

Research Article

# Impact of Product Packaging on Consumer Buying Behaviour

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## I N F O

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## A B S T R A C T

*Introduction:* Consumer is the ultimate user of a product, in case of 1<sup>st</sup> time buying decisions on store or shop may influence with product packaging, even in case of subsequent buying decisions of the same product irrespective of the quantity or other factors like price, product packaging role cannot be ignored. So, this research paper discusses consumer buying behaviour towards product packaging emphasizing how various packaging elements such as package design, package colour, package material, and package sustainability affect consumer perceptions and purchasing decisions. The relationship between the independent and dependent variables was also determined by this study.

*Research Objectives:* The main objective of this study is to understand the product packaging effects on consumer buying behaviour.

*Research Method:* Structure questionnaire 105 responses were taken for the study. Data analysis with the regression, coefficient, and Kruskal-Wallis Test.

*Results:* From the study it has been revealed that eco-friendliness and the colour of the package significantly affect the buying behaviour of the customers. Other factors like package material, attractiveness, quality packaging, and hygiene packaging have no effect on the buying decisions of customers.

*Conclusion:* The analysis showed that packaging has been shown to be the important component which impacts consumer buying behaviour. Colour of the packet which attract customers similarly these days' people have shown concerned on environment which is good for society and people prefer eco-friendly packaging of products.

**Keywords:** Product Packaging, Consumer Buying Behaviour, Package Design, Package Colour, Package Material, and Package Sustainability

## Introduction

A product is a combination of tangible and intangible goods and services offered to a consumer's buying behaviour. Packaging has evolved into a tool for promoting a company's

sales. Numerous packaging aspects, such as container quality, colour, wrapping, and others, have an impact on consumer purchasing behaviour. The entire package becomes the best-selling feature and encourages impulsive purchasing.<sup>1</sup> Packaging plays a vital role in attracting

consumers to any product. Product packaging has a significant impact on consumer buying behaviour. It can influence their perception of a product's quality, value, and desirability. Packaging is the overall package offered by the company to its consumers and stimulates impulse buying behaviour.<sup>2</sup> Packaging attracts consumers and increases its sales. It also reduces the marketing and advertisement cost of the product. Product packaging serves as the first point of contact between the product and the consumer, making a significant impact on purchasing decisions. Effective packaging not only protects the product but also communicates brand identity, values, and essential information to consumers<sup>3</sup>. A good product and its packaging have an equal relationship, yet there is a positive belief and tendency that a box with good design means the product is of high quality. Good packaging can help differentiate a product from its competitors and deliver its value to consumers. Further Analysis shows that a product's packaging quality trails its visual attractiveness as the most important factor most significant quality.

## Levels of Product Packaging

### Primary Packaging

Primary packaging, often known as a consumer unit, is the packaging that comes into direct touch with the product itself. It is the first layer of packaging that consumers see and interact with. Primary packaging's major objective is to confine, safeguard, and/ or preserve the final good, particularly from contamination. The finished product, such as a plastic pouch holding whole-grain cereal or a cardboard box carrying the pouch of cereal, is contained in this initial layer.

### Secondary Packaging

Secondary packaging refers to the additional layer of packaging that is used to group and protect multiple primary packages, it is typically used for transportation, storage, and display purposes.

### Tertiary Packaging

The outermost layer of packaging used for product handling, storage, and delivery in bulk is referred to as tertiary packaging. Its purpose is to safeguard and hold several primary or secondary packing pieces. Items that hold together numerous units of items or secondary packages, such as pallets, crates, or stretch wrap, are examples of tertiary packaging.

## Review of Literature

According to Hill & Tilley, packaging will take over as the main tool for establishing a product's brand as consumer preferences become more complicated and diversified.<sup>4</sup> The packaging of the product brand also has a longer-lasting effect on the customer. According to Silayoi & Speece, when a consumer is deeply invested in a product category, images,

and visual cues have less of an impact on their behaviour.<sup>5</sup> In these situations, customers require more information and take longer to make decisions. Consumers who are more concerned with nutrition and health, for instance, are more inclined to read the small print on product labels. According to Smith & Zook, producers and designers must take six factors into account when making an effective package: form, size, colour, graphics, material, and flavour.<sup>6</sup> According to Aren, packaging, which comprises the physical characteristics of the container, such as the design, colour, form, labelling, and materials used, is the container for a product.<sup>7</sup> According to Rundh, packaging continues to develop brand values during prolonged product consumption, whereas advertising exposure, which can be quite brief, can increase brand equity and loyalty.<sup>8</sup> The typical grocery shopper sees 300 brands in a minute, he continued. This translates to less than a tenth of a second for one product to catch the customer's eye and motivate a purchase. Schlossberg asserts that the best method to draw attention to a product is to emphasise its brand by making it more widely available and employing the right colour, size, language, and image.<sup>9</sup> Lockshin advises not to undervalue the significance of packaging. Marketers frequently assess consumer perceptions of a brand without taking the competition into account.<sup>10</sup> However, based on how customers react to non-branded goods, customers are aware that packaging considerably adds to the reinforcement of customer perceptions. The packaging of a product influences how consumers view it. Customers don't spend enough time examining the links between packaging and the actual product, though. Abrams states that "The carton, jar, or tube propped on that store shelf provides the first impression of a brand's."<sup>11</sup> Hamdar et al. concluded that customers' decisions to buy products are becoming more and more influenced by package components such as colour, the material used for packaging, wrapper design, and innovation.<sup>12</sup> Additionally, it has been demonstrated that packaging is one of the most important and powerful aspects affecting a consumer's decision to make a purchase. Raheem et al. conducted research on 200 respondents and found that design packaging has a significant impact on how products are consumed in Lebanon.<sup>13</sup> The results of the study also demonstrated that packaging, particularly colour and wrapping design, plays a significant role in consumer choice. Alhamdi conducted a survey of 600 consumers in the city of Ridayh, and the results of the study confirm the idea that packaging significantly influences consumer attraction in all dimensions (design, colour, size, and shape).<sup>14</sup> The major piece of advice from the study is that businesses need to develop a defined packaging policy in order to handle the rapid evolution of technology and altering consumer preferences. Modern marketing theories must be taken into consideration, such as "green marketing," which emphasises using packaging materials that are less harmful to the environment than traditional ones.

### The Rationale of the Study

The purpose of this study is to check the product packaging affects consumers’ buying behaviour or not. Today’s marketers place a great priority on consumer choice. According to earlier studies, packaging helps to improve a brand’s image, attracts customers’ attention to it, and affects how people view the product.<sup>15</sup> Thus this study was conducted to ascertain respondents’ perceptions of how packaging changes their purchase behaviour. This study is significant because it provides businesses with detailed guidelines on how to maintain the impact of product packaging on consumer purchasing behaviour and cultivate a loyal client base. The outcomes of this study have commercial viability, it might be used as a springboard for additional research on product packaging.<sup>16</sup>

### Objective of the Study

To study the elements (factors) which affect consumer buying behaviour

### Research Methodology

Based on a descriptive research study, we can determine the distribution of consumers who are at ease with internet advertisements and how it relates to customers’ purchasing habits. It provides a clear picture of the effectiveness and dependability of internet advertisements in relation to consumer purchasing behaviour.

- **Data Collection:** The primary data collection method used of self-designed questionnaire in this research. Data collected from both Online and Offline mode.
- **Duration of Study:** Responses collected from March 2024 to May,2024 in Indore City.
- **Sampling Method of Data Collection:** Convenience random sampling method
- **Sample Size:** The sample consists of 105 respondents.
- **Data Analysis Tool:** SPSS
- **Data Analysis Techniques:** Reliability Check, Regression, Co-efficient, Kruskal-Wallis H Test

**Table 1.Variables of the Study**

Dependent Variable	Independent Variable
Consumer buying behaviour	Material used in packaging (F1)
	Attractiveness/ visibility (F2)
	Quality packaging (F3)
	Eco-friendliness (F4)
	Colour combination (F5)
	Hygiene factor (F6)

### Variables of Study

#### Hypothesis to be Tested

- H<sub>00</sub>: There is no significant relationship between package material and consumer buying behaviour.
- H<sub>01</sub>: There is no significant relationship between attractiveness/ visibility and consumer buying behaviour.
- H<sub>02</sub>: There is no significant relationship between quality packaging and consumer buying behaviour.
- H<sub>03</sub>: There is no significant relationship between eco-friendliness and consumer buying behaviour.
- H<sub>04</sub>: There is no significant relationship between the colour of the package and consumer buying behaviour.
- H<sub>05</sub>: There is no significant relationship between hygiene factors and consumer buying behaviour.

#### Data Analysis

Data reliability is one of the most important aspects of any research because it checks the variables of the study (Table 1). The reliability was measured based on Cronbach’s Alpha of the questionnaires.

The value for the present study is 0.565 as per Table 2, which is less than 0.7. It is less than the standard till we can continue the data as it covered more than 80% of the standard.

**Table 2.Reliability of the Instrument (Reliability Statistics)**

Cronbach’s Alpha	No. of Items
0.565	6

**Table 3.Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.003 <sup>a</sup>	0.000	-0.010	0.802
<sup>a</sup> Predictors: (Constant), Package material				

**Table 4.ANOVA<sup>b</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	0.001	1	0.001	0.001	0.974 <sup>a</sup>
	Residual	66.190	103	0.643	-	-
	Total	66.190	104	-	-	-
<sup>a</sup> Predictors: (Constant), Package material						
<sup>b</sup> Dependent variable: Consumer buying behaviour						

**Table 5.Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.027 <sup>a</sup>	0.001	-0.009	0.801
<sup>a</sup> Predictors: (Constant), Attractiveness/ visibility				

**Results**

**H<sub>00</sub>**: There is no significant relationship between package material and consumer buying behaviour.

Table 3 shows that the adjusted R square value is negative, and Table 4 shows a p value greater than 0.05 which is 0.974 so the null hypothesis is established; there is no significant relationship between package material and consumer buying behaviour.

**H<sub>01</sub>**: There is no significant relationship between attractiveness/ visibility and consumer buying behaviour.

Table 5 shows that adjusted R squared is negative and Table 6 shows a p value greater than 0.05 which is 0.785 so the null hypothesis is established, which states that there is no significant relationship between attractiveness/ visibility and consumer buying behaviour.

**H<sub>02</sub>**: There is no significant relationship between quality packaging and consumer buying behaviour.

Table 7 shows that adjusted R squared is negative and Table 8 shows a p value greater than 0.05 which is 0.689 so the null hypothesis is accepted, which mentions that there is no significant relationship between quality packaging and consumer buying behaviour.

**H<sub>03</sub>**: There is no significant relationship between eco-friendliness and consumer buying behaviour.

Table 9 shows that the adjusted R squared is positive and Table 10 shows a p value less than 0.05 (0.014), so the null hypothesis is rejected, which states that there is a significant relationship between eco-friendliness and consumer buying behaviour.

**H<sub>04</sub>**: There is no significant relationship between the colour of the package and consumer buying behaviour.

**Table 6.ANOVA<sup>b</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	0.048	1	0.048	0.075	0.785 <sup>a</sup>
	Residual	66.142	103	0.642	-	-
	Total	66.190	104	-	-	-
<sup>a</sup> Predictors: (Constant), Attractiveness/ visibility						
<sup>b</sup> Dependent variable: Consumer buying behaviour						

**Table 7.Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.040 <sup>a</sup>	0.002	-0.008	0.801
<sup>a</sup> Predictors: (Constant), Quality packaging				

**Table 8.ANOVA**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	0.104	1	0.104	0.162	0.689 <sup>a</sup>
	Residual	66.087	103	0.642	-	-
	Total	66.190	104	-	-	-
<sup>a</sup> Predictors: (Constant), Quality packaging						
<sup>b</sup> Dependent variable: Consumer buying behaviour						

**Table 9.Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.239 <sup>a</sup>	0.057	0.048	0.778
Predictors: (Constant), Eco-friendliness				

**Table 10.ANOVA<sup>b</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	3.774	1	3.774	6.227	0.014 <sup>a</sup>
	Residual	62.417	103	0.606	-	-
	Total	66.190	104	-	-	-
<sup>a</sup> Predictors: (Constant), Eco-friendliness						
<sup>b</sup> Dependent variable: Consumer buying behaviour						

Table 11 shows that adjusted R squared is mildly positive and Table 12 shows a p value less than 0.05 it is 0.008 so the null hypothesis is rejected; there is a significant relationship between the colour of packaging and consumer buying behaviour.

**H<sub>05</sub>**: There is no significant relationship between hygiene factors and consumer buying behaviour.

Table 13 shows that adjusted R squared is positive and Table 14 shows a p value greater than 0.05 which is 0.152 so the null hypothesis is established; there is no significant relationship between hygiene factor and consumer buying behaviour.

From the data analysis, it has revealed that package material, the attractiveness of packaging quality of packaging R square is very low, and adjusted R squared negative indicates mode does not fit, which means we must conduct the Kruskal-Wallis H test which alternatively uses the non-parametric test of one-way ANOVA..

Table 15 shows the mean rank statistics. Kruskal-Wallis Test as per Table 16 also shows the p value for packaging colour and eco-friendliness to be less than 0.05 which suggests there is a significant relationship between product package colour and eco-friendliness which affects customers buying behaviour.

**Table 11. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.257 <sup>a</sup>	0.066	0.057	0.775
<sup>a</sup> Predictors: (Constant), Colour of package				

**Table 12. ANOVA<sup>b</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	4.360	1	4.360	7.263	0.008 <sup>a</sup>
	Residual	61.831	103	0.600	-	-
	Total	66.190	104	-	-	-
<sup>a</sup> Predictors: (Constant), Colour of package						
<sup>b</sup> Dependent variable: Consumer buying behaviour						

**Table 13. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.141 <sup>a</sup>	0.020	0.010	0.794
<sup>a</sup> Predictors: (Constant), Hygiene factor				

**Table 14. ANOVA<sup>b</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	1.313	1	1.313	2.085	0.152 <sup>a</sup>
	Residual	64.877	103	0.630	-	-
	Total	66.190	104	-	-	-
<sup>a</sup> Predictors: (Constant), Hygiene factor						
<sup>b</sup> Dependent variable: Consumer buying behaviour						

**Table 15. Ranks**

Does packaging affect your buying behaviour?	N	Mean Rank	
Package material (F1)	Yes	75	52.66
	No	10	54.90
	Sometimes	20	53.33
	Total	105	-
Attractiveness (F2)	Yes	75	52.20
	No	10	61.90
	Sometimes	20	51.55
	Total	105	-
Quality packaging (F3)	Yes	75	52.35
	No	10	55.05
	Sometimes	20	54.40
	Total	105	-
Eco-friendliness (F4)	Yes	75	56.48
	No	10	55.90
	Sometimes	20	38.50
	Total	105	-
Colour of package (F5)	Yes	75	46.71
	No	10	79.35
	Sometimes	20	63.40
	Total	105	-
Hygiene packaging (F6)	Yes	75	54.72
	No	10	57.95
	Sometimes	20	44.08
	Total	105	-

**Table 16. Test Statistics**

-	F1	F2	F3	F4	F5	F6
Chi-square	0.056	1.080	0.150	6.350	15.093	2.438
df	2	2	2	2	2	2
Asymp. Sig.	0.972	0.583	0.928	0.042	0.001	0.296
Kruskal-Wallis Test statistics						

**Table 17. Results of Testing of Hypothesis**

S. No.	Hypothesis	Outcome
1	H <sub>00</sub> : There is no significant relationship between package material and consumer buying behaviour.	Not rejected
2	H <sub>01</sub> : There is no significant relationship between attractiveness/ visibility and consumer buying behaviour.	Not rejected
3	H <sub>02</sub> : There is no significant relationship between quality packaging and consumer buying behaviour.	Not rejected
4	H <sub>03</sub> : There is no significant relationship between eco-friendliness and consumer buying behaviour.	Rejected
5	H <sub>04</sub> : There is no significant relationship between the colour of the package and consumer buying behaviour.	Rejected
6	H <sub>05</sub> : There is no significant relationship between hygiene factors and consumer buying behaviour.	Not rejected

## Discussion

This study was conducted with limited respondent of closed ended questionnaire. The study period is restricted to Indore city and the duration of study is only two months. Major factors like package design, package colour, package material, and package sustainability are the independent variables considered for this study. Variable considered from the earlier literature review. Data analysis conducted with both parametric and non-parametric test.

## Conclusion

From the above study, it has been seen that eco-friendliness and the colour of the package significantly affect the buying behaviour of the customers. Other factors like package material, attractiveness, quality packaging, and hygiene packaging have no effect on the buying decisions of customers. So, the colour of the packet which attracts customers similarly these days' people have shown concerned on environment which is good for society and people prefer eco-friendly packaging of products.

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