

# Personal and In-store Factors on Impulse Buying Behavior: Moderating Role of Generation

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## Abstract

The Sri Lankan supermarket industry has experienced significant growth and transformation in recent decades, driven by urbanization, changing lifestyles, and an expanding middle class. Additionally, understanding the factors that contribute to impulsive purchases in a supermarket setting is crucial due to the scarcity of existing findings relevant to the field. This study aimed to test the factors influencing impulse buying behaviour in the Sri Lankan retail sector, with a particular focus on personal factors, in-store factors, and the moderating role of generation. Primary data were collected from 384 customers of Keels supermarket in Sri Lanka based on a convenience sampling method through a self-administered questionnaire. The results showed that individual characteristics including time availability, family influence, and financial availability have a significant impact on impulsive buying behaviour. In a similar vein, it was discovered that in-store elements like music, friendly staff, lighting, and sales promotions significantly influenced customers' impulsive purchasing decisions. Paint colour and retail atmosphere, however, had little effect on impulsive purchasing. Moreover, generation emerged as a significant moderator in these relationships, with different generations exhibiting varying responses to personal and in-store factors. Generation Z (12-29 years), Generation Y (30-43 years), and Generation X (44-58 years) displayed distinct patterns in their propensity for impulse buying, highlighting the importance of considering generational differences in marketing strategies. The practical implications of these findings are substantial for marketers and retailers operating in the Sri Lankan retail market. By understanding the factors driving impulse buying behaviour and how Generation moderates these relationships, retailers can tailor their marketing efforts and optimize their store environments to better cater to the preferences of different demographic segments.

**Keywords:** Generation, Impulse Buying, In-Store Factors, Personal Factors

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## Introduction

The phenomenon of impulsive buying behavior within the supermarket industry of Sri Lanka has garnered increased attention from researchers and academicians in recent years (Kahaduwa & Rasanjalee, 2021; Newton, 2016). Impulse buying, often referred to as unplanned purchasing, is a phenomenon where consumers make sudden and spontaneous purchases without prior intention or planning (Abdelsalam et al., 2020; Husnain et al., 2019).

Understanding the factors that contribute to impulsive purchases in a supermarket setting is crucial for both academic research and practical implications for businesses (Husnain et al., 2019, Floh & Madlberger, 2013). As consumers in Sri Lanka increasingly turn to supermarkets for their daily and discretionary purchases, the dynamics of impulsive buying behavior come into focus (Husnain et al., 2019).

Further, the economic landscape of Sri Lanka adds another layer to the understanding of impulsive buying behavior. Rising disposable incomes, coupled with increased access to a variety of products in supermarkets, contribute to the allure of impulsive purchases (Fernando et al. 2020). Moreover, research by Ünsalan (2016) delves into the impact of in-store factors on impulsive buying, providing insights into how the layout and design of supermarkets influence consumer behavior in Sri Lanka. This underscores the importance of understanding the specificities of the retail environment in shaping impulsive buying tendencies ( Abdelsalam et al., 2020; Ali & Sudan, 2018).

Additionally, the existing scholars highlighted that impulse buying behavior in a retail environment varied with consumer generation (Husnain et al., 2019; Burton et al., 2019; Virvalaite et al., 2009). Due to financial obligations, older people may be more frugal with their purchasing, whereas younger people with more discretionary income may make impulsive purchases more frequently (Virvalaite et al., 2009).

Furthermore, older people may make more independent purchase decisions, whereas younger people may be more influenced by family members (Burton et al., 2019; Xu, 2007). Due to time availability, younger people may have more free time and fewer daily obligations, which may increase the likelihood of impulsive shopping (Husnain et al., 2019; Yu & Bastin, 2010). On the other hand, older people with more hectic schedules might not buy as much on impulse (Yu & Bastin, 2010). Moreover, generation has the ability to mitigate the impact of sales promotions on impulsive purchases (Burton et al., 2019). Discounts and special offers could appeal more to younger customers than to older ones.

Scholars have thus demonstrated that in order for businesses to effectively target different generation groups and improve the overall shopping experience, they must have a thorough awareness of the distinctions among generations (Husnain et al., 2019; Burton et al., 2019; Yusufzai, 2017).

## Literature Review

### *Personal Factors and Impulsive Buying Behaviour*

Based on past research findings, personal factors, including money availability, family influence, and time availability, have shown significant associations with impulsive buying behavior. Here's an explanation of the relationship between these personal factors and impulsive buying based on existing research.

#### *Money Availability on Impulse Buying Behavior*

Individuals with greater financial resources are more likely to engage in impulsive purchases because they have the means to do so without significant financial consequences (Abdelsalam et al., 2020; Kumar & Paul, 2020). They may be more inclined to make unplanned purchases when they perceive an item as attractive or desirable (Husnain et al., 2019; Leenheer et al., 2007). Interestingly, some studies have found that individuals who experience financial stress due to limited resources may also engage in impulsive buying (Kalla & AroraView, 2010; Leenheer et al., 2007; Lin et al., 2023; Muin et al., 2021; Yang et al., 2023). In an attempt to alleviate stress or reward themselves, individuals with limited money availability may make impulsive purchases as a form of emotional relief (Ali & Sudan, 2018; Atulkar & Kesari, 2018a; Yang et al., 2023).

*H1 – Money Availability positively influences on Impulse Buying Behavior*

#### *Family Members on Impulse Buying Behavior*

Research has shown that family members, especially spouses and parents, can influence impulsive buying behavior (Chen et al, 2021; Harari and Eyal, 2019). If a family member, such as a spouse, encourages impulsive purchases, an individual may be more likely to engage in such buying (Badgaiyan & Verma, 2014). This influence may arise from shared financial decisions or familial attitudes toward spending (Atulkar & Kesari, 2018; Sultana & Islam, 2017). In the context of family influence, children can also play a role in impulsive buying (Olanrewaju et al, 2020). Parents may be more likely to make unplanned purchases when shopping with their children, as they attempt to fulfil their children's desires or demands (Muin et al., 2021; Olanrewaju et al., 2020; Sultana & Islam, 2017; Akram et al. 2016).

*H2 – Family Members positively influence on Impulse Buying Behavior*

#### *Time Availability on Impulse Buying Behavior*

Studies have shown that individuals with a sense of time availability are more likely to make impulsive purchases (Lee & Johnson, 2018). When people feel relaxed and not rushed during their shopping experience, they are more open to spontaneous buying decisions (Yue & Zainal, 2021). Time availability is often associated with increased shopping enjoyment (Kalla & AroraView, 2010; Muin et al., 2021; Yang et al., 2023). Consumers who have the perception of having plenty of time for shopping tend to enjoy the process more and may be more receptive to unplanned purchases (Akram et al., 2017). On the contrary, individuals who perceive time pressure and stress are less likely to engage in leisurely shopping and more

likely to make focused, planned purchases (Muin et al., 2021; Yang et al., 2023). Time-constrained shoppers are less prone to impulsive buying (Weaver et al., 2011).

The advent of online shopping has provided consumers with the flexibility to make purchases at any time (Yue & Zainal, 2021). Research indicates that individuals with greater time availability, particularly those who shop online, may make impulsive purchases, taking advantage of the convenience of e-commerce (Koski, 2004; Stern, 1962; Taber, 2018).

*H3 – Time Availability positively influences on Impulse Buying Behavior*

### ***In-store Factors and Impulsive Buying Behaviour***

Based on past research findings, in-store factors play a significant role in influencing impulsive buying behavior. The following is an explanation of the relationship between in-store factors and impulsive buying based on existing research.

#### *Sales Promotions on Impulse Buying Behavior.*

Research has consistently shown a positive relationship between sales promotions and impulsive buying (Wu et al., 2018; Kacen & Lee, 2002). Discounts, special offers, limited-time promotions, and other sales tactics can trigger impulsive purchases (Palihakkara et al. 2021). Sale promotions act as strong impulse triggers and shoppers are more likely to make unplanned buying decisions when they perceive a good deal or an opportunity to save money (Sorensen, 2018; Taber, 2018; Muratore, 2016). When shoppers encounter signs of savings or discounts, they may feel a sense of urgency to buy before the offer expires. This urgency often leads to unplanned purchases (Koski, 2004; Taber, 2018).

*H4 – Sales Promotions positively influence on Impulse Buying Behavior*

#### *Physical Layout on Impulse Buying Behavior*

The physical layout of a store can influence impulsive buying (Muratore, 2016). Researchers have shown that certain store designs, particularly those that encourage exploration and serendipity, can lead to unplanned purchases (Atulkar & Kesari, 2018; Balakrishnan et al., 2014). When a store layout is well-organized, aesthetically pleasing, and encourages browsing, shoppers are more likely to make impulse purchases (Lin et al., 2023; Muin et al., 2021). Merchandise displays in strategic locations, such as at the end of aisles or near checkout counters, can significantly impact impulsive buying (Bhakat & Muruganatham, 2013). Retailers strategically place items that are visually appealing and complementary to other purchases, increasing the likelihood of unplanned buying (Nurcaya & Rastini, 2018).

*H5 – Physical Layout positively influences on Impulse Buying Behavior*

#### *Friendly Employees on Impulse Buying Behavior*

Friendly and helpful store employees can influence impulsive buying (Oliver, 2010). When employees provide assistance, suggestions, or information about products, shoppers may be more likely to make unplanned purchases based on the employee's recommendations (Verhoef et al., 2009). Personal engagement with customers by friendly employees can create a positive

shopping experience (Flight et al., 2012). Shoppers are more inclined to make impulse purchases when they feel valued and appreciated by store staff (Husnain et al., 2019; Muratore, 2016).

*H6 – Friendly Employees positively influence on Impulse Buying Behavior*

*Lighting in the store on Impulse Buying Behavior*

Researchers have found that strategically designed and well-implemented lighting can positively affect consumer behavior and encourage impulse buying in the retail environment (Bhakat & Muruganatham, 2013; Burton et al., 2019; Tinne, 2010). Store lighting can create an inviting ambiance that encourages shoppers to linger and explore (Khan et al., 2015). Studies have shown that well-lit stores with appealing lighting can positively affect impulsive buying behavior (Foroughi et al., 2012). Bright and attractive lighting draws attention to products and can stimulate unplanned purchases (Kalla & AroraView, 2010; Leenheer et al., 2007).

*H7 – Lighting in the store positively influences on Impulse Buying Behavior*

*Music in the store on Impulse Buying Behavior*

Research has demonstrated that the use of music in the store can lead to more unplanned purchases, with shoppers adding items to their cart that they had not originally intended to buy (Pornpitakpan et al., 2017; Mohan et al.;l 2013) Tailoring music genres to the store's target audience, for instance, playing music that resonates with the store's primary customer demographic can increase the likelihood of impulse purchases (Kalla & AroraView, 2010; Leenheer et al., 2007). A pleasant musical atmosphere can positively impact customer satisfaction, potentially encouraging loyalty and repeat visits, further fostering impulsive buying (Husnain et al., 2019).

*H8 – Music in the store positively influences on Impulse Buying Behavior*

*Paint colour in the store on Impulse Buying Behavior*

The choice of paint colour in a store contributes to its overall atmosphere and aesthetics (Atulkar & Kesari, 2018; Johnson, 2008; Yang et al., 2023). Research has shown that specific colours can create different emotional responses for instance; warm and inviting colours can make customers feel more comfortable and open to impulsive purchases (Yang et al., 2023). Additionally, contrasting colours can make products stand out, leading to better product recognition and, consequently, more impulsive buying (Lin et al., 2023). When colours match the products, it can increase product appeal and impulsive buying (Luchs et al., 2010). Further, the overall shopping experience is influenced by the store's colours. Positive emotions associated with colours can lead to increased customer satisfaction, loyalty, and repeat visits, which can result in more impulse buying (Saaticioglu & Ozgen, 2015; Chang et al., 2015).

*H9 – Paint colour in the store positively influences on Impulse Buying Behavior.*

*The Moderating Role of Generation*

Generation can moderate the effect of money availability on impulsive buying behaviour (Husnain et al., 2019; Virvalaite et al., 2009). Younger individuals with more disposable income might make impulsive purchases more frequently, while older individuals might be more cautious with their spending due to financial responsibilities (Virvalaite et al., 2009). Further, younger individuals might be more influenced by family members, while older individuals may have more independent purchasing decisions (Xu, 2007). Younger individuals may have more free time and fewer daily responsibilities, which can lead to increased opportunities for impulsive shopping due to time availability (Husnain et al., 2019; Yu & Bastin, 2010). In contrast, older individuals with busier schedules may make fewer impulsive purchases (Yu & Bastin, 2010).

Additionally, generation can moderate the influence of sale promotions on impulsive buying (Burton et al., 2019). Younger consumers might be more drawn to discounts and special offers, while older consumers may prioritize product quality and need over discounts (Burton et al., 2019). Moreover, younger shoppers might be more influenced by trendy store designs, and bright and dynamic lighting, while older shoppers might prefer a more straightforward and familiar store layout (Husnain et al., 2019; Yusufzai, 2017). Furthermore, younger consumers may be more influenced by trendy or fast-paced music, while older consumers might prefer softer and more soothing music (Kalla & AroraView, 2010).

Thus, scholars revealed that understanding generational differences is crucial for businesses to tailor their marketing and store strategies to effectively target different generation groups and enhance the overall shopping experience (Burton et al., 2019; Husnain et al., 2019; Yusufzai, 2017).

*H10 – Generation significantly moderates the Impact of Personal and In-store factors on Impulsive Buying Decisions.*

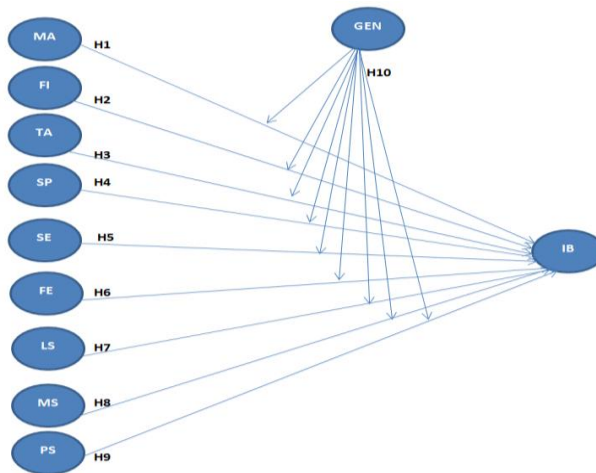


Figure 01: Conceptual Framework

## **Materials and Methods**

A positivistic approach has been used in the current study to examine how personal and in-store factors affect consumers' impulse buying behavior. This method, which emphasizes the methodical testing of accepted theories or hypotheses derived from accepted principles, is in line with the Deductive end of the research continuum (Hair et al, 2016; De Vaus, 2001). Using a positivistic approach, the study primarily aimed to test the interaction between personal and in-store factors on impulsive buying behavior, with a special emphasis on Generation as a moderating variable.

The study used a survey-based questionnaire as its main data collection tool, in line with its goals and research questions. After that, a thorough analysis of the body of research served as a guide for selecting relevant dimensions and variables to be included in the questionnaire. Following that, succinct and unambiguous questions were formulated, with an emphasis on respondent comprehension and clarity. To improve its structure and ensure its efficacy, the draft questionnaire was put through a rigorous pre-testing procedure. Ultimately, the target sample was given access to the validated questionnaire, which made it easier to collect data in a way that was consistent with the objectives of the study.

The target population in this study is precisely defined as the consumers who frequently shop at the supermarket and are between the ages of 18 and 54 are included in the selection criteria. The study's sampling frame consists of people who are classified according to different demographic characteristics. Here, Generation ranges from 18 to over 54, marital status (married or single), income brackets, types of careers (student, businessperson, employee, etc.), and levels of education (diploma, up to O/L, up to A/L, bachelor's degree, master's degree, etc.) are all included. These attributes are organized into different categories within the sampling frame for each category, giving researchers an organized and thorough representation of the population they are studying.

Moreover, the convenience sampling technique was used in this study because it is easily available and beneficial. Rather than being selected at random, participants are selected depending on their willingness to participate and convenient availability.

Finally, following the conceptual model presented in the Methodology, the data analysis of the present study consists of three parts Analysis of the Measurement Model, Structural Model and Multi-group comparison.

## **Data Analysis**

### ***Measurement Model Assessment***

The Measurement Model assessment in this study involved evaluating the reliability and validity of the measurement constructs. Reliability was assessed using Cronbach's alpha, where values above 0.7 were considered acceptable. Additionally, composite reliability (CR) values above 0.7 indicated satisfactory internal consistency. Validity was evaluated through convergent and discriminant validity tests. Convergent validity was confirmed if the average variance extracted (AVE) exceeded 0.5, indicating that constructs explained more than 50% of

their respective items' variance. Discriminant validity was established by comparing the square root of AVE values with the correlations between constructs; discriminant validity was supported if the square root of AVE for each construct exceeded its correlation with other constructs.

*Unidimensionality*

The unidimensionality of the study was assessed by examining the factor loadings of items on their respective constructs. According to Hair et al. (2016), unidimensionality is confirmed when all items load substantially (ideally above 0.7) on their intended construct and show weak or no loadings on other constructs. The data in Table 01, graphically illustrates the results of unidimensionality as follows.

Table 01: Factor loadings of personal factors, in-store factors and impulse buying

Variable	Factor Loading	Variable	Factor Loading
<b>Personal factors</b>		<b>In-Store Factors</b>	
	Money Availability		Sale promotion
MA1	0.895	SP1	0.916
MA2	0.891	SP2	0.896
MA3	0.814	SP3	0.902
	Family influence		Store Environment
FI1	0.917	SE1	0.914
FI2	0.887	SE2	0.948
FI3	0.914	SE3	0.885
FI4	0.856		Friendly Employees
	Time availability	FE1	0.872
TA1	0.913	FE2	0.914
TA2	0.855	FE3	0.944
TA3	0.926		



Paint colour in the store		Lightning in the store	
PS1	0.801	LS1	0.792
PS2	0.805	LS2	0.875
PS3	0.802	LS3	0.812
<b>Impulse buying</b>		LS4	0.806
IB1	0.908	Music in the Store	
IB2	0.902	MS1	0.908
IB3	0.808	MS2	0.859
IB4	0.894	MS3	0.918

Source: Survey data, 2024

The data on Table 01 presents the factor loadings of items representing the constructs of Personal factors, In-Store Factors, and Impulse buying. Factor loadings indicate the strength and direction of the relationship between each item and its underlying construct within the measurement model. For Personal factors, items assessing Money Availability demonstrated strong factor loadings ranging from 0.814 to 0.895, indicating that they effectively measure the construct. Similarly, items measuring Family Influence and Time Availability exhibited factor loadings ranging from 0.856 to 0.917 and 0.855 to 0.926, respectively, suggesting their robust relationship with the intended constructs.

In the case of In-Store Factors, items related to Sale Promotion, Store Environment, Friendly Employees, Lightning in the store, and Paint colour in the store displayed notable factor loadings. Items assessing Sale Promotion had factor loadings ranging from 0.896 to 0.916, while Store Environment items ranged from 0.885 to 0.948. Friendly Employees items exhibited factor loadings ranging from 0.872 to 0.944, indicating their significant association with the construct. Additionally, items representing Lightning in the store and Paint colour in the store displayed factor loadings ranging from 0.792 to 0.875 and 0.801 to 0.806, respectively, indicating their contribution to the construct.

Furthermore, for Impulse buying, items assessing various aspects such as buying spontaneously, the influence of sales representatives' recommendations, unplanned purchases due to store arrangements, and the impact of limited-time offers displayed strong factor loadings. These ranged from 0.808 to 0.908, indicating their substantial relationship with the construct of Impulse buying. Overall, the factor loadings observed in Table 4.10 confirm the unidimensionality of each construct and the reliability of the measurement model. These findings support the validity of the constructs and suggest that the selected items effectively capture the intended dimensions within the study's conceptual framework.

*Reliability*

According to Triwidyati & Tentama, (2020), the reliability composite value and Cronbach's alpha must be greater than 0.7. The reliability test is carried out to evaluate the measurement instrument's internal consistency. The reliability composite value and Cronbach's alpha will provide consistency values with a greater value. The data pertaining to Reliability can be visually illustrated as follows.

Table 02: Reliability Statistics

Variables	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability	(AVE)
Impulse buying	0.901	0.909	0.931	0.773
Friendly Employees	0.904	0.930	0.936	0.829
Family influence	0.916	0.933	0.941	0.799
Lightning in the store	0.840	0.852	0.893	0.676
Money Availability	0.835	0.848	0.901	0.752
Music in the Store	0.876	0.883	0.924	0.802
Paint colour in the store	0.861	0.821	0.750	0.623
Store Environment	0.903	0.904	0.940	0.839
Sale promotion	0.889	0.892	0.931	0.819
Time availability	0.883	0.936	0.926	0.807

Source: Survey data, 2024

Regarding the data on Table 02, Cronbach's alpha coefficients indicate the internal consistency reliability of the constructs, with values ranging from 0.835 to 0.916 exceeding the threshold level 0.7. In addition to that, the statistical data pertaining to Composite reliability (rho\_a) ranging from 0.821 to 0.936 further proved that the items used to measure the dimensions are good enough.

*Validity*

## i. Convergent Validity

Convergent validity, as defined by Hair et al. (2010), refers to the degree to which different measures of the same construct are correlated with each other. The Average Variance Extracted (AVE) assesses the convergent validity of constructs, with values ranging from

0.623 to 0.839. Thus, convergent validity was determined having all AVE values greater than 0.5.

## ii. Discriminant Validity

Discriminant or divergent validity assesses the extent to which two conceptually similar constructs are distinct from each other (Hair et al., 2010). To evaluate discriminant validity, the study employed the widely recognized method called Fornell and Larcker's criterion as follows.

Table 03: Fornell and Larcker criterion

	BI	FE	FI	LS	MA	MS	PS	SE	SP	TA
BI	<b>0.879</b>									
FE	0.220	<b>0.910</b>								
FI	0.402	0.416	<b>0.894</b>							
LS	0.537	0.217	0.363	<b>0.822</b>						
MA	0.624	0.444	0.565	0.426	<b>0.867</b>					
MS	0.407	0.146	0.141	0.234	0.348	<b>0.895</b>				
PS	0.167	0.068	0.019	0.136	0.226	0.039	<b>0.578</b>			
SE	0.341	0.045	0.202	0.435	0.321	0.116	0.034	<b>0.916</b>		
SP	0.563	0.459	0.277	0.266	0.446	0.190	0.162	0.224	<b>0.905</b>	
TA	0.391	0.477	0.302	0.110	0.517	0.039	0.068	0.132	0.364	<b>0.898</b>

Source: Survey data, 2024

As per the results of Table 03, the diagonal elements are consistently higher than the off-diagonal elements, confirming the discriminant validity of the measurement constructs. This finding suggests that each construct captures a unique aspect of the phenomenon under study and is distinct from other constructs, enhancing the credibility of the measurement model.

### *Indicator Multi-collinearity*

To evaluate multicollinearity among the indicators, researchers employ the Variance Inflation Factor (VIF) method (Fornell & Bookstein, 1982). According to Hair et al. (2016), VIF values below 5 indicate no multicollinearity issues. Thus, Table 04 presents the multi-collinearity statistics for each dimension, ensuring the reliability of the analysis.

Table 04: Multi-collinearity statistics

Variable	VIF	Variable	VIF
<b>Personal factors</b>		<b>In-Store Factors</b>	
Money Availability		Sale promotion	
MA1	2.259	SP1	2.742
MA2	2.131	SP2	2.541
MA3	1.695	SP3	2.516
Family influence		Store Environment	
FI1	3.465	SE1	3.301
FI2	3.453	SE2	4.473
FI3	3.804	SE3	2.463
FI4	2.429	Friendly Employees	
Time availability		FE1	2.957
TA1	2.746	FE2	2.900
TA2	2.306	FE3	2.805
TA3	2.521	Lightning in the store	
Paint colour in the store		LS1	1.712
PS1	2.281	LS2	2.182
PS2	3.295	LS3	1.902
PS3	2.075	LS4	1.728
<b>Impulse buying</b>		Music in the Store	
IB1	3.240	MS1	2.678
IB2	3.062	MS2	2.028
IB3	1.921	MS3	2.779
IB4	2.796		

Table 04 provides the Multi-collinearity Statistics for the variables in the study. The Variance Inflation Factor (VIF) values are presented for each indicator, indicating the extent of multicollinearity. For the personal factors dimension, indicators like Money Availability and Family Influence exhibit VIF values below the threshold of 5, suggesting no significant multicollinearity issues. Similarly, in the in-store factors dimension, indicators like Sale Promotion and Store Environment also demonstrate VIF values within an acceptable range. This implies that the variables within each dimension are sufficiently distinct from each other, ensuring the reliability of the measurement model. Furthermore, the indicators of impulse buying behavior, such as IB1, IB2, IB3, and IB4, also show VIF values within acceptable limits, indicating no significant multicollinearity concerns within this construct. Overall, these findings reinforce the robustness of the measurement model and provide confidence in the validity of the study's results.

### ***Assessment of Structural Model***

In assessing the Structural Model, researchers commonly examine the R-squared (R<sup>2</sup>) and F-values to evaluate the goodness of fit and overall model significance (Hair et al., 2016). The R<sup>2</sup> value indicates the proportion of variance explained by the model, while the F-value assesses the significance of the model as a whole. Higher R<sup>2</sup> values and significant F-values suggest a better fit and stronger model validity. These metrics are crucial in determining the predictive power and overall effectiveness of the structural model in explaining the relationships between variables (Hair et al., 2016).

### ***Model Fit***

Before delving into the hypothesis results, it's essential to evaluate the overall fit of the structural model to ascertain how well the proposed relationships align with the research data. Scholars recommend using the Standard Root Mean Residual (SRMR) value to assess model fit, with a threshold of less than 0.08 indicating acceptable fit (Hu & Bentler, 1999). This metric evaluates the discrepancy between observed and predicted covariance, providing insights into the goodness of fit of the structural model. By examining the SRMR value, researchers can gauge the adequacy of their model in representing the underlying relationships among latent constructs, thereby ensuring the validity and reliability of their findings.

Table 05: Fit summary

	Saturated model	Estimated model
SRMR	0.050	0.062
d_ULS	2.836	2.836
d_G	1.671	1.671
Chi-square	2453.687	2453.732
NFI	0.682	0.671

Source: Survey data, 2024

The data on Table 05 presents the fit summary for both the saturated and estimated models. The SRMR values for the saturated and estimated models are 0.050 and 0.062, respectively. Additionally, the  $d_{ULS}$  and  $d_G$  values remain consistent at 2.836 and 1.671 for both models. The chi-square values for the saturated and estimated models are also identical at 2453.687 and 2453.732, respectively. However, it's important to note that the chi-square statistic is sensitive to sample size, often resulting in significant values for large samples. Therefore, additional fit indices such as the Normed Fit Index (NFI) are utilized. The NFI values for the saturated and estimated models are 0.682 and 0.671, respectively. The SRMR (Standard Root Mean Residual) value for the estimated model, at 0.062, is less than the recommended threshold of 0.08. Overall, while the models exhibit acceptable fit based on the SRMR criterion, further examination of fit indices is necessary to comprehensively evaluate the model's goodness of fit.

*Coefficient of Determination ( $R^2$ )*

The coefficient of determination ( $R^2$ ) plays a pivotal role in evaluating the effectiveness of the structural model, providing insights into the extent to which the variance in endogenous constructs is explained by the exogenous constructs linked to them (Hair et al, 2016). Thus, thorough examination and interpretation of  $R^2$  values are essential steps in the assessment and validation of structural equation models.

Table 06: Coefficient of determination

	R-square	R-square adjusted
BI	0.671	0.654

Source: Survey data, 2024

The data shown in Table 06, visually illustrates the coefficient of determination ( $R^2$ ) and adjusted  $R^2$  values for the endogenous variable, BI (Impulse Buying). In here,  $R^2$  indicates the proportion of variance in the dependent variable explained by the independent variables in the model. In this case, the  $R^2$  value for BI is 0.671, suggesting that approximately 67.1% of the variance in impulse buying behavior is accounted by the independent variables included in the structural model. Additionally, the adjusted  $R^2$  value, which takes into account the number of predictors and the sample size, is provided. The adjusted  $R^2$  value for BI is 0.654, indicating that around 65.4% of the variance in impulse buying behavior is explained by the independent variables, while adjusting for the complexity of the model. These  $R^2$  values offer valuable insights into the predictive power and explanatory capacity of the structural model concerning impulse buying behavior. Higher  $R^2$  values signify a stronger ability of the independent variables to predict variations in impulse buying, indicating a better fit of the model to the observed data.

*Path Coefficients and Hypotheses Test results*

In line with the existing literature, followed by the conceptual framework, 10 hypotheses were developed within this study to measure the basic phenomenon. Thus, the results of hypotheses testing can be visually illustrated as follows.

Table 07: Hypotheses test results for the proposed structural model

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Results
FE -> BI	0.276	0.261	0.043	6.438	<b>0.000</b>	<b>Supported</b>
FI -> BI	0.092	0.096	0.038	2.432	<b>0.015</b>	<b>Supported</b>
LS -> BI	0.273	0.276	0.048	5.734	<b>0.000</b>	<b>Supported</b>
MA -> BI	0.229	0.234	0.051	4.488	<b>0.000</b>	<b>Supported</b>
MS -> BI	0.215	0.211	0.035	6.101	<b>0.000</b>	<b>Supported</b>
PS -> BI	-0.093	0.020	0.113	0.823	0.411	Not Supported
SE -> BI	0.015	0.016	0.041	0.375	0.708	Not Supported
SP -> BI	0.369	0.354	0.047	7.930	<b>0.000</b>	<b>Supported</b>
TA -> BI	0.210	0.202	0.047	4.501	<b>0.000</b>	<b>Supported</b>
Gen x MA -> BI	-0.118	-0.107	0.059	1.988	<b>0.047</b>	<b>Supported</b>
Gen x FI -> BI	0.027	0.030	0.046	0.587	0.557	Not Supported
Gen x TA -> BI	0.113	0.097	0.050	2.262	<b>0.024</b>	<b>Supported</b>
Gen x SP -> BI	-0.003	-0.009	0.042	0.069	0.945	Not Supported

Gen x SE -> BI	0.015	0.005	0.038	0.391	0.696	Not Supported
Gen x FE -> BI	0.005	-0.006	0.051	0.091	0.927	Not Supported
Gen x LS -> BI	-0.033	-0.024	0.048	0.684	0.494	Not Supported
Gen x MS -> BI	0.011	0.001	0.039	0.278	0.781	Not Supported
Gen x PS -> BI	-0.094	-0.018	0.084	1.121	0.262	Not Supported

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Source: Survey data, 2024

According to the data on Table 07, all three Personal Factors had a substantial impact on the Tendency to Buy on Impulse, with T values larger than 1.96 and p values less than 0.05. Accepting Hypothesis 03, Time Availability is the most significant Personal Factor with the biggest impact on Impulse Buying Behavior ( $t = 4.501$ ,  $p = 0.000$ ). Second, adopting Hypothesis 01, Money Availability, the second Personal Factor, likewise influences Impulse Buying Behavior ( $t=4.488$ ,  $p=0.000$ ). Third, the hypothesis 02 was verified by the evidence showing that Family Influence dramatically alters Impulse Buying behavior ( $t=2.432$ ,  $p=0.015$ ).

Sales promotion is the main In-store factor that influences Impulse Buying Behavior, with the maximum t value of 7.930 and  $p=0.000$  supporting the Hypothesis 04.

Next, embracing Hypothesis 08, the Store's Music strongly affects customers' purchasing decisions ( $t=6.101$ ,  $p=0.000$ ). Additionally, Hypothesis 06 was approved ( $t=6.438$ ,  $p=0.000$ ), demonstrating that Friendly Employees influence consumers' Impulsive Purchasing Decisions. Ultimately, Hypothesis 07 ( $t=5.734$ ,  $p=0.000$ ) was accepted, indicating that the Store's Lighting has a significant impact on customers' impulse buying behavior. It should be highlighted, nonetheless, that neither the store's physical layout nor its paint color significantly affects consumers' Impulsive Buying Behavior, disproving Hypotheses 05 and 09. Regarding the moderating function of Generation, Table 07 data demonstrated that the link between Two Personal Factors and Impulse Buying Behavior is considerably moderated by Consumer Generation.

The data pertaining to two Personal Factors—Money Availability ( $t=1.988$ ,  $p=0.047$ ) and Time Availability ( $t=2.262$ ,  $p=0.024$ )—accepting Hypotheses 10a and 10c, supported the above idea.



### *Group-wise comparison of Generation Influence through Multi-group analysis*

The present study conducted a multi-group analysis in smart pls because it is the most effective method for measuring multidimensional models with categorical moderator variables (Ringle et al., 2015; Sarstedt and Cheah, 2020). Thus, the data shown in Table 08 below depicts the results of multi-group analysis comparing the three groups of generation.

The results indicate that, with a P value of 0.043, the influence of money availability on impulsive purchase behavior is 0.236 between the Z and X generations. It has therefore been established that Z generation customers make more impulsive purchases than X generation customers do when they have money. Furthermore, the P value (0.043), which is less than 0.05, showed that the two generation groups listed above differ significantly from one another.

Additionally, the data in Table 08 showed that when it comes to impulsive purchasing behavior, Z generation customers are more likely than Y generation customers to be impacted by time availability. This time, the positive coefficient value of 0.223 with a P value of 0.002 served as statistical evidence.

## **Conclusions**

In conclusion, this study provides valuable insights into impulsive buying behaviour and its determinants in the Sri Lankan supermarket industry. Through a comprehensive analysis of various personal, in-store, and environmental factors, the study sheds light on the complex dynamics underlying consumer decision-making processes. The findings highlight the significant influence of factors such as money availability, family influence, store environment, and promotional strategies on impulsive buying behavior, underscoring the importance of understanding these determinants in shaping consumer purchasing patterns. Moreover, the study extends the existing literature by examining the moderating effects of Generation—specifically, across Generation Z, Generation Y, and Generation X—on the relationship between determinants and impulsive buying behaviour. By considering the unique characteristics and preferences of different generational cohorts, the study offers nuanced insights into the interplay between demographic factors and consumer behaviour dynamics.

The practical implications of this research are manifold, offering valuable guidance for marketers, retailers, and policymakers seeking to enhance consumer engagement and drive sales in the supermarket industry. By understanding the factors that influence impulsive buying behavior, businesses can tailor their marketing strategies, product placements, and promotional efforts to effectively target and appeal to their target demographic segments.

However, it is important to acknowledge the limitations of this study, including the reliance on self-reported data, the cross-sectional nature of the study design, and the potential sampling bias associated with convenience sampling. Future research endeavors should address these limitations by employing mixed-method approaches, longitudinal study designs, and probability sampling techniques to enhance the validity and generalizability of the findings. Overall, this study contributes to the existing body of knowledge on impulsive buying behaviour by providing empirical evidence of its determinants and the moderating role of

Table 08: Group-wise comparison of generation influence

	Difference Z Gen. vs X Gen.	Difference Z Gen. vs Y Gen.	Difference X Gen. vs Y Gen.	1 tailed Z Gen. vs X Gen. (P value)	1 tailed Z Gen. vs Y Gen. (P value)	1 tailed X Gen. vs Y Gen. (P value)	2 tailed Z Gen. vs X Gen. (P value)	2 tailed Z Gen. vs Y Gen. (P value)	2 tailed X Gen. vs Y Gen. (P value)
FE -> BI	0.103	0.004	-0.099	0.276	0.418	0.894	0.553	0.837	0.212
FI -> BI	0.170	0.075	-0.095	0.044	0.125	0.823	0.089	0.249	0.354
LS -> BI	-0.366	-0.336	0.026	0.945	0.937	0.371	0.112	0.125	0.745
MA -> BI	0.236	0.253	0.017	0.036	0.234	0.425	<b>0.043</b>	0.209	0.850
MS -> BI	-0.007	-0.039	-0.031	0.536	0.725	0.648	0.928	0.550	0.703
PS -> BI	-0.034	0.070	0.103	0.631	0.207	0.123	0.738	0.413	0.247
SE -> BI	-0.120	0.034	0.154	0.666	0.393	0.038	0.669	0.785	0.077
SP -> BI	0.091	-0.033	-0.124	0.195	0.611	0.831	0.389	0.778	0.338
TA -> BI	0.102	0.223	0.121	0.991	0.994	0.107	0.284	<b>0.002</b>	0.215

Source: Survey data, 2024.

Generation in the Sri Lankan context. By illuminating the intricacies of consumer decision-making processes, this research informs strategic decision-making and lays the groundwork for future exploration in the field of consumer behaviour and retail management.

### ***Directions for Future Research***

Future research in the realm of impulsive buying behavior in the Sri Lankan supermarket industry could explore several avenues to deepen our understanding and address current gaps in knowledge. Firstly, longitudinal studies could be conducted to examine the temporal stability and long-term effects of impulsive buying behaviour and its determinants. By tracking consumer behaviour over time, researchers can uncover trends, patterns, and changes in impulsive buying tendencies, providing valuable insights for marketers and policymakers. Secondly, qualitative research methodologies, such as in-depth interviews and focus groups, could complement quantitative approaches by providing rich, context-specific insights into the underlying motivations, perceptions, and experiences driving impulsive buying behaviour. Qualitative studies could delve deeper into the socio-cultural influences, psychological factors, and situational triggers that shape consumer decision-making processes in the supermarket environment. Additionally, comparative studies could be conducted to assess how impulsive buying behaviour varies across different retail formats, such as traditional brick-and-mortar supermarkets, online grocery platforms, and specialty stores.

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