Volume 11 | No. 1 | January– June 2024

Sukkur IBA Journal of Management and Business
P-ISSN: 2313-1217
E-ISSN: 2410-1885

The Impulsivity of Gen Z: The Influence of External and Situational Factors in a Traditional Buying Environment

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Abstract

Gen Z are born into an era of disruption where change is the only constant. For a generation that considers convenience as a way of life and not a luxury, it is important to understand how traditional retail environments can be tailored to meet their demands. While research has increasingly focused on online and virtual shopping environment, the brick and mortar economy also continues to thrive. It is vital to study new entrants such as Gen Z to understand their buying behavior in traditional environments. This area has not been covered sufficiently in extant literature. This research assesses the impact of external and situational factors on impulsive buying behavior among Gen Z. Two external factors (sales promotions/discounts; store environment) and two situational factors (time availability; money availability) were studied keeping in mind the generational cohort theory and the stimulus-organism-response theory. Data was gathered from 201 Gen Z respondents through an online survey. The proposed model examined relationships between external factors and impulse buying behavior and situational factors and impulse buying behavior. Two hypotheses were developed and analyzed through path modelling with path weighting scheme within partial least square structural equation modelling. Results showed that both external and situational factors had a significant positive impact in triggering impulse buying among Gen Z. When external and situational factors were considered together, they had a significant and positive impact on the impulse buying behavior of Gen Z. Studying the impulse buying behavior of Gen Z in a traditional (brick-and-mortar) setting will help retailers target this segment appropriately.

Keywords: *Impulse buying behavior, Generation Z, external factors, situational factors, PLS-SEM*

JEL Code: M30, M31

1. Introduction

Generational cohorts can have long-lasting inclinations and cognitive styles that influence their behavior throughout their lives (Dahlquist & Garver, 2022). These unique behavioral characteristics are shaped by the era each generation

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was born in (Salleh et al., 2017). Desai and Lele (2017) noted that generation gaps are significant differentiators for organizations worldwide. Hence, marketers should study and comprehend the behavioral characteristics of each generation to create tailored marketing strategies that resonate with their target audience (Bulin et al., 2024).

Over the last few years, focus has gradually shifted towards Generation Z (or Gen Z) (Gentina, 2020). According to UNICEF (2020: website), Gen Z's birth years span between 1995 and 2009. This generation is projected to constitute 27% of the labor force and comprise one-third of the world's population by 2025 (Staglin, 2022). This is, hence, a significant generation for marketers. They have unique purchasing behavior, which is influenced by their generational history, experiences, expectations, demographics, and lifestyles (Williams & Page, 2011). Their purchase decision-making process and consumption preferences are different from other generations (Anton, 2024; Yang et al., 2020).

Gen Z consumers are interested in new and trendy products and are considered early adopters, [or premium pioneers (Bandara & Liyanage, 2024)], an inclination which is particularly pronounced among Gen Z impulse buyers who outnumber their counterparts from other generations such as Millennials and Generation X (Djafarova & Bowes, 2021). Accenture (2017) found that Gen Z consumers are 60% more likely than previous generations to make a purchase simply because they feel like it or because they spotted something they liked. This desire for instant gratification is a defining characteristic of this generation (Duffett, 2017). The research by Dhaundiyal and Coughlan (2016) suggests that younger customers tend to engage in more impulse buying.

Impulse buying is a crucial aspect of consumers' decision-making and purchasing behavior and holds great significance for retailers and marketers as well as for store profit. Therefore, companies need to focus on competitive strategies for encouraging unplanned buying (Ittaqullah et al., 2020). Given Gen Z's desire for instant gratification, as identified by Duffett (2017), it is important to understand the factors that drive impulse buying in this demographic in order to gain insight into their consumption and purchase patterns.

The purchasing power of Gen Z is increasing (Entina et al., 2021). They are redefining consumption and production (Priporas et al., 2017), but still Gen Z as young consumers has received very little attention compared to others (Seemiller & Grace, 2018). There is currently limited knowledge about this generational cohort's consumer behavior (Thach et al., 2021; Thangavel et al, 2022; Vojvodić, 2019), including their impulse buying behavior (Purmono & Ramadania, 2021).

Physical stores are still superior in terms of encouraging impulse buying because of greater sensory stimulation as compared to online channels (Rodrigues, 2021). Impulse buying within physical environment can be triggered by factors like cash availability, time availability, facility of ATM, layout of the store, and store environment (Mohan et al., 2013) in addition to factors common with other buying environments such as personality traits (Atulkar & Kesari, 2018), reference group, consumers' mood, promotion of a product, or perceived enjoyment (Karim et al., 2021). External factors like impressive layout of stores, joyful atmospheric cues, and many other factors also promote unplanned purchases by consumers (Lee & Johnson, 2010; Pinto et al., 2020). Ali and Hasnu (2013) and Nawaz (2018) emphasize the need to study the impact of in-store environment on impulse buying behavior. Moreover, Parsad et al. (2017) highlighted the importance of store environments like lighting, sales employees, crowd, display, and aroma to be considered by retailers for stimulating impulse purchases. Further, Husnain et al. (2019) suggested different age groups be studied with respect to impulse buying behavior by focusing on the impact of store environment. Additionally, prior literature has not sufficiently studied the impact of external factors (sales promotion/discount and store environment) and situational factors (time availability and money availability) on the impulse buying behavior of Gen Z in physical in-store environment.

The advent of web 2.0 has led to the downfall of traditional brick-and-mortar stores (Karim et al., 2021), as consumers have increasingly shifted their attention to online shopping. This shift to online shopping has prompted researchers to study consumers' impulse buying behavior in the online environment (Nanda et al., 2023). However, Gen Z is a true omni-channel consumer who is driven by overall shopping experience rather than brand affinity and store loyalty (Rizk et al., 2024) and, consequently, continues to use physical channels as well (Bhargava et al., 2020). Hence, while most ongoing research on Gen Z is directed towards online retailing, it is imperative to study their buying behavior in traditional brick and mortar shopping environment as well so that traditional retailers can keep abreast of channel competition and develop appropriate tools and strategies to engage this emerging consumer cohort (Vojvodić, 2019). This research aims to bring together these two issues: first: aspects of shopping experience as influencers of impulse buying behavior of Gen Z; and second: a physical retail setting. Our study contributes to enhancing our knowledge of Gen Z impulse buying behavior within a brick-and-mortar retail environment and in the presence of situational and external factors.

The paper is organized as follows: the first section covers the literature review followed by hypotheses development. The second section includes the research

methodology. The next section covers the results of path analysis in PLS-SEM. After this, findings are discussed in light of prior work and future implications.

2. Literature Review

Customers do not always make purchases after following a detailed decision-making process: it would be tiresome, monotonous, and boring for the buyer (Sofi & Nika, 2017). Therefore, at times, customers may buy items on impulse because they feel excited or experience pleasure, or because they have a strong urge to make a purchase (Asrinta, 2018).

The emergence of the retail industry resulted in a stream of research on impulse buying back in the 1950s (Musadik & Azmi, 2019). Deokule and Katole (2020) state that the term impulse buying was first studied by Clover (1950). It refers to unplanned purchases made by customers on the spot, without any prior planning or intention to buy (Ittaqullah et al., 2020). Impulse buying gratifies by focusing on the emotional need "*urge to buy*" rather than the functional need (Parsad et al., 2017, p.4). This urge to buy can be because of excitement, strong desire, or feelings of joy (Abdelsalam et al., 2020).

Impulse buying has continued to be the focus of interest for practitioners and academics (Redine et al., 2022) and has garnered attention from researchers despite the outcome (Spiteri-Cornish, 2020). Buying on impulse is more likely to happen in physical stores due to greater sensory stimulation than online channels (Rodrigues, 2021). As a consequence, physical stores are intentionally designed to encourage impulse purchase (Zhang et al., 2007).

Preference for a certain service or product is influenced by the presence of commercial stimuli. These could include catchy and attractive store features (Meena, 2018), or sales promotion, one of the most effective tools that can change the purchase decision of a consumer (Khan et al., 2019). Promotional activities by retailers (Lo et al., 2016) and enhanced store environment (Barros et al., 2019) evoke rapid purchases by customers.

Within the era of evolving marketplaces and the emergence of omnichannel, customers demand improved experiences while shopping offline or online (Baykal, 2020). Generational cohort theory postulates that this marketplace evolution, coupled with other technological, social, political, economic and environmental changes leave a deep impression on those that are born into and live through these changes (Buss, 1974). The resultant generational cohorts share values, beliefs, and behavior patterns that are unique to them and differentiate them from cohorts that were born and raised in different chronological time and experienced different life events (Thangavel et al., 2021). Gilal et al. (2021) add that segmenting markets according to generational

cohorts helps marketers to focus their marketing efforts more effectively and efficiently.

In 2017, the IBM Institute for Business Value and Oxford Economics jointly conducted a survey in 16 countries across six continents, which involved 15,600 Gen Z participants aged between 13 and 21. The survey reported that "*surprisingly, more than 98 percent still prefer to make purchases in bricks-and-mortar stores*" (Cheung et al., 2017, p.1). Baykal (2020) also reports that Gen Z prefer shopping in physical stores (p.127). Therefore, to capture Gen Z more effectively physical stores need to shift their marketing efforts to meet changing consumer requirements (Vojvodić, 2019).

Recent studies have used the Stimulus-Organism-Response perspective to look at phenomena such as loyalty related to Gen Z (Pasaribu et al., 2023). The SOR model (Mehrabian & Russell, 1974) suggests that stimuli affect the organism, which in turn affects the response. The S-O-R model is well accepted to study impulse buying behavior as mentioned by Djafarova and Bowes (2021), who explain the model succinctly in this domain: consumer behavior is a result of the interplay between three different factors – the stimulus, the organism and the resultant response. Environmental factors are the stimuli (S) which influence the organism (O) via internal factors which then trigger a response (R) as the final factor.

Inspired by Huo et al. (2023), we have anchored our study to depict external and situations factors as the stimuli, the consumer or the consumer's internal psychological working as the organism, and the behavior in terms of impulse buying as the response. Huo et al. (2023, p.3) in turn, set up their conceptual model in a more involved manner including *"social presence and sales promotion as the environmental stimuli (S) that affect consumers' flow experience (O), and in turn, consumers' impulse buying behavior is influenced* (R)*".* Along with the flow experience as a mediator, two situational variables (time availability and money availability) were studied by them as moderators.

Considering the significant impact of surrounding elements and diverse environments on the behavioral development of Gen Z (Salleh et al., 2017), coupled with the preference of Gen Z for physical shopping experiences (Baykal, 2020), it is imperative for retailers to prioritize creating appealing stores and providing ideal shopping experiences. Gen Z is also interested in getting promotional sales for services and products (Jamal, 2020). Gen Z's interest in the newest products (Djafarova & Bowes, 2021) and innovation (Priporas et al., 2017) is high (Djafarova & Bowes, 2021), and they like to stay updated (Ugbomhe & Adomokhai, 2021). This generation is also known to be

"*instant-minded with faster life rhythm*" (Desai & Lele, 2017, p.802). According to Djafarova and Bowes (2021), one of the most important things for Gen Z when doing any activity is speed. They have fast reactions (Entina et al., 2021).

Researchers have given significant attention to situational factors in comprehending impulsive behavior (Badgaiyan & Verma, 2015). According to Yang et al. (2011), in-store impulse buying behavior varies based on different buying situations. For instance, individuals with more time (Khan et al., 2015) or money (Atulkar & Kesari, 2018) tend to make more impulse purchases. Azizi et al.'s (2020) study highlighted the importance of both money and time availability in promoting online impulse purchases.

Developing innovative marketing approaches tailored to the preferences of new young consumers is crucial for marketers and brands to succeed (Anton, 2024). This is particularly important given that Gen Z is the future consumer base (Priporas et al., 2017). Therefore, marketers and brands should understand Gen Z to effectively position their services and products (Djafarova & Bowes, 2021; Thangavel et al., 2021).

2.1. External factors

External stimuli provide motivation for impulse buying (Kazi et al., 2019). Price discount is a short-term promotion which is a common strategy in retail stores (Wu et al., 2014) and acts as an external environment stimulus in an impulse buying situation. It is a type of sales promotion that offers the same product at a lower price (Ittaqullah et al., 2020). Price discounts and other sales promotions in the store play a key role in attracting customers toward a specific product, resulting in instant purchases (Nawaz, 2018). Sales promotions are "*marketing activities usually specific to a time period, place or customer group, which encourage a direct response from consumers or marketing intermediaries, through the offer of additional benefit*" (Peattie & Peattie, 2012, p.458). According to Jamal and Lodhi (2015), if the products are at a promotional/discounted price, customers make more impulsive purchases as compared to when they are sold at regular price.

Impulse buying can hence be triggered by a range of promotional retail strategies employed by stores, including price promotions (reducing price) such as *discounts* and *coupons*, as well as non-price promotions (temporarily adding value) such as *freebies* and *reward points*, which temporarily enhance the value of the product (Asrinta, 2018). Cheung et al. (2018) report that discounts, rewards, and coupons are important for Gen Z while making a purchase. Gen Z is interested in getting promotional sales for services and products of their interest (Jamal, 2020).

Research has continually shown that sales promotions and discounts are critical factors that can make a customer buy a product impulsively (Hasim et al., 2018; Musadik & Azmi, 2020). Thus, we assume that sales promotion has a positive impact on the impulse buying behavior of Gen Z (Amarilys et al., 2022).

Today shopping is not just limited to purchasing goods and services; rather customers' buying decisions are also impacted by the retail environment while shopping (Bawa et al., 2019). The environment of the store is important in encouraging customers to buy impulsively (Husnain et al., 2019). An attractive environment (including staff behavior, product display, technology, location and lightning of the store, goods availability, display, etc.) engages the customers in impulse buying (Akram et al., 2016). Baykal (2020) states that shopping experience is very notable for Gen Z, therefore, retailers should focus on working on it to increase the frequency of this generation's visits. Gen Z specifically desires interesting and new experiences and stimuli (Entina et al., 2021). We, therefore, posit that in addition to promotions/discounts, other external factors such as store environment and attitude towards sales representatives influence the impulsive buying behavior of consumers (Karbasivar & Yarahmadi, 2011; Mamuaya, 2018). Thus, the hypothesis developed is:

H1: External factors have a positive influence on the impulsive buying behavior of Gen Z consumers.

2.2. Situational factors

Situational factors are one of the key indicators of impulse buying behavior of customers (Atulkar & Kesari, 2018). These factors lead the customer to make an emotional decision rather than a rational one; the two main situational factors in impulse buying are time availability (the time available to the customer for shopping which is positively linked with instant buying) and money availability (the extra money or the specific budget the customers have for shopping) (Mamuaya & Pandowo, 2018). The studies by Husnain and Akhtar (2016) and Hasim et al. (2020) recommend studying situational factors like money and time availability for impulse buying behavior. Azizi et al. (2020) revealed the significant impact of money and time availability on online impulse buying in their study.

Husnain et al. (2019) state that several studies have shown the positive impact of time availability on the impulse buying behavior of customers. The more time the customer has, the more items he/she will impulsively purchase apart from what they had already planned (Hussain & Siddiqui, 2019). This is because the less time the customers have, the more they will focus on what they need to buy;

having more time might lead to "*more positive emotional responses*" thus increasing the likelihood of impulse buying (Chang et al., 2014, p.303). Money availability also has a positive impact on consumers' impulse buying (Hussain & Siddiqui, 2019) as unplanned purchases are made when customers have extra money (Badgaiyan & Verma, 2015). Therefore, people tend to make impulsive purchases thinking they might not have time or money available later (Jamal & Lodhi, 2015). Situational factors like time and money availability significantly influence consumers' decisions to make instant purchases online (Azizi et al., 2020). To explore these factors in a brick-and mortar setting, following hypothesis is developed:

H2: Situational factors have a positive influence on the impulsive buying behavior of Gen Z consumers.

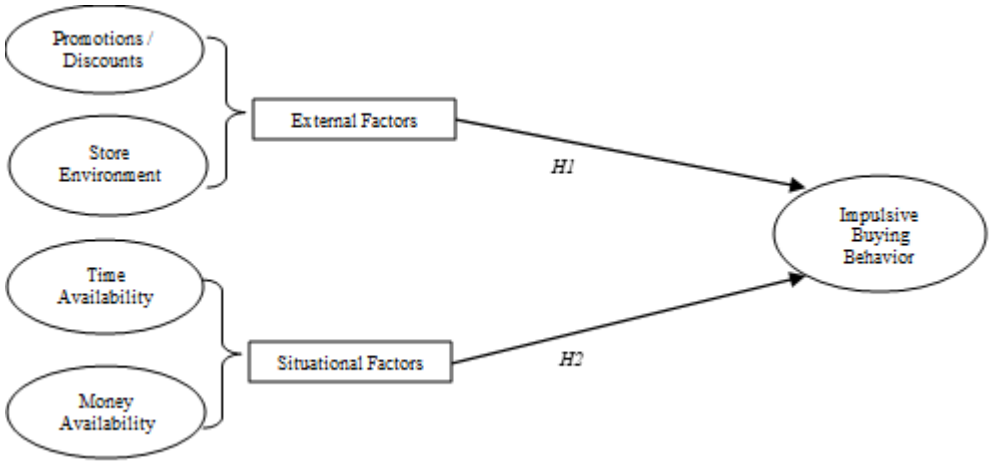

Figure 1: Conceptual Framework (Source: Authors)

The proposed conceptual model for the study is shown in Figure 1.

3. Problem Statement

Despite the growing interest in consumer behavior, there is limited understanding of the impulsive buying tendencies of Gen Z, particularly in traditional retail settings. This study seeks to address the gap in knowledge regarding how various external and situational factors influence the impulsive purchasing decisions of this demographic.

3.1. Research objectives

The research objectives of the present study were:

1. To examine the influence of external factors (such as sales promotions and store environment) on the impulsive buying behavior of Gen Z consumers.
2. To investigate the impact of situational factors (including time availability and money availability) on the impulsive buying behavior of Gen Z consumers.
3. To analyze the combined effect of external and situational factors on the impulsive buying behavior of Gen Z consumers.

3.2. Research hypotheses

H1: External factors have a positive influence on the impulsive buying behavior of Gen Z consumers

H2: Situational factors have a positive influence on the impulsive buying behavior of Gen Z consumers

4. Research Methods

4.1. Data collection method

The main purpose of this study is to understand how external and situational factors lead to impulsive buying among Gen Z (between the ages of 14 to 28 in 2024). The dependent variable was impulse buying behavior with four independent variables: sales discount/promotion and store environment as dimensions of external factors, and time availability and money availability as dimensions of situational factors. All constructs were measured on a 5-point Likert scale (1 = 'Strongly Disagree' and 5 = 'Strongly Agree') and the structured questionnaire was distributed to university students through social media. Respondents were instructed to keep any recent impulsive purchase that they had made at a physical store in mind while filling out the questionnaire. This ensured that research was specific to in-store impulse buying and not online purchase/browsing. The questionnaire was developed using Google Forms and was circulated via Facebook and WhatsApp where it was made available for 3 weeks to conduct the survey.

4.2. Research population

The research population included university students from different universities across three major cities in Pakistan. This demographic was specifically targeted to represent Gen Z, which is characterized by unique consumer behavior patterns.

4.3. Sample size

As per the "*sample-to-item ratio*", the sample size is based on the number of questions in the research (Memon et al., 2020, p.4). According to Suhr (2006), 5 to 1 ratio is the recommended minimum sample; as there were 17 questions in the study, minimum sample size was 85. The sample size targeted was above two hundred. The total number of responses received was 226. The survey was conducted in 2023 and questionnaire included a conditional question: "*Does your age fall under the age group of 13-27?"*, the total number of usable responses were 210 with a '*yes*' answer. After data cleaning and diagnostics, the final data set was 201.

4.4. Sampling technique

A convenience sampling technique was employed to select participants who were readily available and willing to complete the survey, ensuring a diverse representation of Gen Z students across the selected cities.

4.5. Instrument design

The questionnaire was designed with multiple sections. It included demographic information with questions regarding age, gender, and educational background. The survey then had questions related to impulse buying behavior, external factors: (questions related to sales promotions and store environment) and questions related to situational factors (questions assessing time availability and money availability). The dependent variable was impulse buying behavior with four independent variables: sales discount/promotion and store environment as dimensions of external factors, and time availability and money availability as dimensions of situational factors. All constructs were measured on a 5-point Likert scale (1 = 'Strongly Disagree' and 5 = 'Strongly Agree'). To ensure validity, the items for dependent and independent variables were adapted from previous studies (see Table 1 below).

Table 1 Items for the constructs of the study

Construct	Items	Sources
Impulsive Buying Behavior	I ended up spending more money than I originally set out to spend. I bought more than what I had planned to buy. I indulged in impulsive buying.	Badgaiyan and Verma, 2015

Sales Promotion/ Discount	If I see a discount price, I tend to buy impulsively. If I see an interesting promotional offer (reduced price, sales etc.) on in-store signs, I tend to buy. I am more likely to make an unintended purchase if the product has a sale or clearance sign.	Badgaiyan and Verma, 2015
Store Environment	The store had a pleasant shopping environment. The store environment was excellent. Friendly and skilled staff often talks me into buying a product I didn't plan to buy. Employees in the store affected my buying behavior and choice. Sales people turn my product queries into a product purchase. Music in the store positively affects my shopping.	Badgaiyan and Verma, 2015
Money Availability	I did not feel I can afford to make any unplanned purchases on this trip. I feel that I had enough extra money on this shopping trip so that I can splurge a little if I find something I really like. I was on tight budget on this shopping trip.	Beatty and Ferrell, 1998
Time Availability	I had limited time available to me for this particular shopping trip. I was not rushed for time on this shopping trip	Beatty and Ferrell, 1998

Table 2 provides the demographic breakdown according to gender.

Table 2 Demographic breakdown

Demographics	Cases (N)
Males	78
Females	123

5. Data Analysis

The data was cleaned using SPSS. No univariate outliers were identified; a total of 6 multivariate outliers were identified and removed. The scatter plot and normal Q_Q plot indicated normal distribution, linearity, and homoscedasticity. Path analysis with partial least square structural equation modelling (PLS-SEM), which is a reliable technique used in business research for examining complicated models of cause-effect-relationship (Gudergan et al., 2008), was utilized for data assessment and hypotheses testing. In a brief, Ringle et al. (2023) also reinforce the use of PLS-SEM for models built to provide explanation/prediction. In the current study, we opted for PLS-SEM over CB-SEM for a number of reasons. Firstly, our primary aim was to construct a composite-based model (Dash & Paul, 2021). Secondly, PLS-SEM provided us with the versatility to work with our reflective measurement model (Dash & Paul, 2021). Additionally, this method also eliminated the need for a larger sample size or the requirement for data to be normally distributed (Astrachan et al., 2014).

We adopted a two-step analysis method proposed by Hair et al. (2019) to ensure the reliability of the measurement model before path analysis through structural model using Smart-PLS 4.

5.1. Measurement model assessment

Table 3 provides the results of factor loadings, construct reliability and validity, and multicollinearity analysis. Exploratory factor analysis results showed that factor loading of each variable had a value larger than the recommended value of 0.708 (Hair et al., 2019).

Subsequently, we evaluated the reliability of the constructs using Cronbach's Alpha and composite reliability. All measures had Cronbach's Alpha values above 0.708 (Hair et al., 2019), except TA which had a value of 0.624 but its composite reliability, rho c, was well above the 0.70 range (0.839). The low Cronbach's Alpha can be attributed to fewer items in the scale (Özdem et al., 2014). In this case, Pallant (2016) recommends that the mean inter-correlation should be within the acceptable range of 0.15-0.5 (Paulsen & BrckaLorenz,

2017). As the value of the mean inter-correlation of TA was 0.483, it was accepted.

Table 3 Measurement model: Factor loadings; construct reliability; construct validity; VIF

Construct	Item	Loadings	Alpha	CR	AVE	VIF
Impulse Buying Behavior	IBB1	0.913	0.917	0.948	0.858	2.914
	IBB2	0.921				3.280
	IBB3	0.944				4.069
Sales Promotion	SP1	0.924	0.924	0.952	0.868	3.254
	SP2	0.933				3.660
	SP3	0.937				3.654
Store Environment	SE1	0.855	0.949	0.959	0.798	5.425
	SE2	0.886				5.848
	SE3	0.931				6.109
	SE4	0.902				4.853
	SE5	0.917				5.585
	SE6	0.867				3.194
Money Availability	MA1	0.820	0.784	0.869	0.689	2.111
	MA2	0.841				1.342
	MA3	0.829				2.134
Time Availability	TA1	0.802	0.624	0.839	0.723	1.259
	TA2	0.896				1.259

Construct validity was assessed through average variance extracted (AVE). All of the constructs had values of AVE exceeding the suggested threshold of 0.50. Thus, construct validity was established.

No multicollinearity was detected as VIF values were less than 10 (Senaviratna & Cooray, 2019) (Table 3).

Once we were able to establish constructs' reliability and validity, we examined the uniqueness of the constructs in the model through discriminant validity. Discriminant validity ensures that the constructs are distinct and it can be inferred by comparing a factor's loadings with its cross-loadings (Umrani et al., 2022). In Table 4, it can be observed that all factor loadings exceed their cross-loadings on other factors.

Discriminant validity was also gauged through the criterion given by Fornell and Larcker (1981) who claim that discriminant validity is checked if the "*square root of AVE in each latent variable is larger than other correlation values*

among the latent variables" (Gye-Soo, 2016, p.66). The results in Table 5 show that IBB, SE, SP and TA (in bold) meet this criterion. However, the value of MA's AVE square root is lower in comparison to MA-TA with the difference of 0.024. According to Ab Hamid et al. (2017), although the discriminant validity established overall is partial, it can still be accepted when "*the difference of square root of the AVE is significantly small"* (p.622). Discriminant validity was thus established.

Table 4 Discriminant validity - Cross loadings

	IBB	MA	SE	SP	TA
IBB1	0.913	0.679	0.724	0.742	0.679
IBB2	0.921	0.672	0.704	0.76	0.649
IBB3	0.944	0.679	0.788	0.745	0.674
MA1	0.481	0.82	0.578	0.556	0.671
MA2	0.759	0.841	0.736	0.706	0.742
MA3	0.501	0.829	0.545	0.594	0.699
SE1	0.652	0.678	0.855	0.756	0.652
SE2	0.681	0.711	0.886	0.790	0.648
SE3	0.728	0.681	0.931	0.703	0.653
SE4	0.766	0.686	0.902	0.715	0.686
SE5	0.754	0.673	0.917	0.735	0.682
SE6	0.688	0.685	0.867	0.736	0.680
SP1	0.74	0.685	0.741	0.924	0.664
SP2	0.736	0.705	0.750	0.933	0.662
SP3	0.784	0.734	0.814	0.937	0.697
TA1	0.515	0.744	0.516	0.564	0.802
TA2	0.693	0.721	0.73	0.661	0.896

Table 5 Fornell-Lacker Criterion - Discriminant validity

	IBB	MA	SE	SP	TA
IBB	**0.926**				
MA	0.731	0.830			
SE	0.798	0.767	**0.893**		
SP	0.809	0.760	0.825	**0.932**	
TA	0.721	0.854	0.747	0.724	**0.850**

5.2. Structural model assessment

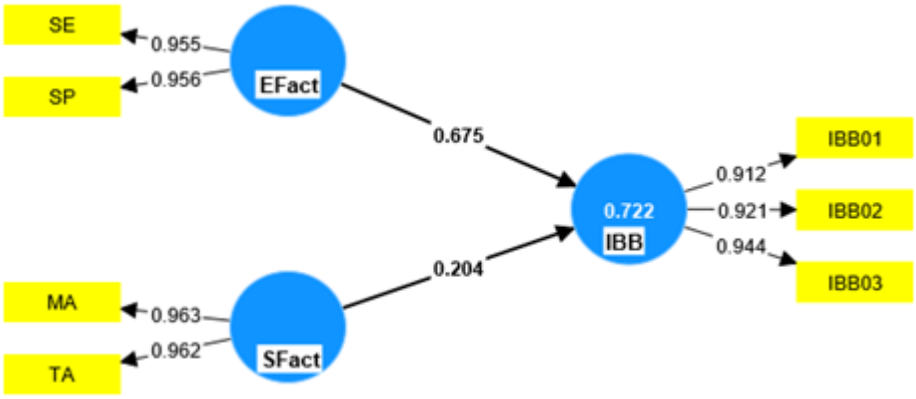

Figure 2: Structural model with higher order constructs

The PLS-SEM algorithm was used to establish the reliability and validity of the structural model prior to analyzing the path relationships through structural model. Figure 2 depicts the structural model.

Table 6 Higher order constructs: Factor loadings; construct reliability; construct validity (AVE); VIF

	Loading	Cronbach's Alpha	CR	AVE	VIF
EFact		0.906	0.955	0.914	
SE	0.955				3.170
SP	0.957				3.170
SFact		0.919	0.961	0.925	
MA	0.961				3.621
TA	0.963				3.621
IBB		0.917	0.948	0.857	
IBB1	0.913				2.914
IBB2	0.921				3.280
IBB3	0.944				4.069

Two higher order constructs – External Factors (EFact) = Sales Promotion (SP) + Store Environment (SE), and Situational Factors (SFact) = Time Availability (TA) + Money Availability (MA) – were formed and analyzed (Figure 2). Higher order model was tested for validity and reliability before conducting path analysis. Cronbach's Alpha, composite reliability and

average variance extracted were within acceptable range (Table 6), establishing construct reliability and validity. Discriminant validity was also achieved since square roots of all constructs were greater than their correlations with all other constructs. Similarly, construct loadings were greater than cross-loadings for each item (Table 7). Additionally, no multicollinearity issues were found since VIF values for all items were lower than 5 (Hair et al., 2019). Inner model collinearity was also found to be within acceptable range of < 3 (Table 8).

Table 7 Discriminant validity - Cross-loadings

	EFact	SFact	IBB
SE	0.955	0.764	0.797
SP	0.957	0.757	0.809
MA	0.774	0.961	0.691
TA	0.757	0.963	0.707
IBB1	0.767	0.685	0.913
IBB2	0.765	0.656	0.921
IBB3	0.801	0.677	0.944

Discriminant validity - Fornell-Larcker Criterion

	EFact	IBB	SFact
EFact	**0.956**		
IBB	0.840	**0.926**	
SFact	0.795	0.727	**0.962**

5.2.1. Explanatory power of the structural model: R^2 and f^2

The explanatory power of the model was determined by examining the coefficient of determination, R^2. R^2 measures the variance in the endogenous variable, which is IBB in our model. R^2 values of up to 0.75 are considered good, up to 0.5 as moderate, and up to 0.25 as low at explaining the model (Hair et al., 2019). According to Falk and Miller (1992), R^2 should be greater than or equal to 0.10. The value of R^2 for IBB was 0.715 (Table 8).

We also calculated the effect size, f^2, to examine the relevance of each predictor variable in explaining the variance in the outcome variable (Table 8). External factors, EFact, showed a large effect size (0.55) on IBB, and situational factors, SFact, showed a small effect size (0.05). However, both f^2 were above the minimum threshold of 0.02, and therefore, held relevance in the model.

Table 8 Inner model collinearity; f^2; and R^2

	VIF	f^2	R-square	R-square adjusted
EFact -> IBB	2.720	0.55		
SFact -> IBB	2.720	0.05		
IBB			0.715	0.712

5.2.2. Predictive power of structural model

The model's predictive relevance was measured through the assessment of cross-validated redundancy, also known as Q^2. According to Hair et al. (2019), the value for Q^2predict should be greater than zero; values greater than 0.5 show large predictive accuracy (Table 9). Additionally, out-of-sample predictive ability using PLS predict was evaluated. This involved comparing the RMSE and MAE values of the PLS-SEM model to those of a linear model. It was found that all the PLS predict values for the PLS-SEM model were lower than the corresponding values for the linear model (Table 9). This indicates constructs exhibited strong predictive ability.

Table 9 PLS-Predict

	Q^2predict	**PLS-SEM_RMSE**	**PLS-SEM_MAE**	**LM_RMSE**	**LM_MAE**
IBB1	0.602	0.735	0.498	0.748	0.501
IBB2	0.591	0.776	0.507	0.790	0.520
IBB3	0.641	0.723	0.494	0.731	0.502

5.2.3. Cross-validated predictive ability test (CVPAT)

According to the CVPAT analysis conducted by Liengaard et al. (2021), the difference between the average loss values must be significantly lower than zero to demonstrate good predictive capabilities of the model compared to prediction benchmarks. The results presented in Table 10 illustrate that the average loss values of PLS-SEM were significantly less than the indicator variable's average loss values. This was supported by p-values less than 0.001.

Table 10 Cross-Validated Predictive Ability Test (CVPAT)

	Average loss difference	t value	p value
IBB	-0.874	7.436	0.000
Overall	-0.874	7.436	0.000

5.3. Hypothesis testing: direct relationships

After establishing the robustness of the inner model, the hypothesized relationships of the study were analyzed (Table 11). Results showed that both *H1*: EFact→IBB (β = 0.675, t = 8.412, p = 0.000) and *H2*: SFact→IBB (β = 0.204, t = 2.362, p = 0.018) were positive and significant.

Additionally, the upper and lower values of the confidence intervals did not have the value 0 between them. Therefore, both *H1* and *H2* found support in the analysis.

Table 11 Direct relationships

	Beta	T-value	P-value	CI 2.5%	Cl 97.5%	Decision
***H1*: EFact -> IBB**	0.675	8.412	0.000	0.517	0.830	Supported
***H2*: SFact -> IBB**	0.204	2.362	0.018	0.035	0.370	Supported

IBB R^2 =0.715

5.4. Combined effect of external factors and situational factors

A model was developed to study the combined effect of EFact and SFact. EFact and SFact were taken as independent variables and a new higher order construct - Combined Effect (ComE) was formed. Figure 3 depicts the model developed. A measurement model assessment was conducted before path analysis. The values for Cronbach's Alpha, composite reliability and AVE were found to be within acceptable ranges (Table 12). Additionally, no multicollinearity were found.

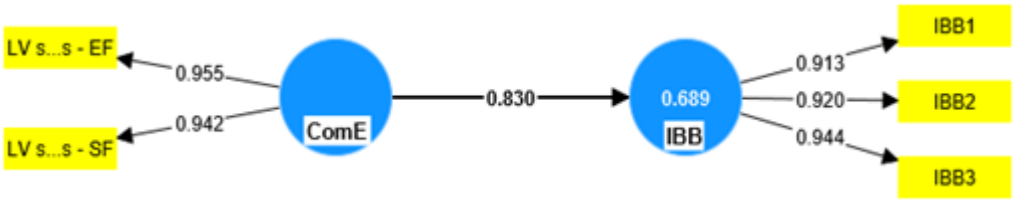

Figure 3: Combined Effect of EF and SF

Table 12 Higher order construct ComE: Construct reliability and validity; and VIF

Construct	Alpha	CR	AVE	Construct	VIF
IBB	0.917	0.948	0.857	**EFact**	2.786
ComE	0.889	0.947	0.900	**SFact**	2.786

The values for Q^2predict were greater than zero. Table 13 shows that the PLS-SEM average loss values are significantly lower than those of the indicator variable, as supported by p-values below 0.001.

Table 13 Cross-Validated Predictive Ability Test (CVPAT)

	Average loss difference	t value	p value
IBB	-0.840	7.099	0.00
Overall	-0.840	7.099	0.00

The combined model showed strong explanatory power (R^2 = 0.789, Table 14). Results also showed that ComE had a significant positive impact on IBB (β = 0.830, t =31.744, p = 0.000). This is in line with the notion that path coefficients closer to +1 indicate a stronger positive relationship between variables (Hair et al., 2021). ComE effect over IBB (f^2= 2.212) was strong.

Table 14 Direct relationship

	Beta	T- value	P-value	f^2	CI 2.5%	Cl 97.5%
ComE -> IBB	0.830	31.744	0.000	2.212	0.770	0.874

IBB R^2 =0.789

6. Discussion

The results indicate that overall EFact and SFact play a key role in influencing impulse buying in Gen Z consumers. An important contribution of the paper is that the significant impact of these EFact (SE & SP) and SFact (MA & TA) on the IBB of Gen Z customers is studied in a traditional shopping

environment. Additionally, the combined effect of EFact and SFact (ComE) is also observed to have a strong and notable influence on the IBB of Gen Z.

These results are in line with previous findings by Cheung et al. (2018) and Entina et al. (2021). The relationship between IBB and EFact can be explained by the fact that discounts, rewards, and coupons are important for Gen Z when making a purchase (Cheung et al., 2018). Also, Gen Z prefers sales in order to get the best value (Barcelona et al., 2022). Entina et al. (2021) mention that Gen Z is interested in new experiences and stimuli. In addition, Cui et al.(2022) found that enough money and sufficient time are significant situational factors that motivate impulse purchases behavior.

This study's significant contribution is that Gen Z's IBB is studied in a brick-and-mortar shopping environment (the organism and response in the SOR model), by explicitly observing the impact of two variables: EFact and SFact (the stimuli). This study confirms that the same factors are important in a brick-and-mortar setting as in an online setting (Azizi et al., 2020; Barcelona et al., 2022; Cui et al., 2022). It also observes the influence of the combined effect of the two variables EFact and SFact on Gen Z's IBB. The study presents a conceptual framework that can be used by researchers to study the impact of EFact and SFact on the IBB of Gen Z in an online context as well. Moreover, as the present conceptual model has not targeted any specific product category, therefore it can be generalized and adapted for online or offline contexts by targeting specific industries like apparel or food. The present study can also be replicated for another age group to better understand the concept of IBB.

The McKinsey report by Francis and Hoefel (2018) states that young consumers influence people of all ages and incomes and shape their consumption patterns and brand perceptions. Gutfreund (2016) also noted that young consumers are transforming the consumer landscape. Brands should therefore focus on meeting the needs of this segment to target them effectively. Gen Z can be targeted more effectively by keeping in mind the change in trends and attitudes of this unique segment. As Gen Z is more attracted to novelty (Priporas et al., 2017) and the latest products (Djafarova & Bowes, 2021), marketers should keep in mind the aspects that are attractive to Gen Z.

7. Theoretical and Managerial Implications

Our results are based on the individual, and combined, impact of external and situational factors on Gen Z's impulse buying behavior in physical shopping environments. By focusing on this specific area, we offer valuable insights into how in-store retailers can better understand and engage with this important consumer group. The store's layout, decorations, and general feel can make them

want to buy things they did not plan on purchasing. Similarly, discounts or limited time offers can also trigger unplanned purchases. Moreover, having enough time and money can increase the likelihood of impulse buying. Retailers should consider these factors to take advantage of Gen Z's impulse buying tendencies and boost sales.

Regarding environmental factors, brands should use effective sale promotions to attract Gen Z. They should work on providing coupons, discounts, bonuses, gifts, and coupons (Amarilys et al., 2022; Cheung et al., 2018). This was also highlighted by Cheung et al. (2018) who posited that Gen Z expect "*.... good value for their money...*" (p.1) and prefer less expensive products (Thangavel et al., 2022). As Gen Z is technology savvy (Chetioui & El Bouzidi, 2023), information about in-store discounts and sales can be communicated through social media platforms. Gen Z love receiving promotional sales information via social media for products and services of interest to them (Jamal, 2020). Brands can also use QR code discounts through mobile applications.

With regards to time availability of situational factors, retailers should try to influence customers' time spent in the store. Readily available customer service to cater to customers' queries can be one way of making a customers' shopping experience more efficient. Gen Z born in the digital era have short attention spans, so marketers should use a "*less is more*" approach and use simplification to attract this generation (Törőcsik et al., 2014, p.30). Retailers can also manage time availability for Gen Z by working on providing quick checkouts; this can include "*mobile payment apps, facilitating 'cashless/self-service checkout*," as Gen Z prefer quick speedy shopping and checkouts and want to find what they are looking for quickly (Cheung et al., 2018, p.10). Brands can focus on making Gen Z aware of product availability ahead of time (Ayden, 2017). This can be done through updated information on their websites or social media. Moreover, Gen Z prefer convenience products (Thangavel et al., 2022), therefore brands should focus on these to avoid time wastage during shopping. Interestingly, our study found that money availability also has a significant role to play in Gen Z impulse purchases: another study (Noenickx, 2023, website) revealed a more nuanced picture: These young people not only have this money – experts say they're also willing to spend it, even amid a period of high financial anxiety. However, Gen Z's buying patterns are different than the generations that came before them. They're not simply spending on whatever they want the moment they think of it; instead, they're being extremely deliberate with who gets their dollars, and when.

Therefore, brands should focus on EFact and SFact to attract Gen Z for more sales through impulse buying. Careful planning of the shopping experience is important to make it worthwhile for Gen Z customers.

8. Limitations and Future Research Scope

This study looks at the impulse buying behavior of Gen Z in the traditional brick-and-mortar environment. Online purchases will of course have their own dynamics. Furthermore, this study is based on data generated through self-reporting. Experimental and observational studies have a lot of value to add in this context, and although some have already been conducted, the interaction between the Gen Z and ever changing technology should be studied further. Longitudinal studies measuring changes in attitudes over time will also be beneficial in this context.

This study only looks at Gen Z while there is great scope to compare and contrast different cohorts in terms of their consumer behavior (Gilal et al., 2020, 2022). Future research can also study cultural differences through cross-cultural research.

Additionally, Gen Alpha needs to be studied in both these contexts as the up and coming generation with great purchasing power. Although the SRO model has been used to study Pakistani Gen Z's response to vlog advertising of tourist destinations (Abbasi, 2023), the framework has the potential to be used in many sectorial contexts to study various generational cohorts. This makes it a very useful tool for intersectional research.

9. Conclusion

As recently as 2024, researchers have been applying the Stimulus Organism Response model to assess Gen Z's consumer behavior (Rūtelionė & Bhutto, 2024). The generational cohort theory in conjunction with the SOR model provides a useful context in which to study the impulse buying behavior of Gen Z. Both situational and external factors need to be kept in mind by policy makers, store and brand managers, and front line retail staff in promoting impulse purchases. This study highlights the fact that traditional brick and mortar stores still remain relevant for studying purchase behavior in the younger generation.

Author Contributions:

Dr. Huma Amir: Formal analysis, Visualization, Creation of model, Software; Writing-Editing and Review; Final Write-Up.

Nida Fatima: Data curation; Writing - Original draft; Methodology; Data Collection; Software.
Dr. Amber Gul Rashid: Conceptualization; Resources; Writing - Review and Editing; Final Write-Up.

Data Availability Statement:
The datasets generated during and/or analyzed during the current study are not publicly available due to confidentiality but are available from the corresponding author on reasonable request.

Conflict of Interest:
No potential competing interest was reported by the authors.

Funding Information:
No funding was received to assist with the preparation of this manuscript. One of the authors is a Research Assistant (RA) at IBA.

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