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THE IMPACT OF DIGITAL DEPENDENCY, ONLINE IMPULSE BUYING, AND SOCIAL MEDIA ENGAGEMENT ON PURCHASE INTENTION: THE MEDIATING ROLE OF CONSUMER TRUST

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KEYWORDS	ABSTRACT
digital dependency; online impulse buying; social media engagement; consumer trust; purchase intention; social commerce	<p>This study aims to investigate the relationship between digital dependency, online impulse buying tendency and purchase intention mediated by consumer trust as a mediator. The study is based on Stimulus-Organism-Response framework and trust-transfer theory; and is conducted on adult online consumers in Sindh province in Pakistan. The quantitative cross-sectional survey design is applied with the help of well-established multi-item measures and SPSS analysis. Descriptive statistics, reliability testing, Pearson correlations, hierarchical regression and mediation analysis using Hayes' PROCESS Model 4 are included in the analysis. The results show that digital dependency positively influences purchase intention, as does the tendency to buy online impulsively and social media engagement. The three predictors also significantly impact consumer trust, with social media engagement having the greatest impact on trust ($\beta = .307, p < .001$). The final regression model accounts for 37.2% of the variance in purchase intention and consumer trust significantly predicts purchase intention ($\beta = .261, p < .001$). Mediation analysis also reveals that the relationships between digital dependency and online impulse buying tendency, social media engagement and purchase intention are mediated in part by consumer trust. Social media engagement has the highest mediation effect in terms of indirect effects, mediated by consumer trust (indirect effect = .091, 95% CI [.057, .130]). Overall, the findings reflect the critical role of consumer trust in increasing their online purchasing intentions among online consumers in Sindh based on their digital engagement and online purchasing tendency.</p>
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Introduction

Digital platforms have revolutionized the way consumers find products, research options, reach out to sellers, and make purchases. Social media pages, short video platforms, online marketplaces, influencer content, mobile payment systems, and more are now the different components of the consumer journey. Product exposure isn't just about looking for products because now consumers can see products when they are scrolling through social media or watching entertainment content, reading comments, or joining online communities. This setting provides significant commercial opportunities but there are also concerns regarding excessive digital use, impulsive buying, credibility, privacy and trust (Davis 1989, Pavlou 2003, State Bank of Pakistan 2025).

This study is concerned with three consumer-related factors; digital dependency, the tendency to buy when online, and social media engagement. Digital dependency is the heavy use of digital devices and services and being unable to control digital use. Online impulse buying tendency refers to unexpected and somewhat unplanned purchases made online. Social media engagement is a measure of consumers' cognitive attention, emotional involvement, and behavioral interaction with social media content, online communities, influencers, sellers, and brands. There is a relationship between these constructs but they are different aspects of consumer behavior. One consumer might spend many hours online and not buy something, while another could buy something after receiving a nice discount. Likewise, when overall digital dependency is moderate, a highly involved social media user could actively follow, comment and share, as well as evaluate product content on social media platforms (Kesici & Tunç, 2018; Brand et al., 2022; Hollebeek et al., 2014).

Purchase intention is a critical measure for online consumer research since it shows consumers' willingness or probability to buy from a merchant, website, or company. While a high purchase intention does not necessarily lead to actual purchase, it is still a valuable measure of consumer decision-making. In online and social-commerce contexts, the factors that can influence purchase intention are convenience, usefulness, social influence, price, credibility, reviews, perceived risk, and trust. There are additional risks involved in online transactions compared to those that occur in a brick-and-mortar store because it is difficult to physically examine the product, check out the seller, or assess the quality of the service before paying for it. Consumer trust is therefore especially important, as it helps mitigate perceived uncertainty and boost the confidence in the transaction process (Ajzen, 1991; Dodds et al., 1991; Gefen et al., 2003).

In this study, consumer trust is explored as a mediator. It is the notion that an online seller, platform or brand is knowledgeable, trustworthy, ethical and will not exploit the consumer. Trust has been found to positively affect online purchase intention in the past, and can mediate the influence of platform familiarity, social interaction, information quality, and other digital experiences. Digital dependency, impulse buying tendency, and social media engagement can therefore impact purchase intention via increased exposure or emotional stimulation, or due to changes in consumers' perceptions of reliability of the seller, online information, security of payment, and credibility of the transaction (McKnight et al., 2002; Morgan & Hunt, 1994; Hajli et al., 2017).

Sindh Province is relevant for the analysis of these relationships as it encompasses highly connected consumers in the metropolitan cities as well as consumers from secondary cities and less densely connected districts. There are a number of major commercial and digital markets, including Karachi, and a range of different digital access, income, education, platform use, and online shopping experience, as seen in the other markets including Hyderabad, Sukkur, Larkana, Mirpurkhas, Shaheed Benazirabad, and others. The variations make it even more beneficial to conduct a province-wide investigation which can offer a wider picture of the online consumer behaviour in comparison to studies limited to the city or study population of any university (Pakistan Bureau of Statistics, 2025; State Bank of Pakistan, 2025).

Although social media, digital marketplaces, influencer marketing, live-stream commerce and targeted advertising are on the rise, there are limited evidences that explain the combined influence of digital dependency, online impulse buying tendency and social media engagement on purchase intention among consumers in the province of Sindh. Constant connectivity can lead to the exposure of additional commercial messages, as well as less time for careful consideration and evaluation; limited-time offers, personalised recommendations, convenient payment options and one-click purchasing can help to encourage spontaneous purchases. Meanwhile, social media participation can help build familiarity and social influence, while also potentially offering up false claims, misinformation and unverified sellers. Whether these factors affect purchase intention, however, is not the only question of interest; whether consumer trust is the reason for these effects and how is also of interest.

Therefore, this study focuses on the impact of digital dependency, online impulse buying tendency and social media engagement on purchase intention of online consumers in Sindh. It also examines the impact of the three predictors on consumer trust, the impact of consumer trust on purchase intention, and the mediation of consumer trust between the three predictors and the purchase intention. Moreover, the study aims to explore the most significant factor that affects consumer trust and buying intentions and suggest some practical recommendations for online retailers, social-commerce sellers and online marketers in Sindh.

Several key questions are answered in the study: How digital dependency influences purchase intention? Does the tendency to buy on impulse online increase consumers' willingness to buy? Does the level of social media engagement increase purchase intention? Do these three factors significantly influence consumer trust? It also explores whether consumer trust is an independent predictor of purchase intention and whether consumer trust acts as an intervening variable between digital and behavioral attributes and consumers' intention to purchase on the internet.

The study has theoretical, methodological, contextual and practical dimensions. In theory, it incorporates all these factors—namely, digital dependence, online impulse purchase, social media use, consumer trust, and purchase intention—in one. In the methodological aspect it used a multi-city approach for adults online consumers, which differs from the approach of limiting the sample to university students and a single geographical area. In the context of the research, it adds

evidence from the province of Sindh where the digital purchasing conditions and extent of online engagement is different in various cities and demographic groups. The results have practical applications as well: For online retailers and social-commerce sellers, the findings show that increased exposure and engagement to a product or service does not always lead to increased purchase intention unless the customers feel the product is sold by a trustworthy seller and in a trustworthy environment. The research can also contribute to consumer awareness campaigns by helping to determine the conditions under which the spontaneous occurs online and in psychology.

Literature Review

Theoretical Foundation

Stimulus-Organism-Response Framework

The Stimulus-Organism-Response model provides a description of how external or behavioral stimuli affect internal evaluations and elicit a response. Online retail: website cues, social interaction, messages, platform features, repeated digital exposure can act as stimuli. The organism corresponds to their internal cognitive and emotional state, the response to approach or avoidance behaviour. The current model conceptualizes digital dependency, online impulse buying tendency, and social media engagement as factors that influence a consumer's internal judgment of trust. Consumer trust is then the response to the purchase intention. The framework is suitable as it offers an understanding of why a relatively identical exposure to the digital medium can result in different buying behaviors from the consumer's perspective, based on his or her internal credibility and safety assessment.(Mehrabian & Russell, 1974)

Trust-Transfer Theory

Trust-transfer theory proposes that trust developed in a familiar entity or environment can extend to a related but less familiar target. In social commerce, familiarity with a platform, positive interactions with peers, established brand presence, and credible reviews can transfer trust to an online seller or transaction. This perspective complements the Stimulus-Organism-Response framework by explaining how repeated use and social interaction may reduce uncertainty. It also highlights that trust is not produced by exposure alone. Transfer is more likely when consumers perceive a meaningful connection between the trusted source and the seller or product. (Kim & Park, 2013; Irshad et al., 2020)

Digital Dependency

Digital dependency is a broad pattern of psychological and behavioral reliance on digital devices, applications, and connected environments. It includes persistent checking, discomfort when disconnected, difficulty limiting use, interference with routines, and the tendency to organize daily activity around digital access. It differs from productive digital engagement because the defining feature is reduced control rather than the number of hours spent online. A consumer may use digital tools intensively for work without being dependent if use remains purposeful and flexible. (Kesici & Tung, 2018; Han et al., 2023; Brand et al., 2022)

Digital dependency can affect consumer decision-making through repeated exposure and reduced reflective processing. Highly connected consumers encounter more product recommendations, advertisements, reviews, influencer endorsements, and promotional notifications. Familiarity with platforms may reduce uncertainty and make online transactions feel normal. However, dependency can also create fatigue, distraction, privacy concerns, and weak information evaluation. The direction of its relationship with purchase intention therefore depends partly on whether repeated exposure develops trust or produces skepticism. (Han et al., 2023; Brand et al., 2022)

In this study, digital dependency is expected to have a positive overall association with purchase intention because dependent users are more frequently exposed to online products and have fewer practical barriers to digital purchasing. The study also tests whether trust explains part of this relationship. Repeated platform use may increase familiarity with transaction procedures, payment options, review systems, and seller signals, thereby strengthening trust.

Online Impulse Buying

Impulse buying occurs when a consumer experiences a sudden and persistent urge to buy immediately with limited prior planning. Online impulse buying extends this process to digital environments where product discovery, evaluation, payment, and confirmation can occur within minutes. The online setting can intensify impulsive behavior through convenience, personalized recommendations, scarcity messages, countdown timers, social proof, visually rich content, and frictionless checkout. (Stern, 1962; Rook, 1987; Beatty & Ferrell, 1998; Verplanken & Herabadi, 2001; Liu et al., 2013)

Online impulse buying should be distinguished from compulsive buying. Impulse buying may occur occasionally and does not necessarily involve long-term impairment. Compulsive buying is repetitive, difficult to control, and associated with distress or harmful consequences. The present study measures online impulse buying tendency as a consumer characteristic reflecting spontaneity, emotional activation, and reduced deliberation in online purchasing situations. (Rook & Fisher, 1995; Verplanken & Herabadi, 2001)

Trust is important even in rapid decisions. A consumer may feel a strong urge to purchase but still abandon the transaction if the seller appears unreliable, the payment process seems unsafe, or product claims are doubtful. Trust can therefore enable the transition from impulse tendency to purchase intention. Positive previous experiences with online shopping may also reinforce both trust and willingness to act quickly in future transactions. (Wang & Chapa, 2022)

Social Media Engagement

Social media engagement refers to the consumer's cognitive, emotional, and behavioral involvement with social media content and communities. Cognitive engagement includes attention, interest, and mental absorption. Emotional engagement includes enthusiasm, enjoyment, attachment, or excitement. Behavioral engagement includes following, liking, sharing,

commenting, saving, reviewing, clicking, and communicating with sellers or other users. (Hollebeek et al., 2014)

Engagement can influence purchase intention by increasing product knowledge, brand familiarity, social presence, and perceived relevance. Interaction with peers and sellers may also provide reassurance through reviews, responses, demonstrations, and user-generated content. Studies of social media and social commerce generally show that meaningful interaction can strengthen credibility and purchase intention, although privacy concerns and poor-quality interaction can weaken these effects. (Hajli et al., 2017; Onofrei et al., 2022; Zhang et al., 2022)

The quality of engagement matters more than simple exposure. Passive scrolling may create awareness, while active participation can generate stronger relationships and more diagnostic information. The present study therefore treats engagement as a multidimensional construct and tests its direct effect on purchase intention as well as its indirect effect through consumer trust. (Onofrei et al., 2022)

Consumer Trust

Consumer trust is the willingness to accept vulnerability based on positive expectations about another party's competence, integrity, and benevolence. In online purchasing, consumers cannot fully inspect products or monitor seller behavior before payment. Trust reduces this uncertainty by creating confidence that the seller will provide accurate information, protect personal data, deliver the promised product, and address problems fairly. (McKnight et al., 2002; Morgan & Hunt, 1994)

Online trust may be directed toward a seller, brand, platform, payment process, or information source. These targets are related but not identical. A consumer may trust a marketplace's payment protection while distrusting an individual seller. The present study uses a broad consumer-trust measure that focuses on confidence in the online seller and transaction environment associated with the intended purchase. (Gefen et al., 2003; Pavlou, 2003; Kim & Park, 2013)

Trust has consistently been linked with online purchase intention. It can also mediate the effects of social motivations, platform familiarity, source credibility, information quality, and engagement. In the model, trust explains how digitally dependent, impulsive, and engaged consumers convert online experience into a willingness to purchase. (Hajli et al., 2017; Irshad et al., 2020)

Purchase Intention

Purchase intention reflects the likelihood, willingness, or plan to buy a product or service from a particular seller, platform, or brand. It is an attitudinal and motivational outcome that is closer to behavior than general awareness or liking. Online purchase intention is influenced by perceived usefulness, ease of use, price, product value, social influence, risk, trust, prior experience, and the quality of available information. Although intention does not guarantee actual purchase, it is widely used because it captures the consumer's immediate decision orientation. (Ajzen, 1991; Davis, 1989; Dodds et al., 1991)

Relationships among the Variables and Hypotheses

Digital Dependency and Purchase Intention

Repeated digital exposure increases contact with products, sellers, reviews, and promotional cues. Familiarity with online transaction processes can also lower practical barriers to buying. Therefore, consumers with stronger digital dependency may report stronger online purchase intention, although excessive use may create countervailing fatigue or skepticism. H1: Digital dependency has a significant positive effect on purchase intention.

Online Impulse Buying and Purchase Intention

Consumers with a stronger impulse-buying tendency are more likely to respond quickly to attractive products, discounts, scarcity messages, and emotionally stimulating content. Their lower level of pre-purchase deliberation should increase readiness to buy. H2: Online impulse buying tendency has a significant positive effect on purchase intention. (Beatty & Ferrell, 1998; Liu et al., 2013; Xiang et al., 2016; Djafarova & Bowes, 2021)

Social Media Engagement and Purchase Intention

Engaged users receive more product information, interact with social proof, and develop stronger familiarity with brands and sellers. Positive engagement can therefore increase willingness to purchase. H3: Social media engagement has a significant positive effect on purchase intention. (Onofrei et al., 2022; Zhang et al., 2022)

Predictors of Consumer Trust

Digital familiarity can reduce uncertainty, previous impulse purchases may create positive reinforcement when outcomes are satisfactory, and social media engagement can provide credibility cues through interaction and user-generated information. H4: Digital dependency has a significant positive effect on consumer trust. H5: Online impulse buying tendency has a significant positive effect on consumer trust. H6: Social media engagement has a significant positive effect on consumer trust. (Kim & Park, 2013; Irshad et al., 2020)

Consumer Trust and Purchase Intention

Trust reduces perceived transaction risk and increases confidence that the seller will fulfil promises. It should therefore increase willingness to purchase. H7: Consumer trust has a significant positive effect on purchase intention. (Gefen et al., 2003; Hajli et al., 2017)

Mediating Role of Consumer Trust

The model proposes that each predictor affects purchase intention partly through trust. Digital dependency can create familiarity, impulse-buying tendency can translate into action when the transaction appears safe, and engagement can supply social and informational cues that strengthen

confidence. H8a: Consumer trust mediates the relationship between digital dependency and purchase intention. H8b: Consumer trust mediates the relationship between online impulse buying tendency and purchase intention. H8c: Consumer trust mediates the relationship between social media engagement and purchase intention. (Hajli et al., 2017; Wang & Chapa, 2022)

Conceptual Model

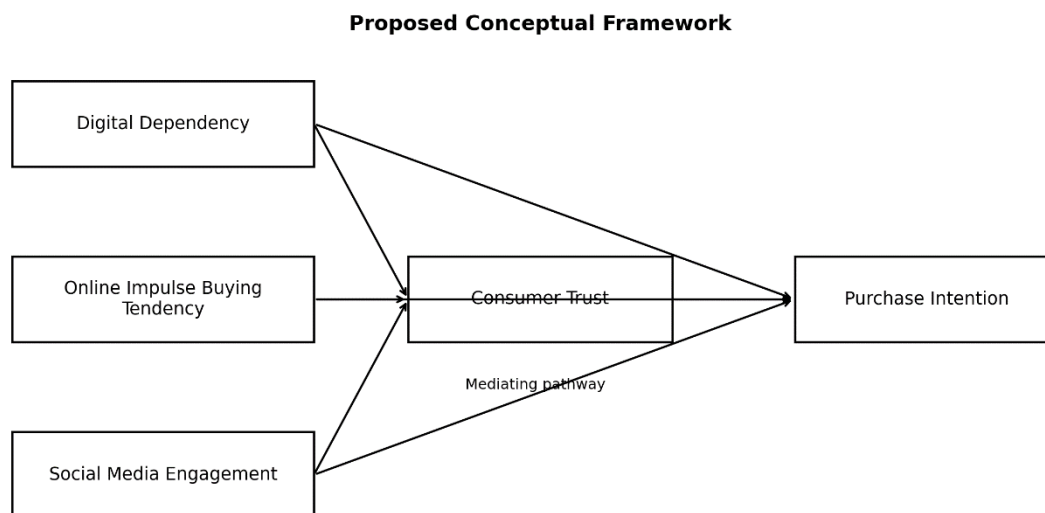


Figure 1. Conceptual model.

Methodology

Based on a positivist philosophy and deductive, explanatory research design, this study investigates measurable relationships between digital dependency, online impulse buying tendency, social media engagement, consumer trust and purchase intention. A quantitative cross sectional survey will be carried out on adults social media user who has purchased online at least once in last six months in Sindh Province, Pakistan. The respondents should be 18 years old or above and should have been residing in Sindh for one year or more. A multistage purposive and quota sampling approach will be employed because there is no sampling frame of online consumers. Data will be gathered in major cities, such as Karachi, Hyderabad, Sukkur, Larkana, Mirpurkhas, Shaheed Benazirabad and other places, while efforts will be made to not concentrate in Karachi. The target is approximately 550 questionnaires to be completed to get at least 500 usable questionnaires, which is more than Cochran's minimum requirement of approximately 384 questionnaires. The questionnaire will be based on scales adapted and established to measure digital dependency, impulse buying, social media engagement, consumer trust and purchase

intention (mostly on a 5-point Likert scale). This instrument will be translated into English and Urdu and reviewed by experts, translated and back translated, content validated and subjected to a pilot testing to determine clarity, reliability, item performance and completion time by including 40-60 eligible consumers. Ethical approval will be given and data will be gathered using secure online surveys and when needed supervised paper based questionnaires. The participation will be voluntary and anonymous, informed consent will be taken prior to data collection and no unnecessary identifying information will be collected. Data screening, descriptive statistics, reliability analysis, correlation and hierarchical multiple regression will be used in SPSS. If extensive adaptation and/or translation has been done, exploratory factor analysis can be used. Hayes' PROCESS Macro Model 4 will be used to test for the statistical mediation of the relationships between the main predictors and purchase intention with a total sample size of 5,000 bootstrap samples. If the 95% bootstrap confidence interval for the indirect effect does not contain zero, then the indirect effect will be deemed significant. Common method bias will be mitigated by procedural and statistical methods, and regression assumptions will be tested such as linearity, homoscedasticity, residual normality, and multicollinearity. The findings will be presented in a general way, the data will be collected in a secure way and the participant will have the possibility to skip questions or to withdraw before the submission of the questionnaire. (Hair et al., 2019; Hayes, 2022)

Results

The results are presented in four stages. First, the demographic composition and measurement quality are reported. Second, descriptive statistics and bivariate correlations are examined. Third, regression models assess the direct relationships among the study variables. Finally, Hayes' PROCESS Model 4 is used to evaluate the indirect effects of digital dependency, online impulse buying tendency, and social media engagement on purchase intention through consumer trust.

Data Screening and Sample Characteristics

Table 2. Demographic Profile of Respondents

Characteristic	Category	n	%
Gender	Male	264	52.8
Gender	Female	228	45.6
Gender	Other/prefer not to say	8	1.6
Age	18–24 years	186	37.2
Age	25–34 years	190	38.0
Age	35–44 years	83	16.6
Age	45 years and above	41	8.2
City cluster	Karachi	196	39.2
City cluster	Hyderabad	95	19.0
City cluster	Upper Sindh	119	23.8
City cluster	Other Sindh districts	90	18.0

Online shopping frequency	Monthly or more	287	57.4
Online shopping frequency	Every 2–3 months	152	30.4
Online shopping frequency	Less often	61	12.2

The analysis included 500 eligible online consumers from Sindh. Male respondents accounted for 52.8% of the sample and female respondents for 45.6%, while 1.6% selected other/prefer not to say. The largest age group was 25–34 years (38.0%), followed closely by 18–24 years (37.2%). Karachi represented 39.2% of the sample, while 60.8% of respondents were from Hyderabad, Upper Sindh, and other districts. More than half of the respondents (57.4%) reported purchasing online at least once per month.

Reliability and Construct Adequacy

Table 3. Reliability and Construct Adequacy

Construct	Items	Cronbach α	Corrected item~ total range	KMO	Assessment
Digital dependency	8	.854	.555–.637	.920	Strong
Online impulse buying tendency	6	.818	.554–.602	.877	Good
Social media engagement	8	.844	.557–.597	.911	Strong
Consumer trust	6	.834	.589–.645	.884	Good
Purchase intention	4	.801	.593–.630	.791	Good

Internal consistency was satisfactory for all five constructs. Cronbach’s alpha values ranged from .801 for purchase intention to .854 for digital dependency, exceeding the commonly used .70 benchmark. Corrected item–total correlations ranged from .554 to .645 and therefore showed that the items contributed consistently to their respective scales. KMO values ranged from .791 to .920, indicating adequate to strong sampling adequacy. Bartlett’s tests of sphericity were significant for every construct ($p < .001$), supporting the suitability of the item sets for factor-based assessment.

Descriptive Statistics and Pearson Correlations

Table 4. Descriptive Statistics and Pearson Correlations

Variable	M	SD	1	2	3	4	5
1. Digital dependency	3.23	.65	—				
2. Online impulse buying	3.17	.66	.269**	—			
3. Social media engagement	3.54	.62	.274**	.253**	—		
4. Consumer trust	3.58	.67	.258**	.317**	.396**	—	

5. Purchase intentio	3.74	.71	.355**	.393**	.399**	.455**	—
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Note. N = 500. ** p < .01 (two-tailed). The mean scores were 3.23 for digital dependency, 3.17 for online impulse buying tendency, 3.54 for social media engagement, 3.58 for consumer trust, and 3.74 for purchase intention. All focal variables were positively and significantly correlated. Purchase intention was associated with digital dependency (r = .355, p < .001), online impulse buying tendency (r = .393, p < .001), social media engagement (r = .399, p < .001), and consumer trust (r = .455, p < .001). The correlations were moderate and did not indicate problematic overlap among the constructs.

Predictors of Consumer Trust

Table 5. Regression Predicting Consumer Trust

Predictor	B	SE	β	t	p	VIF
Digital dependency	.121	.044	.118	2.76	.006	1.15
Online impulse buying tendency	.212	.043	.209	4.89	<.001	1.15
Social media engagement	.331	.046	.307	7.23	<.001	1.14
Control variables	Entered as block	—	—	—	—	—

The regression model predicting consumer trust was statistically significant, $F(13, 486) = 11.15$, $p < .001$, $R^2 = .230$, adjusted $R^2 = .209$. Digital dependency had a positive effect on consumer trust ($B = .121$, $\beta = .118$, $p = .006$), supporting H4. Online impulse buying tendency also positively predicted trust ($B = .212$, $\beta = .209$, $p < .001$), supporting H5. Social media engagement produced the strongest effect on consumer trust ($B = .331$, $\beta = .307$, $p < .001$), supporting H6. VIF values were close to 1.0, indicating no meaningful multicollinearity problem.

Predictors of Purchase Intention

Table 6. Hierarchical Regression Predicting Purchase Intention

Model	Predictor	β	SE	t	p	$R^2 / \Delta R^2$
1	Demographic controls	—	—	—	.079	$R^2 = .033$
2	Digital dependency	.198	.044	4.95	<.001	$R^2 = .320$, $\Delta R^2 = .286$
2	Online impulse buying tendency	.281	.043	7.01	<.001	
2	Social media engagement	.278	.046	6.96	<.001	

3	Consumer trust	.261	.043	6.36	<.001	$R^2 = .372$; $\Delta R^2 = .052$
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The demographic controls entered in Model 1 explained 3.3% of the variance in purchase intention and the block was not statistically significant, $F(10, 489) = 1.69, p = .079$. Adding digital dependency, online impulse buying tendency, and social media engagement in Model 2 increased explained variance to 32.0% ($\Delta R^2 = .286, \Delta F(3, 486) = 68.17, p < .001$). Digital dependency ($\beta = .198, p < .001$), online impulse buying tendency ($\beta = .281, p < .001$), and social media engagement ($\beta = .278, p < .001$) all had significant positive effects, supporting H1, H2, and H3. Consumer trust was added in Model 3 and explained a further 5.2% of the variance ($\Delta F(1, 485) = 40.50, p < .001$). Trust remained a significant positive predictor ($\beta = .261, p < .001$), supporting H7. The final model explained 37.2% of the variance in purchase intention.

Mediating Role of Consumer Trust

Table 7. Bootstrap Indirect Effects through Consumer Trust

Focal predictor	Total effect	Direct effect	Indirect effect	Boot LLCI	Boot ULCI	Decision
Digital dependency	.216	.182	.033	.010	.062	Partial mediation
Online impulse buying tendency	.302	.243	.058	.031	.092	Partial mediation
Social media engagement	.317	.225	.091	.057	.130	Partial mediation

Mediation was tested using Hayes' PROCESS Model 4 with 5,000 bootstrap samples. The indirect effect of digital dependency on purchase intention through consumer trust was .033, with a 95% bootstrap confidence interval from .010 to .062. Because the interval did not include zero, H8a was supported. The indirect effect for online impulse buying tendency was .058 (95% CI [.031, .092]), supporting H8b. Social media engagement produced the strongest indirect effect, .091 (95% CI [.057, .130]), supporting H8c. The direct effects of all three predictors remained significant after consumer trust was included, indicating partial rather than complete mediation.

Summary of Hypothesis Testing

Table 8. Summary of Hypothesis Testing

Hypothesis	Path	Expected sign	Decision
H1	Digital dependency → purchase intention	Positive	Supported
H2	Online impulse buying → purchase intention	Positive	Supported

H3	Social media engagement → purchase intention	Positive	Supported
H4	Digital dependency → consumer trust	Positive	Supported
H5	Online impulse buying → consumer trust	Positive	Supported
H6	Social media engagement → consumer trust	Positive	Supported
H7	Consumer trust → purchase intention	Positive	Supported
H8a	DD → trust → purchase intention	Positive indirect	Supported
H8b	OIB → trust → purchase intention	Positive indirect	Supported
H8c	SME → trust → purchase intention	Positive indirect	Supported

The hypothesis tests showed a consistent positive pattern across the model. H1–H7 were supported by the regression results, and H8a–H8c were supported by the bootstrap mediation analysis. Social media engagement was the strongest predictor of consumer trust, while online impulse buying tendency and social media engagement showed the largest direct effects on purchase intention. Consumer trust added explanatory power beyond the three focal predictors and carried a significant portion of each predictor’s effect on purchase intention.

Discussion

The statistical results reported are discussed in this section in the light of the theoretical framework and existing literature. As can be seen in the results, all three key factors have a positive correlation with the purchase intention and consumer trust. Trust is also helpful in its own right in predicting purchase intention. Based on the content of the mediation results, it can be concluded that trust is one of the factors that mediate between digital behavior and consumers’ willingness to buy online products via social media.

Digital dependency had a significant positive effect on purchase intention and a smaller, but significant effect on consumer trust. This trend matches the theory that repeated use of a platform leads to greater exposure to product, seller information, reviews, payment, and familiar transaction processes. Being familiar with something can decrease practical obstacles to online purchasing and uncertainty. Concurrently, the relatively small impact on trust indicates that regular use of digital tools does not guarantee the confidence of the sellers: as with other cues, credibility still matters, and there is a need to consider the quality of the transaction.

This study found that the relationship between online impulse buying tendency and purchase intention was strong and positive and that online impulse buying tendency also significantly

affected consumer trust. This finding aligns with studies that have identified that the online environment is particularly conducive for making quick purchases due to the ability to discover, evaluate and register purchases in a short time. However, the significant direct effect was still present when trust was added to the model, which suggests that impulsive buying does not only account for trust. Other factors are also likely to be important such as emotional activation, brief deliberation, convenience, scarcity cues, and immediate product appeal, which were found to be important in previous impulse-buying literature (Rook & Fisher, 1995; Xiang et al., 2016; Djafarova & Bowes, 2021).

Purchase intention and consumer trust were also well predicted by a social media engagement. It was the most powerful predictor of trust and direct relation with trust via the mediator. The pattern reinforces the idea of connecting with product-related content, reviews, sellers, influencers and other consumers in an active way to get information and social reassurance to increase trust in online transactions. This is aligned with previous studies that correlated social media interaction and engagement with trust and purchase intention (Hajli et al., 2017; Onofrei et al., 2022; Zhang et al., 2022). The findings also indicate the quality of engagement is more significant than mere exposure since the active involvement can offer credibility cues that passive scrolling may not be able to.

Consumer trust had a significant positive impact on purchase intention and partially mediated the three predictor–outcome relationships. Social media engagement to consumer trust to purchase intention, and online impulse buying tendency to digital dependency were the strongest indirect pathways. The results corroborate the conceptual framework's emphasis on the importance of trust. When the seller, information, payment method, and delivery seems reliable, then consumers are more likely to proceed with the transaction and buy the product at the same time they are exposed to it at a high frequency. The partial mediation pattern is also significant as it demonstrates that digital behavior and engagement does not only have an impact on purchase intention via trust, but also in other ways. This is in line with the literature on online trust (Gefen et al., 2003; Kim & Park, 2013; Hajli et al., 2017).

This needs to be kept in mind while interpreting the findings in Sindh context. The sample design also covers other districts including Karachi, Hyderabad, Upper Sindh, etc., where consumers might have a different behaviour with respect to the platforms they are familiar with, delivery services, digital payments, and their reliance on social-media sellers. 60.8% of the respondents in the draft analysis were outside of Karachi, minimising the concentration of the supply in one metro market. When interpreting the results from the final field study, it is important to take into account the differences between cities as there may be variation in trust as a result of the delivery experience, payment preference, the seller's accessibility to the buyer, the language and the presence of mechanisms to protect the buyer.

Theoretical and Practical Implications

The reported results support the Stimulus-Organism-Response model, which suggests that there are relationships between digital dependency, impulse-buying tendency, social media engagement with consumer trust and finally with purchase intention. The results also align with the trust-transfer theory, which posits that familiarity and social interactions help build trust with sellers and online transactions. The level of engagement with social media is relatively high, indicating that building trust is important when audience members are actively engaging with information and commercial messages.

Trust is a marketing asset online retailers and social-commerce sellers should value as much as they value their other marketing assets, not a side-effect. Identifying the seller, providing detailed product specifications, transparent pricing, accurate photos, return policies, secure payment methods, communication, and delivery reliability are key ways to build consumer confidence. Engagement strategies cannot just be based on urgency or emotional appeal and must offer value to the interaction.

Digital marketers need to be aware that there are consumers that are very dependent and impulsive towards persuasive design. Ethical practice demands that there should be no false countdowns, no false scarcity, no hidden charges and no over-ambitious product claims. Reminders, order review screens and transparent cancellation procedures help consumers make informed decisions on platforms and sellers. Consumer awareness campaigns in Sindh could educate customers on how to check the credibility of the seller, look for reviews, check the return policy and not rush into impulsive buying.

Out-of-Karachi businesses should customize trust-building strategies. Where customers have little previous experience with the seller or platform, it may be particularly important that they can purchase items on delivery, have access to customer support, communicate in their local language, see contact details, and receive regular updates on the delivery.

Limitations and Future Directions

The cross-sectional design also precludes any statements about causal interpretation as it is not possible to infer that the predictors are prior to trust and purchase intention. Self-reported measures can be problematic with regard to social desirability, recall error and common-method variance. Purposive and quota sampling might limit generalizability over the population due to the absence of a sampling frame of all recent online consumers. The study does not measure actual purchases but rather purchase intention and groups various platform, seller and product categories, which can lead to varying levels of trust, impulse activation. Previous negative shopping experiences, perceived risk, price value, privacy concern, income pressure and financial literacy are also not included in the model.

Longitudinal designs that measure digital behavior before measuring trust and then follow with a measurement of actual purchase behavior are suggested for future studies. Experimental studies can make product pages more or less credible, more or less review quality, more or less messages of scarcity, and checkout friction. Comparisons should be made across other divisions of Sindh and

differences across genders, ages, income levels, platform and product category should be explored. Other mediators can be perceived value, social presence, fear of missing out, enjoyment, perceived risk and emotional arousal. These data can help mitigate self-report bias: Objective data (screen-time data, click behavior, abandoned carts, transactions verified). Qualitative interviews can also give insight into how consumers determine whether the seller on social media is trustworthy or not.

Conclusion

The current study investigates the correlation among digital dependency, online impulse buying tendency, social media engagement, consumer trust and purchase intention of the online consumers in Sindh Province. Results indicate positive correlations between the three predictors and purchase intention, and also positive correlations between each predictor and consumer trust. The three predictor–outcome relationships are in turn positively associated with consumer trust, which partially mediates the relationships. Social media engagement scores have the highest indirect effect. The results support the notion that when consumers trust the seller and the buying situation, digital exposure, tendency to impulsively buy and social media use are more likely to affect purchase intent.

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Appendix A: Draft Questionnaire

Title: Digital Behavior, Consumer Trust, and Online Purchase Intention among Consumers in Sindh

Dear Respondent, this questionnaire is for academic research. Your participation is voluntary and anonymous. Please answer according to your own experience. Do not provide passwords, payment details, or other sensitive information.

Section A: Screening Questions

Are you 18 years of age or older? Yes / No

Have you lived in Sindh for at least twelve months? Yes / No

Do you use at least one social media platform? Yes / No

Have you purchased a product or service online during the last six months? Yes / No

Section B: Demographic Information

Gender: Male / Female / Other / Prefer not to say

Age group: 18–24 / 25–34 / 35–44 / 45 and above

Highest education: Secondary / Intermediate / Bachelor's / Master's or above / Other

City or district: _____

Monthly household income category: _____

Online shopping frequency: Weekly / Monthly / Every 2–3 months / Less often

Most-used platform for product discovery: Facebook / Instagram / TikTok / YouTube / Marketplace / Other

For Sections C–G, use: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

Section C: Digital Dependency

1. I find it difficult to stay away from digital devices for long periods.
2. I check online platforms even when I did not plan to use them.
3. Digital activities sometimes interrupt my other responsibilities.
4. I feel uncomfortable when I cannot access the internet or my usual applications.
5. I spend more time online than I originally intend.
6. I often organize my routine around access to digital devices.
7. I continue using digital platforms even when I should be doing something else.
8. Reducing my digital use would be difficult for me.

Section D: Online Impulse Buying Tendency

1. I sometimes buy products online without planning to do so.
2. When I see an attractive online offer, I may purchase it quickly.
3. I often decide to buy online with little prior comparison.
4. Excitement can lead me to place an online order immediately.
5. I sometimes purchase online first and think about the decision later.
6. Limited-time online offers make it difficult for me to delay a purchase.

Section E: Social Media Engagement

1. I pay close attention to product or brand content on social media.
2. I enjoy interacting with product-related social media content.
3. I often read comments or reviews before considering an online purchase.
4. I follow brands, sellers, or influencers that discuss products I like.
5. I like, save, share, or comment on product-related posts.
6. I feel involved when a seller or brand responds to users on social media.
7. Social media discussions help me understand products and sellers.
8. I frequently return to social media pages that provide useful product information.

Section F: Consumer Trust

1. I believe that reliable online sellers provide accurate product information.
2. I feel confident buying when a seller clearly explains delivery and return conditions.
3. I trust online sellers that consistently respond to customer concerns.
4. I believe a trustworthy seller will deliver what was promised.
5. I feel safer purchasing when the platform or payment process protects buyers.
6. I am willing to rely on a seller when reviews and other information appear credible.

Section G: Purchase Intention

1. I am likely to purchase products online in the near future.
2. I would consider buying from an online seller that I trust.
3. When I find a suitable product online, I intend to complete the purchase.
4. I am willing to recommend a trustworthy online purchasing option to others.