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Determinants of F-commerce Impulse Purchase in Bangladesh: Mediating Effect of Perceived Price Dispersion

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Abstract - F-commerce has become an integral part of daily life in Bangladesh, providing a platform where customers and sellers interact in real time to buy and sell products. Here, businesses not only showcase their products but also interact with their customers in real time, breaking the barriers of time and place. To understand this growing platform's impact on F-commerce impulse purchase, we have designed this study. While prior studies have explored individual factors such as Facebook usage intensity, para social relationships, and others, the current study aims to fill that gap by examining the collective impact of multiple factors on impulse purchasing within F-commerce. The study investigates the collective impact of F-commerce through six predictor variables such as Facebook usage intensity, hedonic gratification, para social relationship, social interaction, social trust, and online vividness of product, alongside the mediating role of perceived price dispersion on impulse purchasing behavior. To collect data, the study uses a purposive sampling technique, which is appropriate as data were collected from 403 Bangladeshi users of F-commerce platform. The survey was conducted through a structured questionnaire and used structural equation modeling (SEM) approach to analyze data via SmartPLS 4.0. The results show that para social relationships, social interaction, and social trust have significant influence on impulse purchase, whereas Facebook usage intensity, hedonic gratification, online vividness of product, and perceived price dispersion do not. Moreover, perceived price dispersion does not mediate the hypothesized relationships. These results offer valuable implications for marketers, businesspeople, developers, as well as researchers in developing more effective strategies and creating new avenues for further research on this growing multipurpose platform.

Keywords - F-commerce, Impulse Purchase, Perceived Price Dispersion, Facebook, Hedonic Gratification.

I. INTRODUCTION

F-commerce in Bangladesh has expanded with improved internet access, enabling real-time buyer-seller interaction and greater accountability than traditional e-commerce [1], [2]. Although early privacy and security concerns slowed adoption, mobile-friendliness and brand-page interactivity promoted acceptance and kept customers updated on product launches. This growth accelerated during the COVID-19 period amid movement restrictions and rising internet use [3]. Facebook now accounts for a large share of commercial activity: 66.7% of businesses reportedly use it, lowering entry barriers for youth entrepreneurship and empowering many women; around 30% of users shop there, valuing convenience and delivery, yet cumbersome returns, weak after-sales service, and concerns about product

quality, payment security, and seller trust continue to impede loyalty [4], [5], [6]. As F-commerce becomes routine, usage intensity, vivid product presentations, para social ties, and hedonic gratification can amplify unplanned buying; brands deploy influencer-driven live streams, vlogs, and visually rich posts, while perceived price fairness and credible reviews help build trust and reduce uncertainty [2], [7], [8], [9].

Bangladesh's Facebook-based commerce is expanding quickly and operates year-round, including most weekends and holidays except major events like Eid. Yet trust challenges persist, and prior studies have focused more on general purchasing drivers than on impulse buying [6]. To address this gap, we examine how Facebook usage intensity, hedonic gratification, para social relationships, social interaction, social trust, and online vividness shape impulse purchasing, and test the mediating role of perceived price dispersion. Considering these factors together in the Bangladeshi context clarifies the mechanisms behind impulse buying and supports development of a more resilient F-commerce ecosystem.

Online shopping in Bangladesh is expanding as consumers increasingly research products online before visiting stores and use social platforms to track new items, features, trends, discounts, and prices [10], [11]. Although Facebook began as a communication tool, F-commerce now enables interactive buying and selling, and brands cultivate warm communities that encourage customer feedback [12]. A youth-heavy user base engages socially and commercially while algorithms surface interest-aligned content, enabling personalized ads that elicit positive emotions and, together with vivid product presentations, can trigger impulse purchases [13], [14], [15]. Therefore, this study examines how these dynamics shape F-commerce impulse purchasing and provides guidance for marketers designing strategies suited to local user behavior.

The objective behind this study is to provide understanding of different factors which influence F-commerce impulse purchase, as well as to determine the perceived price dispersion mediating effect on F-commerce impulse purchase.

F-commerce has become an integral part of the online shopping landscape. Previous studies have shown that usage intensity positively affects impulse buying behavior [2]. The interactive nature of the platform allows buyers and sellers to engage directly, which creates hedonic gratification and influences impulsive purchasing [8], [16]. The same study also found that the impulse purchase

behavior can be influenced by para social relationship, social interaction, social trust. Zafar et al. [8], also noted that online vividness has a significant influence on consumers' impulse buying behavior. In another study, Chen & Ku [7] examined the moderating effect of perceived price dispersion on impulse buying.

Although these studies have investigated individual variables, no research has collectively analyzed these key factors or examined their combined effect on impulse purchases within F-commerce. To address this gap, the present study considers six independent variables, namely Facebook usage intensity, hedonic gratification, para social relationships, social interaction, social trust, and online vividness of products, as well as one mediating variable, perceived price dispersion.

II. LITERATURE REVIEW AND DEVELOPMENT OF CONSTRUCTS

a. Theoretical Background

The present study adopts the Stimulus-Organism-Response (SOR) paradigm to identify the factors of f-commerce impulse purchase. The original framework introduced by Mehrabian and Russell (1974), Under this model it judges how consumer external stimuli can influence their internal evaluation and ultimately drive their response to it [2], [17], [18]. This is particularly suited for assessing customer behavior in an online commerce environment. In the stimulus (S) part they process those stimuli. In the organism (O) part they customer they decide behavioral action [19]. In the context of F-commerce, factors such as Facebook usage intensity, hedonic gratification, para social relationships, social interaction, social trust, online vividness of products, and perceived price dispersion are conceptualized as external stimuli. These variables impact users' internal evaluations and ultimately drive their impulse purchasing behavior. By utilizing the SOR paradigm, this research aims to clarify the pathways through which these determinants influence unplanned buying behavior in the dynamic environment of F-commerce [2], [20].

b. F-commerce Impulse Purchase (FIP)

Impulse purchase in F-commerce refers to unplanned, immediate buying on Facebook, driven by a sudden urge with little deliberation [21], [22]. Not every unplanned act is impulsive; for example, quickly buying a genuinely needed item forgotten from a list is not impulse buying [23]. In online settings, cues such as advertisements, promotions, scarcity, and social influence heighten the likelihood of impulse purchases [24]. Prior work distinguishes pure, reminder, suggestive, and planned-impulse forms [8]. The interactive, visually rich nature of Facebook commerce, reinforced by celebrities and influencers, further elevates these urges [2], [25]. In this study, FIP is treated as the dependent variable capturing spontaneous, unplanned purchasing on Facebook-based commerce.

c. Facebook Usage Intensity (FUI) and F-commerce Impulse Purchase (FIP)

Facebook usage intensity (FUI) captures how frequently and deeply users engage with browsing, posting, groups, and interactions, reflecting habitual and emotional attachment [2], [26], [27]. In F-commerce, higher FUI increases exposure to brand pages, shopping groups, discovery posts, and ads, amplifying marketing and peer cues that prompt unplanned purchases [2]. Frequent use also builds familiarity and comfort, making users more responsive to shopping stimuli; thus FUI is expected to raise the likelihood of impulse buying on Facebook [16], [28]. Based on these theoretical considerations and previous findings, the following hypothesis is formulated:

H1: Facebook Usage Intensity (FUI) has positive impact on F-commerce Impulse Purchase (FIP).

d. Hedonic Gratification (HG) and F-commerce Impulse Purchase (FIP)

Hedonic gratification (HG) is the pleasure, excitement, and enjoyment from browsing and interacting with Facebook shopping content. Positive affect shortens deliberation and heightens the urge to buy; vivid visuals, entertaining live streams, and playful interactions provide hedonic value that nudges spontaneous purchases [2], [14]. On Facebook, gamified promotions, personalized ads, and para social entertainment intensify HG, converting attention into unplanned buying [13], [15]. Consistent with prior work linking hedonic motives to online impulse purchasing, higher HG is expected to increase FIP in F-commerce [7], [8]. In light of these findings, the following hypothesis is proposed:

H2: Hedonic Gratification (HG) has positive impact on F-commerce Impulse Purchase (FIP).

e. Para Social Relationship (PR) and F-commerce Impulse Purchase (FIP)

Para Social relationship (PR) is the imagined bond with influencers or celebrities on Facebook [29], [30], [31]. In F-commerce, repeated exposure and interaction foster trust and identification with endorsers [8], [32]. Such ties heighten spontaneous buying, as followers respond more to emotional connection and perceived similarity than to expertise [33], [34], [35]. Endorsements, live sessions, and product demonstrations by digital celebrities further accelerate impulse purchases [36]. Accordingly, stronger PR is expected to increase FIP. Based on these considerations, the following hypothesis is proposed:

H3: Para Social Relationship (PR) has positive impact on F-commerce Impulse Purchase (FIP).

f. Social Interaction (SI) and F-commerce Impulse Purchase (FIP)

Social interaction (SI) refers to communicative processes on Facebook, including conversations, comments, group participation, opinion exchange, and live-stream engagement, through which users form ties with friends, peers, sellers, and communities, building trust and socioemotional support [37], [38]. These interactions create

belonging and involvement that elevate spontaneous purchasing; peer advice, affirming feedback, and real-time recommendations raise perceived value and credibility, lower uncertainty, and stimulate unplanned buying in F-commerce environments [39], [40], [41]. Based on these considerations, the following hypothesis is proposed:

H4: Social Interaction (SI) has positive impact on F-commerce Impulse Purchase (FIP).

g. *Social Trust (ST) and F-commerce Impulse Purchase (FIP)*

Social trust (ST) is the expectation that others on the platform will act honestly, ethically, and reliably, creating confidence for interpersonal and transactional exchanges. In F-commerce this is critical because buyers often share personal information and purchase from unfamiliar sellers. ST develops through positive interactions, transparency, and perceived fairness, and is reinforced by trustworthy recommendations and group norms [42], [43], [44]. When ST is high, positive reviews, social proof, and supportive community feedback reduce perceived risk and encourage spontaneous purchases, while also fostering repeat interactions and loyalty [45], [46], [47]. Based on these considerations, the following hypothesis is proposed:

H5: Social Trust (ST) has positive impact on F-commerce Impulse Purchase (FIP).

h. *Online Vividness of Products (OVP) and F-commerce Impulse Purchase (FIP)*

Online vividness of products (OVP) is the richness and quality of digital product presentation, including clear images, engaging videos, detailed descriptions, and interactive media, which provide multiple sensory cues and help consumers visualize and evaluate items; on Facebook this includes high-resolution photos, live demonstrations, dynamic clips, and immersive multimedia [48], [49], [50]. Higher OVP captures attention and evokes emotion, fostering positive attitudes and quick, unplanned decisions; interactive features such as virtual try-ons, review videos, and testimonials enhance authenticity and desirability, reduce hesitation, and increase impulse purchasing in F-commerce [51], [52]. On the basis of the discussion, the following hypothesis is proposed:

H6: Online vividness of product (OVP) has positive impact on F-commerce impulse purchase (FIP).

i. *Perceived Price Dispersion (PPD) and F-commerce Impulse Purchase (FIP)*

Perceived price dispersion (PPD) is consumers' awareness that the same or similar products are offered at different prices by different sellers; in F-commerce, users often encounter and compare such differences across pages and groups [53]. PPD reflects both actual price gaps and subjective perceptions shaped by experience and platform information, guiding judgments of price fairness and competitiveness in multi-seller digital markets [7], [54]. PPD can influence impulse buying in two ways: wide gaps may prompt search and delay, whereas unusually attractive

or limited-time prices relative to alternatives can trigger immediate, unplanned purchases; credible reviews and transparent seller information strengthen this effect by reducing uncertainty [9], [55]. Based on these considerations, the following hypothesis is proposed:

H7: Perceived Price Dispersion (PPD) has positive impact on F-commerce Impulse Purchase (FIP).

j. *Mediating Effects of Perceived Price Dispersion (PPD)*

In F-commerce, a mediating variable clarifies how or why an independent variable influences a dependent variable. Perceived price dispersion (PPD) can serve as a mediator by shaping the connection between predictors such as Facebook usage intensity, hedonic gratification, para social relationships, social interaction, social trust, and online vividness of products, and the outcome of impulse purchase behavior. When customers observe different prices for similar products across sellers, their perceptions of price fairness and value influence the impact these independent variables have on purchasing decisions [7].

PPD may either strengthen or weaken the effects of variables like social trust, social interaction, and product vividness by providing additional information that shapes consumer judgment. For instance, positive social interaction or vivid product displays may lead to impulse buying if the perceived price is considered fair or especially attractive in comparison to alternatives [9], [56]. On the other hand, even high levels of hedonic gratification or trust may not result in impulse buying if price dispersion causes doubt or uncertainty. Thus, PPD is expected to mediate the relationships between these independent variables and F-commerce impulse purchase, offering insight into the mechanisms driving unplanned buying behavior in digital commerce [57]. All the above research shows how Perceived Price Dispersion influences customer purchase along with elements of hedonic gratification, online vividness. here are designed hypothesis given below:

H8: Perceived Price Dispersion (PPD) mediates the relationship between Facebook Usage Intensity (FUI) and F-commerce Impulse Purchase (FIP).

H9: Perceived Price Dispersion (PPD) mediates the relationship between Hedonic Gratification (HG) and F-commerce Impulse Purchase (FIP).

H10: Perceived Price Dispersion (PPD) mediates the relationship Para Social Relationship (PR) and F-commerce Impulse Purchase (FIP).

H11: Perceived Price Dispersion (PPD) mediates the relationship Social Interaction (SI) and F-commerce Impulse Purchase (FIP).

H12: Perceived Price Dispersion (PPD) mediates the relationship Social Trust (ST) and F-Commerce Impulse Purchase (FIP).

H13: Perceived Price Dispersion (PPD) mediates the relationship Online Vividness of Product (OVP) and F-commerce Impulse Purchase (FIP).

Figure 6: TempoFlux Value Function Components

$$TFV = (Ta \times Pr^{\alpha}) + (Ci \times If^{\beta}) - (Ew \times Dt)$$

Evolution of key value determinants over 12-month period

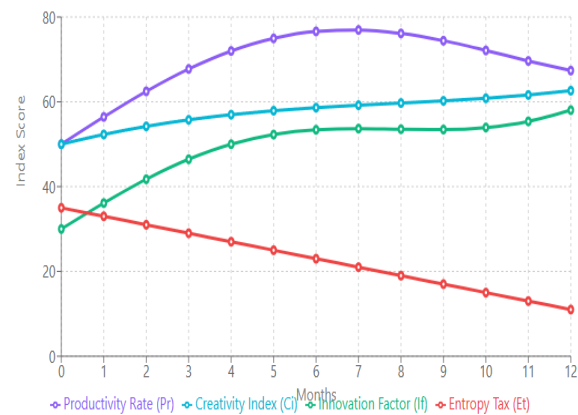


Fig. 1: Conceptual framework (source: Author’s own work)

RESEARCH METHODOLOGY

Data Sampling

The population comprised customers with experience shopping via Facebook-based commerce. Because the population size was unknown, we used purposive non-probability sampling to recruit respondents aligned with the study objectives. A structured, in-person questionnaire was administered. The final sample exceeds common benchmarks for SEM and is adequate for PLS analysis (Hair et al., 2017; Kline, 2023).

Measurement Instrument

All variables are measured with Likert scale type questions ranging from 1=strongly agree to 5- strongly disagree. In this study six independent variables have been taken, one mediating variable and one dependent variable. F-commerce usage intensity has 5 items adopted from the research paper [2]. Hedonic gratification has 5 items, which is adopted from several paper [8], [2]; [60]. Para Social relationship has 5 items adopted from [61]. Social interaction has 5 items adopted from [62]. Social trust has 5 items adopted from [8], [63]. Online vividness of product has 5 items adopted from Chen & Ku [7] and Wu et al. [64]. Price perceived Dispersion has 5 items adopted form Chen & Ku [7] and Wu et al. [64]. The dependent variable F-commerce impulse purchase was measured with 6 items these items were adopted from several previous research [2], [8], [39].

Data Analysis Technique

Data were analyzed using SPSS 25 for descriptive statistics and data preparation, and SmartPLS 4 to assess the measurement and structural models. The study employed PLS-SEM to test the hypothesized relationships and evaluate reliability and validity [58], and PLS-SEM is effective for applied multivariate analysis [65]. Analysis

proceeded by first evaluating the measurement model, then the structural model to test hypothesized paths.

III. DATA ANALYSIS AND RESULTS

Respondent’s Profile

Among the 403 respondents, 72.2% were male and 27.8% female. The largest age group was 25–34 (51.1%), followed by 15–24 (31.3%), 35–44 (10.2%), 45–54 (5.2%), and 55+ (2.2%). Regarding education, 39.0% held a bachelor’s degree and 30.5% a postgraduate degree, while 19.6% had HSC and 10.4% SSC. F-commerce experience was less than 1 year 22.1%, 1–2 years 21.3%, 3–4 years 24.1%, 5–6 years 16.6%, and more than 6 years 15.9%. Platform use frequency was very often for 36.0% of respondents, occasionally for 41.7%, and rarely for 22.3%. These demographic attributes suggested that sample is well-suited for accurately measuring the observed variables in the present study.

Measurement Model

a. Convergent Validity

Convergent validity was assessed in Table 1 by examining item loading, Cronbach’s Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE). Under the assessment of loading value ST1 value was less than 0.7 that’s why the item ST1 is removed based on the standard criteria recommended by [66]. After the removal process, PLS algorithm generate AVE score higher than 0.50 for all the latent variables, which means the latent variables had sufficient convergent validity [66].The CR varied between 0.824 - 0.932, providing a positive reliability rate and the values are above the cut of value of 0 .70 [67], [68].Along with this CA value range between 0.822 - 0.888 which is higher than the standard value of 0.6 that proves the significant reliability of our measurement model.

TABLE 1
ITEM LOADING, CONVERGENT VALIDITY AND RELIABILITY

Constructs	Items	Loadi ng	CA	CR	AVE
Facebook Usage Intensity (FUI)	FUI 1	0.722	0.866	0.879	0.653
	FUI 2	0.862			
	FUI 3	0.759			
	FUI 4	0.835			
	FUI 5	0.851			
Hedonic Gratification (HG)	HG 1	0.753	0.822	0.824	0.583
	HG 2	0.777			
	HG 3	0.781			
	HG 4	0.726			
	HG 5	0.780			
Para Social Relationship (PR)	PR 1	0.832	0.876	0.885	0.671
	PR 2	0.718			
	PR 3	0.845			
	PR 4	0.845			
	PR 5	0.847			

Social Interaction (SI)	SI 1	0.826	0.888	0.889	0.690
	SI2	0.854			
	SI3	0.834			
	SI4	0.820			
	SI5	0.819			
Social Trust (ST)	ST 2	0.780	0.887	0.890	0.749
	ST 3	0.891			
	ST 4	0.906			
	ST 5	0.878			
Online Vividness of Products (OVP)	OVP1	0.787	0.878	0.879	0.673
	OVP2	0.800			
	OVP3	0.829			
	OVP4	0.852			
	OVP5	0.831			
Perceived Price Dispersion (PPD)	PPD1	0.837	0.874	0.878	0.666
	PPD2	0.808			
	PPD3	0.859			
	PPD4	0.749			
	PPD5	0.823			
F-Commerce Impulse Purchase (FIP)	FIP1	0.831	0.930	0.932	0.740
	FIP2	0.846			
	FIP3	0.902			
	FIP4	0.851			
	FIP5	0.868			
	FIP 6	0.861			

Source: Author's Own Work

b. Discriminant Validity

Following the assessment of convergent validity, which confirmed the internal consistency between items and their respective constructs, discriminant validity was evaluated to determine the extent to which each construct is distinct from the others [69]. To examine the discriminant validity of the variables the study followed HTMT (Heterotrait-Monotrait) ratio [66]. The standard value for this examination has to be below 0.85 as recommended by [67], [68] and [70]. However, in some cases, the threshold value is suggested to be 0.90 [66], [71]. The variable's discriminant validity was quite satisfactory since the HTMT ratio of the variable (Table 2) topped the strict of cut-off below 0.85. This confirms that each construct is empirically distinct, and there no significant issues of multicollinearity or overlap among the variables.

TABLE 2

HETEROTRAIT-MONOTRAIT (HTMT) RATIO

	FIP	FUI	HG	OVP	PPD	PR	SI	ST
FIP								
FUI	0.561							
HG	0.454	0.763						
OVP	0.572	0.599	0.650					
PPD	0.313	0.454	0.525	0.642				
PR	0.641	0.720	0.676	0.573	0.313			
SI	0.633	0.663	0.669	0.668	0.460	0.737		
ST	0.764	0.691	0.554	0.725	0.337	0.713	0.691	

Structural Model

• Predictive Power of the Model

The benchmark value of R^2 is 0.75 indicates substantial, 0.50 indicates moderate, 0.25 indicates weak [66]. R^2 value for FIP is .539 indicating this independent variable explains 53.9% of the variance. Therefore, the R^2 for FIP reflects a moderate to substantial level of predictive accuracy. Another variable PPD R^2 value is .380, which also indicates moderate explanatory power.

• Result of Direct Path Analysis

The direct effects on FIP (Table 3) show that PR has a significant positive effect ($\beta = 0.179$, $p = 0.004$), SI has a significant positive effect ($\beta = 0.163$, $p = 0.013$), and ST is the strongest positive predictor ($\beta = 0.459$, $p < 0.001$). FUI ($\beta = 0.040$, $p = 0.549$), HG ($\beta = -0.069$, $p = 0.215$), OVP ($\beta = 0.045$, $p = 0.508$), and PPD ($\beta = 0.018$, $p = 0.704$) are not significant. These results confirm that PR, SI, and ST increase FIP, while FUI, HG, OVP, and PPD show no direct effect.

TABLE 3
RESULT OF DIRECT PATH ANALYSIS

H	Path	β	SD	T statistic	P values	Decision
H1	FUI → FIP	0.040	0.066	0.599	0.549	Rejected
H2	HG → FIP	-0.069	0.056	1.239	0.215	Rejected
H3	PR → FIP	0.179	0.062	2.889	0.004	Accepted
H4	SI → FIP	0.163	0.066	2.487	0.013	Accepted
H5	ST → FIP	0.459	0.062	7.414	0.000	Accepted
H6	OVP → FIP	0.045	0.068	0.661	0.508	Rejected
H7	PPD → FIP	0.018	0.047	0.380	0.704	Rejected

• Result of Indirect Path Analysis

The results of the indirect path analysis were examined to evaluate the mediating effects of PPD on the relationships between the independent variables and FIP. H8 (FUI → PPD → FIP, $\beta = 0.003$, $SD = 0.008$, $T = 0.350$ and $p = 0.726$) has no significant effect, H9 (HG → PPD → FIP, $\beta = 0.003$, $SD = 0.008$, $T = 0.336$ and $p = 0.737$) has no significant effect, H10 (PR → PPD → FIP, $\beta = -0.002$, $SD = 0.007$, $T = 0.334$ and $p = 0.738$) has no significant effect, H11 (SI → PPD → FIP, $\beta = 0.002$, $SD = 0.007$, $T = 0.328$ and $p = 0.743$) has no significant effect, H12 (ST → PPD → FIP, $\beta = -0.004$, $SD = 0.010$, $T = 0.349$ and $p = 0.727$) has no significant effect, H13 (OVP → PPD → FIP, $\beta = 0.009$, $SD = 0.025$, $T = 0.373$ and $p = 0.709$) has no significant effect. As all value hypothesis from H8 to H13 value is more than 0.05 that's why PPD has no significant effect on FUI, HG, PR, SI, ST, OVP.

TABLE 4

RESULT OF INDIRECT PATH ANALYSIS

H	Path	β	SD	T statistics	P values	Decision
H8	FUI $\rightarrow$ PPD $\rightarrow$ FIP	0.003	0.008	0.350	0.726	Rejected
H9	HG $\rightarrow$ PPD $\rightarrow$ FIP	0.003	0.008	0.336	0.737	Rejected
H10	PR $\rightarrow$ PPD $\rightarrow$ FIP	-0.002	0.007	0.334	0.738	Rejected
H11	SI $\rightarrow$ PPD $\rightarrow$ FIP	0.002	0.007	0.328	0.743	Rejected
H12	ST $\rightarrow$ PPD $\rightarrow$ FIP	-0.004	0.010	0.349	0.727	Rejected
H13	OVP $\rightarrow$ PPD $\rightarrow$ FIP	0.009	0.025	0.373	0.709	Rejected

IV. DISCUSSION ON FINDINGS

H1 shows no significant effect of FUI on FIP ($\beta = 0.040$, $p = 0.549$). In Bangladesh, Facebook is primarily a social networking space for connection, self-presentation, and community rather than a dedicated shopping channel; high platform use does not translate into more impulse purchases [72]. This contrasts with prior evidence [2]. Practically, campaigns should be scheduled around shopping-relevant moments instead of relying on frequent exposure.

H2 indicates that HG does not significantly influence FIP ($\beta = -0.069$, $p = 0.215$). Given that many users seek entertainment and socializing on Facebook, heavy promotional content may interrupt enjoyment and dampen hedonic value, helping explain the divergence from earlier findings [8]. Marketers should carefully time and place promotions to avoid disrupting leisure use.

By contrast, H3–H5 are supported: PR ($\beta = 0.179$, $p = 0.004$), SI ($\beta = 0.163$, $p = 0.013$), and ST ($\beta = 0.459$, $p < 0.001$) significantly increase FIP. This aligns with research showing that influencer ties, peer interaction, and trust heighten spontaneous buying [8], [39], [63]. Emotionally resonant endorsements, community conversations, and transparent practices reduce perceived risk and encourage quick decisions. Firms should cultivate interactive brand communities, collaborate with credible endorsers, and strengthen after-sales service and transparency.

H6 and H7 are not supported: OVP ($\beta = 0.045$, $p = 0.508$) and PPD ($\beta = 0.018$, $p = 0.704$) show no direct effect on FIP, diverging from prior work [7], [39], [41], [73]. Attractive visuals alone may have limited influence, perhaps because high-quality imagery is easy to produce and less diagnostic, while limited price transparency reduces the salience of price comparisons. Overinvesting in visual stimuli or price cuts can be counterproductive and may even trigger mistrust. Emphasis should remain on PR, SI, and ST over OVP, PPD, FUI, and HG.

All indirect paths via PPD are non-significant (H8–H13, all $p > 0.05$), indicating no mediating effect of PPD on the relationships with FIP. In this context, impulse buying appears more emotion-driven and socially cued than price-comparison driven, consistent with the primacy of PR, SI, and ST over price-focused mechanisms. Strategically, price-based tactics (e.g., frequent discounts) should be de-emphasized in favor of building trustworthy relationships, credible endorsements, and active community engagement that can trigger spontaneous purchases without relying on perceived price gaps.

V. IMPLICATION AND CONCLUSION

Practical Implications

Given that PR, SI, and ST significantly increase FIP, while FUI, HG, OVP, and PPD do not and PPD shows no mediation, managers should prioritize community building and trust over purely visual or price-centric tactics. Partner with credible influencers to cultivate authentic parasocial bonds; use groups and live sessions for Q&A, demos, and peer endorsements; and standardize transparent policies on pricing, delivery, and returns to reduce risk perceptions. Emphasize verified pages, clear seller information, reliable cash-on-delivery or escrow options, order tracking, and responsive service. Highlight authentic user reviews and testimonials rather than heavy discounts or glossy creatives alone, and time campaigns to periods when users are more receptive to shopping. Train seller teams for fast, respectful messaging and track engagement and trust metrics, such as response time and repeat interactions, alongside sales. These steps align platform behavior with the social mechanisms that most effectively trigger impulse purchases in Bangladesh's F-commerce.

Policy Implications

Current study proves the presence of F-commerce impulse purchase presence in Bangladeshi customers. That's to ensure the business long term growth as well as to protect the customers. This study's findings provide some insights which will help the government of Bangladesh to take some practical initiative to make this platform more viable. Firstly, they should introduce formal training programs which will cover not only digital literacy training but also build trust, manage online customers. These programs will help the business to understand the need for a trustworthy and transparent relationship creating process. Secondly, the government should start consumer awareness campaigns on how to recognize trustworthy sellers, where to look for digital business identification numbers, especially for high value items sellers. Also, they should make a campaign about how a customer can seek legal help if they get scammed like not receiving product, receiving fake items. Thirdly, Government bodies can blacklist frequently reported scams sellers and public those reports to alert the citizen. Finally, they should create dedicated F-commerce community guidelines and ethical standards and promote these to make both sellers and buyer aware of it.

● Conclusion

The study highlights that para social relation, social interaction and social trust impact on F-commerce impulse purchase in the context of Bangladesh. In this growing sector business can create strong connections by developing these variables. As well as marketers and developers must strategies based on local customer behavioral and cultural patterns.

On the policy front, they study highlight steps which will help both seller and buyer through training programs, customer awareness campaigns, and set up ethical guidelines for F-commerce base business. In conclusion, by implementing both Practical implications and Policy mentions in this study can contribute to building a long-term sustainable F-commerce ecosystem in Bangladesh.

VI. LIMITATIONS AND FUTURE RESEARCH DIRECTION

This study has several limitations: the sample is predominantly urban; although 403 responses were obtained, the size remains modest relative to the total F-commerce user base; the closed-ended questionnaire may have constrained respondents' views; the scope is limited to Facebook-based commerce (excluding platforms such as Instagram and conventional e-commerce); and the cross-sectional design captures behavior at a single point in time. Future research should broaden geographic coverage (including rural users), increase sample size, incorporate open-ended items or mixed-methods designs for richer insights, compare across multiple online platforms, employ longitudinal approaches, and analyze demographic subgroups to reveal heterogeneous effects.

REFERENCES

- [1] M. Amin, Md. H. Islam, A. Kafi, A. Mamun, and S. Khatun, "Customers' Satisfaction with E-Commerce Business Through Facebook in Bangladesh: Service Receiver's Perspective," *Seybold Rep.*, vol. 19, pp. 68–89, Feb. 2024.
- [2] L.-Y. Leong, N. I. Jaafar, and S. Ainin, "The effects of Facebook browsing and usage intensity on impulse purchase in f-commerce," *Comput. Hum. Behav.*, vol. 78, pp. 160–173, Jan. 2018.
- [3] S. Alam and M. Minhajur Rahman, "COVID-19 Impact on Facebook-Based Social Commerce in Bangladesh." *Social Science Research Network*, Rochester, NY, Apr. 2022.
- [4] F. Zaman and S. Tasnim, "The Nature, Prospect and Challenges of e-commerce:: Experiential Evidences from Online Shoppers of Dhaka City in Bangladesh," *Bangladesh J. Public Adm.*, vol. 29, no. 1, pp. 26–44, Sep. 2021.
- [5] N. Jahan Mim, D. Nandi, S. Sumyia Khan, and A. Dey, "F-commerce and Urban Modernities: The Changing Terrain of Housing Design in Bangladesh" *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems.* 2022.
- [6] F. Hoque, T. Joya, A. Akter, T. Afrina, T. Haque Beg, and A. Mukul, "Customer Perception On Purchasing Through Facebook In Bangladesh: An Empirical Study On Dhaka City," *Acad. Mark. Stud. J.*, vol. 24, pp. 1–14, Apr. 2020.
- [7] C.-D. Chen and E. C. S. and Ku, "Diversified Online Review Websites as Accelerators for Online Impulsive Buying: The Moderating Effect of Price Dispersion," *J. Internet Commer.*, vol. 20, no. 1, pp. 113–135, Jan. 2021.
- [8] A. U. Zafar, J. Qiu, and M. Shahzad, "Do digital celebrities' relationships and social climate matter? Impulse buying in f-commerce," *Internet Res.*, vol. 30, no. 6, pp. 1731–1762, Jul. 2020.
- [9] F. T. Hride, F. Ferdousi, and S. M. Jasimuddin, "Linking perceived price fairness, customer satisfaction, trust, and loyalty: A structural equation modeling of Facebook-based e-commerce in Bangladesh," *Glob. Bus. Organ. Excell.*, vol. 41, no. 3, pp. 41–54, 2022.
- [10] S. Basak, "Women Entrepreneurship Through F-Commerce: A Qualitative Study in Bangladesh.," vol. Volume 24, pp. 12–7, Apr. 2022.
- [11] N. Lopa, "Perception Of Bangladeshi Consumers Towards Social Media Advertisements In: Facebook, LinkedIn, YouTube And Twitter" 2019.
- [12] M. S. Hosain and A. M. A. Mamun, "Facebook-based social media marketing and Facebook-based online purchases: evidence from the Facebook page admins of selected South Asian fashion retailers," *J. Electron. Bus. Amp Digit. Econ.*, vol. 2, no. 2, pp. 191–212, Aug. 2023.
- [13] J. Christian, F. Karissa, B. Handoyo, and F. Antonio, "The Effect of Perceived Ads Personalization Toward Online Impulse Buying Tendency with Mediating and Moderating Variables, Evidence from Indonesian Millennial E-Commerce Customers." Apr. 2021.
- [14] C. Pelau, M. Stanescu, and D. Serban, "Big-Data and Consumer Profiles – The hidden traps of data collection on social media networks," *Proc. Int. Conf. Bus. Excell.*, vol. 13, no. 1, pp. 1070–1078, May 2019.
- [15] T. P. Tran, "Personalized ads on Facebook: An effective marketing tool for online marketers," *J. Retail. Consum. Serv.*, vol. 39, pp. 230–242, Nov. 2017.
- [16] S. Sardana, P. Kaur, and M. P. Malik, "The Effect of Facebook Usages on Implus Buying, Advancing the Financial Inclusion and Organizational Efficiency: The Role of Digitalization, Technology and Sustainability," pp. 51–67, Dec. 2024.
- [17] V. Hochreiter, C. Benedetto, and M. Loesch, "The Stimulus-Organism-Response (S-O-R) Paradigm as a Guiding Principle in Environmental Psychology: Comparison of its Usage in Consumer Behavior and Organizational Culture and Leadership Theory," *J. Entrep. Bus. Dev.*, vol. 3, no. 1, pp. 7–16, Oct. 2023.
- [18] V. A. Vieira, "Stimuli–organism–response framework: A meta-analytic review in the store environment," *J. Bus. Res.*, vol. 66, no. 9, pp. 1420–1426, Sep. 2013.
- [19] T. A. A. M, D. S. Litaay, and F. S. Roring, "(PDF) The Impact of Hedonic Shopping Motivation, Discounts, and Urge to Buy

- Impulsively on Impulse Buying: S-O-R Perspective,” *ResearchGate*, vol. 9, no. 3, pp. 349–364, Dec. 2024.
- [20] Y. Xiang Xia, S. Wook Chae, and Y. Cai Xiang, “Frontiers \textbar How social and media cues induce live streaming impulse buying? SOR model perspective,” May 2024.
- [21] Y. Lina, D. Hou, and S. Ali, “Impact of online convenience on generation Z online impulsive buying behavior: The moderating role of social media celebrity,” *Front. Psychol.*, vol. 13, Aug. 2022.
- [22] M. B. M. Bansal and D. S. K. D. S. Kumar, “Impact of Social Media Marketing on Online Impulse Buying Behaviour: Exploring the Impact of Social Media on Online Impulse Buying Behavior,” *J. Adv. Sch. Res. Allied Educ.*, vol. 15, no. 5, pp. 136–139, Jul. 2018.
- [23] C. Amos, G. R. Holmes, and W. C. Keneson, “A meta-analysis of consumer impulse buying,” *J. Retail. Consum. Serv.*, vol. 21, no. 2, pp. 86–97, Mar. 2014.
- [24] L.-Y. Leong, N. I. Jaafar, and A. Sulaiman, “Understanding impulse purchase in Facebook commerce: does Big Five matter?,” *Internet Res.*, vol. 27, no. 4, pp. 786–818, Aug. 2017.
- [25] Y. Parmar, B. Jit Singh Mann, and M. Kaur Ghuman, “Impact of celebrity endorser as in-store stimuli on impulse buying: The International Review of Retail, Distribution and Consumer Research: Vol 30 , No 5 - Get Access.” Sep. 2019.
- [26] A. Dhira and C.-C. Tsai, “Understanding the relationship between intensity and gratifications of Facebook use among adolescents and young adults,” *Telemat. Inform.*, vol. 34, no. 4, pp. 350–364, Jul. 2017.
- [27] G. Orosz, I. Tóth-Király, and B. Bőthe, “Four facets of Facebook intensity — The development of the Multidimensional Facebook Intensity Scale,” *Personal. Individ. Differ.*, vol. 100, pp. 95–104, Oct. 2016.
- [28] T. Wang, R. K.-J. Yeh, and D. C. Yen, “Influence of Customer Identification on Online Usage and Purchasing Behaviors in Social Commerce,” *Int. J. Hum.-Comput. Interact.*, vol. 31, no. 11, pp. 805–814, Nov. 2015.
- [29] Y. M. Baek, Y. Bae, and H. Jang, “Social and Parasocial Relationships on Social Network Sites and Their Differential Relationships with Users’ Psychological Well-Being,” *Cyberpsychology Behav. Soc. Netw.*, vol. 16, no. 7, pp. 512–517, Jul. 2013.
- [30] J. L. Dibble, T. Hartmann, and S. F. Rosaen, “Parasocial Interaction and Parasocial Relationship: Conceptual Clarification and a Critical Assessment of Measures: Parasocial Interaction and Parasocial Relationship,” *Hum. Commun. Res.*, vol. 42, no. 1, pp. 21–44, Jan. 2016.
- [31] E. M. Perse and R. B. Rubin, “Attribution in Social and Parasocial Relationships,” *Commun. Res.*, vol. 16, no. 1, pp. 59–77, Feb. 1989.
- [32] C. A. Lin, J. Crowe, L. Pierre, and Y. Lee, “Effects of Parasocial Interaction with an Instafamous Influencer on Brand Attitudes and Purchase Intentions,” *J. Soc. Media Soc.*, vol. 10, no. 1, pp. 55–78, May 2021.
- [33] M. O. Karahan, “How Social Media Influencers Shape Online Impulsive Buying: The Mediating Role of Parasocial Interaction,” *Tour. Manag. Stud.*, vol. 21, no. 1, pp. 113–125, Feb. 2025.
- [34] H. Liu, M. F. S. D. C. B. M. F. De Costa, M. A. B. Yasin, and Q. Ruan, “A study on how social media influences on impulsive buying,” *Expert Syst.*, vol. 42, no. 1, p. e13448, 2025.
- [35] H. J. Park and J. Sharron Lennon, “Television Apparel Shopping: Impulse Buying and Parasocial Interaction - Ji Hye Park, Sharron J. Lennon, 2004.” Jun. 2004.
- [36] Z. Shao, J. SZE Yin Ho, G. Wei -Han Tan, K. Boon Ooi, and Charles, “Will social media celebrities drive me crazy? Exploring the effects of celebrity endorsement on impulsive buying behavior in social commerce - Shao - 2024 - International Journal of Consumer Studies - Wiley Online Library.” May 2024.
- [37] A. Ghahtarani, M. Sheikhmohammady, and M. Rostami, “The impact of social capital and social interaction on customers’ purchase intention, considering knowledge sharing in social commerce context,” *J. Innov. Knowl.*, vol. 5, no. 3, pp. 191–199, Jul. 2020.
- [38] N. F. Jumaat, N. Ahmad, N. A. Samah, Z. M. Ashari, D. F. Ali, and A. H. Abdullah, “Facebook as a Platform of Social Interactions for Meaningful Learning,” *Int. J. Emerg. Technol. Learn. IJET*, vol. 14, no. 04, p. 151, Feb. 2019.
- [39] L.-T. Huang, “Flow and social capital theory in online impulse buying,” *J. Bus. Res.*, vol. 69, no. 6, pp. 2277–2283, Jun. 2016.
- [40] S. Kamboj and Z. Rahman, “Measuring customer social participation in online travel communities: Scale development and validation,” *J. Hosp. Tour. Technol.*, vol. 8, no. 3, pp. 432–464, Oct. 2017.
- [41] M. Zhang and G. Shi, “Consumers’ Impulsive Buying Behavior in Online Shopping Based on the Influence of Social Presence,” *Comput. Intell. Neurosci.*, vol. 2022, no. 1, p. 6794729, 2022.
- [42] A. S. Al - Adwan and H. Kokash, “The Driving Forces of Facebook Social Commerce.” 2019.
- [43] S. Sharma, P. Menard, and L. A. Mutchler, “Who to Trust? Applying Trust to Social Commerce,” *J. Comput. Inf. Syst.*, vol. 59, no. 1, pp. 32–42, Jan. 2019.
- [44] C. Moser, P. Resnick, and S. Schoenebeck, “Community Commerce: Facilitating Trust in Mom-to-Mom Sale Groups on Facebook,” in *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*, Denver Colorado USA: ACM, May 2017, pp. 4344–4357.
- [45] W. Huang, X. Wang, Q. Zhang, J. Han, and R. Zhang, “Beyond likes and comments: How social proof influences consumer impulse buying on short-form video platforms,” *J. Retail. Consum. Serv.*, vol. 84, p. 104199, May 2025.
- [46] R. W. Attar, M. Shanmugam, and N. Hajli, “Investigating the antecedents of e-commerce satisfaction in social commerce context,” *Br. Food J.*, vol. 123, no. 3, pp. 849–868, Feb. 2021.
- [47] K. Mizukoshi, “Exploring the effects of trust and perceived values on consumer brand-related activities (COBRAs): a study of LINE and Facebook users in Japan - Journal of Marketing Analytics.” Apr. 2025.

- [48] A. D. Griffith and C. C. Gray, "The Fallacy of the Level Playing Field: The Effect of Brand Familiarity." 2003.
- [49] C. Orús, R. Gurrea, and C. Flavián, "Facilitating imaginations through online product presentation videos: effects on imagery fluency, product attitude and purchase intention," *Electron. Commer. Res.*, vol. 17, no. 4, pp. 661–700, Dec. 2017.
- [50] S. Stenimann, T. Kilian, and D. Brylla, "Experiencing Products Virtually: The Role of Vividness and Interactivity in Influencing Mental Imagery and User Reactions" Dec. 2014.
- [51] J. V. Chen, Q.-A. Ha, and M. T. Vu, "The Influences of Virtual Reality Shopping Characteristics on Consumers' Impulse Buying Behavior," *Int. J. Human-Computer Interact.*, vol. 39, no. 17, pp. 3473–3491, Oct. 2023.
- [52] J. Victor Chen, S. Ruangsri, Q. An ha, and A. E. Widjaja, "An experimental study of consumers' impulse buying behaviour in augmented reality mobile shopping apps." Dec. 2022.
- [53] F. Li, H. Lu, M. Hou, K. Cui, and M. Darbandi, "Customer satisfaction with bank services: The role of cloud services, security, e-learning and service quality," *Technol. Soc.*, vol. 64, p. 101487, 2021.
- [54] A. Biswas, S. Dutta, and C. Pullig, "Low price guarantees as signals of lowest price: The moderating role of perceived price dispersion," *J. Retail.*, vol. 82, no. 3, pp. 245–257, Jan. 2006.
- [55] P. Broeder and E. Wentink, "Limited-time scarcity and competitive arousal in E-commerce," *Int. Rev. Retail Distrib. Consum. Res.*, vol. 32, no. 5, pp. 549–567, Oct. 2022.
- [56] Z. Zhang, "How Price Dispersion Influences Intention to Join Online Group Buying: The Role of Perceived Price Fairness," *J. Mark. Manag. JMM*, vol. 8, no. 2, 2020.
- [57] D. A. Putri, E. Salim, V. B. Kumbara, and E. Elfiswandi, "The Effects of Price Discount, Bonus Pack, and In-Store Display on Impulse Buying at Supermarkets," in *Proceedings of the 8th International Conference on Entrepreneurship and Business Management (ICEBM 2019)* UNTAR, Kuala Lumpur, Malaysia: Atlantis Press, 2020.
- [58] J. F. Hair, L. M. Matthews, R. L. Matthews, and M. Sarstedt, "PLS-SEM or CB-SEM: updated guidelines on which method to use," *Int. J. Multivar. Data Anal.*, vol. 1, no. 2, pp. 107–123, Jan. 2017.
- [59] R. B. Kline, *Principles and practice of structural equation modeling*. Guilford publications, 2023.
- [60] A. Dhir and C.-C. Tsai, "Understanding the relationship between intensity and gratifications of Facebook use among adolescents and young adults," *Telemat. Inform.*, vol. 34, no. 4, pp. 350–364, Jul. 2017.
- [61] A. U. Zafar, J. Qiu, and M. Shahzad, "Do digital celebrities' relationships and social climate matter? Impulse buying in f-commerce," *Internet Res.*, vol. 30, no. 6, pp. 1731–1762, Jul. 2020.
- [62] L.-T. Huang, "Flow and social capital theory in online impulse buying," *J. Bus. Res.*, vol. 69, no. 6, pp. 2277–2283, Jun. 2016.
- [63] A. Dabbous, Aoun Barakat, Karine, and M. and Merhej Sayegh, "Social Commerce Success: Antecedents of Purchase Intention and the Mediating Role of Trust," *J. Internet Commer.*, vol. 19, no. 3, pp. 262–297, Jul. 2020.
- [64] K. Wu, J. Vassileva, Z. Noorian, and Y. Zhao, "How do you feel when you see a list of prices? the interplay among price dispersion, perceived risk and initial trust in Chinese C2C market," *J. Retail. Consum. Serv.*, vol. 25, pp. 36–46, Jul. 2015.
- [65] L. Fong and R. Law, "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)," *Eur. J. Tour. Res.*, Jul. 2013.
- [66] J. F. Hair, L. M. Matthews, R. L. Matthews, and M. Sarstedt, "PLS-SEM or CB-SEM: updated guidelines on which method to use," *Int. J. Multivar. Data Anal.*, vol. 1, no. 2, pp. 107–123, Jan. 2017.
- [67] J. F. Hair, J. J. Risher, M. Sarstedt, and C. M. Ringle, "When to use and how to report the results of PLS-SEM," *Eur. Bus. Rev.*, vol. 31, no. 1, pp. 2–24, Jan. 2019.
- [68] J. Henseler, C. M. Ringle, and M. Sarstedt, "A new criterion for assessing discriminant validity in variance-based structural equation modeling," *J. Acad. Mark. Sci.*, vol. 43, no. 1, pp. 115–135, Jan. 2015.
- [69] J. F. Hair, W. Black, B. J. Babin, and Rolph. E. Anderson, "Multivariate Data Analysis: A Global Perspective," ResearchGate
- [70] K. R. B., "Kline, R. B. (2015). Principles and practice of structural equation modeling (Fourth). The Guilford Press.," Bing.
- [71] A. H. Gold, A. Malhotra, and A. H. Segars, "(PDF) Knowledge Management: An Organizational Capabilities Perspective," ResearchGate, Jun. 2001,
- [72] A. Nadkarni and S. G. Hofmann, "Why do people use Facebook?," *Personal. Individ. Differ.*, vol. 52, no. 3, pp. 243–249, Feb. 2012.
- [73] T. T. A. Ngo, H. L. T. Nguyen, H. P. Nguyen, H. T. A. Mai, T. H. T. Mai, and P. L. Hoang, "A comprehensive study on factors influencing online impulse buying behavior: Evidence from Shopee video platform," *Heliyon*, vol. 10, no. 15, p. e35743, Aug. 2024.