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RESEARCH ARTICLE

Effect of product variety on online impulse purchase intention in customers

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ABSTRACT

The effect of product variety on online impulse purchase intention in e-customers is a distinguished area of research within the domain of consumer behavior. The focus of current research is that, how the assortment of products available on online stores impact the possibility in creating the impulsive urge of buying in customers. The range of option in product categories can improve the shopping experiences as well as self-confidence of the customer. This state may trigger emotional responses such as excitement and curiosity, which can effectively drive towards creating an urge for impulse purchases. To make the research model complete and to obtain most humanistic results the current study has used hedonic motive as a mediator and made the research framework aligned with S.O.R theory. As this study is based on mediation model to observe the direct and indirect effect of Product Variety (PV) on online impulse purchase intention (OIPI), in addition, the hedonic motives (HM) indirect effect would be possible through mediating variable. For empirical analysis, the data collected from 115 respondents, which is analyzed by using SPSS software. The result suggested that product variety (PV) and hedonic motives (HM) both have strong correlations with online impulse purchase intention (OIPI), but Product Variety (PV) and hedonic motives (HM) have weak correlations among each other. It was also resulted that age, qualification, brand names, and age has no effect exploiting the urge of customers. It is concluded that all three hypotheses H1, H2, and H3 are proved.

Keywords: Product Variety; Hedonic Motives; Online Impulse Purchase Intention

1. Introduction

Having a choice on an e-store catches the eyes of customers because they can stay longer and purchase can be predicted then. McDonald and Eisenhardt,[1] stated the same thing about availability of choice in an

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online business is a guarantee of success. In the words of Kimiagari, and Malafi[2], availability of multiple items on an e-store satisfy the expectation of online customers because they can purchase many things from the same store. In a past study[3], eight constructs were indicated for predicting about e-buyers' satisfaction on an e-store. One construct was about the attributes of goods which can analyzed from two perspectives: variety and price. Lin, Wu, and Chang,[4] equated variety with quality and then with loyalty because satisfaction leads towards loyalty. That means an array of product not only satisfy the customers but also gives an indication towards future buying.

We know that the time of quarantine in Covid19 was horrific in start for Pakistanis and then internet comes in through the availability of shopping websites and the physical shopping trend was transformed into online shopping from plenty of online shopping platforms. This was a sudden flux toward online shopping because almost everything was available online that outburst attracted the researchers and posed a challenge for the practitioners to comprehend it, in terms of its being rationalistic or purely desire based.

Hedonistic feeling of pleasure seeking is a driving force in shopping[5], which can help avoiding sad emotions; the idea of pleasure seeking through purchase is further strengthened by Hirschman and Holbrook[6] and Baumeister and Newman.,[7], who said that purchasing the desired thing can be satisfying. The availability of choice under hedonistic pleasure-seeking drive created an impulsive intention to purchase the item available on an online platform in different shapes and volume and the purchasing volume of online stores having availability of choice for their customers was increased. Schaupp, and Bélanger,[8] noted this success of online platforms.

The current research is going to explore the effect of variety of product on online impulse purchase intention through the mediating effect of hedonic motives or hedonistic pleasure-seeking.

2. Research objectives

The current study is conducted under the following objectives:

1. To explore the relationship of product variety and hedonic motives
2. To understand the influence of hedonic motives on impulse purchase intention in an online environment
3. To find the effect of product variety on producing impulse purchase intention with the mediation of hedonic motives

3. Hypotheses generation

3.1. Product variety

Schaupp and Bélanger[8] stated in their classic study that attraction of e-buyers is attached with product variety because it can directly impact the sales of an e-store. One of the current studies by Milovic et al.,[9] also confirmed the same results that customers' e-satisfaction is attached with the variety of products. It means product variety can produce the intention to purchase the items available on the internet and because different products are available on the same e-store so they don't need to go anywhere else to purchase different objects, so a sudden intension is aroused to purchase the item.

This sudden arousal of purchasing something online is created in hierarchical order. At first, the product variety creates a desire to like the items and then the impulsive intention to purchase the same item is aroused. The desire of purchasing something is called hedonic motive because it is attached with pleasure seeking. Murry[5] said that hedonism is about pleasure seeking from everything. Hirschman and Holbrook[6]

stated that hedonic motives were derived from hedonism and are the emotional satisfaction, the result of purchasing something under some desire of pleasure seeking. They also said that arousal of emotion can be of different kinds like fear, passion, jealousy, joy, or cheering. That is why, Babin, Darden, and Griffin[10] stated in a previous study that shopping has different meaning for some people and it is more than just having a product. Moreover, satisfaction for the people of hedonism is different than the other people, so e-business owners need to focus on various aspects of pleasure seeking through shopping.

There are two major themes studied in previous research works for the sake of choosing variety of products: choice of the brand, and choice of the produce[11,12]. Minor[13] equated satisfied emotions with choosing from a variety of products. It is because of the difference between the levels of arousal and desire, which is commented in a previous research study by Lattin and McAlister[11] as a strategy used by the customers when they switch their choices among different brands so that their level of arousal could be extended. Though the study was conducted on physical stores but it is also valid for online customers. In a classic study by[14], the researcher has recognized that seeking variety of products is driven by hedonic motivation which is intrinsic. The studies like[15,16] have already established that motivations which are intrinsically driven are self-sustained, so stays longer being attached with satisfaction. It means the research can propose the following hypothesis:

H1: Hedonic motives in online customers are positively influenced by product variety

3.2. Hedonic motives

Hedonic motivations are a source of happiness, pleasure and enjoyment sought after the shopping. The feeling of comfort in the shoppers create an impulsive intention of buying the item to achieve satisfaction. This pleasure makes the shoppers forgetful about their goals and they start buying impulsively. Impulsive buying is unplanned buying of some product as a result of sudden intent which is produced by hedonic motive. This impulse force the customer to buy an item without thinking about the consequences. There are previous studies which have established the link between intention to buy and hedonic motive and the influence of impulsive purchase on intention to purchase[17-21].

The quality of experience resulted from shopping is attached with hedonic motives and intentions of shopping[22] as in a previous research study by Tauber[23] it is clarified that satisfaction of the customer is depended on hedonic motives and impulse to buy an item from the market. Previous studies e.g.,[24-29] have established this fact that satisfaction of hedonic motivation is attached with impulsive buying and it is a source of happiness that means it has a positive impact on impulsive purchases. It means that the study can propose the following hypothesis:

H2: Impulse purchase intention of online customers is positively influenced by hedonic motives

3.3. Relationship between PV, IPI and HM with its mediation

Dhar and Simonsson[30] stated that saying a store has variety of products, means depth and breadth of products on a store, which can create satisfaction to the consumers[31]. The depth and breadth were defined by[32] as variation in a same group of products and the type of products. The criteria to offer variety of products in physical stores and in online environment are quite different because in online one has to offer sub-categorization whereas, assortment can be used in physical environment, because variety can transform the shopping behavior[33] so studying product variety is important.

Online product variety is a kind of neglected aspect in the academic scholars because there is a scarcity like[34] who divided variety of the products in online environment into two categories of unfiltered and filtered. Unfiltered means presenting the products simultaneously but filtered means dividing them into

different categories.[35] had stated that variety in the availability of products in either form can gratify the consumers and create a chance to like the alternative being available; in other words, it is flexibility of choice[36] or freedom of decision[37]. That also means choice is equated with higher sales[38].

In a research study[39], it has been concluded that there is a strong relationship between hedonic motives and impulsive purchase. That means impulsive purchase can freshen up the mood of the customer, which is supported by[40], who have said that if purchases are planned, no excitement or happiness can be the result. It can be concluded that impulsive purchasing can change unhappiness to happiness or excitement[41]. In this respect, we know that purchases can be done physically or online for which[42] already said that online purchases are driven by hedonism. Supporting to this opinion,[43] stated the online platform can provide pleasure to their customers by displaying the variety of products, that means variety can enhance hedonic motives and ultimately work on producing intentions to purchase the product. It means the relationship between impulse purchase and hedonic motives is established[44] but it is yet to be established whether product variety can be helpful in online purchase intentions under hedonic motives. That means a hypothesis can be generated to analyze this phenomenon.

H3: The hedonic motives can positively motivate the relationship of variety of products available on a platform and impulse purchase intention.

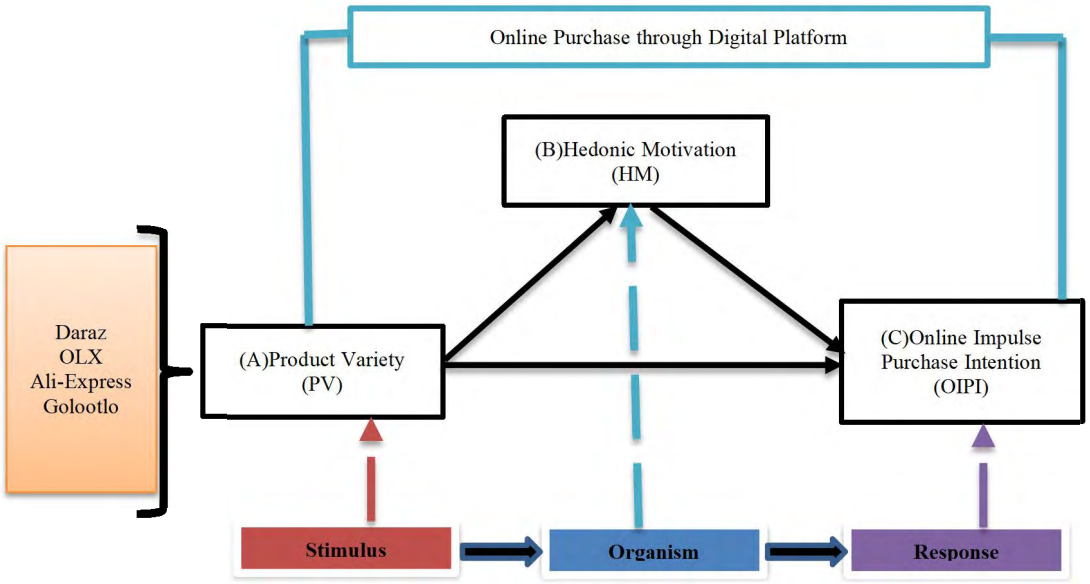
3.4. Theoretical framework

SOR [Stimulus, Organism, and Response] theory is proposed by[45] and an extension of the previous M-R model which was already being used for research in the field of consumer marketing. The model was used to determine the relationship between purchases and the environment of the store. There are many other models being used for consumer marketing like TAM, TAM2, UTAUT, and IDT etc., yet they are not catering emotions. The current research is about the impact of exogenous factors on online purchases but there is a lack of using emotions in between these impacts and the current study is using emotions as mediation analysis, for which SOR model is a good fit. It means, product variety is working as stimulus and hedonic motives are organism to produce online impulse purchase intentions that is the response.

3.5. Research method

The current research is going to use quantitative method which is used to test a theory for its relationship among the variables.[46] declared that quantitative research is based on testing a theory to generate a hypothesis.[47] said that objectivity and neutrality are the main pillars of this type of research as it has multiple methods of collecting data to look at a wider picture.[48] said questionnaire is mostly used to collect data in quantitative method because it is a good tool to test a hypothesis and can rapidly cater large sample. The current study is using the mediation analysis to check the relationship between A to C and via A to B and to C to check whether direct effect is more than the indirect effect. In this study the A is independent variable [product variety], B is mediating variable [hedonic motive], and C is dependent variable [online impulse purchase intention]. Following would be the diagrammatic view of mediation analysis:

By doing this the main research objective can be achieved. In this process, the quantitative method of research would help the researcher to look at the mediating relationship from an objective eye to understand the shopping habits of online buyers of Pakistan and the effect of hedonic motive on their online impulse purchase intention. Moreover, it is also important to mention that the current study is a cross-sectional type as the structured questionnaire is going to be used once to collect data from online shoppers.



3.6. Sampling

Claimed[49] that sampling is very important for quantitative study to generalize the results for the population. Sampling should be the true representation of the target population so that the results could be justifying to solve the problem for which the research was conducted. For the current research purposive sampling technique is applied, which is considered subjective but probably sampling is unsuitable due to difficulty in randomization[50]. The researcher considered 200 sample enough for this research due to time constraints. After data collection, some people did not respond and some of the data filled was incomplete so data was cleaned to delete those incomplete responses and the total sample selected for this research was 115.

3.7. Participants

The study based on the online purchasing intention so online buyers were the participants of this research. The research asked a simple question from the respondents whether they have purchase something online in last 4 weeks. The 4 weeks times selected because in this period the memory remain fresh if the people respond with no online purchase in last 4 weeks, they were not selected for the research. The participants were divided into 3 age brackets like less than 30 years, 30 to 45 years and more than 45 years of age to get opinions of every age people. The gender was also divided into 3 categories: male, female, and others but nobody selected 'others' option. One more option was also added about their residence in the province, as online buyers from all four provinces were part of this research. The participants were free to note down the category of item purchased from online and then the things were grouped into 6 categories, 3 with the names of vendors and 3 for the types of products purchased from any a local vendor. Along with that, the column of education was also mentioned, so that it could be discerned whether education has any influence on their choice of purchasing online or vice versa. The column of education was divided into 5 categories: less than SSC, HSSC, Bachelors, Masters, and then MPhil or PhD was grouped into one option. As the society, we live in a society where mixed financial class is living from poor to elites so the options were also included about the estimated income of the participants. The financial income was divided into 3 categories starting from 0-50k and ended on more than 100k.

4. Instrumentation

The statements of the questionnaire were adapted based on the relevance and relation to the current research purpose. Selected vocabulary items were then used to construct short sentences based on the main

themes and during this process, some of the specific vocabulary items like jargons, confusing terms, acronyms, ambiguous terms, and abbreviations were avoided so that the message should be clear enough for the online respondents. The statements were then grouped into similar themes to represent concerned variable. A specific demographic section was also added in the questionnaire to get the relevant personal details.[51] suggested to put that section at the end of questionnaire but the section was placed in front of the tool so that they could know whether it is relevant to them or not. The researcher has used two types of scales in the questionnaire: nominal and ordinal. Nominal scale is utilized in demographic section and ordinal scale is utilized in the remaining questionnaire to measure the responses against variables. For measuring ordinal responses, the 5-point Likert scale is used from strongly disagree to strongly agree.[52] declared in their research that 5 point scale is better than 7 point Likert scale and it is also less confusing for the respondents. Moreover, the researcher tried the best to keep the questionnaire short in length to keep the respondent feelings[53]. The researcher has tried to keep the flow of the instrument intact.

To use a tool for measuring the opinions of the respondents, validity is important because it testify the tool aligning the results with the objectives. Content validity is one of the important types, which is used to estimate the selected contents for their relationships with scale of measurement[53]. In case of some revisions are suggested, must be done before using it for data collection. The current tool is adapted from previous studies; hence, considered having content validity.

One more type of validity which is utilized for this tool was face validity; for which the tool was shown to 10 potential respondents and their opinions were sought to analyze purpose of the tool and the readability of the contents. They were satisfied that the tool is readable and fulfilling the purpose of the research. Their opinions regarding comprehension, appropriacy, and formatting were sought and they were satisfied on the current format. So, it was decided to use it for final data collection.

5. Data collection

The data was collected through a google form designed for the e-shoppers. The researcher utilized personal and friends' social media app accounts, like Facebook and WhatsApp, to share the link of that form. The data was collected in the months of September till November as this season in Pakistan is considered marriages' season because of mild weather most of the families consider this time for the marriages; for which, a lot of shopping is done. That is why this time is selected for data collection.

6. Data analysis

The current study used a combination of inferential and descriptive statistical techniques to analyze the collected data. The research has used SPSS ver. 21 for analyzing the data; for which the data was cleaned to remove those entries which were left blank or having irrelevant answers and then it was codified to enter in SPSS from google sheet where the data was actually saved automatically. ANOVA, and independent t test were applied to analyze the opinions based on the demographical information of the respondents.

For mediation analysis the process macro was installed and merged in the SPSS to run mediation analysis. Mediation analysis was required because of the prime aim of conducting this research was to check indirect effect of product variety on online impulse purchase intention through the mediation of hedonic motives. The process macro can calculate the direct and indirect effects and their difference so that either the H1 or the H0 could be validated.

Table 1. Demographics.

S/No	Variable	Sample	%age

1.	Gender			
		Male	83	72.17
		Female	32	27.83
2.	Age			
		Less than 30 years	62	53.92
		30 – 45 years	41	35.65
		More than 45 years	12	10.43
3.	Education			
		No Education	06	5.22
		HSSC	13	11.30
		Bachelors	62	53.91
		MA	28	24.35
		MPhil or PhD	06	5.22
4.	Financial Status			
		0 – 50K per month	54	46.96
		50 – 100K per month	33	28.69
		More than 100K per month	28	24.35
5.	Provincial area			
		Punjab	77	66.96
		Sindh	7	6.09
		Baluchistan	3	2.61
		KPK	7	6.09
		Gilgit Baltistan	2	1.74
		Federal Territory	19	16.51

Above table is showing the detailed numbers of samples based on their affiliations.

Table 2. Correlations among PV, HM, and OIPI.

		PV	**HM**	**OIPI**
Product Variety [PV]	P. Corr.	1	.497**	.572**
	Sig. (2-tailed)		.000	.000
	N	115	115	115
Hedonic Motive (HM)	P. Corr.	.497**	1	.669**
	Sig. (2-tailed)	.000		.000
	N	115	115	115
Online Impulse Purchase Intention (OIPI)	P. Corr.	.572**	.669**	1
	Sig. (2-tailed)	.000	.000	
	N	115	115	115

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

Pearson Correlation is applied on the 3 variables to analyze the correlation among them. Through the results, it is clear that hedonic motive and online impulse purchase intention are strongly correlated with the score of .669; whereas product variety is moderately correlated with hedonic motive (.497) but strongly correlated with online impulse purchase intention (.572).

Table 3. Independent sample statistics between genders on PV, HM, & OIPI.

Variables		**N**	**Mean**	**Std. Deviation**	**T Value**	**Sig. (2-tailed)**
Product Variety	Male	83	12.905	2.460	.809	.420

	Female	32	12.492	2.406		
	Male	83	11.500	2.981	-.476	.635
Hedonic Motive	Female	32	11.806	3.322		
	Male	83	15.318	3.572	-.265	.791
Online Impulse Purchase Intention	Female	32	15.513	3.390		

As per the result of independent sample t test, there is no gender-based significant difference for PV, HM, or OIPI. Though there are preferences of gender like translanguaging is helping Male international students in learning. The mean difference for learning is 9.267 with t_{31}= -1.662 where p is greater than .05 standard; whereas the mean difference for translanguaging strategies is 1.69 with t_{31}= -.194 where is p <.848. for both the factors there was no significant difference which could affect the opinions based on the gender.

Table 4. Effect of purchasing from different online stores on PV, HM, and OIPI.

Group Statistics (Descriptive)					ANOVA Main					
		N	**Mean**	**Levene Stat. Sig.**		**Sum of Squares**	**Eta Square**	**Df**	**F**	**Sig.**
Product Variety	Daraz	52	18.8977	.047	Between Gps	49.554	0.9	6	1.416	.215
	Aliexpress	21	19.8846		Within Gps	630.145		108		
	Olx	24	29.9063		Total	679.699		114		
	Golootlo	18	20.8750							
	Total	115	12.7891							
Hedonic Motive	Daraz	52	19.3352	.070	Between Gps	98.563	0.9	6	1.821	.102
	Aliexpress	21	20.2115		Within Gps	974.298		108		
	Olx	24	25.8750		Total	1072.861		114		
	Golootlo	18	16.5000							
	Total	115	11.5848							
Online Impulse Purchase Intention	Daraz	52	23.2955	.059	Between Gps	113.224	0.9	6	1.579	.160
	Aliexpress	21	24.9538		Within Gps	1290.367		108		
	Olx	24	23.1500		Total	1403.591		114		
	Golootlo	18	26.8502							
	Total	115	15.3722							

0.01 = small, 0.06 = medium, 0.13 = large (Cohen, 1987 effect size for eta squared calculation)

The above table is the result of one-way ANOVA between groups is applied to know the effect of PV, HM, and OIPI. The responses of the participants shown having four categories: Daraz, Aliexpress, OLX, and Golootlo. There was no statistically significant difference for using PV, HM, or OIPI for all four categories, F (6, 108) = 1.416, p< .215; F = (6, 108) = 1.821, p< .102; F (6, 108) = 1.579, p<.160, respectively. Despite no statistical significance in the online shopping from different companies the effect size calculated using eta squared is medium (Cohen's effect size calculation) with .9 for each variable. Post-hoc comparisons indicated that the mean score for Daraz, (M = 18.90), for Aliexpress (M = 19.88), for OLX (M = 29.91) and Golootlo (M=20.88), significantly different from each other shown by the Levene Statistics Sig. of .047; whereas, the scores for HM and OIPI are not significantly different having p<.070 and p<.059 respectively.

Table 5. Effect of AGE on PV, HM, and OIPI.

Group Statistics (Descriptive)					ANOVA Main					
		N	**Mean**	**Levene Stat. Sig.**		**Sum of Squares**	**Eta Square**	**Df**	**F**	**Sig.**
Product Variety	<30 yrs	62	12.839	.198	Between Gps	1.159	0.9	2	.096	.909
	30-45 yrs	41	12.799		Within Gps	678.540		112		
	>45 yrs	12	12.500		Total	679.699		114		
	Total	115	12.789							
Hedonic Motive	<30 yrs	62	11.984	.078	Between Gps	21.427	0.9	2	1.141	.323
	30-45 yrs	41	11.116		Within Gps	1051.434		112		
	>45 yrs	12	11.125		Total	1072.861		114		
	Total	115	11.585							
Online Impulse Purchase Intention	<30 yrs	62	15.448	.233	Between Gps	7.669	0.9	2	.308	.736
	30-45 yrs	41	15.478		Within Gps	1395.922		112		
	>45 yrs	12	14.617		Total	1403.591		114		
	Total	115	15.372							

0.01 = small, 0.06 = medium, 0.13 = large (Cohen, 1987 effect size for eta squared calculation)

The above table is the result of one-way ANOVA between groups, which was applied to know the effect of PV, HM, and OIPI. The responses of the participants shown having three age categories: less than 30 years, 30-45 years, and above 45 years. There was no statistically significant difference for using PV, HM, or OIPI for all three age groups, F (2, 112) =.096, p< .909; F = (2, 112) = 1.141, p< .323; F (2, 112) = .308, p<.736, respectively. Despite no statistical significance in the online shopping by different age groups the effect size calculated using eta squared was medium (Cohen's effect size calculation) with .9 for each variable. Post-hoc comparisons indicated that the mean score for all age groups was not significantly different from one another as shown by the Levene Statistics Sig. of .198, .078, and .233 respectively.

Table 6. Effect of education on PV, HM, and OIPI.

Group Statistics (Descriptive)					ANOVA Main					
		N	**Mean**	**Levene Stat. Sig.**		**Sum of Squares**	**Eta Square**	**Df**	**F**	**Sig.**
Product Variety	No Edn	6	10.9583	.710	Between Gps	73.347	0.8	4	3.327	.013
	HSSC	13	11.3077		Within Gps	606.352		110		
	BA	62	13.0806		Total	679.699		114		
	MA	28	13.4554							
	>MA	6	11.7083							
	Total	115	12.7891							
Hedonic Motive	No Edn	6	9.8750		Between Gps	74.986	0.9	4	2.067	.090
	HSSC	13	11.2115		Within Gps	997.875		110		
	BA	62	12.2823		Total	1072.861		114		
	MA	28	10.8750							
	>MA	6	10.2083							

		N	Mean	Levene Stat. Sig.		Sum of Squares	Eta Square	Df	F	Sig.
Online Impulse Purchase Intention	Total	115	11.5848	.923	Between Gps	115.237	0.9	4	2.460	.050
	No Edn	6	11.5333		Within Gps	1288.354		110		
	HSSC	13	14.4615		Total	1403.591		114		
	BA	62	15.8710							
	MA	28	15.4571							
	>MA	6	15.6333							
	Total	115	15.3722							

Table 6. (*Continued*)

= small, 0.06 = medium, 0.13 = large (Cohen, 1987 effect size for eta squared calculation)

The above table is the result of one-way ANOVA between groups, which was applied to know the effect of PV, HM, and OIPI. The responses of the participants shown having five educational qualification categories: No education, FA, BA, MA and more than MA like MPhil and PhD. There was no statistically significant difference for using HM, F (4, 110) =2.067, p< .90; whereas for PV and OIPI there was a significant difference F = (4, 110) = 3.327, p< .013; F (4, 110) = 2.460, p<.50 for PV and OIPI. Despite no statistical significance in the online shopping by different qualification groups the effect size calculated using eta squared was medium (Cohen's effect size calculation) with .8, .9, and .9 for PV, HM, and OIPI respectively. Post-hoc comparisons indicated that the mean score for all age groups was not significantly different from one another as shown by the Levene Statistics Sig. of .710, .105, and .923 respectively.

Table 7. Effect of monthly income on PV, HM, and OIPI.

Group Statistics (Descriptive)					ANOVA Main					
		N	Mean	Levene Stat. Sig.		Sum of Squares	Eta Square	Df	F	Sig.
Product Variety	0-50K	54	12.5417	.465	Between Gps	6.334	0.9	2	.527	.592
	50-100K	33	13.0455		Within Gps	673.365		112		
	>100K	28	12.9643		Total	679.699		114		
	Total	115	12.7891							
Hedonic Motive	0-50K	54	11.1574	.040	Between Gps	28.855	0.9	2	1.548	.217
	50-100K	33	12.3409		Within Gps	1044.005		112		
	>100K	28	11.5179		Total	1072.861		114		
	Total	115	11.5848							
Online Impulse Purchase Intention	0-50K	54	14.7407	.406	Between Gps	48.683	0.9	2	2.012	.139
	50-100K	33	16.2667		Within Gps	1354.908		112		
	>100K	28	15.5357		Total	1403.591		114		
	Total	115	15.3722							

= small, 0.06 = medium, 0.13 = large (Cohen, 1987 effect size for eta squared calculation)

The above table is the result of one-way ANOVA between groups, which was applied to know the effect of PV, HM, and OIPI. The responses of the participants shown having three income categories: less than 50k, 50-100k and more than 100k. There was no statistically significant difference for using PV, HM, or OIPI for all three age groups, F (2, 112) =.527, p< .592; F = (2, 112) = 1.548, p< .217; F (2, 112) = 2.012, p<.139, respectively. Despite no statistical significance in the online shopping by different income groups the effect size calculated using eta squared was medium (Cohen's effect size calculation) with .9 for each variable.

Post-hoc comparisons indicated that the mean score for all age groups was not significantly different from one another as shown by the Levene Statistics Sig. of .465 and .406 for PV and OIPI respectively but significantly different HM .040 that means for HM the mean score was different.

Table 8. Effect of provincial affiliation on PV, HM, and OIPI.

Group Statistics (Descriptive)					ANOVA Main					
		N	**Mean**	**Levene Stat. Sig.**		**Sum of Squares**	**Eta Square**	**Df**	**F**	**Sig.**
Product Variety	Pb	77	12.8994	.557	Between Gps	28.956	0.9	5	.970	.440
	Sdh	7	12.2857		Within Gps	650.743		109		
	Bal	3	10.0833		Total	679.699		114		
	Kpk	7	12.3214							
	GB	2	12.5000							
	FT	19	13.1579							
	Total	115	12.7891							
Hedonic Motive	Pb	77	11.7955	.669	Between Gps	29.002	0.9	5	.606	.696
	Sdh	7	11.3929		Within Gps	1043.858		109		
	Bal	3	9.3333		Total	1072.861		114		
	Kpk	7	10.3929							
	GB	2	11.8750							
	FT	19	11.5658							
	Total	115	11.5848							
Online Impulse Purchase Intention	Pb	77	15.6545	.120	Between Gps	101.550	0.9	5	1.700	.141
	Sdh	7	15.1429		Within Gps	1302.041		109		
	Bal	3	9.8000		Total	1403.591		114		
	Kpk	7	14.8857							
	GB	2	15.7000							
	FT	19	15.3368							
	Total	115	15.3722							

0.01 = small, 0.06 = medium, 0.13 = large (Cohen, 1987 effect size for eta squared calculation)

The above table is the result of one-way ANOVA between groups, which was applied to know the effect of PV, HM, and OIPI. The responses of the participants shown having six provincial categories: Punjab, Sindh, Baluchistan, KPK, GB and Federal Territory. There was no statistically significant difference for using PV, HM, or OIPI for all six provincial groups, F (5, 109) =.970, p< .449; F = (5, 109) =.606, p< .696; F (5, 109) = 1.700, p<.141, respectively. Despite no statistical significance in the online shopping by different age groups the effect size calculated using eta squared was medium (Cohen's effect size calculation) with .9 for each variable. Post-hoc comparisons indicated that the mean score for all age groups was not significantly different from one another as shown by the Levene Statistics Sig. of .557, .669, and .120 respectively.

Table 9. Regression analysis for mediation of hedonic motives between product variety and online impulse purchase intention.

Variable	**B**	**95% CI**	**SE B**	**β**	**R^2**	**▲R^2**
Step 1					0.33	0.33***

Contant	4.86***	[2.0, 7.72]	1.44	0.57***		
PV	0.822***	[.602, 1.04]	0.11			
Step 2					0.52	0.20***
Constant	2.76	[0.27, 5.26]	1.26			
PV	0.46	[0.24, 0.67]	0.11	0.32***		
HM	0.58	[0.41, 0.75]	0.09	0.51***		

Note. *CI = confidence interval*

****p <.001.*

Table 1 shows the impact of product variety and hedonic motives on online impulse purchase intention. In step 1, the R^2 value of.33 revealed that the PV explained 33% variance in the OIPI with F (1, 113) = 54.93, p < .001. The findings revealed that PV positively predict OIPI (β = .57, p<.001). In step 2, the R^2 value of .52 revealed that PV and HM explained 52% variance in the OIPI with F (2, 112) = 61.45, p < .001. The findings revealed that PV (β = .32, p<.001) and HM positively predict OIPI (β = .51, p<.001). The ▲R^2 value of .20 revealed 20% change in the variance of model 1 model 2 with ▲F (1, 112) = 46.07, p<.001. The regression weight for PV subsequently reduced from Model 1 to Model 2 (.57 to .32) but remained significant which confirmed the partial mediation. More specifically, PV has direct as well as indirect effect on OIPI.

7. Findings

The findings of the study indicates that there are no significant differences between male and female behavior regarding product variety (PV), hedonic motives (HM), and online impulse purchase intention (OIPI). In this regard the finding of[54], also aligned with the current the research that there are slight gender differences in e-shopping behavior.

It is also observed a significant relationship between product variety and online impulse purchase intention, as well as between hedonic motives and online impulse purchase intention, and a sensible relationship between product variety and hedonic motives. This finding ropes the work of[55], which emphasizes the influence of product variety on consumer purchase intentions. it is also come to knowledge that education has meaningfully impact on product variety but not effect on hedonic motives and online impulse purchase intention. These results are consistent with the findings of[56], who highlighted the role of education in shaping consumer purchasing decisions.

Moreover, current research found that Hedonic Motives has a 20% direct effect on online impulse purchase intention. Which is supported by the research of Santo & Marques[57], which establishes the strong relationship among hedonic motives and impulse purchase intentions. At the end, the research found that product variety partially mediates online impulse purchase intention through hedonic motives, having the mediation effect of 32%. Dey & Srivastava[58] provide insights into the significance of mediation in consumer behavior studies, reinforcing the importance of hedonic motives in developing impulse purchase intention.

8. Conclusion

The study was conducted to measure three hypotheses: 1) positive effect of PV and HM, 2) positive effect of HM on OIPI, 3) positive effect of PV on OIPI through the mediation of HM. Variety of product on an online store means either having different product available on the same store or variety of same product

available but in either case, it is an important phenomenon because business sales are directly proportioned to this availability. The sale is also determined by the intentions of customers and their intention can sudden be created by having variety of products available on the store and their desires which are also impacting in the creation of purchasing. That impulse purchase intention was the main concern of this research. The data revealed that both direct and indirect effect of product variety on online impulse purchase intention was significant. Direct effect was about the relationship of PV and OIPI and indirect effect was about the mediating effect of PV on OIPI through HM. All three positive hypotheses are valid as there is direct effect of PV on OIPI and indirect effect of PV on OIPI through HM.

Conflict of interest

The authors declare no conflict of interest.

References

1. McDonald RM, Eisenhardt KM. Parallel play: Startups, nascent markets, and effective business-model design. Administrative Science Quarterly. 2020 Jun;65(2):483-523.
2. Kimiagari S, Malafe NS. The role of cognitive and affective responses in the relationship between internal and external stimuli on online impulse buying behavior. Journal of Retailing and Consumer Services. 2021 Jul 1;61:102567.
3. Liu X, He M, Gao F, Xie P. An empirical study of online shopping customer satisfaction in China: a holistic perspective. International Journal of Retail & Distribution Management. 2008 Oct 10;36(11):919-40.
4. Lin CC, Wu HY, Chang YF. The critical factors impact on online customer satisfaction. Procedia Computer Science. 2011 Jan 1;3:276-81.
5. Murray E. Motivation and emotion prentice-Hall. Inc., Englewood Cliffs, NJ. 1964.
6. Hirschman EC, Holbrook MB. Hedonic consumption: emerging concepts, methods and propositions. Journal of marketing. 1982 Jul;46(3):92-101.
7. Baumeister RF, Newman LS. Self-regulation of cognitive inference and decision processes. Personality and Social Psychology Bulletin. 1994 Feb;20(1):3-19.
8. Schaupp LC, Bélanger F. A conjoint analysis of online consumer satisfaction1. Journal of electronic commerce research. 2005 May 1;6(2):95.
9. Melović B, Šehović D, Karadžić V, Dabić M, Ćirović D. Determinants of Millennials' behavior in online shopping–Implications on consumers' satisfaction and e-business development. Technology in society. 2021 May 1;65:101561.
10. Babin BJ, Darden WR, Griffin M. Work and/or fun: measuring hedonic and utilitarian shopping value. Journal of consumer research. 1994 Mar 1;20(4):644-56.
11. Lattin JM, McAlister L. Using a variety-seeking model to identify substitute and complementary relationships among competing products. Journal of marketing research. 1985 Aug;22(3):330-9.
12. Givon M. Variety seeking, market partitioning and segmentation. International Journal of Research in Marketing. 1985 Jan 1;2(2):117-27.
13. Minor M. Consumer behavior: a framework. Prentice Hall; 2001.
14. Staw BM. Intrinsic and extrinsic motivation. General Learning Press; 1976.
15. Trijp HC, Hoyer WD, Inman JJ. Why switch? product category–level explanations for true variety-seeking behavior. Journal of marketing research. 1996 Aug;33(3):281-92.
16. Raju KV. A study on various factors affecting the impulse purchase behaviour of customers in fmcg apparels. (organized retail sector in the cities of Hyderabad, Secunderabad and Vijayawada).
17. Wakefield KL, Baker J. Excitement at the mall: determinants and effects on shopping response. Journal of retailing. 1998 Sep 1;74(4):515-39.
18. Chan TK, Cheung CM, Lee ZW. The state of online impulse-buying research: A literature analysis. Information & Management. 2017 Mar 1;54(2):204-17.
19. Beatty SE, Ferrell ME. Impulse buying: Modeling its precursors. Journal of retailing. 1998 Jun 1;74(2):169-91.
20. Huang LT. Flow and social capital theory in online impulse buying. Journal of Business research. 2016 Jun 1;69(6):2277-83.
21. Mohan G, Sivakumaran B, Sharma P. Impact of store environment on impulse buying behavior. European Journal of marketing. 2013 Sep 20;47(10):1711-32.

22. Taufik, M., & Asih, D. (2024). Mediating Effect of Consumer Attitude Variables on the Influence of Store Atmosphere, Brand Awareness, and Product Variety on Purchase Intentions. International Journal of Indonesian Business Review, 3(2), 62-80.
23. Tauber EM. Marketing notes and communications: Why do people shop?. Journal of marketing. 1972 Oct;36(4):46-9.
24. Rook DW, Fisher RJ. Normative influences on impulsive buying behavior. Journal of consumer research. 1995 Dec 1;22(3):305-13.
25. Ramanathan S, Menon G. Time-varying effects of chronic hedonic goals on impulsive behavior. Journal of Marketing Research. 2006 Nov;43(4):628-41.
26. Hausman A. A multi-method investigation of consumer motivations in impulse buying behavior. Journal of consumer marketing. 2000 Sep 1;17(5):403-26.
27. Peck J, Childers TL. If I touch it I have to have it: Individual and environmental influences on impulse purchasing. Journal of business research. 2006 Jun 1;59(6):765-9.
28. Arnold MJ, Reynolds KE. Hedonic shopping motivations. Journal of retailing. 2003 Jan 1;79(2):77-95.
29. Herabadi AG, Verplanken B, Van Knippenberg A. Consumption experience of impulse buying in Indonesia: Emotional arousal and hedonistic considerations. Asian Journal of Social Psychology. 2009 Mar;12(1):20-31.
30. Dhar R, Simonson I. Making complementary choices in consumption episodes: Highlighting versus balancing. Journal of Marketing Research. 1999 Feb;36(1):29-44.
31. Hoch SJ, Bradlow ET, Wansink B. The variety of an assortment. Marketing Science. 1999 Nov;18(4):527-46.
32. Hart C, Rafiq M. The dimensions of assortment: A proposed hierarchy of assortment decision making. Int. Rev. of Retail, Distribution and Consumer Research. 2006 Jul 1;16(3):333-51.
33. Kahn BE, Wansink B. The influence of assortment structure on perceived variety and consumption quantities. Journal of consumer research. 2004 Mar 1;30(4):519-33.
34. Morales A, Kahn BE, McAlister L, Broniarczyk SM. Perceptions of assortment variety: The effects of congruency between consumers' internal and retailers' external organization. Journal of Retailing. 2005 Jan 1;81(2):159-69.
35. Lancaster K. The economics of product variety: A survey. Marketing science. 1990 Aug;9(3):189-206.
36. Kahn BE, Wansink B. The influence of assortment structure on perceived variety and consumption quantities. Journal of consumer research. 2004 Mar 1;30(4):519-33.
37. Reibstein DJ, Youngblood SA, Fromkin HL. Number of choices and perceived decision freedom as a determinant of satisfaction and consumer behavior. Journal of Applied Psychology. 1975 Aug;60(4):434.
38. Borle S, Boatwright P, Kadane JB, Nunes JC, Galit S. The effect of product assortment changes on customer retention. Marketing science. 2005 Nov;24(4):616-22.
39. Horváth C, Adıgüzel F. Shopping enjoyment to the extreme: Hedonic shopping motivations and compulsive buying in developed and emerging markets. Journal of Business Research. 2018 May 1;86:300-10.
40. Kato R, Hoshino T. Unplanned purchase of new products. Journal of Retailing and Consumer Services. 2021 Mar 1;59:102397.
41. Koch J, Frommeyer B, Schewe G. Online shopping motives during the COVID-19 pandemic—lessons from the crisis. Sustainability. 2020 Dec 8;12(24):10247.
42. Menon S, Kahn B. Cross-category effects of induced arousal and pleasure on the internet shopping experience. Journal of retailing. 2002 Mar 1;78(1):31-40.
43. Fiore AM, Jin HJ, Kim J. For fun and profit: Hedonic value from image interactivity and responses toward an online store. Psychology & Marketing. 2005 Aug;22(8):669-94.
44. Horváth C, Adıgüzel F. Shopping enjoyment to the extreme: Hedonic shopping motivations and compulsive buying in developed and emerging markets. Journal of Business Research. 2018 May 1;86:300-10.
45. Donovan RJ, Rossiter JR, Marcoolyn G, Nesdale A. Store atmosphere and purchasing behavior. Journal of retailing. 1994 Sep 1;70(3):283-94.
46. Greener S. Business research methods. BookBoon; 2008.
47. Gray DE. Doing research in the real world. SagePublisher: 2004
48. Sekaran U. Research methods for business: A skill building approach. Wiley: 2003
49. Singh HP, Tailor R. Estimation of finite population mean using known correlation coefficient between auxiliary characters. Statistica. 2005;65(4):407-18.
50. Etikan I, Musa SA, Alkassim RS. Comparison of convenience sampling and purposive sampling. American journal of theoretical and applied statistics. 2016 Jan 5;5(1):1-4.
51. Rattray J, Jones MC. Essential elements of questionnaire design and development. Journal of clinical nursing. 2007 Feb;16(2):234-43.
52. De Winter JC, Dodou D. Five-point Likert items: t test versus Mann-Whitney-Wilcoxon. Practical assessment, research & evaluation. 2010;15:1-2.
53. Edwards P, Roberts I, Clarke M, DiGuiseppi C, Pratap S, Wentz R, Kwan I. Increasing response rates to postal questionnaires: systematic review. Bmj. 2002 May 18;324(7347):1183.

54. Amin, B. Z., & Amin, P. (2013). A conceptual framework to understanding online consumer buying behavior. International Journal of Online Marketing (IJOM), 3(1), 47-63.
55. Taufik, M., & Asih, D. (2024). Mediating Effect of Consumer Attitude Variables on the Influence of Store Atmosphere, Brand Awareness, and Product Variety on Purchase Intentions. International Journal of Indonesian Business Review, 3(2), 62-80.
56. Asri, M. M., & Andadari, R. K. (2023). The Influence of Psychological Factors on Consumer Purchasing Decisions in the New Normal Era with Age and Education Level as Moderating Variables. International Journal of Economics Development Research (IJEDR), 4(2), 846-865.
57. Santo, P. E., & Marques, A. M. A. (2022). Determinants of the online purchase intention: hedonic motivations, prices, information and trust. Baltic Journal of Management, 17(1), 56-71.
58. Dey, D. K., & Srivastava, A. (2017). Impulse buying intentions of young consumers from a hedonic shopping perspective. Journal of Indian business research, 9(4), 266-282.