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FACTORS AFFECTING CONSUMER IMPULSE BUYING BEHAVIOR IN SUPERMARKETS: EVIDENCES FROM GAMPAHA DISTRICT

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ABSTRACT

Supermarkets have emerged as a result of the modernization of retail business in Sri Lanka. A supermarket can be defined as a wide range of retail stores that operate on self-service, including groceries and basic home products. Nowadays, consumers have a high tendency to buy goods from supermarkets. As a result, it creates a high competition among supermarkets in which they tend to adopt various visual merchandising strategies to attract customers. There is a direct impact on the decisions of customers to purchase certain goods, owing to these visual merchandising strategies and customers are highly motivated to purchase goods in an instant. The major objective of the study is to investigate the influence of visual merchandising strategies of supermarkets in the Gampaha district regarding the impulse buying behavior of customers. The researcher identified window displaying, floor merchandising, product shelf presentation, store environment, and sales promotion as visual marketing strategies that influence impulse buying behavior through the literature review. Music, lightning, sales staff, buy 1 get 1 free, free samples distribution, and discounts were identified as sub-dimensions to measure store environment and sales promotion respectively. Primary data were collected by submitting a structured

questionnaire using a sample of 300 customers using the multi-cluster sampling method to achieve the objectives of the study and the data were analyzed through the Structural equation model using smart PLS version 2.0 software. According to the results of the research, visual merchandising strategies have a positive relationship with consumer impulse buying behavior. Moreover, floor merchandising, product shelf presentation, store environment has the strength of significant association to impulse buying behavior. Finally, the overall research provides important recommendations to supermarket owners, consumers, and the government regarding supermarket regulations.

Keywords – Customers of supermarket, Consumer Impulse Buying Behavior, Visual Merchandising Strategies, Demographic Factors, Structural Equation Model

1. INTRODUCTION

Retail has been growing rapidly as an industry and modernizing over the past few decades which plays an important role in improving the living standards of the people and building the economy of the country. Supermarket chains are a major category in the retail industry and currently showing signs of rapid growth (Gunasekera, De Silva, 2012*). "A supermarket is a store of not less than 2,000 sq. ft. sales area with three or more checkouts and operated mainly self-service, whose range of merchandise comprises all food groups, including fresh meat, fresh fruits, and vegetables, plus basic household requisites (i.e.soaps and cleaning materials)" (McClelland, 1962).* Moreover, the Supermarket sector had traversed beyond the stage of the industrial life cycle and private supermarkets have widely spread in both urban and rural areas. Major reasons that are affected by this sudden upheaval are the emergence of a newly rich circle in those areas and the motivation of inhabitants to a novice lifestyle (Wanninayake & Randiwela, 2007).

Five major supermarket chains are operating in Sri Lanka (Herath, 2014). Cargills Food City and Keells Supermarkets, two supermarket chains owned by Cargills (Ceylon) PLC and John Keells Holdings PLC, have already dominated the supermarket industry (Wanninayake & Randiwela, 2007, October). The Cargills Food City chain currently has 298 branches island-wide and 62 branches in the Gampaha District (Cargills Ceylon, n.d.), while the Keells super supermarket chain has 110 branches island-wide and 18 branches in the Gampaha District (Keells Super, n.d.).Other major supermarket chains include Arpico Super, Laugfs Super Market, and Lanka Sathosa (Herath, 2014). Such development in the chain of supermarkets had increased the competition in between Retail sales industries by attracting the

interest of customers and utilized strategies and steps followed by Retail sales industries to compete with its competitors (Shamini, 2016).

At present, most of the customers' interests had evolved from the traditional retail sales industry to modern retail sale models of shopping tours in supermarkets. The convenience offered with the ability to purchase varied goods under different brands, unique luxury and comfort offered with the supermarket model, storage facility and most importantly the security of food, the ability to purchase goods with high quality, cleanliness and the pleasant shopping aura created for customers are major motivations for buyers. Moreover, owing to the increase of busy lifestyles of people, their decisions to interact in supermarkets have the capability to secure their time and it has proved the decrease of pre-planned purchases by people (Wanninayake & Randiwela, 2007). In addition to that, customers are entrapped in sales strategies utilized by the supermarket schemes: that they choose products without the initial knowledge of other options and not having adequate information or else without the pre-intention of purchasing. An instance in this regard is impulse buying (Tversky & Kahneman, 1981). In such behaviors, both external and internal factors had directly affected. A major limitation to this study is the exploration of only external factors that influence the impulse buying behavior of customers. Further, according to Hubrechts & Koktürk (2012), visual merchandising strategies are an external motivator that can significantly influence consumer buying behavior. That is, when consumers roam the supermarket without the intention of buying any specific product, they are exposed to visual merchandising tactics in the supermarket environment. It will encourage customers to spend more time in stores and be attracted to products, eventually making unplanned purchases (Gajanayake, Gajanayake, & Surangi, 2011). Therefore, this study is a timely research that explores few varied visual merchandising strategies that directly influence the instant buying of customers.

Sri Lanka as a developing country, caters to the Sri Lankan retail sales industry as a booming sector with diversified transformations (Wanninayake & Randiwela, 2007, October). Here, in order to attract customers, sales strategies had utilized visual merchandising as a significant arena in it (Stern, 1962). Supermarket owners and producers annually allocate a large sum of revenue on visual merchandising to motivate customers to buy day-to-day needs of food and other non-food products that directly affect the impulse behavior of customers that increase their sales profits (Chhabra & Farooque, 2018).

Moreover, research conducted in the discipline had proved that in the past decade, there is a gradual development in novice visual merchandising strategies and the increase of competitive aura had resulted in the use of many

visual merchandising strategies within Sri Lanka. Yet, systematic research had not been conducted on the tendency on the impulse buying of customers. Herath (2014) focus on the storage environment an important aspect of visual merchandising that has a significant effect on impulse buying behavior. Weerathunga & Pathmini's (2015) research is on sales promotions in relation to impulse buying of supermarkets in the Anuradhapura district. According to Shamini's (2016) research, the influence of promotional variables which is a major component of visual merchandising strategies in impulse buying has been explored. Apart from these scholarly researches, rigorous and systematic scholarly research had not been conducted within the field.

The increase of supermarkets and shopping complexes, transformations in lifestyles, independence of young customers, and the vulnerability to hundreds of daily promotional messages had filled the impulse buying of customers in the modern economy. Furthermore, customers' attitudes had changed in relation to shopping tours and impulse buying (Muruganantham & Bhakat, 2013). The owners of supermarkets had identified the customers' attitudes alongside impulse buying behavior, and that phenomenon had been utilized through different visual merchandising strategies to motivate buyers. Therefore, the broad exploration of visual merchandising strategies of impulse buying in the modern retail sales industry is required. By means of that, this research will focus on supermarkets in the second dense populated district and the commercial hub, Gampaha district to utilize an in-depth exploration in the selected field.

Therefore, this research's major research problem is checking "what are the most impacting visual merchandising strategies in determining the impulse buying behavior of consumers in supermarkets in Gampaha district ". The main objective of this study is to identify highly influential visual merchandising strategies that affect impulse buying of customers.

2. LITERATURE REVIEW & HYPOTHESES

Impulse buying behavior: According to Beatty & Ferrell (1998) and Stern (1962), impulse buying *is "any purchase that is not planned in advance by the shopper*" (Sharma, et al, 2010). Rook (1987) challenged this statement by stating that not all unplanned purchases happen spontaneously or instantaneously. Iyer (1989) states *that "not all instant purchases are at least planned, but not all unplanned purchases are necessarily instantaneous."* Various stimulants in the store directly or indirectly affect the consumer, and the exposure of the consumer to a stimulant while in the store may result in an impulse buying (Applebaum, 1951). Sharma, et al, 2010, identified window display, floor merchandising, product shelf presentation, sales promotion, and storage environment as visual merchandising strategies that have a strong

influence on impulse buying behavior. According to the Literature Review, Music (Herath, 2014; Mattila & Wirtz,2008; Saad & Metawie ,2015; Sherman et.al, 1997), lighting (Gajanayake et.al,2011; Siddhu & Miet, 2012; Herath 2014; Saad & Metawie ,2015), sales staff Herath,2014; Mattila & Wirtz, 2008**;** Sangalang et.al, 2017; Sherman et al.,1997; Tinne 2011), buy1 get1 free (Cho et al.,2014; Tinne,2011; Weerathunga & Pathmini, 2015), free samples distributions (Karbasivar & Yarahmadi ,2011; Weerathunga & Pathmini, 2015) and price discounts (Cho et al.,2014; Karbasivar & Yarahmadi ,2011; Tinne,2011) were considered as sub-dimensions to measure store environment and sales promotion. As a result of these visual merchandising strategies, the consumer is tempted to buy any product instantly without any real need.

H_1: There is a relationship between window display and consumer impulse buying

The window display is "any kind of visual presentation of face-to-face merchandise to attract the attention of the customer that eventually enter the store" (Jiyeon, 2003). Accodring to Abratt & Goodey (1990), Bhatti & Latif (2014), Gutierrez (2014), Jiyeon (2003), Karbasivar & Yarahmadi (2011), Mehta & Chugan, (2012), Shamini (2016), Siddhu & Miet (2012) and Vishnu & Raheem (2013), there is a positive relationship between impulse buying and Window display.

H_2: There is a relationship between floor merchandising and consumer impulse buying

Floor Merchandising is defined as the way in which different parts of a store are organized, with the primary purpose of facilitating the purchase of more goods (Davies & Tilley, 2004). According to Cho et al., (2014), Bhatti & Latif (2014), Hubrechts & Koktürk (2012), Mehta & Chugan (2012), Pradhan (2014) and Shamini (2016) there is a positive relationship between impulse buying and floor merchandising.

H_3: There is a relationship between sales promotion and consumer impulse buying

Impulse purchases occur when the buyer is reminded of the need to buy in-store products through sales promotions (Muruganantham & Bhakat, 2013) . According to Akyuz (2018), Hubrechts & Koktürk (2012), Jamal & Lodhi (2015), Mehta & Chugan (2012) Muruganantham & Bhakat (2013), Pradhan (2016), Sangalang et al., (2017) and Shamini (2016), sales promotion also affects impulse buying.

H_{3A}: There is a relationship between sales promotion and Buy 1 Get 1 based on the consumer's impulse purchase

According to Nakarmi (2018) Buy 1 Get 1 influences on the decision to buy while shopping. It motivates consumers to make impulse purchases and leads

to sales growth (Nagadeepa et al., 2015) and also has a positive impact on impulse purchases (Cho et al., 2014; Tinne, 2011; Weerathunga & Pathmini, 2015).

H_{3B}: There is a relationship between sales promotion and price discounts based on the consumer's impulse purchase

Price discounts affect the consumer's impulse buying decision (Nakarmi, 2018). It also contributes to the sales growth (Nagadeepa et al., 2015). According to Cho et al (2014) and Karbasivar & Yarahmadi, (2011) Tinne, (2011) and Nakarmi, (2018) price discounts are also positively associated with impulse buying. But according to Weerathunga & Pathmini (2015), price discounts have a negative impact on impulse purchases.

H_{3C}: There is a relationship between sales promotion and free samples distribution based on the consumer's impulse purchase

Free samples motivate customers to make impulse purchases and lead to sales growth (Nagadeepa et al., 2015). Free delivery of samples has a positive effect on impulse purchases (Karbasivar & Yarahmadi, 2011; Nakarmi, 2018; Weerathunga & Pathmini, 2015).

H_4: There is a relationship between product shelf presentation and consumer impulse buying

The product shelf emphasizes highlighting the items for sale. Accordingly, Abratt & Goodey (1990), Davies & Tilley (2004), Hubrechts & Koktürk (2012) and Jiyeon (2003) explained that there is a positive relationship between product display and impulse buying

H_5: There is a relationship between the consumer impulse purchase and the store environment

Pleasant storage environments lead to impulse purchases (Hoyer & Macinnis, 1997; Muruganantham & Bhakat, 2013). According to Pradhan (2016), the storage environment has a positive effect on impulse buying.

H_{5A}: There is a relationship between the store environment and the music based on the consumer's impulse purchase

Music is a factor that affects on the impulse buying (Baker et al., 2002). According to Herath (2014), Mattila & Wirtz (2008) and Saad & Metawie (2015) the pleasant music background has a positive impact on the store environment as well as on the impulse purchases.

H_{5B}: There is a relationship between the storage environment and lighting based on the consumer's impulse purchase

Lighting is a factor that effect on the consumers' impulse purchases (Baker et al., 2002). There is a significant positive relationship between lighting and

impulse buying (Gajanayake et.al, 2011; Herath 2014; Saad & Metawie, 2015).

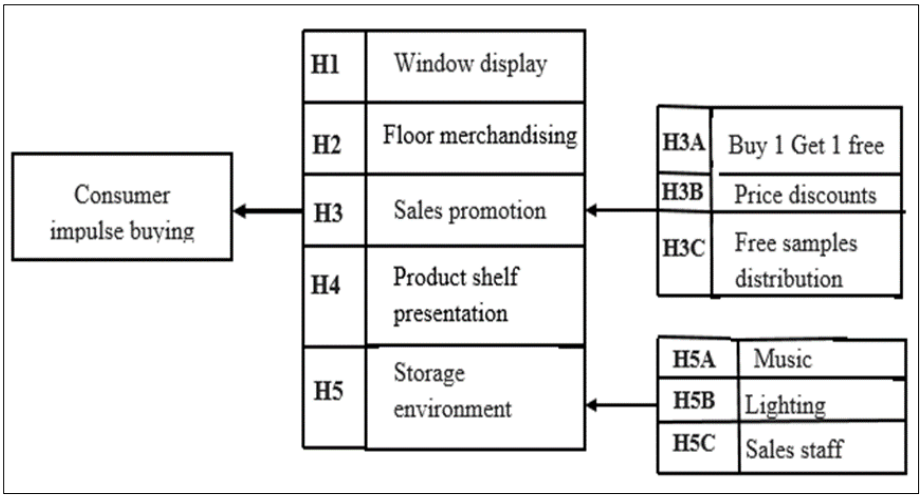
H_{5C}: There is a relationship between the warehouse environment and the sales employee based on the consumer's impulse buying

Social factors in the warehousing environment, such as the productivity of sales staff usually encourage the consumer impulse buying (Baker et al., 2002). According to Herath (2014), Mattila & Wirtz (2008), Sangalang et al., (2017) iy Tinne (2011), there is a significant positive relationship between sales employees and impulse buying.

3. METHODOLOGY

The type of the study and its nature: The research is a Pure survey as it deviates from exploring solutions for the pragmatic problem in the country. In addition to that, the research is a Clear observation as it utilizes descriptive analysis and 5 visual merchandising strategies in relation to impulse buying of customers.

Research Approach: According to the nature and objective of the research, a Qualitative approach was utilized. In the Data Collection, the Questionnaire survey method had been conducted as an applicable methodology to derive data and collected data had been interpreted using Quantitative methods. In relation to that, the influence of visual merchandising strategies on impulse buying had investigated. According to Holmen & Solvang (1997) (as cited in Hubrechts & Koktürk, 2012), the Qualitative approach to the study is depicted to derive a systematic study and the influence of variables utilized through a deductive process.



Source: Author Developed

Figure 1- Conceptual Framework

Table 1: Operationalize of the variable

Variables	Measurement Indicators	Sources
Consumer impulse buying	Based on 7 questions (5 Point Likert scale)	Abratt & Goodey (1990), Applebaum (1951), Beatty & Ferrell (1998), Iyer (1989), Jiyeon (2003), Rook (1987), Sharma et.al (2010), and Stern (1962)
Window display	Based on 5 questions (5 Point Likert scale)	Bhatti & Latif (2014), Gudonaviciene & Alijosiene (2015), Hubrechts & Koktürk (2012), Jiyeon (2003), Karbasivar & Yarahmadi (2011), Mehta & Chugan (2012), Shamini (2016), and Vishnu & Raheem (2013)
Floor merchandising	Based on 5 questions (5 Point Likert scale)	Bhatti & Latif (2014), Gajanayake et al. (2011), Jiyeon (2003), Mehta & Chugan (2012), Pradhan (2016), and Shamini (2016)
Sales promotion	Buy 1 Get 1 Price discount free samples dis_	Cho et al. (2014), Karbasivar&Yarahmadi (2011), Nagadeepa et al. (2015), Nakarmi (2018), Shamini (2016), Tinne (2011), Vishnu & Raheem (2013), Weerathunga & Pathmini(2015)
Product shelf presentation	Based on 5 questions (5 Point Likert scale)	Hubrechts & Koktürk (2012), Jiyeon (2003), Mehta & Chugan (2012)
Store environment	Music lighting, sales staff	Gajanayake et al. (2011), Herath (2014), Saad & Metawie (2015), Sangalang et al. (2017), Tinne (2011)

Source: Developed by researcher

Research Population: Customers of supermarkets in the Gampaha district.

Sample Frame and Sample unit : The sample Frame has consisted of Wattala, Negombo, and Ja- Ela divisional secretariats with Ja-Ela, Kochchikade, Wattala Grama niladhari divisions of Gampaha district that includes all Cargills and Keells customers. The sample unit consisted of all buyers above 18 who come out from supermarkets after their purchases.

Sample Method and Sample size : Gampaha district had assigned to 13 Divisional secretariats and the research is confined to supermarkets in Grama

Niladhari divisions of Ja-Ela, Kochchikade, and Negombo. Therefore, in the selection of the sample, Multiplayer Cluster Sampling which is a Random sampling method had implemented. According to the Literature review of (Bhatti & Latif (2014), the entire sample is 344, Gajanayake et al.,(2011), the sample is 307 also, Karbasivar & Yarahmadi (2011) the sample size is 275 customers). As the entire sample, 300 customers had taken into consideration with Cargills and Keells supermarket chains that inherited the monopoly of retail sales in Gampaha district with the highest number of supermarkets. the researcher intends to conduct the research using 150 customers per supermarket.

Data collection : The questionnaire method was used to collect primary data. Questionnaire items were measured using a five point likert scale ranked from strongly disagree = 1 to strongly agree = 5. Websites, books and the 2019 Central Bank Report were used for this research to collect secondary data.

The method of Data collection : Before entering the supermarket, a randomly selected buyer (most probably the customer comes third) is acknowledged with the purpose of the study and after the purchase of products from the supermarket, if the pre-recognized customer has not done any unnecessary purchase, will not respond to the Questionnaire. When the customer had done one or a few impulse buying he/she is selected as respondents to the Questionnaire.

Data analysis : The first step of analysis was to report the results of the questionnaire by reporting the basic features of the sample through the SPSS software. The second step was to use the structural equation model in the Smart PLS version 2.0 software to first address the outer model results and then evaluate the Inner model results.

4. DATA ANALYSIS AND DISCUSSION

As the first and the second step, the reliability of items in the measurement model was checked by testing the indicator reliability (outer Loading, T-statistics) and internal consistency reliability (composite reliability, cronbach's alpha). When checking the validity of the items, factors like convergence validity (AVE) and discrimination (Fornell-Lacker criteria) were considered. Accordingly, it is clear that the outerloading values of the questionnaire items mentioned in Tables 3 and 5 above are above 0.7. Also, the T statistics value for those items is much higher than 2:58. It can be stated with a high statistical reliability level of over 99% that more reliable items have been used to build independent variables. Table 3 shows the items of indicators used to construct the latent variables and Table 5 shows the high reliability and internal consistency of the final model.

Table 2 : Demographic (personal) data in the sample

Demographic Factors	Frequency	Cumulative Percent (%)
Gender		
Male	191	63.7
Female	109	36.3
Age		
18-30	142	47.33
31-40	83	27.67
41-55	50	16.67
>55	25	8.33
Educational level		
Primary Education	2	0.67
Secondary Education	13	4.33
Tertiary Education	202	67.33
Bachelor degree	62	20.67
Post Graduated	21	7.0
Average Monthly Income		
<25,000	22	7.33
26,600-50,000	95	31.67
51,000-100,000	118	39.33
>100,000	65	21.67

Source: Survey data, 2020.

Measurement Outer Model

Table 3: Validity and Reliability constructs of first order analysis

Construct		Indicator Reliability		Internal Consistency Reliability		Convergent Validity
		Loading	T statistics	Composite Reliability	Cronbach's Alpha	AVE
Sales promotion						
01	**Buy1 Get1**			0.841	0.739	0.639
	BG2	0.798	15.517			
	BG3	0.797	41.294			
	BG4	0.803	17.707			
02	**Free samples distribution**			0.892	0.759	0.805
	FSD3	0.896	66.407			
	FSD5	0.898	59.523			
03	**Price discount**			0.896	0.855	0.633
	PD1	0.832	36.010			
	PD2	0.734	20.035			
	PD3	0.815	32.109			
	PD4	0.827	45.395			
	PD5	0.765	22.198			
Store environment						
01	**Lighting**			0.985	0.978	0.957
	L2	0.968	54.588			
	L3	0.979	104.075			
	L4	0.987	228.428			
02	**Music**			0.963	0.924	0.930
	M3	0.963	72.543			
	M4	0.965	87.041			
03	**Sales staff**			0.945	0.884	0.895
	SE2	0.940	53.465			
	SE4	0.952	96.865			

Source: Survey data, 2020

Table 4: Fornell-Larcker criterion analysis for checking Discriminant validity

		Buy1 Get1	free samples dis_	Price disc_	lighting	Music	sales staff
Buy1 Get1	Pearson Correlation	.799*	.604*	.727*	.749*	.762*	.846*
	Sig. (2-tailed)		.000	.000	.000	.000	.000
free samples dis_	Pearson Correlation	.604*	.897*	.915*	.386*	.359*	.344*
	Sig. (2-tailed)	.000		.000	.000	.000	.000
Price disc_	Pearson Correlation	.727*	.915*	.795*	.420*	.394*	.390*
	Sig. (2-tailed)	.000	.000		.000	.000	.000
lighting	Pearson Correlation	.749*	.386*	.420*	.978*	.960*	.875*
	Sig. (2-tailed)	.000	.000	.000		.000	.000
Music	Pearson Correlation	.762*	.359*	.394*	.960*	.964*	.897*
	Sig. (2-tailed)	.000	.000	.000	.000		.000
sales staff	Pearson Correlation	.846*	.344*	.390*	.875*	.897*	.946*
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

**Correlation is significant at the 0.01 level (2-tailed)

Source: Survey data, 2020

Table 5 : Validity and Reliability construct of second order analysis

Construct		Indicator Reliability		Internal Consistency Reliability		Convergent Validity
		Loading	T statistics	Composite Reliability	Cronbach's Alpha	AVE
01	**Consumer impulse buying behavior**			0.943	0.929	0.705
	CIB1	0.809	19.533			
	CIB2	0.919	93.661			
	CIB3	0.772	19.487			
	CIB4	0.849	30.004			
	CIB5	0.919	91.070			
	CIB6	0.755	18.348			
	CIB7	0.839	28.264			
02	**Window displaying**			0.956	0.943	0.816
	WD1	0.907	47.340			
	WD2	0.874	40.487			
	WD3	0.947	128.921			
	WD4	0.935	85.080			
	WD5	0.847	33.482			
03	**Floor Merchandising**			0.917	0.880	0.734
	FM1	0.890	51.493			
	FM2	0.880	56.467			
	FM3	0.817	35.678			
	FM4	0.837	25.262			
04	**Sales promotions**			0.930	0.899	0.816
	Buy1Get1	0.917	61.942			
	Free Sample Dis :	0.861	28.356			
	Price Discounts	0.930	43.981			
05	**Product shelf presentation**			0.898	0.860	0.638
	PSP1	0.778	18.682			
	PSP2	0.870	75.228			
	PSP3	0.772	21.013			
	PSP4	0.815	21.625			
	PSP5	0.752	13.161			
06	**Store environment**			0.979	0.968	0.940
	Music	0.982	241.137			
	Lighting	0.974	136.001			
	Sales Employees	0.952	69.784			

Source: Survey data, 2020

Table 6 : Fornell-Larcker criterion analysis for checking Discriminant validity

		Con_ imp_ buy_	Floor Merch_	Prod_ shelf pres_	Sales prom _	Store env_	Window disp_
Con_ imp_ buying_	Pearson Correlation	.840*	.618*	.806*	.517*	.772*	.645*
	Sig. (2-tailed)		.000	.000	.000	.000	.000
Floor Merch_	Pearson Correlation	.618*	.857*	.631*	.320*	.464*	.491*
	Sig. (2-tailed)	.000		.000	.000	.000	.000
Prod_ shelf pres_	Pearson Correlation	.806*	.631*	.799*	.549*	.818*	.671*
	Sig. (2-tailed)	.000	.000		.000	.000	.000
Sales prom_	Pearson Correlation	.517*	.320*	.549*	.904*	.661*	.456*
	Sig. (2-tailed)	.000	.000	.000		.000	.000
Store env_	Pearson Correlation	.772*	.464*	.818*	.661*	.970*	.718*
	Sig. (2-tailed)	.000	.000	.000	.000		.000
Window disp_	Pearson Correlation	.645*	.491*	.671*	.456*	.718*	.903*
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

*Correlation is significant at the 0.01 level (2-tailed)

Source: Survey data, 2020

Fornell & Larcker (1981) stated that the square root of the AVE values relative to each variable can be used to verify validity. It can be seen that the validity of the separation of all the other index variables in the model is due to the fact that the corresponding $\sqrt{AVE}$ of the index variables in the model are less than the horizontal values under the $\sqrt{AVE}$ value, with the exception of

the free sampling index, which is the latent variable in Table 4 above. Also, according to Table 6, the AVE squares of the variables in the model are less valid than the original values, so the model can be considered as valid. Furthermore, according to Table 6, it is clear that product shelf presentation has a higher correlation with the impulse buying when considering the correlation (0.806) and the lower correlation that exists in the ground trade (0.618).

Measurement Inner Model

Assessment of Collinearity

Table 7: VIF values and Tolerance of the model

Variables	Tolerance	VIF
Window displaying	0.447	2.237
Floor Merchandising	0.574	1.743
Sales promotions	0.561	1.782
Product shelf presentation	0.248	4.033
Store environment	0.222	4.506

Source: Survey data, 2020

According to the above table, the VIF value for each independent variable is less than 10, i.e. the VIF value is between 1-5 and the tolerance value is greater than 0.2, and it is considered as not having a multiple linearity condition. Accordingly, all the variables included in the model can be used to measure the model.

Table 8: Determining the relationships and statistical significance among variables

Hypothesis	ß Co-efficient	T Statistics	Results
H1	0.058448	1.171754	Not supported
H2	0.204993	3.278118	Supported
H3	0.003801	0.106994	Not supported
H3A	0.917432	61.942692	Supported
H3B	0.930640	43.981960	Supported
H3C	0.861334	28.356466	Supported
H4	0.356934	4.021327	Supported
H5	0.332589	4.595928	Supported
H5A	0.982326	241.137288	Supported
H5B	0.974216	136.001115	Supported
H5C	0.952599	69.784584	Supported

Source: Survey data, 2020

Table 9: Coefficient of determination

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.847[a]	0.717	0.712	0.537779403

Source: Survey data, 2020

Assessment of Coefficient of determination (R^2)

The coefficient of determination (R^2) is 0.717. That is, 71% of the total variation in the dependent variable, consumer impulse buying behavior will be explained by the independent variables which are window display, floor merchandising, sales promotion, product shelf presentation, and storage environment. Adjusted R^2 for this model is 0.712. Accordingly, this model can be identified as a research model with high accuracy (R^2> 0.67).

Assessment of f squared (F^2) – Effect Size

Table 10: Values of the effect size

Variables	Consumer impulse buying	Effect Size
Window displaying	1.08	Large
Floor Merchandising	1.014	Large
Sales promotions	1.55	Large
Product shelf presentation	0.24	Medium
Store environment	0.05	Small

Small: 0.0 < F2 effect size < 0.15; Medium: 0.15 < F2 effect size < 0.35; Large: F2 effect size > 0.35

Source: Survey data, 2020

The most influential variables in the model were the window display, Floor Merchandising, and sales promotion.

Assessment of Predictive Relevance (Q^2)

The Q^2 value in this research was 0.4993. Therefore, it can be seen that there is a predictive.

Table 11: Predictive Relevance

Variable	SSO	SSE	Q^2(=1-(SSE/SSO)
Consumer impulse buying	2100.0000	1051.5279	0.4993

Source: survey data, 2020

5. CONCLUSION, RECOMMENDATIONS AND IMPLICATIONS

According to the results of Demographic Factors (Table 2), it was clear that there was a tendency for impulse purchases of goods among male consumers in the income group between Rs. 51000-100000 whose ages are of 18 to 30 years with average tertiary education level. Further, there was a significant positive relationship between consumer impulse buying behavior, window display, floor merchandising, product shelf presentation, storage environment, and sales promotion. Also, there is a strong association of floor merchandising, product shelf presentation, storage environment with consumer impulse buying behavior.

Product shelf presentation and storage environment had a correlation coefficient of 0.806 and 0.772 respectively. Therefore, it is essential to attach name tags and prices on each product shelf to make it easier for consumers to choose the products they want to buy. It is also essential to consider the space provided for each product so that it can be easily identifiable and problem-free for customers, and the height and size of the shelves should be taken into account when designing product shelves. Further, as the recommendations, employees working in the store should be concerned about service ethics and formal training to employees should be given.

Impulse buying is a common phenomenon in the modern visual merchandising market and has become a hub for several marketing strategies. Therefore, there is more practical orientation in the results of this test, which is primarily aimed at exploring the factors influencing impulse buying behavior of consumers.

In particular, this research will provide an understanding of the impact of age on the relationship between impulse buying and visual merchandising strategies, and may encourage marketers to make policy reforms that need to be made at the institutional level to increase sales revenue, targeting younger consumers in the future. Also, consumers are attracted to various visual marketing strategies that cause them to lose the logical understanding of the expendable income when making a purchase, which can lead to reduced long term living standards. Therefore, programs that provide consumers with a rational consumer-based understanding of purchases should be implemented. Several visual merchandising strategies may lead to marketing misconducts, and therefore it is needed for government regulation of supermarkets and implementation of new policies on trade misconducts. Further, the results of this research will guide to develop existing policies to avoid misconducts.

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