023). Many studies, including those of Irfan et al. (2023), examined the impact of promotion, cultures, festivals, and heritage on tourism. Besides other factors, the studies found that Pakistan has not effectively used social media to attract tourists in Pakistan (Zafar & Siddiqui, 2023).

Similarly, other studies document Pakistan's need to develop infrastructure, like railroads, hotels, and motels, to attract tourists (Aftab & Khan, 2019). Moreover, Qasim, 2022) stresses that if Pakistan addresses these issues, its tourism will grow and benefit the local communities of northern areas where tourists visit. Many past studies on tourism lack clarity on the factors necessary to promote tourism in Pakistan (Zafar & Siddiqui, 2023). For example, besides other factors, one important antecedent of tourism is safety and security, which limited studies have examined (Sardak et al., 2020). In the same context, Rehman et al. (2020) assert that issues of terrorism after 9/11 have adversely affected the tourism industry in Pakistan. Therefore, we argue that the Pakistan Tourism Bureau must project that the country is safe and there are no terrorist activities. Moreover, extant literature underscores that many factors, including sightseeing, shopping, games, culture, history, wildlife, and means of some recreation" are important for attracting tourists to a country (Aftab & Khan, 2019). These factors promote and make the tourism industry competitive (Gul et al., 2023). Similarly, Zafar and Siddiqui (2023) cite that, like the global economy, the tourism industry has also become highly competitive and dynamic. Thus, we argue that countries that use social media and television to promote tourism are faring well.

Travel intention (TI) is an important precursor of an actual visit to a destination (Soliman, 2021). The Theory of Planned Behavior (TPB) asserts that travel intention (TI)

significantly depends on subjective norms, attitudes, and perceived behavior control (Liu et al., 2021). Subjective norms include culture and peer group pressure, where attitudes are long-term perceptions about a good, service, or person (Chen et al., 2023; Yang et al., 2023). Past studies have examined the impact of various factors that affect travel intention (TI). For example, the literature highlights that traveler constraints (TCs) are an important precursor of travel intention (TI) (Yang et al., 2023).

Furthermore, many past studies have examined the effect of different variables on travel intention (TI) in different domains with varying results. For instance, a study conducted in China, with a sample size of 225, found that celebrity endorsement, object-based authenticity, and existential authenticity significantly promote travel intention (TI) (Zhu et al., 2023). This implies that firms in the tourism industry can strategically use celebrity involvement in TikTok videos to enhance tourists' travel intentions and increase their customer base. Similarly, a study focused on the tourists of Russia and Turkey during the COVID-19 era found that boredom and travel motivation promote travel intention (TI). They also document that travel intention (TI) and fear of Covid-19 are significant predictors of willingness to pay, and bordem enhances travel motivation (Durgun & Davras, 2024). The study recommended that tourist operators identify and target those segments who could afford to travel to Russia and Turkey. Solo female travelers are very common in the Western countries. Given its importance, a study examined the effect of solo female travel risks and anxiety by collecting the responses of Facebook users. The study documents that solo female travel risks and anxiety negatively affect their travel intention (TI). It also found that risks promote anxiety(ANX) (Karagöz et al., 2021). Thus, the study recommended that solo female travelers are a growing sector. Therefore, we argue that countries can increase tourism by targeting it. However, for that, the countries must focus on reducing gender discrimination and providing an environment where females are safe. This highlights the industry's responsibility to promote equality and ensure a safe and environment for all travelers.

Past studies have used various moderators affecting travel intention. A study in the United States during the COVID-19 era found that public trust in the government moderates travel concerns and intentions (Thapa et al., 2023). Similarly, another study on female solo female travelers found that online social support insignificantly moderates (i) travel risks and anxiety and (ii) travel risks and travel intention (TI) (Karagöz et al., 2021). Moreover, another study used destination image (DI) and ease of use (EOI) as moderators. The study collected a sample of 258 respondents using online platforms. The study documents that ease of use (EOI) moderates (i) Vlog marketing (VM) and consumer travel intention (CTI) and (ii) Vlog marketing (VM) and consumer purchase intention (CPI). However, the study found an insignificant moderating effect

of destination image (DI) on (i) Vlog marketing (VM) and consumer travel intention (CTI), and (ii) Vlog marketing (VM) and consumer purchase intention (CPI).

Given the above discussion, the study examines the effect of travel anxiety (ANX), tourism distribution channels (TDCs), and product offering (PP) on travel intention (TI). It also examines the moderating role of useful advertisement content (UAC) on product offering (PO) and traveler intention (TI). We believe the study will provide a deeper understanding of these dynamics

Literature Review

Hypothesis Development

Travel Constraints and Travel Intention

Literature on leisure and travel asserts that tourists consider time and money constraints while selecting a destination (Karl et al., 2020). Subsequent literature suggests that the sub-dimensions of traveler constraints (TCs) include "opportunity, knowledge, ability, overcrowding, and safety of the choice destination" (Aziz & Long, 2022). Researchers believe all these sub-dimensions of traveler constraints (TCs) individually and collectively positively affect travel intentions (TI) (Aziz & Long, 2022). Similarly, Schiopu (2022) asserts that besides other sub-dimensions of travel constraints, intrapersonal, interpersonal, and structural constraints promote travel intention (TI) (Medai & Wu, 2023).

In the context of gender, studies researchers believe that constraints such as "socio-cultural, personal, practical and spatial" are more specific for sole female travelers than male tourists (Sun et al. 2020). Moreover, several studies examined the association between travel constraints and visit intention, but most found inconsistent results (Nazir et al., 2021). For example, Huang and Hsu (2009) found that disinterest inversely affects travel intention (TI). Similarly, other studies found an inverse association between travel constraints (TCs) (i.e., intrapersonal, interpersonal, and structural) and travel intention (TI) (Hung & Petrick, 2012). At the same time, many studies, including those of Dedeoglu et al. (2023), show that travel constraint (TCs) (i.e., intrinsic, interactional, and environmental) insignificantly affects travel intention (TI). These studies also found that demographic factors such as age and gender moderate travel constraints (TCs) and travel intention (TI). On the contrary, other studies found that demographic factors insignificantly moderate travel constraints (TCs) and travel intention (TI) (Şengel et al., 2023). Moreover, studies also found inconsistent results on the effect of gender, marital status, and age on travel intention (TI). Some studies found these factors positively

affect travel intention (TI), while other studies found an inverse association between these factors and travel intentions (TI) (Sari et al., 2023).

H1: Travel constraints negatively affect travel intention.

Anxiety and Travel Intention

Anxiety (ANX), in broad terms, refers to an individual perception of potential risks. It also relates to fear of negative consequences (Şengel et al., 2023). Dogra et al. (2023) also assert that when individuals buy something risky, they are afraid of negative consequences. Moreover, many researchers have extended the definition of anxiety (ANX) by including "uncomfortable, disturbed, scared or panicked" in it (Luo & Lam, 2020). Furthermore, travelers visiting any destination often suffer from anxiety (ANX) (Karagöz, 2021). Some factors that promote anxiety (ANX) in travelers are risks, uncertainty, and cultural values. Risk includes physical and financial risks. Uncertainty includes timely booking of hotels and other visiting places. Cultural risks relate to similarities and differences between visitors' and destination cultures. In this context, many researchers assert that consumers' perception of a destination may vary from one traveler to another (Zenker et al., 2021). For example, many studies cite that some travelers found one destination scary and dangerous, while others found the same destination fun and exciting (Tepavčević et al., 2021). Furthermore, many studies found inconclusive results on the association between anxiety (ANX) and traveler intention (TI). For example, some studies found that anxiety (ANX) is positively associated with traveler intention (TI), while other studies document an inverse association between anxiety (ANX) and travel intention (TI) (Angguni & Lenggogeni, 2021).

H2. Traveler anxiety negatively affects travel intention.

Tourism Distribution Channels and Travel Intention

A tourism distribution channel (TDCs) refers to the channels a tourist uses to acquire tourism products from suppliers (Nguyen & Tong, 2023). An efficient tourism distribution channel (TDC) increases consumers' travel intention (TI) (Wu & Ding, 2023). Tourists obtain tourist products via traditional channels, including travel agents, government information centers, and tour operators (Wang & Park, 2023). A typical tourism distribution channel (TDC) comprises suppliers, wholesalers, retailers, and consumers. Suppliers provide accommodation, transportation, and avenues for attraction and experience. Wholesalers develop tourist packages for retailers. A typical tourist package includes tours, activities, accommodations, and travel insurance.

Meanwhile, resellers purchase various products from wholesalers to sell directly to

consumers. It includes online travel agents, including Expedia and TripAdvisor (Wu & Ding, 2023). Past studies document that Pakistan needs to improve the efficiency of the tourism distribution channels (TDCs) to enhance its tourism industry (Wang & Park, 2023). Similarly, Wu and Ding (2023) argue that technology-based distribution channels can increase travel intention (TI). Furthermore, studies document that Pakistan needs to improve the efficiency of tourism distribution channels (TDCs) by incorporating technology to enhance its tourism industry (Rana & Ameen, 2023).

H3: Tourism distribution channels positively affect travel intention.

Product Offering and Travel Intention

Product offering (PO) is an important aspect of the marketing mix. In the context of tourism, it includes "attractions, accommodation, and the environment" (Nguyen & Tong, 2023). All these factors, directly and indirectly, affect travel intention (TI). Extant literature asserts that product offering positively affects travel intention (TI) (Zhang et al., 2021). Moreover, product offering (PO) as a destination includes destination image, historical heritage, and cultural richness. All these factors individually and collectively affect travel to intention (TI) (Tsai & Bui, 2021). Moreover, extant literature suggests that travelers develop destinations' reputations based on the airport image (Wattanacharoensil et al., 2022). Given the importance of the airport image, countries like Singapore, Dubai, and Hong Kong have spent considerable resources on developing the airports. As a result, the travel intention (TI) to these countries has significantly increased (Maxim, 2020).

H4: Product offering as a destination positively affects travel intention.

The Usefulness of Advertising Content and Travel Intention

This study has used the usefulness of advertising content (UAC) as a moderating variable between product offering (PO) and travel intention (TI). Past studies document that it has a varying effect on the association between product offering (PO) and travel intention (TI) (Chu et al., 2020). Extant literature recommends that countries sharing conventional and social media advertising content must communicate the value proposition to existing and potential tourists. However, studies document that the impact of conventional advertising on the association between product offering (PO) and traveling intention (TI) differs from social media advertising (Cheng et al., 2020). Similarly, Nguyen et al. (2021) underscore that user-generated content significantly affects travel intention (TI) (Chu et al., 2020). Extending this argument, we assert that exciting and interesting user-generated content shared on social media increases the relationship between product offering (PO) and travel intention (TI).

H5: Usefulness of advertising content moderated product offering and travel intention.

Conceptual Framework

Given the above theoretical discussions, we have proposed a model containing four independent variables {i.e., traveler constraints (TCs) , traveler anxiety (ANX), traveler distribution channels (TDCs)}, and {product offering(PO)}, one dependent variable {(i.e., travel intention)} and one moderating variable, {i.e., the usefulness of advertising content(UAC)}. Figure 1 exhibits the conceptual framework.

Figure 1: Conceptual Framework
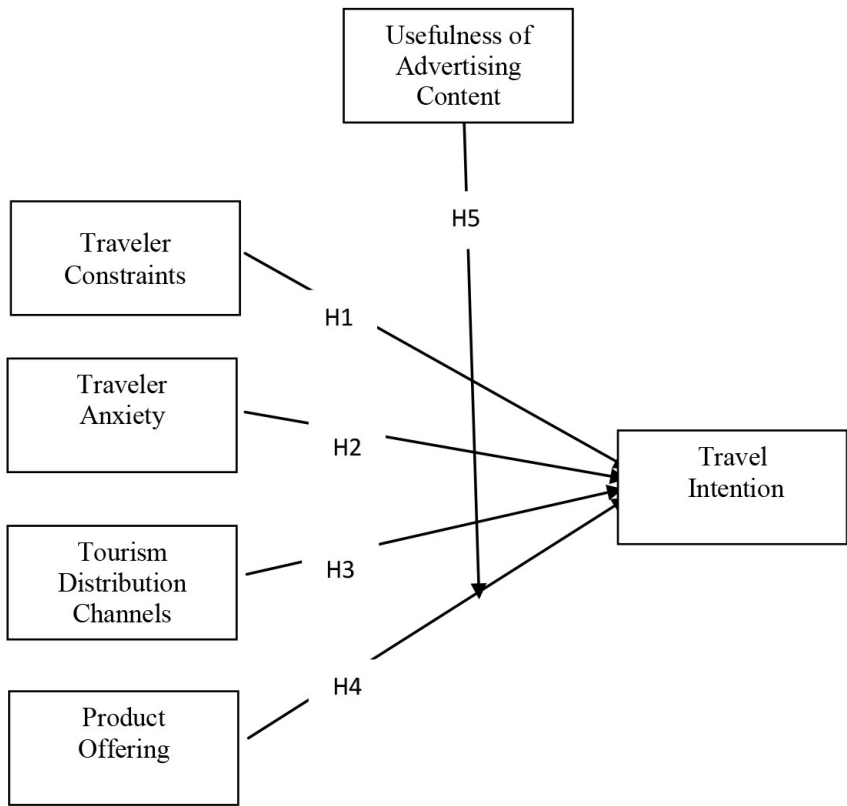
Methodology

Research Design

A research design helps a researcher follow the steps to achieve its objectives (Kratochwill et al., 2020). It includes types of study, methods used to collect data, and data analysis (Williams et al., 2023). This study has used a descriptive and deductive approaches to achieve its objectives (Carter et al., 2023). It collected data from the target

segment using an online survey method. It used SPSS for data analysis, which includes reliability and validity analyses (Dineva, 2023). For the results of the hypotheses, the study used multiple regression analysis.

Population and Sample Size

The study's target population is the passengers who travel from Jinnah International Airport, Karachi. The civil aviation authority reports that about 11 million passengers travel annually from Jinnah International Airport Karachi. Based on this population, we have calculated a minimum sample size of 385 respondents. However, to increase the study's generalizability, we collected a sample of 470. After dropping incomplete questionnaires and outliers, the valid sample size was 439.

Scale and Measure:

All the indicator variables used in the study are based on a five-point Likert Scale. (5= Very High agreement and 1= Very Low agreement). Usually, the respondents feel comfortable filling out the Five Point Scale questionnaire. The study has four independent variables {i.e., traveler constraints (TCs) traveler anxiety (TA) , travel distribution channels, (TDCs) and product offering (PO)}. It also has one dependent variable, {travel intention (TI), and one moderating variable, {I.e the usefulness of advertising content (UAC)}. The study adopted the questionnaire from past studies. As recommended by many researchers, we initially conducted the face and content validity followed by reliability and validity analyses. Table 1 exhibits the summary related to the adapted scale and measures.

Table 1: Scale and Measures

Constructs	Sources	Items
Travel Intention (TI)	Zhu et al. (2022)	3
Tourism Distribution Channel (TDC)	Pearce and Schott (2005)	3
Product Offering(PO)	Hussain(2020)	3
Trvaleller Constraints (TCs)	Khan et al. (2019)	5
The Usefulness of Advertising Content (UAC)	Ayeh et al. (2013	5
Traveller Anxiety (TA)	Reisinger and Mavondo (2005).	5

Statistical Analysis

The study used SPSS for statistical analysis. Researchers widely use it in social sciences for data analysis. The tool allows the researchers to generate results related to descriptive and infernal statistics. The study also used it for results related to "normality, reliability, validity, and hypotheses testing of direct and moderating relationships.

Results

Profile of the Respondents

Out of the total respondents, about 62% were females, and the rest 38% were males. Most respondents belonged to the age group of 21-30 (40%), and the rest (60%) in higher age groups. The marital status shows that 60% are married and 40% are single. Regarding education, about 40% of respondents have post-graduate education, 35% have graduate-level education, and 25% have intermediate education level. 95% of the respondents answered that Pakistan should formally promote tourism using social media.

Descriptive Statistics

The study used Skewness and Kurtosis analyses to evaluate the uni-variate normality of the adopted constructs. Table 2 depicts results related to the descriptive analysis.

Table 2: Descriptive Analysis

Construct	Mean	Std Dev	Skewness	Kurtosis
Travel Intention (TI)	4.101	0.601	-0.262	0.581
Traveler Constrainsts (TCs)	4.372	0.734	-1.325	1.828
Traveler Anxiety(TA)	3.441	0.950	-0.154	-0.717
Tourism Distribution Channels (TDCs)	3.555	0.870	-0.100	-0.691
Product Offering (PO)	3.332	0.833	0.052	-0.086
The Usefulness of Advertising Content (UAC)	3.712	0.963	-0.424	-0.634

The Table above shows that the highest Skewness level (SK=-1.325) is for the construct traveler constraints (TCs) (Mean=4.372, SD= 0.734), and the lowest (SK=0.052) is for the construct product offering (PO) (Mean = 3.332, SD=0.833). Conversely, the highest Kurtosis level (KR=1.828) is for the construct traveler constraints (TCs) (Mean=4.372, SD=0.734), and the lowest is for product offering (PO) (Mean=3.332, SD=0.833). As Skewness and Kurtosis range from -2.5 to +2.5, all the adopted constructs fulfill uni-variate normality requirements (Park, 2015).

Reliability Analysis

The two most important factors of precision are reliability and validity. Reliability is measured by analyzing several measurements on the same objects(Hair, 2015). The study has examined the internal consistency of the adopted constructs using Cronbach's Alpha values. Table 3 depicts the results related to the reliability analysis.

Table 3: Reliability Analysis

Construct	Cronbach's Alpha	No of Items	Mean
Travel Intention (TI)	0.745	3	4.101
Traveler Constraints (TCs)	0.827	5	4.372
Traveler Anxiety(TA)	0.785	5	3.441
Tourism Distribution Channels (TDCs)	0.738	3	3.555
Product Offering (PO)	0.748	3	3.332
The Usefulness of Advertising Content (UAC)	0.772	5	3.712

The above Table shows that the highest reliability (α= 0.827) is for the construct traveler constraints (TCs), while the reliability for the tourism distribution channels (TDCs) is the lowest(α= 0.738). All the Cronbach's alpha values of the constructs are greater than 0.6, indicating adequate consistency (Hair, 2015; Iqbal & Usmani, 2009).

Exploratory Factor Analysis

The study used Exploratory Factor Analysis (EFA) to understand the relationships between the constructs and their indicators. Table 4 summarizes the results.

Table 4: Exploratory Factor Analysis

Constructs	Items	BToS	KMO	CFL
Travel Intention (TI)	3	267.86	0.720	75.32%
Traveler Constraints (TCs)	3	267.94	0.719	74.33%
Traveler Anxiety(TA)	3	213.006	0.702	70.10%
Tourism Distribution Channels (TDCs)	5	179.365	0.661	65.90%
Product Offering (PO)	5	179.365	0.661	67.00%
The Usefulness of Advertising Content (UAC)	5	201.829	0.680	69.00%

Correlation Analysis

The study conducted correlation analysis to find whether there is any hidden relationship between two or more variables (Mustafa & Rahman, 2024). The results presented in Table 5 exhibit the results related to correlation analysis.

Table 5: Correlation Analysis

Constructs	TI	TCs	TA	TDCs	PO	UAC
Traveler Intention (TI)	1					
Traveler Constraint (TCs)	0.252	1				
Traveler Anxiety(TA)	0.420	0.039	1			
Tourism Distribution Channel (TDCs)	0.426	0.129	0.655	1		
Product Offering (PO)	0.406	0.050	0.578	0.646	1	
The Usefulness of Advertising Content (UAC)	0.349	0.285	0.194	0.257	0.331	1

The above Table shows that the strongest relationship (r=0.655) was between tourism distribution channels (TDCs) and traveler anxiety (AN). The lowest (r=0.039) is between traveler anxiety (TA) and traveler constraints (TCs), suggesting there is no multi-colinearity between the variables used in the study (Sadriddinovich, 2023).

Discriminant Validity

The study used Fornell Larcker's (1981) criteria to ascertain whether the constructs used are "unique or distinct." Table 6 depicts the results related to discriminant validity.

Table 6: Discriminant Validity

Constructs	TI	TCs	TA	TD	PO	UAC
Traveler Intention (TI)	0.867					
Traveler Constraints (TCs)	0.252	0.861				
Traveler Anxiety(TA)	0.420	0.039	0.838			
Tourism Distribution Channels (TDCs)	0.426	0.129	0.655	0.812		
Product Offering (PO)	0.406	0.050	0.578	0.646	0.819	
The Usefulness of Advertising Content (UAC)	0.349	0.285	0.194	0.257	0..331	0.831

The results in Table 6 show that the square root of AVE (0.867) is the highest for traveler intention (TI) and the lowest (0.812) for tourism distribution channels (TDCs). At the same time, the strongest relationship (r=0 .655) was between the tourism distribution channels (TDCs) and traveler anxiety (TA). The lowest correlation (r=0.039) is between traveler anxiety (TA) and traveler constraints (TCs). Thus, we have inferred that the constructs used in the study are "unique and distinct."

Convergent Validity

Since the study adopted all the constructs from published research, we also ascertained the convergent validity (Tavakol & Wetzel, 2020). Table 7 exhibits the results related to construct validity.

Table 7: Convergent Validity

Construct	Mean	Std Dev	Composite Reliability	Variance Explained
Travel Intention (TI)	4.101	0.601	0.757	0.752
Traveler Constraint (TCs)	4.372	0.734	0.843	0.741
Traveler Anxiety(TA)	3.441	0.950	0.801	0.702
Tourism Distribution Channel (TDC)	3.555	0.870	0.798	0.660
Product Offering (PO)	3.332	0.833	0.801	0.670
Usefulness of Advertising Content (UAC)	3.712	0.963	0.779	0.691

All the composite values in Table 7 are at least 0.757, and AVE values are at least 0.660, suggesting that all the constructs and their indicators are theoretically associated (Tavakol & Wetzel, 2020).

Overall Model Regression

The study used Multiple Regression Analysis to test the overall model and the results related to the proposed hypotheses. Table 8 depicts the results derived from Multiple Regression Analysis.

Table 8: Regression Model Results

Variables	Unstandardized Coefficient		Standard Coefficient	T	Sig
	B	St Error	Beta		
Constant	0.791	0.133		5.964	0.000
Traveler Constraints (TCs) H1	-0.130	0.026	-0.158	5.079	0.000
Traveler Anxiety(TA) H2	-0.148	0.026	-0.231	5.575	0.000
Tourism Dist. Channel (TDC) H3.	0.156	0.032	0.223	4.940	0.000
Product Offering (PO) H4.	0.086	0.031	0.118	2.792	0.006

Dependent Variable: Travel Intent (TI), R2 = 0.79% Adjusted R2 = 0.78%, P<0.05

Table 8 shows that the combined effect of independent variables on the dependent variable is 78% (R^2 = 0.78, P< .0.05) The results also show that t>1.96 and p< 0.05 for all the hypotheses, suggesting that our results support all four direct hypotheses.

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Moderation Analysis

To ascertain the moderating impact of the variable, we first calculated the Z-score of the independent variables. We then multiplied each variable's Z-score values to create an interactive term. The below-mentioned regression analysis shows that the interactive term is statistically significant suggesting the existence of moderating effects. That is

usefulness of advertising contents (UAC) moderates the relationship between product offering (PO) as destination' and 'travel Intention (TI). Refer to Table 9 for results.

Table 9: Moderation Analysis

	Un. Standardized Coefficient		Std. Coefficient	t	Sig
	B	**Std. Error**	**Beta**		
(Constant)	2.418	0.212		11.423	0.000
Usefulness of Advertising Content (UAC)	0.320	0.034	0.212	9.515	0.000
Product offering (POD)	0.118	0.047	0.034	2.527	0.012
IT_ZUAC_ZPOD	-0.066	0.028	0.047	-2.383	.0018

R^2=0.400, P<0.05,

The negative β coefficient indicates that the 'usefulness of advertising content's (UAC) effect becomes more negative -or less positive with the increase in product offering (PO) as the destination. At p <0.05, all three effects are highly statistically significant.

Discussion and Conclusion

Discussion

The study accepted Hypothesis 1 (β= -0.158, t=5.079<0.05), stating, "Travel constraints (TCs) negatively affect travel intention (TI)." Literature on leisure and travel asserts that tourists consider time and money constraints while selecting a destination (Karl et al., 2020). Subsequent literature suggests that the sub-dimensions of traveler constraints (TCs) include "opportunity, knowledge, ability, overcrowding, and safety of the choice destination" (Aziz & Long, 2022). Researchers believe all these sub-dimensions of traveler constraints (TCs) individually and collectively positively affect travel intentions (TI) (Aziz & Long, 2022). Several studies examined the association between travel constraints and visit intention, but most found inconsistent results (Nazir et al., 2021). For example, Huang and Hsu (2009) found that disinterest inversely affects travel intention (TI). Similarly, other studies found an inverse association between travel constraints (TCs) (i.e., intrapersonal, interpersonal, and structural) and travel intention (TI) (Hung & Petrick, 2012). At the same time, many studies, including those of Dedeoglu et al. (2023), show that travel constraint (TCs) (i.e., intrinsic, interactional, and environmental) insignificantly affects travel intention (TI). These studies also found that demographic factors such as age and gender moderate travel constraints (TCs) and travel intention (TI). On the contrary, other studies found that demographic factors insignificantly moderate travel constraints (TCs) and travel intention (TI) (Şengel et al.,2023).

The study accepted Hypothesis 2 (β= -0.231, t=5.575, p<.05), stating "travel anxiety (TA) negatively affects travel intention (TI)." Many researchers have extended the definition of anxiety (ANX) by including "uncomfortable, disturbed, scared or panicked" in it (Luo & Lam, 2020). Furthermore, travelers visiting any destination often suffer from anxiety (ANX) (Karagöz, 2021). Some factors that promote anxiety (ANX) in travelers are risks, uncertainty, and cultural values. Risk includes physical and financial risks. Uncertainty includes timely booking of hotels and other visiting places. Cultural risks relate to similarities and differences between visitors' and destination cultures. In this context, many researchers assert that consumers' perception of a destination may vary from one traveler to another (Zenker et al., 2021). For example, many studies cite that some travelers found one destination scary and dangerous, while others found the same destination fun and exciting (Tepavčević et al., 2021). Furthermore, many studies found inconclusive results on the association between anxiety (ANX) and traveler intention (TI). For example, some studies found that anxiety (ANX) is positively associated (TI), while other studies document an inverse association between anxiety (ANX) and travel intention (TI) (Angguni & Lenggogeni, 2021).

The study accepted Hypotheses 3 (β= 0.118, t= 2.792, p<0.05), stating, "Tourism distribution channels (TDCs) positively affect travel intention (TI). A distribution channel (TDC) comprises suppliers, wholesalers, retailers, and consumers. Suppliers provide accommodation, transportation, and avenues for attraction and experience. Wholesalers develop tourist packages for retailers. A typical tourist package includes tours, activities, accommodations, and travel insurance. Meanwhile, resellers purchase various products from wholesalers to sell directly to consumers. It includes online travel agents, including Expedia and TripAdvisor (Wu & Ding, 2023). Past studies document that Pakistan needs to improve the efficiency of the tourism distribution channels (TDCs) to enhance its tourism industry (Wang & Park, 2023). Similarly, Wu and Ding (2023) argue that technology-based distribution channels can increase travel intention (TI). Furthermore, studies document that Pakistan needs to improve the efficiency of tourism distribution channels (TDCs) by incorporating technology to enhance its tourism industry (Rana & Ameen, 2023).

The study accepted Hypothesis 4 (β= 0.223, t=4.940, p<.05), stating, "Product offering (PO) positively affects travel intention (TI)." Product offering (PO) is an important aspect of the marketing mix. In the context of tourism, it includes "attractions, accommodation, and the environment"(Nguyen & Tong, 2023). All these factors, directly and indirectly, affect travel intention (TI). Extant literature asserts that product offering positively affects travel intention (TI) (Zhang et al., 2021). Moreover, product offering (PO) as a destination includes destination image, historical heritage, and cultural richness. All

these factors individually and collectively affect travel intention (TI) (Tsai & Bui, 2021). Moreover, extant literature suggests that travelers develop destinations' reputations based on the airport image (Wattanacharoensil et al., 2022). Given the importance of the airport image, countries like Singapore, Dubai, and Hong Kong have spent considerable resources on developing the airports. As a result, the travel intention (TI) to these countries has significantly increased (Maxim, 2020)

The study accepted Hypothesis 5: Usefulness of advertising content (UAC) moderates the relationship between product offering (PO) as destination and travel intention (TI). Past studies document that it has a varying effect on the association between product offering (PO) and travel intention (TI) (Chu et al., 2020). Extant literature recommends that countries sharing conventional and social media advertising content must communicate the value proposition to existing and potential tourists. However, studies document that the impact of conventional advertising on the association between product offering (PO) and traveling intention (TI) differs from social media advertising (Cheng et al., 2020). Similarly, Nguyen et al. (2021) underscore that user-generated content significantly affects travel intention (TI) (Chu et al., 2020). Extending this argument, we assert that exciting and interesting user-generated content shared on social media increases the relationship between product offering (PO) and travel intention (TI).

Conclusion

Tourism is important for a country's reputation. It generates economic activities and employment and significantly contributes to GDP. Given its importance, the study has examined the impact of traveler constraints (TCs), traveler anxiety (TA), tourism distribution channels (TDCs), and product offering (PO) on travel intention (TI). It also examined the moderating effect of the usefulness of advertising content (UAC) on traveler intention (TI). The study collected the sample from travelers at Jinnah International Airport. The study found that traveler constraints (TCs) and traveler anxiety (TA) negatively affect traveler intention (TI). It also found that tourism distribution channels (TDCs) and product offering (PO) positively affect travel intention (TI). The study also supported the moderating effect of the usefulness of advertising content (UAC) between product offering (PO) and travel intention (TI).

Implication for Managers and Policy Makers

The study recommends that the government must improve the infrastructure and ambiance of Pakistan's airports. It enhances the image of the airport and country and attracts tourists. Tourism distribution channels (TDCs) in Pakistan are not efficient and effective. The government must improve them by involving all the stakeholders, including retailers and wholesalers. The government must advise wholesalers and

retailers to use technology to improve the distribution network. The hotels and motels, especially in the country's Northern part, need considerable improvement to attract travelers. The tourism bureau must develop proper marketing strategies to promote the country's historical and cultural heritage. The government must invest considerable resources to maintain the cultural and historical places in Pakistan, as they are in pathetic conditions.

Limitation and Future Research

The scope of this study was for tourism in Pakistan. Other studies may focus on other destinations. We have focused on four antecedents of travel intention: travel constraints, travel anxiety, travel distribution channels, and product offering. Future studies may include other antecedents to travel intention, including cultural values. Demographic factors, including age and gender, directly and indirectly affect travel intention, which future studies may incorporate in their studies. A comparative study between the two countries may bring more insight into the discussed phenomenon, which we recommend for future studies.

Annexure 1

Constructs and Items Used in the Questionnare

Travel Intention

TI1. If I plan for a trip, I will visit Pakistan.

TI2. If I can travel, I will consider a trip to Pakistan.

TI3. I think Pakistan is a good place deserving a visit.

Tourism Distribution Channel

TDC1. The website I use has good search options.

TDC2. The website I use has good booking options.

TDC3. The website I use has good payment options.

Product Offering

PO1. Pakistan has a beautiful landscape for visitors.

PO2. Pakistan has a rich historical heritage for visitors.

PO3. Pakistan has a natural diversity, which visitors will like to experience.

Traveller Anxiety

TA.1 I am worried while traveling to Pakistan.

TA2. I am tense while traveling to Pakistan.

TA3. I am stressed while traveling to Pakistan.

TA4. I am nervous while traveling to Pakistan.

TA5. I am scared while traveling to Pakistan.

Trvaleller Constraint

TC1.Due to family commitments, I cannot travel to Pakistan.

TC2. Due to official commitments, I cannot travel to Pakistan.

TC3. Due to budgetary contents, I cannot travel to Pakistan.

TC5. Due to different cultural values, I cannot travel to Pakistan.

The Usefulness of Advertising Content

UAC1. The advertising content improves my travel planning.

UAC2. The advertising content helps me improve my efficiency.

UAC3. The advertising content makes my traveling plan easier.

UAC4. The advertising content makes my travel-related decisions easier.

UAC5. Over all, I found advertising content useful for travel plan.

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