



Impulse Buying and Consumer Well-Being in Flash Sales: The Mediating Roles of the Feel-Good Factor and Return-Exchange

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Abstract: Impulse purchases during flash sales may deliver instant satisfaction but can lead to financial burdens, guilt, and overall cognitive dissonance for consumers, especially in developing countries where knowledge of proper spending behavior is just beginning to be recognized. Prior research has prominently targeted the negative outcomes of impulse buying (IB), focusing less on its positive effects on consumers and retailers. The purpose of this research is to examine the effects of impulse purchases on consumer well-being (CW) in the South Asian context and analyze the mediating effects of the feel-good factor and return-exchange process as potential means of achieving a win-win strategy for consumers and retailers. Grounded in post-purchase behavior theory—integrating cognitive dissonance theory, regret theory, and the bottom-up spillover theory of subjective well-being—this study applies partial least squares structural equation modeling to cross-sectional survey data collected from 569 online consumers in Pakistan. IB exerts a positive direct effect on CW, with the feel-good factor emerging as the dominant mediating pathway and return-exchange behavior providing a secondary corrective route. The study resolves a longstanding paradox in IB research by demonstrating that flash-sale IB can enhance rather than undermine CW when post-purchase mechanisms are accounted for. It advances post-purchase behavior theory with novel evidence from South Asia and offers actionable guidance for marketers seeking to balance promotional effectiveness with consumer welfare.

Keywords: Flash sales, impulse buying, consumer well-being, feel-good factor, return and exchange, post-purchase behavior, South Asia, PLS-SEM.

JEL Classification: D12, D91, M31, O33.

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1. Introduction

The internet has transformed the shopping behavior (Ali & Amir, 2024). Online shopping is regarded as a contemporary, dynamic, readily accessible, and habitual activity that can take place at any time of day (Leung, 2023). By visiting shopping websites, consumers can find all the information necessary to satisfy their needs and examine several products from different electronic retailers placed on the same webpage (Mhaskar et al., 2024). There has been a phenomenal increase in e-commerce sales, which is expected to reach USD 8 trillion by 2027 (Statista, 2024).

The e-commerce landscape has experienced a surge in the use of flash sales, a marketing strategy that offers discounted products for a limited time and in limited quantities (Liu et al., 2021; Zhang et al., 2018). Flash sales have gained popularity in several online marketplaces, including Amazon, eBay, Walmart, and AliExpress. These time-sensitive, reduced-price offers are strategically featured on the front pages of applications, serving as a significant attraction for price-conscious consumers (Utama & Bestari, 2018). Consumers tend to make impulsive purchases during flash sales when the offers are particularly enticing, contributing to impulse buying (IB) behavior (Liu et al., 2021; Nigam et al., 2020). IB and flash sales are related concepts, as the latter often triggers the former in customers. Flash sales, known for time-bound discounts and limited goods, generate a sense of urgency and excitement that may push consumers to engage in IB (Fan et al., 2013). Scarcity associated with the limited availability of goods is one of the factors contributing to consumers' perceptions of goods as more desirable, causing fear of missing out on a good deal and encouraging IB (Fauzi, 2018). The discounts associated with flash sales may be another factor that promotes perceptions of the attractiveness of goods, and thus IB (Fauzi, 2018).

The phenomenon of flash sales is becoming common in developing nations like Pakistan. The growth rate of Pakistan's e-commerce market is forecast to grow by 3.22 percent between 2025 and 2029, reaching USD 6.71

billion in sales by 2029 (Statista, 2024). Both e-commerce websites and brick-and-mortar stores are adopting the flash-sale marketing approach to attract consumers and boost sales (Utama & Bestari, 2018). The pleasure derived from the impulsivity of buying something activates the brain's dopamine release, giving an immediate "high." The permanence of this feeling and its association with overall consumer well-being (CW) are the most contentious issues in consumer psychology today (Beikverdi et al., 2024).

Notwithstanding the substantial volume of impulse purchase behavior within e-commerce environments and its obvious significance in consumer psychology, one must recognize an important deficiency that is inherent in current scholarship: the overwhelming preoccupation with the antecedents and triggers of IB while paying scant regard to its aftermath on consumers' psychological well-being (Beikverdi et al., 2024; Redine et al., 2023). Indeed, according to systematic literature reviews, current research on the post-consumption effects of IB is far less developed than research that focuses on pre-purchase triggers (Beikverdi et al., 2024). Redine et al. (2023) emphasize the urgent need for research on the long-term impact of impulse purchases on consumers' subjective well-being. The current body of knowledge focuses on immediate post-consumption emotions, such as regret and guilt, without explaining how they aggregate into broader assessments of well-being.

Most studies on the post-purchase outcomes of IB portray it as an inherently harmful activity associated with negative results, such as cognitive dissonance, economic problems, self-blame, and buyer's remorse (Chen et al., 2023; Zeelenberg & Pieters, 2007). The bias against the phenomenon that dominates academic discussions fails to capture the more nuanced reality associated with impulse purchases during flash sales. Far from being an unequivocally negative experience, impulse shopping creates a paradoxical process by inducing both hedonic satisfaction and post-purchase dissonance in the same transaction, depending on how the consumer feels in the aftermath (Beikverdi et al., 2024; Ozer & Gultekin, 2015). The "feel-good factor"—the immediate hedonic uplift, sense of reward, and emotional gratification experienced following an impulse purchase—has been theorized as a potential positive pathway from IB to well-being, yet its mediating role has not been formally examined (Dhendra, 2020). Equally, the return and exchange mechanism—an increasingly salient feature of South Asian e-commerce platforms—is a

behavioral response to post-purchase dissatisfaction whose relationship with CW has attracted insufficient scholarly attention.

In addition, another important limitation exists regarding geographic and contextual specificity. The existing body of academic literature on consumers' impulsive purchasing behavior and well-being is predominantly based on empirical studies conducted in Western, educated, industrialized, rich, and democratic countries or East Asian countries like China (Beikverdi et al., 2024). South Asian countries present a unique socioeconomic and sociocultural environment where affordability is the primary motivator for online shopping (Yasmeen & Lai, 2024). At the same time, there is higher mobile commerce penetration, less-developed consumer protection mechanisms, and a unique attitude to spending that combines aspirational spending and normative frugality.

The dominant academic approach to explaining impulse purchases considers IB a behavioral flaw, a lack of self-control that is expected to negatively impact consumers in the form of overstretching their financial capabilities, feelings of regret after purchases, and cognitive dissonance (Farid & Ali, 2018; Festinger, 1957; Zeelenberg & Pieters, 1999). While this framework has considerable support, it is theoretically unsatisfactory for two related reasons. First, it is grounded in a rational-choice model that describes impulsive buyers as individuals whose emotional responses to consumption choices are always harmful. Second, it conflates the immediate post-purchase emotional state with the more stable evaluation of CW, treating a transient negative effect as a proxy for long-run harm.

Theory on post-purchase behavior (PPB) provides a richer, more analytical perspective to explore the issue. Two major schools of thought dominate the study of PPB. The theory of cognitive dissonance states that the discrepancy between expectations and reality about purchases is psychologically distressing for consumers, who seek relief by rationalizing their attitudes or behaviors, such as returning goods and exchanging them for something else. Regret theory, proposed by Bell (1982) and Loomes and Sugden (1982), views post-purchase regret as a counterfactual emotion resulting from the realization that another course of action would have led to better results. Moreover, according to Zeelenberg and Pieters (2007), the theory of regret includes methods of emotion regulation, such as returning products and exchanging them. Complementing these deficit-oriented

frameworks, the bottom-up spillover theory of subjective well-being (Headey & Wearing, 1989) posits that global well-being assessments are constructed from the accumulation of domain-specific emotional experiences, including consumption experiences. This implies that positive post-purchase emotions, including hedonic satisfaction and the feel-good factor, can meaningfully contribute to subjective well-being, even when the purchase itself was unplanned.

Therefore, the theoretical problem this study addresses is as follows: if IB in flash sale contexts generates a dual emotional trajectory—simultaneously activating hedonic gratification (feel-good factor) and potential dissonance (resolved through return and exchange)—the net effect of IB on CW is not predetermined by the act of impulse purchase itself, but is contingent upon which of these post-purchase pathways dominates. This represents a theoretically underspecified and empirically uninvestigated mechanism. Existing research neither formally models the mediating role of the feel-good factor between IB and CW nor examines return and exchange as effective regulation mechanisms that shape well-being outcomes following impulsive flash-sale purchases.

Additionally, the implied assumption that IB is anti-CW has led researchers to overlook the possibility that, under specific circumstances, the enjoyment and satisfaction derived from impulse purchases may contribute sufficiently to the creation of a genuine source of happiness (Ozer & Gultekin, 2015). The probability of achieving such a result within the context of flash sales is very high because the act of purchasing an attractive product at a considerable discount can enhance one's self-image, garner social approval, and produce lasting satisfaction regardless of the impulsive character of the activity. On the other hand, if the purchased product fails to satisfy one's hedonic needs, the possibility of an uncomplicated refund and exchange mechanism can act as a consumer protection measure that restores a sense of agency while reducing associated costs and consequences (Beikverdi et al., 2024).

This study advances the theoretical understanding of IB consequences in three significant respects. First, it departs from the dominant pre-purchase orientation in IB research by centering PPB theory as its primary explanatory lens. In doing so, it responds directly to calls from Beikverdi et al. (2024) and Redine et al. (2023) for the systematic

theoretical development of post-purchase IB outcomes, particularly in relation to CW. Rather than treating CW as an assumed casualty of impulsive purchasing, this study theorizes well-being as an outcome variable whose valence is determined by the interplay of post-purchase psychological and behavioral mechanisms.

Second, the study introduces and formally tests two theoretically grounded mediating mechanisms (the feel-good factor and return and exchange) that have thus far remained theoretically implicit but empirically unexamined in IB literature. The feel-good factor, operationalized as the hedonic emotional uplift, reward satisfaction, and positive affective response experienced following an impulse purchase, is theorized as a positive mediating pathway through which IB can enhance CW in accordance with the bottom-up spillover theory (Headey & Wearing, 1989). Return and exchange, operationalized as the consumer's intention and actual engagement in post-purchase return or exchange behaviors following IB, is theorized as a regret-regulation mechanism that mediates the relationship between IB and well-being in accordance with regret theory (Zeelenberg & Pieters, 2007) and cognitive dissonance theory (Festinger, 1957).

Third, by situating this theoretical framework within the flash sale context of South Asian e-commerce—a market setting that is both economically significant and theoretically underrepresented—the study contributes to a growing body of scholarship calling for contextually grounded consumer behavior research in developing economies (Beikverdi et al., 2024). Flash sales are not merely a promotional format in South Asia; they are a structurally embedded mechanism through which millions of price-sensitive consumers engage with e-commerce platforms on a daily basis. Understanding how this mechanism shapes post-purchase emotional trajectories and CW is, therefore, a matter of both theoretical consequence and practical urgency.

Guided by PPB theory, this study addresses the following research question: How does IB during flash sales affect CW, and to what extent do the feel-good factor and return and exchange behavior mediate mechanisms in this relationship? The current study aims to reconcile the paradox in the body of knowledge concerning IB, where impulsive purchases have been found to induce hedonic enjoyment, while the

negative consequences associated with IB continue to be highlighted. The current study does so by providing a formal model that explains how these contrasting outcomes are achieved. Additionally, it contributes both theoretically and practically to the field of PPB theory and platform designers/managers in South Asia's fast-growing digital retail landscape.

The remainder of the paper is organized as follows: section 2 provides a review of existing literature and proposes hypotheses. Section 3 describes the methodology used. Section 4 presents the empirical results obtained using structural equation modeling. Section 5 discusses the results and relates them to existing theories. Section 6 presents conclusions.

2. Literature Review and Hypotheses Development

2.1. Impulse Buying in the Flash Sale Context

IB can generally be described as a spontaneous purchase driven by immediate urges and emotions rather than rational thought (Rook, 1987; Verplanken & Herabadi, 2001). The development of the concept over recent years in connection with digital retail has been characterized by platform features such as time countdowns, scarcity indicators, one-click purchases, and individualized product recommendations, which have collectively reduced cognitive inhibition and increased emotional responses, thereby making impulse purchases inherently more probable than before in traditional stores (Redine et al., 2023). The flash sale is the epitome of this development. Limited periods of decision-making and discounts associated with restrictions on quantity stimulate the fear-of-missing-out phenomenon, resulting in a form of buying behavior that Sun et al. (2023) call "cognitive IB" because decisions are made under time pressure without due consideration. Flash sales are reliably identified as strong predictors of impulse purchases in various online shopping scenarios (Beikverdi et al., 2024; Dang et al., 2025).

In South Asia, the structural conditions that make the above relationship relevant become quite prominent. Customers' price consciousness in countries like Pakistan, India, and Bangladesh makes flash-sale discounts very relevant. In addition, the fast adoption rate of mobile commerce, where 80 percent of online transactions in Pakistan take place on smartphones (Payments and Commerce Market Intelligence,

2025), ensures that customers come across promotions from e-commerce platforms very frequently. However, IB in relation to flash sales is not yet a well-established theoretical concept, which is precisely what this research seeks to address.

2.2. Post-Purchase Behavior Theory

Theory related to PPB forms the major theory underpinning this research. The theory includes the cognitive, emotional, and behavioral activities in which consumers engage after purchasing goods (Oliver, 1997). Several other theories complement this theory.

The first is the cognitive dissonance theory developed by Festinger (1957), who believed that the difference between what the customer expects from a product and what they actually get causes mental tension that leads them to rationalize the purchase, seek positive reinforcement, or physically return the product.

Second, the theory of regret (Bell, 1982; Zeelenberg & Pieters, 2007) defines post-purchase regret as a counterfactual emotion resulting from the regret of not choosing an alternative path to achieve better results; the emotion prompts consumers to take measures to correct the situation through product return and other ways.

Third, the bottom-up spillover theory of subjective well-being by Headey and Wearing (1989) complements these deficit approaches; it posits that subjective global well-being results from adding up specific emotional experiences, including those associated with consumption.

Beikverdi et al. (2024), who conducted a systematic review of the impact of IB after purchase, found emotional satisfaction and post-purchase regret to be the most critical consequences and stated a need for models that examine the relationship between these consequences and well-being.

2.3. Consumer Well-Being and Impulse Buying

CW is a multidimensional concept in which consumers make judgments about their experiences in the market environment and how such experiences influence their quality of life and happiness (Sirgy, 2012). According to the existing literature on CW, IB is generally considered a

behavior that negatively affects CW since it causes financial stress, buyer's remorse, guilt, and life dissatisfaction (Beikverdi et al., 2024; Chen et al., 2023). At the same time, some studies have revealed a positivity effect of such purchases on CW. For instance, Ozer and Gultekin (2015) found that certain impulse purchases with hedonic elements result in positive emotional experiences that persist after consumption. This effect is evident in the purchase happiness literature as well (Nicolao et al., 2009).

This paradox is thus one of process and directionality—the same behavior may impair and improve CW based on the psychological process triggered following the purchase. So far, research has not provided a framework for examining how this dual impact is brought about, nor have researchers identified the conditions under which the positive process would prevail over the negative one. The feel-good element and returns/exchange activities are central in this regard.

2.4. Impulse Buying and Consumer Well-Being: The Direct Relationship

The affective outcome of flash-sale-related IB is the result of a tension between two factors. On the one hand, there is the enjoyment factor associated with acquiring an attractive offer at a considerably lower price, which triggers a rewarding experience and a positive feeling. Moreover, it might reinforce feelings of financial efficiency (Dang et al., 2025). On the other hand, the decision can be interpreted as a violation of the planned expense pattern, thereby triggering psychological discomfort related to financial problems or self-criticism (Festinger, 1957; Zeelenberg & Pieters, 1999). Prior literature has presented ambiguous evidence regarding the net directionality of this effect. In some settings, the hedonic gain dominates the cognitive dissonance cost, leading to a positive net effect on well-being. However, the opposite is true in other settings (Beikverdi et al., 2024). Therefore, in light of theoretical ambiguity in the flash-sale setting, this study examines the direct link without specifying its direction:

H1: IB has a significant direct effect on CW.

2.5. The Feel-Good-Factor as a Mediator

The feel-good-factor, defined in this study as hedonic emotional lift, satisfaction from reward, and positive affect resulting from IB, stands for the positive post-purchase effect linking IB and well-being. Theoretically,

there are two mechanisms underlying the positive effect described. One such mechanism (the dopaminergic reward) involves the triggering of dopamine secretion in response to buying, causing a temporary but notable feeling of well-being (Black, 2007). Such feelings appear to be especially intense when impulse purchases occur during flash sales due to scarcity cues and time pressure increasing anticipation arousal. Per the bottom-up spillover mechanism suggested by Headey and Wearing (1989), if an individual's impulse buy produces strong feelings of good that are positive, they contribute to CW as a whole; consequently, IB during flash sales is expected to result in the following feel-good factor, which enhances CW because:

H2: IB positively influences the feel-good factor.

H3: The feel-good factor positively influences CW.

H4: The feel-good factor mediates the positive relationship between IB and CW.

2.6. Return and Exchange as a Mediator

Consumer return and exchange behavior, defined as consumers' tendency to conduct return/exchange procedures after making impulsive purchases during flash sales, constitutes the corrective PPB pathway. Regret theory by Zeelenberg & Pieters (2007) and cognitive dissonance theory by Festinger (1957) form the theoretical framework for this pathway. As an impulsive purchase often fails to deliver its expected pre-purchase benefits due to time compression in the process, the post-purchase dissonance and regret experienced by the consumer will drive them to seek corrections. The return and exchange procedure is one of the most direct forms of correction available, functioning as a regret-relief behavior and partial restoration of the consumer's feelings of self-control.

Critically, whether return and exchange enhance or diminishes CW depends on the quality of the platform's return and exchange policy. When policies are transparent, frictionless, and promptly executed, the corrective act of returning a product resolves dissonance and restores well-being. As an act of self-regulation, the return itself may also generate a sense of agency and satisfaction that contributes positively to well-being (Beikverdi

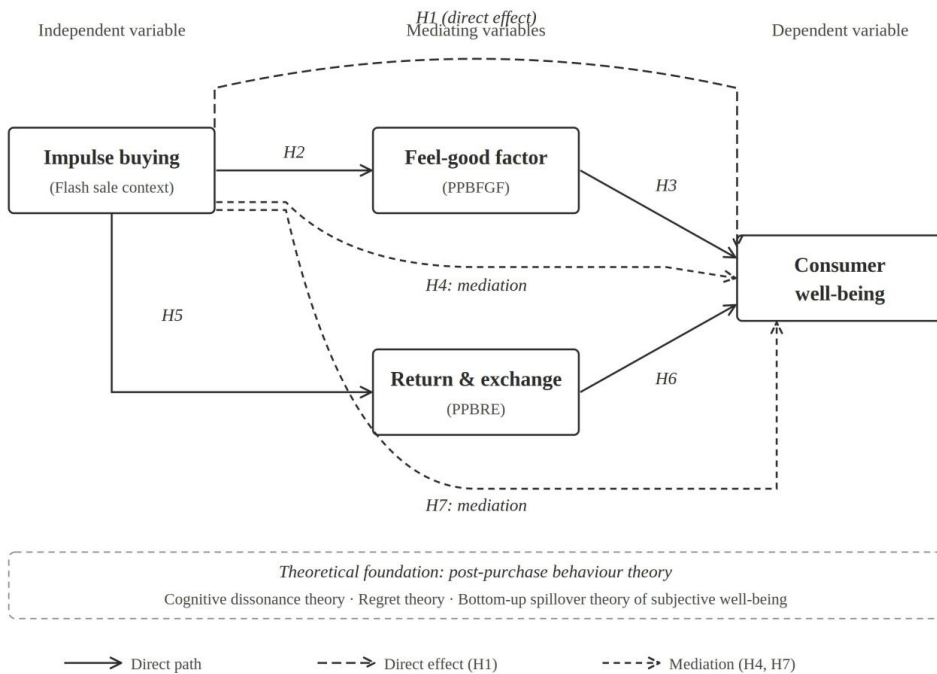
et al., 2024). IB is further expected to predict higher return and exchange propensity, consistent with the well-established finding that impulse purchases have materially higher return rates than planned purchases (Li et al., 2024):

H5: IB positively influences returns and exchange behavior.

H6: Return and exchange behavior positively influences CW.

H7: Return and exchange behavior mediates the relationship between IB and CW.

Figure 1: Conceptual framework



3. Research Methodology

3.1. Research Design

This study adopts a quantitative, cross-sectional survey design grounded in the post-positivist paradigm. The explanatory research design is appropriate given the study's objective of testing theoretically derived hypotheses about causal relationships among IB, post-purchase

mechanisms, and CW in the context of South Asian flash sales. Partial least squares structural equation modeling (PLS-SEM) was selected as the analytical technique for its suitability with reflective measurement models, its robustness with non-normally distributed data, and its particular strength in examining mediation within complex explanatory frameworks (Hair et al., 2019; Ringle et al., 2024). The analysis was conducted using SmartPLS 4 (Ringle et al., 2024).

3.2. Sampling and Data Collection

The target population of interest for this research included adults who had purchased products or services online in South Asia and attended at least one flash sale event on an e-commerce website in the last three months. Purposive sampling was used to include individuals who had experienced flash sales firsthand. Frequent participation in flash sales was defined as making at least one impulse purchase when attending a flash sale event in the past 90 days. This was used as the inclusion criterion.

Data was gathered through an online survey conducted across social media platforms and online communities in Pakistan. Content validity was established by three experts in consumer behavior. The questionnaire underwent a pilot test among 30 online consumers to establish item clarity and cultural appropriateness. The final usable sample (n) comprised 569 respondents, a sample size that satisfies the minimum power analysis requirements for PLS-SEM with the present model's complexity (Hair et al., 2019).

3.3. Measurement Instrument

All constructs were measured using reflective, multi-item scales adapted from established instruments and modified to fit the flash sale context. IB was measured using four items adapted from Rook and Fisher's (1995) IB tendency scale. CW was measured using four items adapted from Ekici et al. (2018). The PPB feel-good factor (PPBFGF) was measured using six items adopted from Ozer and Gultekin (2015) and Nicolao et al. (2009). Return and exchange (PPBRE) was measured with six items adapted from Chen et al. (2023). All items were rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The questionnaire was reviewed by two academic experts to ensure face validity.

4. Data Analysis

A total of 600 questionnaires were distributed, and 569 responses were recorded—a 94.8 percent response rate. The majority of participants were male (85 percent), while the remaining 15 percent were female, reflecting the characteristics of a male-dominated society, especially in the context of online buying (Table 1). From an age perspective, 62 percent were 26–35 years old, reflecting a young population. Participants bought clothing, cosmetics, electronics, and other products. Clothing (51.5 percent) and cosmetics (33 percent) constituted the largest shares. In terms of income, the highest contribution (41 percent) came from the income segment earning PKR 50,000–100,000. Participants reported exposure to all major e-commerce platforms in the country.

Table 1: Demographic profile

Demographic variable	Category	Frequency	Percentage
Gender	Male	485	85.24
	Female	84	14.76
Age	17–25 years old	149	26.19
	26–35 years old	355	62.39
	36–45 years old	65	11.42
Which product category do you prefer to shop during flash sales? Which brand do you prefer? (select all that apply)	Clothing	293	51.49
	Cosmetics	187	32.86
	Electronics	57	10.02
	Other	32	5.62
Income	< 50,000	195	34.27
	50,000–100,000	235	41.30
	100,000–150,000	89	15.64
	150,000+	50	8.79
Which online marketplace do you usually use for purchases during flash sales? (select all that apply)	Daraz.pk	16	2.81
	Panda Mart	153	26.89
	Shopify	231	40.60
	Brand's website	158	27.77
	Others	11	1.93

4.1. Measurement Model Assessment

The measurement model was evaluated following the two-step procedure recommended by Anderson and Gerbing (1988), assessing

indicator reliability, internal consistency reliability, convergent validity, and discriminant validity before proceeding to structural model estimation. Table 2 includes outer loadings, reliability, and validity statistics.

Table 2: Construct reliability, validity, and outer loadings

Construct/ item	Loading	Cronbach's alpha	Composite reliability	AVE
CW		0.931	0.932	0.828
CW2	0.917			
CW3	0.932			
CW4	0.925			
CW5	0.864			
IB		0.901	0.903	0.771
IB1	0.871			
IB2	0.862			
IB3	0.888			
IB4	0.890			
PPBFGF		0.921	0.923	0.717
PPBFGF1	0.834			
PPBFGF2	0.837			
PPBFGF3	0.860			
PPBFGF4	0.845			
PPBFGF5	0.868			
PPBFGF6	0.836			
Return and exchange (PPBRE)		0.904	0.905	0.675
PPBRE1	0.794			
PPBRE2	0.825			
PPBRE3	0.796			
PPBRE4	0.826			
PPBRE5	0.845			
PPBRE6	0.843			

AVE = average variance extracted (score), CW = consumer well-being, IB = impulse buying, PPBFGF = post-purchase behavior: feel-good factor, PPBRE = post-purchase behavior: return and exchange.

One item of the CW scale was removed due to low loading. Indicator reliability was assessed by examining outer loadings, all of which

exceeded the recommended threshold of 0.70 (Hair et al., 2019), ranging from 0.794 (PPBRE1) to 0.932 (CW3). Internal consistency reliability was evaluated using Cronbach's alpha and composite reliability. Cronbach's alpha values ranged from 0.901 to 0.931, and composite reliability values ranged from 0.903 to 0.932, all substantially exceeding the threshold (Hair et al., 2019). Convergent validity was confirmed through average variance extracted (AVE) scores, which ranged from 0.675 to 0.828, all exceeding the 0.50 benchmark.

Discriminant validity was assessed using the heterotrait-monotrait ratio, the values of which were below the conservative 0.85 threshold (Henseler et al., 2015): $IB \leftrightarrow CW = 0.472$, $PPBFGF \leftrightarrow CW = 0.683$, $PPBFGF \leftrightarrow IB = 0.462$, $PPBRE \leftrightarrow CW = 0.514$, $PPBRE \leftrightarrow IB = 0.534$, $PPBRE \leftrightarrow PPBFGF = 0.597$.

These results confirm that all constructs are empirically distinct. Multicollinearity among predictor variables was assessed using variance inflation factors, where the inner model variance inflation factor values ranged from 1.00 to 1.60, well below the threshold of 5.0, indicating no multicollinearity concern (Hair et al., 2019). All the data was collected from a single source. Therefore, there was a chance of common method variance. The Harmon one-factor test method was used to check the presence of common method variance. The largest variance extracted by one factor was 45.57 percent (below 50 percent), which indicates the absence of common method variance.

4.2. Structural Model Assessment

The structural model was evaluated in accordance with the criteria recommended by Hair et al. (2019) for PLS-SEM, including the coefficient of determination (R^2), effect sizes (f^2), and predictive relevance (Q^2). Bootstrapping with 5,000 subsamples was applied throughout to generate bias-corrected confidence intervals (BC-CIs).

Explanatory power was assessed using R^2 values. CW achieved $R^2 = 0.445$ (adjusted $R^2 = 0.442$), indicating that the model accounts for 44.5 percent of variance in the dependent variable—a moderate-to-substantial level of explanation by conventional benchmarks (Cohen, 1992; Hair et al., 2019). The feel-good factor yielded $R^2 = 0.178$ (adjusted = 0.177), and return

and exchange yielded $R^2 = 0.237$ (adjusted = 0.236), reflecting the proportion of variance in each mediator explained by IB alone. Table 3 shows the effect sizes for structural paths.

Table 3: Effect sizes for structural paths

Path	f^2	Effect classification	Interpretation
IB → CW (direct)	0.034	Small	Modest residual direct effect after mediation
IB → PPBFGF	0.217	Medium	IB meaningfully drives the feel-good factor
IB → PPBRE	0.311	Large	IB is a strong driver of return/exchange intent
PPBFGF → CW	0.305	Large	The feel-good factor is the dominant well-being predictor
PPBRE → CW	0.017	Small	Return/exchange contributes to well-being, but modestly

The effect sizes clearly show the hierarchy of structural effects. For example, the largest effect size was observed between the IB → PPBRE path ($f^2 = 0.311$), indicating a strong behavioral influence of IB on PPB in flash sales in terms of post-purchase corrective actions. A similar effect size was found for the PPBFGF → CW path ($f^2 = 0.305$), which demonstrates that the feel-good factor is the most significant predictor of CW in the model. A medium effect was established between the IB → PPBFGF path ($f^2 = 0.217$), while small effects were revealed in the IB → CW path and the PPBRE → CW path ($f^2 = 0.034$ and 0.017 , respectively). It is theoretically reasonable since the positive hedonic pathway affects CW outcomes more significantly than the corrective pathway. Predictive relevance (Q^2) was assessed using PLSpredict (Shmueli et al., 2019), which generates out-of-sample prediction errors for endogenous constructs by applying a leave-one-out cross-validation procedure. PLSpredict evaluates predictive relevance by comparing the PLS-SEM prediction errors (root mean squared error [RMSE], mean absolute error) against a naive linear model benchmark: a Q^2_{predict} value greater than zero indicates that the model has predictive relevance beyond the naive benchmark (Hair et al., 2019; Shmueli et al., 2019). The results are summarized in Table 4.

Table 4: Predictive relevance: PLSpredict results (Q^2_{predict})

Construct	R^2	Q^2_{predict} (RMSE)	Linear model benchmark (RMSE)	Q^2_{predict} (mean absolute error)	Predictive relevance
CW	0.445	0.753	0.999	0.602	Confirmed
PPBFGF	0.178	0.913	1.000	0.731	Confirmed
PPBRE	0.237	0.877	1.000	0.699	Confirmed

CW = consumer well-being, PPBFGF = post-purchase behavior: feel-good factor, PPBRE = post-purchase behavior: return and exchange, RMSE = root mean squared error.

The PLSpredict analysis confirmed predictive relevance for all three endogenous constructs. CW achieved the strongest out-of-sample prediction accuracy (RMSE = 0.753 vs. the linear model benchmark of 0.999), consistent with its high explanatory R^2 . The feel-good factor (RMSE = 0.913) and return and exchange (RMSE = 0.877) also outperformed their respective linear model benchmarks, confirming that the model's predictive capability extends beyond in-sample fit. Collectively, these results indicate that the proposed theoretical model not only explains variance in the endogenous constructs but also generates valid out-of-sample predictions, satisfying the criterion of predictive relevance as defined by Shmueli et al. (2019) and required by Hair et al. (2019).

Model fit was evaluated using the saturated model standardized root mean square residual = 0.046, well within the acceptable threshold of < 0.08 (Henseler et al., 2015), and the normed fit index = 0.913 for the saturated model, exceeding the conventional 0.90 threshold. The estimated model standardized root mean square residual of 0.116 reflects the constraints of the specified structural paths relative to the unconstrained saturated model, a pattern common in complex mediation models (Hair et al., 2019). The saturated model indices are the appropriate reference for overall fit assessment in PLS-SEM.

4.3. Hypothesis Testing Results

All seven hypotheses were supported. The direct effect of IB on CW (H1) was positive and statistically significant ($\beta = 0.161$, $t = 3.426$, $p < 0.001$, $f^2 = 0.034$), confirming that flash-sale IB exerts a positive, albeit small, direct effect on CW independent of the two mediating pathways.

IB strongly predicted the feel-good factor (H2: $\beta = 0.422$, $t = 8.383$, $p < 0.001$, $f^2 = 0.217$) and return and exchange behavior (H5: $\beta = 0.487$, $t = 11.015$, $p < 0.001$, $f^2 = 0.311$). The feel-good factor was the dominant predictor of CW (H3: $\beta = 0.501$, $t = 9.192$, $p < 0.001$, $f^2 = 0.305$), while return and exchange also had a significant positive effect (H6: $\beta = 0.122$, $t = 2.459$, $p = 0.014$, $f^2 = 0.017$).

The mediation analyses confirmed H4 and H7. The feel-good factor mediated IB–CW with an indirect effect of $\beta = 0.212$ (95 percent BC-CI: [0.156, 0.276], $t = 6.942$, $p < 0.001$), and return and exchange mediated with $\beta = 0.059$ (95 percent BC-CI: [0.013, 0.112], $t = 2.379$, $p = 0.017$). Because the direct path remained significant alongside both indirect effects, both mediators operate as partial mediators. The total indirect effect was $\beta = 0.271$ ($p < 0.001$) and the total effect $\beta = 0.432$, confirming a large cumulative positive relationship (total effect $f^2 = 0.230$) between IB and CW in the flash sale context. A consolidated summary of all structural estimates, effect sizes, and predictive relevance indicators is presented in Table 5.

Table 5: Hypotheses results

H	Path	β	t	p	f^2	f^2 class	95% BC-CI	Decision
H1	IB → CW (direct)	0.161	3.426	< 0.001	0.034	Small	[0.069, 0.255]	Supported
H2	IB → PPBFGF	0.422	8.383	< 0.001	0.217	Medium	[0.321, 0.515]	Supported
H3	PPBFGF → CW	0.501	9.192	< 0.001	0.305	Large	[0.391, 0.605]	Supported
H4	IB → PPBFGF → CW (indirect)	0.212	6.942	< 0.001	—	—	[0.156, 0.276]	Supported
H5	IB → PPBRE	0.487	11.015	< 0.001	0.311	Large	[0.401, 0.571]	Supported
H6	PPBRE → CW	0.122	2.459	0.014	0.017	Small	[0.028, 0.221]	Supported
H7	IB → PPBRE → CW (indirect)	0.059	2.379	0.017	—	—	[0.013, 0.112]	Supported

5. Discussion of Findings

5.1. The Positive Direct Effect of Impulse Buying on Consumer Well-Being

The confirmation of H1 represents another important theoretical finding due to the implication that IB is not as negative an experience for consumers in all cases as suggested by previous research. In the flash sales scenario, with deep discounts and consumers experiencing a true sense of achievement by obtaining products at good prices, there is a positive correlation between IB and CW. It is in line with Ozer and Gultekin (2015), who claim that the relationship between IB and CW is determined by the purchasing context, and agrees with the findings of Dang et al. (2025) regarding the importance of hedonic value for impulse purchase satisfaction in social commerce.

5.2. The Feel-Good Factor as the Dominant Pathway

The feel-good factor proved to be the most influential mediator and the strongest predictor of CW ($\beta = 0.501$, $f^2 = 0.305$). Specifically, this finding confirms for the first time the empirical validity of the idea that post-impulse purchase hedonic elevation (feel-good feeling) is a significant mediator through which flash-sale impulse purchases improve CW. The magnitude of PPBFGF $\rightarrow$ CW path is higher than any other path in the model, suggesting that high levels of hedonic satisfaction from a flash sale impulsive purchase contribute to global evaluations of one's well-being.

This conclusion is theoretically supported by the bottom-up spillover theory (Headey & Wearing, 1989) and empirically consistent with the literature on purchase happiness (Nicolao et al., 2009). Moreover, it extends the findings of Beikverdi et al. (2024), as this study shows that the positive hedonic effect of impulse purchasing found earlier in the literature leads to improvements in well-being and is not limited only to temporary emotional experiences.

5.3. Return and Exchange as a Regret-Relief Pathway

The confirmation of H7 establishes return and exchange behavior as a significant, albeit weaker, mediating pathway ($\beta = 0.059$). The significant positive effect of return and exchange on CW (H6: $\beta = 0.122$, $p =$

0.014) is consistent with regret theory's prediction that corrective action following a regret-inducing decision restores emotional equilibrium (Zeelenberg & Pieters, 2007). When consumers who have made impulsive flash-sale purchases exercise the option to return or exchange a product that fails to meet their expectations, they reclaim a sense of financial and psychological agency. The act of return resolves the cognitive dissonance associated with the unplanned purchase and converts a potentially negative post-purchase experience into one associated with positive self-regulation outcomes.

The relatively lower indirect impact of PPBRE compared to PPBFGF (0.059 vs. 0.212) is worth considering. It shows that while the return/exchange process contributes to happiness by reducing regret, the primary experience associated with the flash sale situation is hedonic rather than reparative in nature. In most cases of impulse purchases, consumers are sufficiently satisfied with the actual purchase to be happy with their experience, with the return process merely being an added security measure in case of underperformance.

5.4. Partial Mediation and the Integrated Model

The presence of both indirect and direct effects proves partial mediation. The theoretical importance lies in the fact that neither the feel-good factor nor return and exchange alone explains how IB influences consumers' well-being. Instead, an additional effect could be explained by variables not addressed in this study. Some of them include a feeling of identity satisfaction from getting a good bargain, showing off shopping skills via signaling behavior, or sheer enjoyment of the buying experience. All of them are promising directions for further research.

5.5. Theoretical Contributions

This study makes three distinct theoretical contributions to consumer behavior literature. First, it formally resolves the theoretical paradox surrounding the IB-CW relationship in flash sale contexts by demonstrating that the net effect is positive, operating through both a hedonic satisfaction pathway and a corrective behavioral pathway. Prior literature treated this relationship as inherently ambiguous or presumptively negative; this study's model demonstrates that under the

conditions of flash-sale e-commerce in South Asia, the positive pathways dominate. This advances the call by Redine et al. (2023) for systematic empirical investigation of IB's long-run consequences and responds to Beikverdi et al.'s (2024) agenda for post-purchase outcome research.

Second, the study introduces and empirically validates the feel-good factor and return and exchange as formally theorized and measured mediating mechanisms in the IB-well-being chain. These mechanisms were theoretically anticipated in the literature but had not been formally integrated into a mediation model tested with primary survey data. By anchoring these mechanisms in PPB theory, specifically the bottom-up spillover theory and regret theory, this study provides a theoretically coherent framework for future research on post-purchase CW.

Third, the study advances contextually grounded consumer behavior research in South Asia. By generating theoretically interpretable findings from a region that is economically significant but underrepresented in IB literature (Beikverdi et al., 2024), the study challenges the implicit universality of findings derived from Western or East Asian consumer samples and demonstrates that the positive hedonic pathway from IB to well-being is operative in a price-conscious, mobile-first, developing-market context.

5.6. Managerial Implications

The findings carry several actionable implications for e-commerce platform managers and marketing practitioners operating in South Asia. For platform designers, the dominance of the feel-good factor pathway confirms that investments in enhancing the hedonic quality of the post-purchase experience through personalized confirmation messages, loyalty rewards triggered by flash-sale purchases, and social sharing mechanisms that allow consumers to celebrate their deals can materially improve CW. Post-purchase communications that reinforce the positive emotional value of the deal secured, rather than simply providing a transaction confirmation, are likely to amplify the feel-good effect and strengthen consumer-platform relationships.

The revelation that a seamless return and exchange process can improve consumer well-being through regret relief is highly significant for

managers responsible for these policies. By implementing a platform with no cost for returning products purchased during flash sales, managers are essentially helping consumers meet their well-being needs. Since returns made from impulse purchases tend to be high (Li et al., 2024), the economic benefits of return policies should be viewed not as losses but as a well-being-restoring process.

For consumer welfare advocates and regulatory bodies, the overall positive net effect of flash sale IB on CW, once post-purchase mechanisms are accounted for, provides nuanced evidence that counters blanket narratives of harm. Policy interventions aimed at flash-sale practices in South Asia should focus on ensuring the quality of post-purchase mechanisms, particularly return-and-exchange accessibility, rather than suppressing flash-sale promotions themselves.

5.7. Limitations and Future Research Directions

This study is subject to several limitations that should be acknowledged and that point to productive future research directions. First, the cross-sectional design prevents the establishment of temporal precedence and precludes causal inference with certainty. IB, the feel-good factor, return and exchange behavior, and CW may unfold across different time horizons—the hedonic uplift may be immediate, while well-being assessments may reflect a more extended post-purchase evaluation period. Future research should employ longitudinal or experience-sampling designs that capture the temporal dynamics of post-purchase emotional trajectories.

Second, the use of purposive, self-selected sampling through online channels introduces potential self-selection bias. Consumers who are sufficiently engaged with flash sales to participate in an online survey may be systematically more positive about their flash-sale experiences than the broader population of flash-sale shoppers. Future research should explore probability-based sampling approaches (stratified sampling) to complement survey-based measurement.

Third, the study establishes partial mediation, indicating that the residual direct effects from IB to CW are not fully explained by the two mediators. Future research should investigate additional post-purchase

mechanisms, including social sharing of deals, product category effects, self-congruity of impulse purchases, and platform trust, as potential additional pathways. Moderating effects of cultural orientation, financial literacy, and regulatory context on IB-well-being pathways also represent fruitful extensions.

Fourth, the sample is skewed towards male respondents, limiting its generalizability. Future research studies should address this limitation and incorporate a comparative gender analysis.

6. Conclusion

This study set out to resolve a theoretically contested relationship: whether IB in the context of e-commerce flash sales enhances or diminishes CW, and through what mechanisms. Drawing on PPB theory, and specifically integrating the bottom-up spillover theory and regret theory, the study proposed and tested a model in which the feel-good factor and return and exchange behavior mediate the IB-well-being relationship. Using data from 569 online consumers across South Asia and PLS-SEM with 5,000-subsample bootstrapping, all seven hypotheses were supported.

The findings collectively demonstrate that flash-sale IB exerts a significant positive net effect on CW, predominantly through the hedonic satisfaction generated by the feel-good factor, and secondarily through the regret-relief afforded by return and exchange. The direct positive effect further confirms that some of the well-being benefits are immediate and not mediated by post-purchase mechanisms. These findings advance PPB theory by introducing and validating two novel mediating mechanisms, challenge the prevailing negativity bias toward IB in CW literature, and generate actionable guidance for platform managers seeking to design post-purchase experiences that genuinely improve consumer welfare.

References

- Ali, M., & Amir, H. (2024). Understanding consumer herding behavior in online purchases and its implications for online retailers and marketers. *Electronic Commerce Research and Applications*, 64, 101356.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411–423.
- Beikverdi, L., Sipilä, J., & Tarkiainen, A. (2024). Post-purchase effects of impulse buying: A review and research agenda. *Journal of Consumer Behaviour*, 23(1), 1–16.
- Bell, D. E. (1982). Regret in decision making under uncertainty. *Operations Research*, 30(5), 961–981.
- Black, D. W. (2007). Compulsive buying disorder: A review of the evidence. *CNS Spectrums*, 12(2), 124–132.
- Chen, W.-K., Chen, C.-W., & Lin, Y.-C. (2023). Understanding the influence of impulse buying toward consumers' post-purchase dissonance and return intention: An empirical investigation of apparel websites. *Journal of Ambient Intelligence and Humanized Computing*, 14, 14453–14466.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159.
- Dang, T.-Q., Nguyen, L.-T., & Duc, D. T. V. (2025). Impulsive buying and compulsive buying in social commerce: An integrated analysis using the cognitive-affective-behavior model and theory of consumption values with PLS-SEM. *SAGE Open*, 15(2).
- Dhandra, T. K. (2020). Does self-esteem matter? A framework depicting role of self-esteem between dispositional mindfulness and impulsive buying. *Journal of Retailing and Consumer Services*, 55, 102135.
- Ekici, A., Sirgy, M. J., Lee, D.-J., Yu, G. B., & Bosnjak, M. (2018). The effects of shopping well-being and shopping ill-being on consumer life satisfaction. *Applied Research in Quality of Life*, 13(2), 333–353.

- Fan, X., Liu, F., & Zhang, J. (2013). To be familiar or to be there? The roles of brand familiarity and social presence on web store image and online purchase intention. *International Journal of Electronic Marketing and Retailing*, 5(3), 199–221.
- Farid, D. S., & Ali, M. (2018). Effects of personality on impulsive buying behavior: Evidence from a developing country. *Marketing and Branding Research*, 5(1), 31–43.
- Fauzi, M. P. (2018, April 19). *Shopee ingin selamanya gelar flash sale dan gratis ongkir*. <https://inet.detik.com/cyberlife/d-3978981/shopeeingin-selamanya-gelar-flash-sale-dan-gratis-ongkir>
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford University Press.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24.
- Headey, B., & Wearing, A. (1989). Personality, life events, and subjective well-being: Toward a dynamic equilibrium model. *Journal of Personality and Social Psychology*, 57(4), 731–739.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135.
- Leung, S. K. (2023). 24-hour online shopping: A study in Indian college online shoppers. *Academy of Marketing Studies Journal*, 27(3), 1–11.
- Li, X., Zhao, K., & Pu, W. (2024). Return rate of live-streaming commerce: A systematic review. *Journal of Retailing and Consumer Services*, 78, 103732.
- Liu, X., Zhou, Y.-W., Shen, Y., Ge, C., & Jiang, J. (2021). Zooming in the impacts of merchants' participation in transformation from online flash sale to mixed sale e-commerce platform. *Information and Management*, 58(2), 103409.

- Loomes, G., & Sugden, R. (1982). Regret theory: An alternative theory of rational choice under uncertainty. *The Economic Journal*, 92(368), 805–824.
- Mhaskar, N., Dakhane, D., & Narawade, V. (2024). E-commerce website product compare. *Journal of Electrical Systems*, 20(10s).
- Nicolao, L., Irwin, J. R., & Goodman, J. K. (2009). Happiness for sale: Do experiential purchases make consumers happier than material purchases? *Journal of Consumer Research*, 36(2), 188–198.
- Nigam, A., Dewani, P. P., & Behl, A. (2020). Exploring deal of the day: An e-commerce strategy. *Benchmarking: An International Journal*, 27(10), 2807–2830.
- Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the consumer*. McGraw-Hill.
- Ozer, L., & Gultekin, B. (2015). Pre- and post-purchase stage in impulse buying: The role of mood and satisfaction. *Journal of Retailing and Consumer Services*, 22, 71–76.
- Payments and Commerce Market Intelligence. (2025). *Pakistan e-commerce market data 2024–2027*.
- Redine, A., Deshpande, S., Jebarajakirthy, C., & Surachartkumtonkun, J. (2023). Impulse buying: A systematic literature review and future research directions. *International Journal of Consumer Studies*, 47(1), 3–41.
- Ringle, C. M., Wende, S., & Becker, J.-M. (2024). *SmartPLS 4*. SmartPLS GmbH. <https://www.smartpls.com>
- Rook, D. W. (1987). The buying impulse. *Journal of Consumer Research*, 14(2), 189–199.
- Rook, D. W., & Fisher, R. J. (1995). Normative influences on impulsive buying behavior. *Journal of Consumer Research*, 22(3), 305–313.

- Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J. H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLSpredict. *European Journal of Marketing*, 53(11), 2322–2347.
- Sirgy, M. J. (2012). *The psychology of quality of life: Hedonic well-being, life satisfaction, and eudaimonia* (2nd ed.). Springer.
- Statista. (2024). *Retail e-commerce sales worldwide from 2014 to 2027 (in trillion U.S. dollars)*. <https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/>
- Sun, Y., Chen, Y., & Xue, H. (2023). Flash sales and impulse buying: The role of time pressure and scarcity messaging. *International Journal of Electronic Commerce*, 27(3), 81–109.
- Utama, L., & Bestari, N. P. (2018). *Pantas saja flash sale cepat habis, ini sebabnya*. <https://www.viva.co.id/digital/digilife/1032760-pantas-saja-flash-sale-cepat-habis-ini-sebabnya>
- Verplanken, B., & Herabadi, A. (2001). Individual differences in impulse buying tendency: Feeling and no thinking. *European Journal of Personality*, 15(S1), S71–S83.
- Yasmeen, R., & Lai, P. (2024, February 15). *2024 consumer trends in Asia and the impact on e-commerce*. Euromonitor International. <https://www.euromonitor.com/article/2024-consumer-trends-in-asia-and-the-impact-on-e-commerce>
- Zeelenberg, M., & Pieters, R. (1999). Comparing service delivery to what might have been. *Journal of Service Research*, 2(1), 86–97.
- Zeelenberg, M., & Pieters, R. (2007). A theory of regret regulation 1.0. *Journal of Consumer Psychology*, 17(1), 3–18.
- Zhang, M., Cheng, T. C. E., & Du, J. (2018). Advance selling of new products to strategic consumers on flash sale platforms. *International Journal of Logistics Research and Applications*, 21(3), 318–331.