

1 **Original Research Article**

2 **A MULTISTAGE SAMPLING CASE STUDY IN INDIA OF FOOD**
3 **PACKAGING ON BUYERS' BEHAVIOR**

4 **ABSTRACT**

5 Due to increasing self-service and changing consumers' lifestyles, interest in packaging as a
6 tool of sales promotion and stimulator of impulsive buying is growing. The basic purpose of
7 this paper was to find out how different elements of packaging influence buyer behaviour at
8 different stages of purchasing. Varanasi district (Uttar Pradesh) was selected for the study
9 purposively. The Results showed that all the packaging elements are highly important to
10 consumers' depending on their demographics and these factors can highly influence their
11 purchasing decision.

12
13 **Keywords:** Packaging, food products, buying behaviour, eco-friendly packaging

14
15 **INTRODUCTION**

16
17 Packaging is one of the most important factors in purchase decisions made at the point of
18 sale. Packaging is also a key food product attribute perceived by consumers. There is no
19 escaping the fact that packaging performs marketing function, even if a company does not
20 explicitly recognize the marketing aspects of packaging. In addition with the move to self-
21 service retail formats, packaging increases its key characteristic as the salesman on the shelf
22 at the point of sale. The critical importance of packaging design is growing in such
23 competitive market conditions, as the package becomes a primary vehicle for communication
24 and branding. Packaging as defined by the Packaging Institute International is the enclosure
25 of products, items or packages in a wrapped pouch, bag, box, cup, tray, can, tube, bottle or
26 other container form to perform one or more of the following functions: containment,
27 protection, preservation, communication, utility and performance. It may otherwise be
28 defined as a socio-scientific discipline which operates in a society to ensure delivery of goods
29 to the ultimate consumer of those goods in the best condition intended for their use. New
30 packaging systems and materials and environmental concerns are some innovation in
31 packaging sector

32 Proper packaging plays a crucial role in increasing the shelf life of the products. Food
33 products specifically require protection from light and oxygen to prevent oxidation during
34 storage. Innovations in packaging have become the order of the day and are used as a
35 strategic marketing tool to launch, re-launch, reposition, and increase demand for its products
36 and services (Alam, 2007; Olga and Natalia, 2006). Interest in the development of sustainable
37 packaging has increased in recent years, with several programs and initiatives having been
38 instigated to improve the sustainability of packaging (Martinhoa et al, 2016). The package is
39 a critical factor in the decision-making process because it communicates to consumers. The
40 package design must ensure that consumer response is favourable. However, several
41 conflicting trends in consumer decision making have made the food design challenging.
42 Some consumers are paying more attention to label information, as they become more
43 concerned about health and nutrition issues. Others have focused attention to the eco-
44 friendliness of packaging. In the household consumption, groceries account for a substantial
45 share, and up to one-third of the environmental impact is mainly due to packaging materials
46 (Koenig-Lewis et al., 2014). This trend seems to be catching in India, which is generating
47 waste products at a rather alarming rate, much faster than the natural degradation process and
48 is using resources at a speed that exceeds the rate at which these materials are being replaced
49 (Pattnaik and Reddy, 2010; Nandy et al., 2015). However, Indian consumers are more
50 conscious of their environmental impact than consumers from Brazil, China, Australia,
51 Russia, Canada, America and Germany (Prakash and Pathak, 2015). Most of the Indian
52 consumers have a positive attitude towards eco-friendly packaged product and are ready to
53 pay premiums for it. However, packaging sector should always add some new features to
54 make packaging more sustainable. It has to increase the likelihood of consumers to choose
55 sustainable packaging during product purchase. In the developing countries like India the
56 packaging sectors should always pay attention to the environmental awareness among
57 consumers and try to increase the level of pro-environmental behaviour of consumers who
58 currently have low levels of such behaviour. The proposed study was conducted to study how
59 packaging elements that influence consumers' behaviour during the different stages of
60 purchase decision.

61

62 **METHODOLOGY**

63 Varanasi district was purposively selected for the study purpose. Multistage sampling
64 technique was used and the sample size for the study was 100. The research design was

65 exploratory-cum-descriptive. The study was exploratory in nature as few studies have been
 66 conducted in the area of prevalent packaging strategies with respect to food products
 67 especially in non-metro areas.

68 Also, an attempt had been made using descriptive statistics to see the relationship
 69 between the prevalent packaging strategies implemented by the marketers and the consumers’
 70 buying behaviour. The primary data has been collected with the help of a pre-structured
 71 schedule to gather the primary information of the respondents regarding demographic
 72 information, significance of packaging, consumers’ perception about packaging strategies
 73 and impact of packaging strategies on purchase decision of consumers. The attitude of buyers
 74 was measured on the Likert scale.

75 RESULTS AND DISCUSSION

76 1.1. Consumers’ preference of packaging elements based on demographic factors

77 The majority of the respondents belonged to age group of 20-30 years (40%), followed by 30-
 78 40 years (30%), 40-50 years (20%) and least were from 50 years and above (10%).

79 The mainstreams of respondents were post graduates i.e. 38%. 11% of the
 80 respondents were below graduation, 32% were graduates and 19% per cent were Ph.D. Since
 81 the study was conducted in BHU campus, most of the respondents were post graduates and
 82 only 11% of respondents were educated below bachelor’s level.

83 Accordingly, 20 percent of respondents earned Rs. 1 lakh whereas majority of
 84 respondents earned between 25,000 - 1 lakh. Only 10 percent of respondents earn less than
 85 Rs. 25,000.

86 Table 1 shows preference for packaging elements based on age. These elements were
 87 packaging colour, quality, design, Labelling & Information.

88 **Table 1. Preference for packaging elements based on ‘Age’ Factor**

Packaging Elements	Age Group (n=100)			
	20-30	30-40	40-50	50 & above
Packing colour	17(42.5%)	4 (13.3%)	2 (10%)	0
Quality Packing	4 (10%)	10 (33.3%)	5 (25%)	3 (30%)
Wrapper design & Innovation	12 (30%)	7 (23.4%)	3 (15%)	2 (20)
Labelling & Information	7 (17.5%)	9 (30%)	10 (50%)	5 (50%)

89

90 The perusal of the table 1 shows that in the age group of 20-30 years majority i.e.
 91 42.5% prefer packing colour (yellow, red, blue attract more) of the products. People
 92 belonging to age groups of 30-40 years prefer quality packaging which would help in storage
 93 of the food product for a long time i.e. 33.3% of the respondents. And respondents in the age
 94 groups of 40-50years and above prefer the information of the product printed on the package
 95 regarding price, expiry date, date of manufacturing i.e. 50% of the respondents.

96 **Table 2. Preference of packaging elements based on 'Education' Factor**

Packaging Elements	Educational Qualification (n=100)			
	Below Graduation	Graduation	Post-Graduation	PhD
Packing colour	2 (18.2%)	2 (6.25%)	3 (7.9%)	5 (26.3%)
Quality Packing	4 (36.4%)	10 (31.25%)	10 (26.3%)	2 (10.5%)
Wrapper design and Innovation	3 (27.3%)	5 (15.625%)	5 (13.16%)	5 (26.3%)
Labelling & Information	2 (18.2%)	15 (46.9%)	20 (52.6%)	7 (36.8%)
TOTAL	11	32	38	19

97 Table 2 shows that respondents below graduation level i.e. 36.4% prefer packing
 98 quality for various food products. For products such as milk and juices, tetra pack is more
 99 preferable. People who are graduates and above prefer labelling & information about the
 100 products. For these people the labelling of the package, information about the product, its
 101 composition etc, matters the most.

102 **Table 3. Preference of packaging elements based on 'Income' Factor**

Packaging Elements	Income Group (n=100)				
	Below 25,000	25,000-50,000	50,000-75,000	75,000-1,00,000	Above 1,00,000
Packing colour	0	3 (15%)	8 (26.6%)	2 (10%)	3 (15%)
Quality Packing	3 (30%)	5 (25%)	7 (23.4%)	8 (40%)	8 (40%)
Wrapper design and Innovation	2 (20%)	5 (25%)	5 (16.7%)	5 (25%)	4 (20%)
Labelling and Information	5 (50%)	7 (35%)	15 (50%)	5 (25%)	5 (25%)

103

104 Table 3 shows that respondents having income up to Rs 75,000 prefer the labelling on
 105 the package and product information. People having income above Rs 75,000 and above
 106 majorly prefer the package quality of food products. This showed that people with higher
 107 income are inclined towards the quality and appearance of the package as compared to people
 108 with less income. People with low salary and income prefer packaging and product
 109 information.

110 **1.2 Influence of packaging elements on consumers’ buying behaviour during the**
 111 **different stages of purchase decision**

112 The questionnaire was developed based on visual and informational elements of food
 113 products packaging including five items of size, shape, colour, technology and information
 114 and these were rated on five-point scales from *very important to no response at all* at each
 115 end. Based on the questions, respondents were asked how these items of packaging would
 116 influence their different activities of purchase decision.

117 **Table 4. Importance (%) of packaging elements during pre-purchase stage**

S. No.	Degree of Importance	Packaging Elements	
	Particulars	Informational (%)	visual (%)
1.	‘Very important’	35	20
2.	Fairly important	25	27
3.	Indifferent	20	15
4.	Not so important	10	20
5.	‘Not at all important’	4	13
6.	No response	6	5

118
 119 The perusal of the Table 4 revealed that informational elements of a food package are
 120 the most important elements at the pre-purchase stage when evaluating different alternatives.
 121 It appears that food product buyers pay attention to packaging elements when they feel the
 122 need for a specific product.

123 **Table 5. Importance of packaging elements during purchase stage**

S.No.	Degree of importance	Packaging Elements
-------	----------------------	--------------------

	Particulars	Informational (%)	Visual (%)
1.	Very important	35	19
2.	Fairly important	20	34
3.	Indifferent	22	26
4.	Not so important	14	13
5.	Not at all important	4	8
6.	No response	5	0

124

125 The perusal of Table 5 indicates that packaging with reliance on information and
 126 visual elements plays the most important role in consumer purchase decision at this stage in
 127 comparison with the other stages. The food product buyers mostly pay attention to
 128 information written on food package when they are going to make their purchase decision.

129 **Table 6. Importance of packaging elements during post-purchase stage**

S. No.	Packaging Elements		
	Degree of importance	Informational (%)	Visual (%)
1.	Very important	20	10
2.	Fairly important	30	15
3.	Indifferent	22	36
4.	Not so important	17	15
5.	Not at all important	8	18
6.	No response	3	6

130

131 The perusal of Table 6 indicates that both the packaging elements influence their
 132 future decision. As after purchasing a product, the package has two key roles in consumers'
 133 satisfaction or dissatisfaction. In addition, when consumers use the products they compare all
 134 the information written on the package with the actual product.

135 The overall evaluation of the above criteria and in particular, the high values of both
 136 informational and visual elements of packaging suggests that consumers' are mostly
 137 concerned with essential properties and informational characteristics of product and pay
 138 considerably less attention to visual dimensions of the product such as packaging colour,
 139 shape & size. Properly delivered information on packaging generates strong impact on the
 140 consumers' buying behaviour. However, graphics and colour are relatively important.

141 **1.3 Consumers’ perception about prevalent packaging strategies of food products**
 142 **followed by the marketers**

143 The consumer perception about packaging strategies has been measured on the basis of five
 144 statements ranging from strongly agree (SA) to strongly disagree (SD) on following 6
 145 parameters: **sachet packaging; communication & display factors, eco-friendly factors,**
 146 **convenient & reusable factor, innovative & attractive packaging factors and finally**
 147 **value for money.**

148 Results are presented in Table 7 through Table 13.

149 **Table 7. Consumers’ perception about ‘Sachet’ Packaging Strategy**

	Statements	SA	A	N	D	SD
I	Sachets are easy to handle/use	78	20	0	2	0
II	Sachet motivates a consumer to try various products	60	25	5	4	6
III	Using sachets leads to less wastage of product	15	20	8	32	25
IV	Use of sachet(very small packets) is increasing	20	28	5	25	22
V	Usage of sachet is increasing because of its affordable/low price.	19	18	11	27	25

150

151 From above Table it can be inferred that majority of respondents *strongly agree* with
 152 reference to statements I & II, whereas III maximum people have *disagreed* for statement 5,
 153 majority of respondents *agree* for statement IV and for statement V a large no. of people
 154 *strongly disagree*. Overall, it could be inferred that people are favourable towards sachet
 155 packing as they are easy to handle and use and also costs less.

156 **Table 8. Consumers’ perception about ‘Eco-friendly’ Packaging Strategy**

S. No.	Statements	SA	A	N	D	SD
I	You prefer eco-friendly packaging	70	20	10	0	0
II	You prefer eco-friendly packaging even if you have to pay little extra	34	20	8	20	18
III	Packaging is creating more waste material	55	32	5	5	3
IV	It is creating more pollution in the environment	62	25	3	8	2

157

158 From above Table it could be inferred that majority of respondents *strongly*
 159 *agree* with reference to statements I & II but equal no. of people i.e20 *agree* as well as
 160 *disagree* for statement II, for statement III & IV maximum people *strongly agree* when
 161 environment and pollution issues are present.

162 **Table 9. Consumers’ perception about ‘Value for Money’ packaging strategy**

S. No.	Statements	SA	A	N	D	SD
I	You prefer refill pack as its original packaging can be reused.	7	10	10	50	23
II	You prefer refill pack as it costs less	4	5	2	80	9
III	You buy a product because of the reusability of its package.	5	2	3	75	15
IV	You will purchase a product because of its value pack (big pack for less price)	40	34	1	19	6

163

164 From above Table, it could be inferred that majority respondents *disagree* with
 165 reference to statements I, II& III and for statement IV maximum respondents *agree* when
 166 value pack is considered as value pack gives extra amount within the same price.

167 **Table 10. Consumers' perception of ‘Attractive and Innovative’ Packaging Strategy**

S. No.	Statements	SA	A	N	D	SD
I	The use of very innovative and different kind of packaging is increasing.	35	40	8	10	7
II	Today, a consumer has more choices in terms of packaging options.	31	38	7	14	10
III	You buy a product (which you do not require) only because of its very attractive or different packaging.	21	23	4	30	22
IV	You will pay higher for good/attractive packaging	19	23	5	25	28
V	It enhances impulse purchase (purchasing Without thinking)	20	37	15	11	17

168 From above Table it could be concluded that majority respondents *strongly agree*
 169 with reference to statements I, II & V, majority people *disagree* with reference to statement
 170 III and with reference to statement IV maximum respondents *strongly disagree*.

171

172 **Table 11. Consumers’ perception about ‘Convenient & Reusable’ Packaging Strategy**

	Statements	SA	A	N	D	SD
I	You will buy a product because its packing makes the product usage more convenient.	25	62	3	6	4
II	After consumption of the product the packaging is used for decoration/storage purpose.	10	15	5	34	36

173

174 From above Table it could be inferred that majority of respondents *agree* with
 175 reference to statement I which states that people are inclined towards the packaging which is
 176 more convenient to use. And maximum people *strongly disagree* with reference to statement
 177 II. But they are not willing to pay an extra price for convenience.

178 **Table 12. Consumers’ perception about ‘Communication and Display’ Packaging**
 179 **Strategy**

S.No.	Statements	SA	A	N	D	SD
I	More attractive packaging image is displayed in the main areas of the shops.	50	23	5	10	12
II	Good packaging is taken as symbol of better quality product.	70	19	2	6	3
III	These days more information is written on the package.	79	17	2	2	0

180

181 From the Table 12 it could be inferred that majority of respondents *strongly agree*
 182 with reference to the statement I, II & III.

183 **Table 13. Importance of various factors used for packaging strategy**

S.No.	Factors	Importance (%)
1.	Communication and Display	5

2.	Convenient & Reusable	16
3.	Attractive and Innovative	12
4.	Value for Money	27
5.	Sachet packing	18
6.	Eco-friendly packing	22

184

185 This perusal of table 13 indicates the various factors used by marketers for their
 186 packaging strategy in order of their importance as perceived by the consumers' is as follows
 187 – value for money (27%) eco-friendly packaging (22%), sachet packing (18%), convenience
 188 & reusability (16%), attractive & innovative packing(12%) and least is communication &
 189 display(5%).

190

191 **SUMMARY AND CONCLUSION**

192

193 After the analysis and observations made regarding the significance of packaging, consumers'
 194 perception about prevalent packaging strategies and impact of packaging strategies on the
 195 purchase decision, the major deficiencies which have been identified are less packaging
 196 options to choose from, communication problems, limited eco-friendly packaging, low
 197 availability of economical packaging, misleading packaging etc.

198 The suggestions proposed to fill the gaps present in the market and bring about necessary
 199 improvements and in the packaging strategies are in-depth research before launching the
 200 product, the packaging should communicate effectively, focus on ethical packaging, increase
 201 in eco-friendly packaging, and more availability of economical packaging and lastly
 202 packaging should be designed to perform promotional role.

203 Gone are the days, when packaging was considered just a container or an outer covering, it
 204 has multiple roles to play now. As the consumer perceptions are changing, the marketers will
 205 have to provide them more user- friendly, eco-friendly, economical and innovative packaging
 206 options. The customers are becoming more aware and demanding so more packaging options
 207 have to be explored. The different packaging strategies have an impact on the purchase
 208 decision of the consumers. More effective the packaging strategies followed by the
 209 marketers, more is the market share of the product. Any package innovation that provides
 210 product security, integrity and ensures the product is uncontaminated is a winner. It is

211 imperative that it fulfils a consumer need for product trust. The marketers will have to move
212 one step ahead of the customers' requirements. The biggest challenge before them is to
213 maintain a balance between providing customers packaging options which satisfy them and
214 taking care of the environment at a reasonable price.

215 **REFERENCES:**

216 Alam, Tanweer and Goyal, G.K.(2007). Packaging and storage of tomato puree and paste,
217 Stewart Postharvest Review, Vol. 3, No. 5, October.

218

219 Ampuero, Olga and Vila, Natalia (2006). Consumer perceptions of product packaging,
220 Journal of Consumer Marketing, Vol. 23, No. 2, pp. 102-114.

221

222 Koenig-Lewis, N., Palmer, A., Dermody, J., Urbye, A., 2014. Consumers' evaluations of
223 ecological packagingRational and emotional approaches. J. Environ. Psychol. 37, 94:105.

224

225 Pattnaik, S., Reddy, M.V., 2010. Assessment of municipal solid waste management in
226 Puducherry (Pondicherry), India. Resour. Conserv. Recycl. 54 (8), 512:520.

227

228 Nandy, B., Sharma, G., Garg, S., Kumari, S., George, T., Sunanda, Y., Sinha, B., 2015.
229 Recovery of consumer waste in IndiaeA mass flow analysis for paper, plastic and glass and
230 the contribution of households and the informal sector. Resour.Conserv. Recycl. 101,
231 167:181.

232

233 Prakash, Gyan and Pathak, Pramod, Intention to buy eco-friendly packaged products among
234 young consumers of India: A study on developing nation, Journal of Cleaner Production 141
235 (2017) 385:393.

236

237 Grac, Martinhoa, Ana, Piresa,, Goncalo Portelaa, and Miguel Fonseca (2015), Factors
238 affecting consumers' choices concerning sustainable packaging during product purchase and
239 recycling, Resources, Conservation and Recycling, 103 : 58–68.