

## E-Commerce Adoption: The Moderating Role of Commitment between Purchase Intention and Customer Purchase Behavior

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*This study aims to explore how factors such as attitude, self-efficacy, subject norms, and perceived usefulness influence consumer purchase intention in the context of online shopping. Additionally, it examines the moderating role of commitment in shaping these relationships. Understanding these dynamics is crucial for businesses looking to enhance their online retail strategies and customer engagement. A quantitative approach was employed, using quantitative surveys and data was collected from 251 internet users. The study found that attitude, self-efficacy, subject norms, and perceived usefulness significantly influence online purchase intention. A positive attitude towards online shopping, higher self-efficacy in using online platforms, favorable subject norms, and perceived usefulness of online shopping platforms were all linked to increased purchase intention. Notably, commitment was observed to have a moderating effect, strengthening the relationship between these factors and purchase intention. High commitment levels enhanced the impact of positive attitudes, self-efficacy, and perceived usefulness on the likelihood of making online purchases. This research contributes to the existing literature by integrating various psychological and social factors under a unified framework to understand online consumer behavior. It highlights the importance of commitment as a moderating factor, offering new insights for online retailers. The findings provide valuable implications for developing targeted marketing strategies and improving online customer experiences, ultimately boosting online sales and customer loyalty.*

## 1. Introduction

E-commerce has become a prominent force in modern commerce, fundamentally transforming the way firms engage with consumers (Hong et al., 2023). With the growing popularity of online buying, it is crucial to comprehend the elements that impact the shift from intention to real purchase behavior (Baidoun et al., 2024). This research study explores the domain of E-commerce adoption, with a specific focus on the role of Commitment as a moderating element in converting customers' intention to purchase into actual buying behavior.

In the dynamic realm of e-commerce, comprehending customer behavior and the determinants impacting online purchase choices has become crucial for firms aiming to succeed in the digital marketplace (Cho & Sagynov, 2015). The rise of online shopping platforms has given consumers a wide range of options and opportunities. This has created a dynamic environment where their online purchase decisions are constantly influenced by internal and external influences (Hu et al., 2009). The study of online buying behavior is extensively explored in the realm of e-commerce. An essential component of this study involves comprehending the determinants that impact online buy intention, which refers to the probability of a consumer engaging in an online purchase. Commitment is a significant factor that pertains to the extent of a consumer's dedication or loyalty to a specific brand or online business (Liao et al., 2021). Commitment can serve as a mediator between PI and action, exerting an influence on the intensity of the connection between the two (Rehman et al., 2019). Multiple research studies have examined the determinants that impact the intention to make purchases online, which is a crucial element in the process of consumer decision-making. A study conducted by Anuj (2023) examined the influence of social networking sites (SNS) on customers' intention to make online purchases. The study identified several crucial characteristics, including social influence, knowledge sharing, trust, and consumer engagement, that had a favorable impact on consumers' inclination to buy products online. Online buy intention pertains to a consumer's explicit inclination or probability to participate in a transaction on an electronic commerce platform (Octalina et al., 2023).

The rise of online purchase may be attributed to the advancement of internet technology two decades ago. Online shopping has witnessed a surge in terms of enhanced security, a wider range of services, increased popularity, and improved efficiency (Rehman et al., 2019; Abed & Anupam, 2023). Multiple studies have shown that brand trust has a significant role in influencing brand commitment, PI, loyalty, and acceptance of brand extensions (Kim & Jones, 2009). With the growing competitiveness of the online marketplace, it is clear that there is a need to thoroughly explore the intricacies of online PI. Commitment has been found by researchers as a potential moderator, which means it can change the strength and type of the association between other variables. This sheds insight on the complexities of consumer decision-making in the digital domain (Shah et al., 2012; Basu et al., 2023). Furthermore, the significance of PU in determining intention cannot be disregarded when engaging in online buying (Rehman et al., 2019).

Several research have examined the role of online PI as a mediator, providing insights into the underlying processes and mechanisms by which external and internal factors impact the ultimate purchase choice in the online setting. An example is a research study that examined the influence of "Social Networking Sites" (SNS) on consumers' intention to make online purchases. The study found that active participation in SNS has a positive impact on consumers' willingness to make online purchases. This highlights the role of social networks in shaping consumer behavior and purchase choices (Anuj, 2023; Cho & Sagynov, 2015).

SE, derived from social cognitive theory, pertains to an individual's confidence in their capacity to carry out actions required to attain desired results. Within the realm of online purchase, SE plays a crucial role as a psychological determinant that affects a consumer's confidence and ability to navigate the digital marketplace, thereby influencing their overall behavior when making purchases online (Son & Lee, 2021). A study conducted by Faqih (2013) demonstrated a positive correlation between internet SE, online-shopping trust, and online-shopping intention. The study emphasized the significance of SE in influencing consumer behavior and purchase decisions. Subjective norms are the imagined social demands and expectations that individuals believe others place upon them. Subjective norms can exert a substantial influence on customer behavior within the realm of online purchase. PU refers to an individual's personal evaluation of how much a specific technology or system improves their performance and productivity (Bolodeoku et al., 2022). The PU of online purchase is a crucial determinant in consumers' assessment of the effectiveness and efficiency of digital platforms (Lim & Ting, 2012). Attitudes, which are commonly regarded as a fundamental aspect of consumer behavior theories, represent an individual's evaluative assessments and emotional reactions towards a specific object or behavior. Regarding online buying, attitudes can encompass a broad spectrum of sentiments, including the perceived convenience and trustworthiness of online platforms, as well as the perceived risk associated with digital transactions (Li, 2022). In a recent study conducted by Chen et al. (2022), it was discovered that attitude, subjective norm, perceived behavioral control, and social media have a significant impact on consumer PI towards street food vendors. This finding emphasizes the crucial role of attitudes in shaping consumer behavior and purchase choices. The phenomenon of online PI as a mediator has been thoroughly investigated, revealing the underlying mechanisms by which internal and external influences influence the ultimate decision to make a purchase in the online setting. Research examining the influence of Social Networking Sites (SNS) on online PI has demonstrated the favorable impact of SNS engagement on consumers' intentions to make online purchases. This research emphasizes the significant role of social networks in shaping consumer behavior and purchase decisions (Anuj, 2023; Cho & Sagynov, 2015). Furthermore, the importance of PU in the online purchase experience has been highlighted, emphasizing its role in affecting intention (Rehman et al., 2019).

To summarize, the complex nature of e-commerce highlights the need of comprehending consumer behavior and the various aspects that influence online buying choices. As organizations aim to succeed in the digital marketplace, the dynamics of online PI become important, with commitment playing a vital role in influencing the connection between intention and behavior

(Rehman et al., 2019; Iqbal et al., 2023). In order to thrive in the online marketplace, it is important to thoroughly examine the complexities involved and gain a better understanding of how consumers make decisions in the digital world (Shah et al., 2012; Basu et al., 2023).

## **2 Literature Review**

### **2.1 Theoretical Background**

#### **2.1.1 Theory of Planned Behavior**

The Theory of Planned Behavior is a psychological construct that examines the impact of individuals' beliefs on their behaviors. The identification encompasses three important components: attitude, perceived behavioral control, and subjective norms. These aspects influence individuals' deliberate actions. Essentially, it examines how an individual's perspectives, their perceived agency over their actions, and the societal influences they experience; converge to ascertain their likelihood of engaging in specific behaviors.

#### **2.1.2 Diffusion of Innovation Theory**

Diffusion of Innovation Theory, proposed by E.M. Rogers in 1962, explores the progressive dissemination of new ideas or goods throughout a community or civilization. This hypothesis is among the most ancient in the field of social science and plays a vital role in comprehending the process by which ideas become popular over time. It resembles the process of observing a nascent trend, wherein initially only a few of individuals adopt it, but over time, an increasing number of people begin to embrace it as they witness others doing the same. Both theories provide significant perspectives for comprehending human behavior, particularly in the context of embracing and adopting novel concepts or technologies. The Theory of Planned Behavior primarily examines individual intentions, whereas the Diffusion of Innovation Theory explores the collective development of these behaviors among groups.

### **2.3 Hypothesis Development**

#### **2.3.1 Attitude and Online Purchase Intention**

The word attitude refers to individuals' overall evaluation or a feeling about the concept of purchase products or services online is "online shopping perception." The factors encompassed in this study are the perception of convenience, trust in conducting online transactions, perceived simplicity of use, and overall contentment with the online purchase process (Tabatabaei, 2009). "Online purchase intention" is the term describe the probability or inclination of persons to participate in online purchase activities. The statement pertains to the correlation between persons' inclination to engage in online purchase and their attitudes and views towards it. The source cited is from Wen (2013). Researchers have examined the influence of several factors on the desire to make online purchases in diverse settings. The study conducted in China concludes that social commerce is not just an additional benefit, but rather a fundamental aspect of business. The study "How consumers' attitudes and electronic word-of-mouth influence online PI" discovered that guanxi factors, social

support, and electronic word-of-mouth had an impact on online purchase intents (Bilal et al., 2022). Moreover, a research conducted in Indonesia examined the inclination of individuals to buy halal cosmetics online. The study discovered that personal religious devotion and the importance placed on shopping have a favorable impact on attitudes, which subsequently affects the intention to make online purchases (Suparno, 2020).

***H1: Attitude has a positive impact on online purchase intention***

## **2.4 Subjective Norms and Online Purchase Intention**

Previous studies have examined the relationship between perceived norms and the intention to make online purchases. Alatawy (2022) discovered that subjective norms have a beneficial impact on the intention to purchase online health insurance in Saudi Arabia. Subjective norms have a significant impact on people's intention to make online purchases, as they influence individuals' decisions by considering their perception of social expectations. These expectations are shaped by the viewpoints and encounters exchanged within an individual's social circle, such as friends, family, or online evaluations, and play a role in establishing subjective norms (De Silva & Herath, 2019). Positive feedback, suggestions, and social proof, especially on platforms such as social media, are crucial in establishing a favorable atmosphere for online purchase. Furthermore, subjective norms, which are shaped by cultural norms, societal attitudes, and peer comparisons, play a significant role in determining an individual's inclination to participate in online shopping activities (Mosses et al., 2023). A study conducted on Generation Z and Millennials examined the factors that influence their online buying behavior towards organic cosmetics. The study indicated that subjective norms, health consciousness, trust, and attitude have a substantial impact on their intention to make online purchases (Hasbullah et al., 2023; Alvi et al., 2019; Lashari et al., 2016; Alvi et al., 2016).

***H2: Subjective norms have a positive impact on online purchase intention***

## **2.4 Self-efficacy and Online Purchase Intention**

The relationship between SE and the intention to make online purchases has been examined in many settings. A study on online shopping discovered that SE acts as a mediator between perceived control and PI. This means that when customers perceive a higher level of control, it can boost their SE and ultimately lead to a stronger intention to make a purchase. The study suggests that providing customer service that promotes a sense of control can have a positive impact on customers' SE and their likelihood to make a purchase (Li et al., 2018; Iqbal et al., 2023). A separate study sought to examine the impact of SE, perceived ease of use, and PU on behavioral intention in online purchase transactions. The study revealed that SE has a positive and significant influence on behavior. Furthermore, enhancing SE, perceived ease of use, and PU leads to an increase in online behavioral intention for purchase transactions (Yusvita, 2020). Hence, businesses have the ability to influence consumers' likelihood of making online purchases by focusing on and improving their SE through user-friendly interfaces, educational resources, and strong customer support. This approach creates

an atmosphere that promotes confidence and competence in online shopping activities (Lina et al., 2022).

***H3: Self-efficacy has a positive impact on online purchase intention***

## **2.5 Perceived usefulness and Online Purchase Intention**

The relationship between the perceived utility and the intention to make online purchases has been examined in many scenarios. A recent study examined the factors that affect customers' intentions to purchase domestic appliances online. The study revealed that customers' perception of the usefulness and practicality of the products had a negative impact on their intention to make a purchase. However, it was found that customers' intention to purchase online had a significant influence on their actual online purchase behavior (Bhardwaj et al., 2022). Perceived utility is a strong predictor in determining online PI. Consumers are inclined to acquire a favorable inclination towards making a purchase when they consider an online platform or product as being beneficial. Perceptions are frequently shaped by aspects such as the ease, effectiveness, and usefulness of the internet platform. Consumers are likely to see an e-commerce website or mobile app as useful if they believe it offers valuable features, easy navigation, and a seamless buying experience (Ventre & Kolbe, 2020). The correlation between PU and online PI is based on the concept that individuals are driven to participate in activities that they regard as advantageous. Within the realm of online buying, consumers are more likely to develop a desire to make a purchase when they believe that the online platform provides them with significant benefits. The advantages of the online platform can be linked to characteristics such as its ease, functionality, and utility (Mosses et al., 2023).

***H4: Perceived usefulness has a positive impact online purchase intention***

## **2.6 Online Purchase Intention and online Purchase Behavior**

Online purchase intention and online purchase behavior are distinct ideas, although they share a connection. Online purchase intention pertains to the level of customer willingness to make a purchase using online platforms, whereas online purchase behavior relates to the concrete action of actually buying a product online. Online purchase intention serves as an indicator of online purchase behavior, albeit it does not consistently result in tangible actions. Several variables can impact the correlation between online purchase intention and behavior, such as trust, perceived risk, and reference group opinion (Le-Hoang, 2020; Iqbal et al., 2023). An in-depth comprehension of the determinants that impact the intention to make online purchases can assist firms in devising efficacious marketing tactics to augment online sales and enhance consumer satisfaction (Peña García et al., 2020; Zhang et al., 2023). The correlation between online purchase intention and behavior can be greatly impacted by marketing techniques and online promotional endeavors. The implementation of successful digital marketing campaigns has the potential to significantly influence consumers' intentions and motivate them to engage in purchase behavior (Al-Adwan et al., 2022; Chen et al.,

2022). These campaigns can serve as potent incentives for purchase and result in spontaneous buying (Chen et al., 2022).

#### ***H5: Online Purchase Intention has positive impact on online Purchase Behavior***

### **2.7 Commitment as a Moderator**

The level of commitment can actually function as a mediator in the correlation between the intention to make a purchase and the behavior of making purchases online. Studies have demonstrated that a dedicated consumer is more inclined to convert their intention to purchase into tangible action, and the degree of dedication can either strengthen or weaken the connection between intention and behavior (Rehman et al., 2019). Various research has investigated the moderating function of commitment in diverse partnerships. A study conducted by Ioniță (2020) discovered that the perceived level of support from an organization affects the connection between job satisfaction and job commitment. This effect is especially significant for interns and volunteers. A separate study investigated how career commitment influences the connections between procedural justice, perceived organizational support, organizational commitment, and turnover intentions. According to Lin and Chen (2004), the study found that the impact of procedural justice on turnover intentions is more significant for those with high career commitment compared to those with low career commitment. Furthermore, studies have examined how brand commitment influences the acceptance of unfavorable electronic word-of-mouth (e-WOM) (Chang & Wu, 2014). It is essential for firms to comprehend and encourage dedication among online consumers in order to influence the conversion of buy intentions into actual online purchases (Rehman et al., 2019).

#### ***H6: Commitment positively moderates the relationship between online purchase intention and online purchase behavior.***

### **2.8 Purchase Intention as a Mediator**

The online purchase intention acts as a vital mediator between various psychological elements and the final action of making purchases on the internet. Perceived utility, SE, subjective norms, and attitudes all influence individuals' intentions to make online purchases. PU refers to consumers' subjective evaluations of the advantages and feasibility of making online purchases, which affects their willingness to participate in such transactions. SE pertains to individuals' belief in their competence to effectively manage the process of online buying (Bhardwaj et al., 2022). Subjective norms encompass the impact and endorsement of influential individuals on an individual's choice to participate in online buying. Studies have demonstrated that online purchase intention serves as a mediator between trust, PU, e-service quality, perceived behavior control, subjective norms, and consumer online shopping behavior. Moreover, Prabawa et al. (2022) discovered that perceived risk has an adverse impact on the intention to make online purchases, whereas trust has a favorable influence and acts as a mediator in the association between perceived risk and online purchase intention. Subjective norms have been observed to modify the association between perceived risk and

intention to make online purchases. Online purchase intention significantly influences individuals' perceptions, attitudes, and actual behavior when it comes to making purchases over the internet (Bhardwaj et al., 2022).

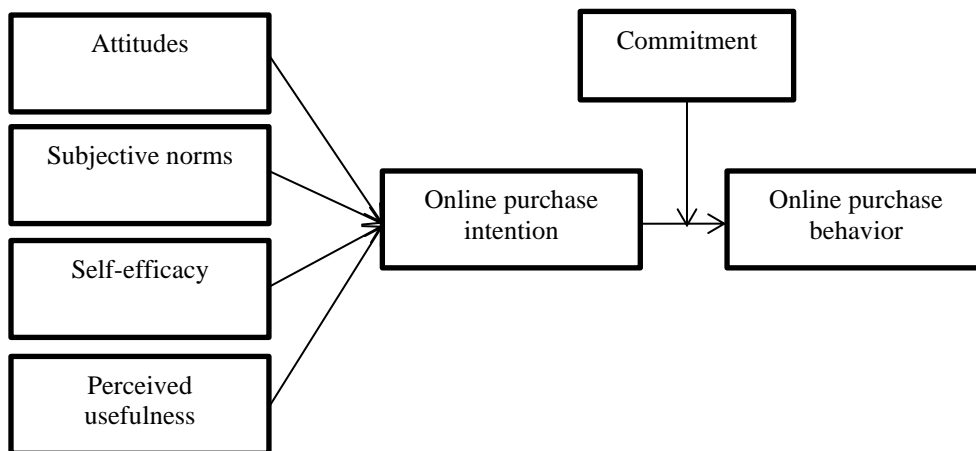
***H7: Purchase intention positively mediates the relationship between attitude and purchase behavior***

***H8: Online Purchase intention positively mediates the relationship between Subjective norms and online purchase behavior.***

***H9: Online Purchase intention positively mediates the relationship between Self-efficacy and Online purchase behavior.***

***H10: Online Purchase intention positively mediates the relationship between Perceived usefulness and online purchase behavior.***

**Figure No 1: The Conceptual Framework**



### 3. Methodology

This quantitative study examined how attitude, subjective norms, PU, and consumer PI affect online shopping behavior in Pakistani internet users, with a focus on commitment. The study examined online shoppers' behavior to understand digital commerce. The sample included 251 Pakistani online shoppers. To collect data, a structured survey questionnaire was distributed online. The survey measured demographics, attitude, subjective norms, PU, consumer PI, and commitment. Harman's single-factor test addressed common method bias (CMB) to ensure data accuracy and reliability (Podsakoff et al., 2003; Nadeem et al., 2021; Khan et al., 2019).

Study constructs were measured using validated scales. Surveys based on Davis (1989) and Ajzen (1991) measured attitude, subjective norms, PU, and commitment. Taylor and Todd (1995)



assessments measured consumer purchase intention. The no of items is mentioned in table no 2. All questions were scored on a Likert scale from 1 (strongly disagree) to 5 (strongly agree).

SmartPLS software was used for complex model testing and path analysis in behavioral research (Ringle, Wende, & Becker, 2015). The software's robustness allowed construct relationships and commitment moderating analysis. Common Method Bias Address, Harman's single-factor test, which assesses a single factor's ability to explain data variance, was used to eliminate common method bias (Podsakoff et al., 2003). Following Podsakoff, MacKenzie, and Podsakoff (2012), other procedural and statistical measures were taken to reduce common method bias.

#### 4. Results and Discussions

##### 4.1 Respondent’s Profile

**Table No 1: Respondent Profile**

Variables		Frequency	Percentage
Gender	Female	34	13.5
	Male	217	86.8
Age	18-25	82	32.6%
	26-39	84	33.4%
	50-59	85	33.8%
Internet Experience	< 1 year	25	9.9%
	1-3 years	70	27.8%
	4-6 years	61	24.3%
	> 7 years	95	37.8%
Income	10,000 to 25000	50	19.9%
	25,001 to 50,000	70	27.8%
	50,001 to 75000	110	43.8%
	75,000 to 100,000	15	5.9%
	100,000 Above	6	2.3%

The above table shows the respondent demographic profile of 251 survey participants. Men make up 83.8% (217 people) of the sample, while women make up 13.5% (34 people). Overall, 32.4% of responders are 18-25, 33.6% are 26-39, and 34% are 50-59. The data shows that 9.9% have less than a year of internet experience, 27.8% for 1-3 years, 24.3% for 4-6 years, and 37.8% for more than 7 years. Income levels differ across members. 19.9% earn between 10,000 and 25,000, 27.8% between 25,001 and 50,000, and 43.8% between 50,001 and 75,000. 5.9% earn between 75,000 and 100,000, and 2.3% earn over 100,000. This data provides insights into the demographic and socio-economic composition of the surveyed group.

## 4.2 Reliability and Validity

**Table No 2. Outer loading, Composite reliability, Average variance extracted**

Construct	Item	Loading	CR	AVE
Attitude	ATT1	0.801	0.801	0.574
	ATT2	0.682		
	ATT3	0.784		
Commitment	C1	0.772	0.804	0.574
	C2	0.794		
	C3	0.714		
	C4	0.748		
Purchase behavior	PB1	0.749	0.91	0.558
	PB2	0.72		
	PB3	0.778		
	PB4	0.737		
	PB5	0.756		
	PB6	0.75		
	PB7	0.732		
	PB8	0.749		
Purchase intention	PI1	0.805	0.851	0.656
	PI2	0.801		
	PI3	0.824		
Perceived usefulness	PU1	0.755	0.847	0.58
	PU2	0.787		
	PU3	0.763		
	PU4	0.741		
Self-efficacy	SF1	0.718	0.883	0.557
	SF2	0.777		
	SF3	0.719		
	SF4	0.768		
	SF5	0.691		
	SF6	0.8		
Subjective norms	SN1	0.788	0.863	0.678
	SN2	0.83		
	SN3	0.852		

Notes: Std L = Standard loading, CR Composite reliability, AVE = Average variance extracted

The table shows reliability and validity statistics for online shopping behavior study constructs. Multiple items measure each construct, and loadings, composite reliability (CR), and average variance (AVE) are reported. The three items (ATT1, ATT2, ATT3) for the construct

'Attitude' have loadings from 0.682 to 0.801, demonstrating good item reliability. This construct's composite reliability is 0.801, over the normal 0.7 criterion, indicating high internal consistency. The AVE is 0.574, exceeding the minimum 0.5, suggesting convergent validity. Four items (C1–C4) measure 'commitment' with loadings between 0.714 and 0.794. The composite reliability is 0.804 and the AVE is 0.574, meeting reliability and convergent validity standards. 'Purchase Behavior' has eight items (PB1–PB8) with loadings 0.72–0.778. This construct has great reliability and validity with a composite reliability of 0.91 and an AVE of 0.558. Three items (PI1–PI3) assess 'PI' with high loadings from 0.801 to 0.824. The build has an above-acceptable CR of 0.851 and AVE of 0.656. 'PU' has four items (PU1–PU4) with loadings between 0.741 and 0.787. The CR is 0.847 and AVE is 0.58, showing strong reliability and validity. Six questions (SF1–SF6) measure 'SE' with loadings from 0.691 to 0.8. With a CR of 0.883 and an AVE of 0.557, the construct has good internal consistency and convergent validity. Finally, three items (SN1–SN3) test 'Subjective Norms' with high loadings from 0.788 to 0.852. This concept has a CR of 0.863 and an AVE of 0.678, showing high reliability and validity. According to loadings, CR, and AVE values, all constructs in the study are measured reliably and validly.

### 4.3 Discriminant validity

The table nO shows the results. This helps determine if the constructs (or variables) you're researching are distinct. Your table has rows and columns for ATT, C, PB, PI, PU, SF, and SN. The square roots of the Average Variance Extracted (AVE) for each construct are the diagonal values (0.758 for ATT, C, PB, PI, PU, SF, and SN). AVE's square root provides a threshold for comparing construct variation to measurement error variance. Each row and column's off-diagonal values are construct correlations. The correlation between ATT and C is 0.642, PB is 0.696, etc. The square root of the AVE of any construct (diagonal values) must be greater than its correlations with any other construct (off-diagonal values in its row/column) to meet the Fornell-Larcker criterion. This suggests that each construct is more strongly related with its own indicators than with others, confirming its uniqueness. The table shows that diagonal values are higher than off-diagonal values in their rows and columns, indicating that the constructs are distinct and the model meets the Fornell-Larcker criterion. This suggests discriminant validity in your model.

**Table No 5. Fornell Larker Criterion**

	ATT	C	PB	PI	PU	SF	SN
ATT	0.758						
C	0.642	0.758					
PB	0.696	0.766	0.747				
PI	0.584	0.692	0.749	0.81			
PU	0.675	0.795	0.757	0.695	0.761		
SF	0.754	0.77	0.797	0.72	0.809	0.747	
SN	0.659	0.684	0.694	0.684	0.654	0.73	0.824

**Table No 6: Path Coefficients**

Constructs	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-statistics	P-values
ATT -> PI	-0.023	-0.015	0.088	0.265	0.791
C -> PB	0.458	0.463	0.072	6.378	0.000
PI -> PB	0.452	0.446	0.072	6.268	0.001
PU -> PI	0.273	0.272	0.097	2.824	0.005
SF -> PI	0.292	0.294	0.111	2.622	0.009
SN -> PI	0.308	0.305	0.085	3.63	0.000
C x PI -> PB	0.115	0.121	0.047	2.452	0.014

The above table show rows represent construct relationships, and the columns offer statistics. First, the analysis shows that ATT (a construct) and PI have a small negative effect size (-0.023), but the T-statistic is low (0.265) and the p-value is high (0.791), suggesting that this relationship may not be meaningful. However, C and PI have positive and substantial impacts on PB, with effect sizes of 0.458 and 0.452, respectively. These correlations are statistically significant (p-values near to zero), indicating a strong association. PU and PI are also associated (p-value = 0.005), with a modest effect size of 0.273, although not as strongly as C and PB or PI and PB. SF and SN also positively correlate with PI, with moderate effect sizes and statistically significant results (p-values of 0.009 and 0, respectively). Finally, the interaction effect of C x PI on PB is statistically significant (p-value = 0.014) with a modest effect size of 0.115, demonstrating that C and PI affect PB beyond their independent effects. These data show which constructs are related in the research setting and how strongly they are related. These findings can inform field research and theoretical model building.

**Table No 7: Specific Indirect Effect**

Relationships	Original sample (O)	Sample mean (M)	STD	T-statistics	P values
PU -> PI -> PB	0.124	0.12	0.044	2.788	0.005
ATT -> PI -> PB	0.011	-0.007	0.04	0.265	0.791
SF -> PI -> PB	0.132	0.132	0.058	2.294	0.022
SN -> PI -> PB	0.139	0.136	0.045	3.087	0.002

The table shows indirect effect outcomes from studies on construct relationships. The columns show statistics, and each row shows a relationship. First, the indirect effect of PU on PB through PI is significant ( $p$ -value = 0.005) and favorable (effect size 0.124). PI may mediate this link, as PU indirectly affects PB through PI. ATT's indirect effect on PB through PI is not statistically significant ( $p$ -value = 0.791), with a tiny effect size of 0.011. It follows that PI does not meaningfully mediate the link between ATT and PB. SF indirectly affects PB through PI, which is statistically significant ( $p$ -value = 0.022) with a positive effect size of 0.132. Finally, the indirect effect of SN on PB via PI is substantial ( $p$ -value = 0.002) with a positive effect size of 0.139. PI mediates this association, suggesting that SN indirectly influences PB through PI. In conclusion, these indirect effect data show how PI mediates the influence of particular variables on PB. Some PI-mediated correlations are statistically significant, whereas others are not. These findings illuminate the research context's intricate construct interactions.

## 5. Conclusion and Discussion

The study shows that attitude, subjective norms, and PU strongly influence online purchase intentions. These components, founded in the Theory of Planned Behavior and the Technology Acceptance Model, have continually influenced e-commerce situations. The study confirms prior research that attitude strongly influences consumer predispositions and intentions (George, 2004). As Fishbein and Ajzen (1975) claimed, subjective norms, which reflect social effects on consumer behavior, have a significant impact on online purchase decisions. This study confirmed Davis's (1989) claim that PU drives technology uptake. The practicality and efficiency of online shopping platforms influence consumer attitudes and purchases. However, its exploration of commitment's moderating effect is its most groundbreaking contribution. Commitment strengthens the link between these psychological characteristics and PI, supporting Moorman, Zaltman, and Deshpande (1992) and Gundlach, Achrol, and Mentzer (1995). The findings have various e-commerce marketing and strategy implications. Retailers should improve user experience and employ social proof to change consumer opinions, knowing that consumer attitudes are impacted by social norms and perceived utility. The importance of perceived utility means that e-commerce platforms must constantly improve and streamline their services to ensure that consumers see actual benefits in shopping online over traditional ways. The moderating effect of commitment emphasizes the need for long-term consumer connections. Businesses should promote loyalty and trust because they reinforce the direct impacts of attitude, subjective standards, and perceived utility on PI and encourage prolonged consumer involvement and repeat purchases. This research advances consumer behavior theory in the digital marketplace and informs e-commerce initiatives. Future study could examine these linkages across cultural contexts and product categories to better understand how they interact in diverse e-commerce environments.

### 5.1 Limitations and future research directions

There are several limitations of the study. This study's generalizability is a major limitation. The research focused on a specific customer group, thus the results may not apply to everyone. To

test the findings in multiple circumstances, future research should duplicate the study across customer categories and cultures. This study used a cross-sectional design to capture data at one time. Online purchase intention dynamics can be better understood through longitudinal research of attitudes, norms, usefulness, and commitment. This study used self-report measures, which might be prone to response biases and social desirability effects. To better understand consumers' online buying intents, future research should include behavioral and observational data. This study examined commitment's moderating role but did not examine its methods or aspects that may affect relationships. Future research could examine how attitudes, norms, and PU affect emotional and continuance commitment.

Future study should examine how commitment moderates attitudes, norms, perceived utility, and online purchase intention. Marketing and business insights can come from understanding the processes. Examining how industry-specific traits or market maturity affect this study's linkages can provide a more detailed perspective. Attitudes, conventions, and perceived utility affect online purchase intention differently across industries. Different consumer commitment levels may react differently to the elements researched. Segment-specific analytics reveal unique trends and preferences, enabling more focused marketing. Understanding how attitudes, norms, and perceived utility affect online purchase intention and change as commitment increases can help customer retention and loyalty initiatives. Controlled manipulations of attitudes, norms, and perceived utility can reveal causal links. Experiments isolate elements affecting online purchase intention. Technological Advancements: Attitudes, norms, and perceived utility may modify online buying intention as technology advances. To stay relevant and helpful for digital organizations, future research should adapt to new technologies and platforms. By addressing these limitations and exploring these future research directions, scholars can better understand the complex relationship between attitudes, SN, PU, commitment, and online purchase intention, which can help digital businesses succeed.

## 6. References

- Abed, A. K., & Anupam, A. (2023). Review of security issues in Internet of Things and artificial intelligence-driven solutions. *Security and Privacy*, 6(3), e285
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Al-Adwan, A. S., Alroushan, M. K., Yaseen, H., Alkufahy, A. M., & Alsoud, M. (2022). Boosting Online Purchase Intention in High-Uncertainty-Avoidance Societies: A Signaling Theory Approach. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3), 136. <https://doi.org/10.3390/joitmc8030136>
- Alatawy, K. S. (2022). Consumers' Purchase Intention Toward Online Health Insurance in Saudi Arabia. *International Journal of Marketing Studies*, 14(2), 121. <https://doi.org/10.5539/ijms.v14n2p121>
- Alvi, A. K., Arshad, R., & Syed, S. (2016). Relationship of Charismatic Leadership, Leadership Effectiveness and Team Performance in Employees of a Microfinance Bank of Lahore. *Science International*, 28(5), 65-72.

- Alvi, A. K., Lashari, R. H., UR Rehman, S., Kaur, P., & Jawaid, A. (2019). The impact of organizational justice on organizational performance in viewpoint of employee voice. *European Online Journal of Natural and Social Sciences*, 8(4), 624-641.
- Anuj, A. (2023). Impact of “Social Networking Sites” and “Online Purchase Intention”: A Quantitative Investigation. *Psychology and Education*, 55(1). <https://doi.org/10.48047/pne.2018.55.1.85>
- Baidoun, S. D., & Salem, M. Z. (2024). The moderating role of perceived trust and perceived value on online shopping behavioral intention of Palestinian millennials during COVID-19. *Competitiveness Review: An International Business Journal*, 34(1), 125-143.
- Basu, R., Lim, W. M., Kumar, A., & Kumar, S. (2023). Marketing analytics: The bridge between customer psychology and marketing decision-making. *Psychology & Marketing*, 40(12), 2588-2611.
- Bhardwaj, A., Kumar, V., Sharma, A., & Narula, A. (2022). Analyzing the mediating effect of consumer online purchase intention in online shopping of domestic appliances. *Journal of Information and Optimization Sciences*, 43(7), 1499–1515. <https://doi.org/10.1080/02522667.2022.2128510>
- Bilal, M., Akram, U., Rasool, H., Yang, X., & Tanveer, Y. (2022). Social commerce isn't the cherry on the cake, its the new cake! How consumers' attitudes and eWOM influence online purchase intention in China. *International Journal of Quality and Service Sciences*, 14(2), 180–196. <https://doi.org/10.1108/IJQSS-01-2021-0016>
- Bolodeoku, P. B., Igbino, E., Salau, P. O., Chukwudi, C. K., & Idia, S. E. (2022). Perceived usefulness of technology and multiple salient outcomes: The improbable case of oil and gas workers. *Heliyon*, 8(4), e09322. <https://doi.org/10.1016/j.heliyon.2022.e09322>
- Chang, H. H., & Wu, L. H. (2014). An examination of negative e-WOM adoption: Brand commitment as a moderator. *Decision Support Systems*, 59, 206–218. <https://doi.org/10.1016/j.dss.2013.11.008>
- Chen, B., Wang, L., Rasool, H., & Wang, J. (2022). Research on the Impact of Marketing Strategy on Consumers' Impulsive Purchase Behavior in Livestreaming E-commerce. *Frontiers in Psychology*, 13. <https://www.frontiersin.org/articles/10.3389/fpsyg.2022.905531>
- Chen, T., Samaranyake, P., Cen, X., Qi, M., & Lan, Y.-C. (2022). The Impact of Online Reviews on Consumers' Purchase Decisions: Evidence From an Eye-Tracking Study. *Frontiers in Psychology*, 13. <https://www.frontiersin.org/articles/10.3389/fpsyg.2022.865702>
- Chieh-Peng Lin & Mei-Fang Chen. (2004). Career Commitment as a Moderator of the Relationships among Procedural Justice, Perceived Organizational Support, Organizational Commitment, and Turnover Intentions. *Asia Pacific Management Review*, 9(3). <https://doi.org/10.6126/APMR.2004.9.3.07>
- Cho, Y. C., & Sagynov, E. (2015). Exploring Factors That Affect Usefulness, Ease Of Use, Trust, And Purchase Intention In The Online Environment. *International Journal of Management & Information Systems (IJMIS)*, 19(1), Article 1. <https://doi.org/10.19030/ijmis.v19i1.9086>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- De Silva, A. C., & Herath, H. M. A. (2019). Impact of Intrinsic Factors and Subjective Norms that Influence Purchase Intention in Sri Lankan Online Retail Apparel Industry. *Kelaniya Journal of Human Resource Management*, 14(2), 16. <https://doi.org/10.4038/kjhrm.v14i2.67>
- Faqih, K. M. (2013). Exploring the influence of perceived risk and internet self-efficacy on consumer online shopping intentions: Perspective of technology acceptance model. *International Management Review*, 9(1), 67-77.

- Fishbein, M., & Ajzen, I. (1975). Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research. *Addison-Wesley*.
- George, J. F. (2004). The theory of planned behavior and Internet purchase. *Internet Research*, 14(3), 198-212.
- Gundlach, G. T., Achrol, R. S., & Mentzer, J. T. (1995). The structure of commitment in exchange. *Journal of Marketing*, 59(1), 78-92.
- Hasbullah, N. A., Osman, A., Abdullah, S., Salahuddin, S. N., Ramlee, N. F., & Soha, H. M. (2016). The relationship of attitude, subjective norm and website usability on consumer intention to purchase online: An evidence of Malaysian youth. *Procedia Economics and Finance*, 35, 493-502.
- Hong, Y., Sawang, S., & Yang, H. P. (2023). How is entrepreneurial marketing shaped by E-commerce technology: a case study of Chinese pure-play e-retailers. *International Journal of Entrepreneurial Behavior & Research*.
- Hu, Y., Sun, X., Zhang, J., Zhang, X., Luo, F., & Huang, L. (2009). A University Student Behavioral Intention Model of Online Shopping. 2009 *International Conference on Information Management, Innovation Management and Industrial Engineering*, 625–628. <https://doi.org/10.1109/ICIII.2009.156>
- Ioniță, A. (2020). Job Satisfaction and Commitment at the Workplace. *Perceived Organizational Support as a Moderator*. *Studia Doctoralia*, 11(1), 17–23. <https://doi.org/10.47040/sd0000079>
- Iqbal, A. I., Ali, U. A., Iqbal, M. S., Ismail, F., & Ali, S. M. (2023). Unveiling the Black Box of Influencer Marketing: The moderating role of Parasocial interaction and persuasion knowledge. *International Journal of Social Science & Entrepreneurship*, 3(4), 134-157.
- Iqbal, A., Aleem, U., Quratulain, S., & Sufyan, M. (2023). Investigating the Influence of Trust, Attractiveness, Perceived Expertise, and Perceived Credibility on Attitude Toward the Influencer: The Mediating Role of Attitude Toward the Influencer and Moderating Role and Perceived Risks. *KASBIT Business Journal*, 16(3), 41-60.
- Iqbal, A., Kazmi, S. Q., Anwar, A., Ramish, M. S., & Salam, A. (2023). Impact Of Green Marketing On Green Purchase Intention And Green Consumption Behavior: The Moderating Role Of Green Concern. *Journal of Positive School Psychology*, 975-993.
- Khan, M. Y., Alvi, A. K., & Chishti, M. F. (2019). An Investigation on The Linkages Between Poverty and Education: A Statistical Review. *Gomal University Journal of Research*, 35(1), 44-53.
- Kim, S., & Jones, C. (2009). Online shopping and moderating role of offline brand trust. *Direct Marketing: An International Journal*, 3(4), 282–300. <https://doi.org/10.1108/17505930911000874>
- Lai, E., & Wang, Z. (2012). An empirical research on factors affecting customer purchase behavior tendency during online shopping. In Paper presented at the software engineering and service science (ICSESS), 2012 IEEE 3rd international conference on. Laohapensang, O. (2009). Factors influencing internet shopping behavior: A survey of consumers in Thailand. *Journal of fashion marketing and management: An international journal*, 13(4), 501–513.
- Lashari, R. H., Alvi, A. K., & Farooq, H. M. (2016). The impact of organisational climate on knowledge management in banking sector of Lahore, Pakistan. *Science International*, 28(5), 81-86.
- Le-Hoang, P. V. 1 1 H. C. M. C. O. U. (2020). Factors Affecting Online Purchase Intention: The Case of E-Commerce on Lazada. 1018–1033. <https://doi.org/10.14807/ijmp.v11i3.1088>
- Li, Y., Xu, Z., & Xu, F. (2018). Perceived control and purchase intention in online shopping: The mediating role of self-efficacy. *Social Behavior and Personality: An International Journal*, 46(1), 99–105. <https://doi.org/10.2224/sbp.6377>



- Liao, C., To, P.-L., & Liu, C.-C. (2013). A motivational model of blog usage. *Online Information Review*, 37(4), 620–637.
- Lim, Y. J., Osman, A., Salahuddin, S. N., Romle, A. R., & Abdullah, S. (2016). Factors influencing online shopping behavior: The mediating role of purchase intention. *Procedia Economics and Finance*, 35, 401–410.
- Liao, S.-H., Hu, D.-C., Chung, Y.-C., & Huang, A.-P. (2021). Risk and opportunity for online purchase intention – A moderated mediation model investigation. *Telematics and Informatics*, 62, 101621. <https://doi.org/10.1016/j.tele.2021.101621>
- Lim, W. M., & Ting, D. H. (2012). E-shopping: An Analysis of the Technology Acceptance Model. *Modern Applied Science*, 6. <https://doi.org/10.5539/mas.v6n4p49>
- Lina, Y., Hou, D., & Ali, S. (2022). Impact of online convenience on generation Z online impulsive buying behavior: The moderating role of social media celebrity. *Frontiers in Psychology*, 13, 951249.
- Moorman, C., Zaltman, G., & Deshpande, R. (1992). Relationships between providers and users of market research: The dynamics of trust within and between organizations. *Journal of Marketing Research*, 29(3), 314–328.
- Mosses, U. D. S., Sajeewanie, L. A. C., & Perera, K. O. E. (2023). Factors that Affect Consumers' Online Purchase Intention with Special Reference to Colombo District. *International Journal of KIU*, 33–40. <https://doi.org/10.37966/ijkiu2023041040>
- Nadeem, M. A., Alvi, A. K., & Rehman, K. U. (2021). The Relationship of Proactive Personality with The Organizational Citizenship Behavior: Intervening Role of Thriving at Work. *Gomal University Journal of Research*, 37(2), 134–141.
- Octalina, L. E., Rahimah, A., & Arifin, Z. (2023). Exploring the Contingent Role of Effort Expectancy on Online Purchase Intention in E-commerce Application. *Jurnal Manajemen Teori Dan Terapan | Journal of Theory and Applied Management*, 16(1), 144–161. <https://doi.org/10.20473/jmtt.v16i1.41398>
- Peña García, N., Saura, I., Rodríguez-Orejuela, A., & Siqueira, J. (2020). Purchase intention and purchase behavior online: A cross-cultural approach. *Heliyon*, 6, 1–11. <https://doi.org/10.1016/j.heliyon.2020.e04284>
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539–569.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Prabawa, A. B., Marthanagara, C., Biagi, M. C., Gui, A., Suryanto, & Karmawan, I. G. M. (2022). Analysis of Factors Affecting Consumer Online Purchase Intention in Indonesia. 2021 *International Seminar on Machine Learning, Optimization, and Data Science (ISMODOE)*, 283–288. <https://doi.org/10.1109/ISMODOE53584.2022.9742847>
- Rehman, S. U., Bhatti, A., Mohamed, R., & Ayoup, H. (2019). The moderating role of trust and commitment between consumer purchase intention and online shopping behavior in the context of Pakistan. *Journal of Global Entrepreneurship Research*, 9(1), 43. <https://doi.org/10.1186/s40497-019-0166-2>
- Ringle, C. M., Wende, S., & Becker, J.-M. (2015). *SmartPLS 3*. Boenningstedt: SmartPLS GmbH.
- Rogers, E. M., Singhal, A., & Quinlan, M. M. (2014). Diffusion of innovations. In *An integrated approach to communication theory and research* (pp. 432–448). Routledge.

- Shah, S., Aziz, J., Jaffari, A. R., Waris, S., Ejaz, W., Fatima, M., & Sherazi, S. (2012). The impact of brands on consumer purchase intentions. *Asian Journal of Business Management*, 4, 105–110.
- Son, H., & Lee, J. (2021). Does online shopping make people feel better? The therapeutic effect of online shopping on Korean female consumers' mood, self-esteem, and self-efficacy : Based on the context of fashion product shopping. *Journal of Global Scholars of Marketing Science*, 31(4), 580–597. <https://doi.org/10.1080/21639159.2020.1808821>
- Suparno, C. (2020). Online purchase intention of halal cosmetics: S-O-R framework application. *Journal of Islamic Marketing*, 12(9), 1665–1681. <https://doi.org/10.1108/JIMA-09-2019-0192>
- Tabatabaei, M. (2009). Online Shopping Perceptions Of Offline Shoppers. *Issues In Information Systems*. [https://doi.org/10.48009/2\\_iis\\_2009\\_22-26](https://doi.org/10.48009/2_iis_2009_22-26)
- Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6(2), 144-176.
- Ventre, I., & Kolbe, D. (2020). The Impact of Perceived Usefulness of Online Reviews, Trust and Perceived Risk on Online Purchase Intention in Emerging Markets: A Mexican Perspective. *Journal of International Consumer Marketing*, 32(4), 287–299. <https://doi.org/10.1080/08961530.2020.1712293>
- Wen, I. (2013). Online Shopping of Travel Products: A Study of Influence of Each Dimension of travelers' Attitudes and the Impact of travelers' Online Shopping Experiences on Their Purchase Intentions. *International Journal of Hospitality & Tourism Administration*, 14(3), 203–232. <https://doi.org/10.1080/15256480.2013.809973>
- Yusvita, R. M. (2020). Influence of Self-Efficacy , and Perceived Ease Of Use , Perceived Usefulness Behavioral Intention To Purchase Online In Tokopedia With Perceived Risk , As Variable Mediation ( Studies in Society Padang ). <https://www.semanticscholar.org/paper/Influence-of-Self-Efficacy-%2C-and-Perceived-Ease-Of-Yusvita/c07c0f144dc12ea55ab333f7a2595431a8302b33>
- Zhang, M., Hassan, H., & Migin, M. (2023). Exploring the Consumers' Purchase Intention on Online Community Group Buying Platform during Pandemic. *Sustainability*, 15, 2433. <https://doi.org/10.3390/su15032433>