

Study on the effective changing trends on packaging in supply chain management and its influence on the consumers

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Abstract: Packaging plays a significant role in the supply chain management. Packaging does not simply mean a cardboard box or a carton, the packaging trends are changing rapidly according to the trends. The most important functions of packaging involves safeguard the products from the external environment, makes a flexible distribution and makes the available from the supplier to the consumer with perfection. Currently, the functions of the packaging are heightened because of the prevailing trend of “conscious buying” among the consumers. Packaging paved the way for creating brand image for the product also, the first moment of truth can be achieved by the packaging itself. Before even trying the product, packaging makes the communication between the product and the consumers. To achieve an effective supply chain management, packaging technologies need to be linked with marketing, distribution, manufacturing and environmental aspects. This paper deals with the importance of packaging in the supply chain management and also the evolving trends of packaging in the market place. This paper deals with the changing trends of packaging like green packaging, flexible packaging in supply chain management.

Keywords: Packaging, Supply chain management, Consumer goods, Brand image, Communication, Trends.

1. INTRODUCTION

Consumer buying patterns took a rapid transformation in the consumer goods industry, from the purchase of whichever available on the shop to “conscious buying”. Complex individual preferences, demand for numerous options, awareness and attitude, personality and earnings and much more are stimulators of purchasing habits that drive the increasing consumer demands for consumer durables and their packaging. The purchasing behavior of current generation customers is currently experiencing dramatic changes in terms of mobile communications technology which leads to the quest for even more environmentally friendly consumer products. This new millennium starting to remind us of one substantial fact that any kind of packaging should be used by any FMCG product sold on the market place. Such packaging, particularly in the case of plastics, lays the groundwork for heavy solid waste, wherever spreading plastic ecosystem, resulting in heaps of litter after use packs and eventual significant contamination.

In the marketing mix, packaging is considered as the fifth P and it has major impact on the consumer goods, FMCG, food and beverages industry. According to the recent trend, this amazing flexible packaging is distributed throughout the world as it is carelessly tossed after being used, leading to huge waste owing to the non-decomposing nature of animals and other sources such as water and air. Consumers are now most aware of these kinds of plastics and its harmful effects to the environment leads to the green packaging trend. This paper also deals with the consumer’s preferences of the brands due to the packaging.

2. LITERATURE REVIEW

Cruz (2012) – This paper suggests Food packaging has been used to enable product marketing and to provide passive protection against environmental contamination or influences affecting the product's shelf-life. Active packaging’s is intended to communicate with the products and or the environment in general and are used effectively to increase the shelf life of processed food and can be divided into adsorption and release systems in order to enhance the quality of product packaging. **Molina (2016)** the author implies that Green packaging comprises three key characteristics,

minimizes the use of difficult-to-decompose packaging, says low-energy packaging and uses environmentally friendly packaging. Green packaging issues are often used to illustrate the company's contribution to environmental sustainability and improve brand awareness. **Aora (2014)** Flexible packaging in FMCG packaging plays a vital role. Flexible packaging includes multi-layer laminated plastic sheets (PVC, LDPE, HDPE, BOPP, and BOPET), paper or metal foils or fabric used individually or in combination of two or three layers for comprehensive packaging applications. The benefit of flexible packaging as 44 plastics laminates has unique properties that ensure shine, hardness, resistance to grease, resistance to moisture, ability to seal heat, printability, preservation of scent, low odor and taste. **Williams et al (2008)** – This paper describes that packaging is one of the measure which can decrease the wastage of food solution by understanding the life-cycle and environmental issues which can impact the chain operations in the organization and it also tries to explore the purpose of packaging by means of identifying and describing supply chains need regarding the packaging. **Lutters & Klooster (2008)** At the point of sale, purchases of packaging gears, as it is the main and recurring marketing element of FMCG. Understanding packaging and its functions is therefore a prerequisite in any research project, since awareness and acceptance about packaging facets play a key role in discovering consumer product priorities. Henceforth it becomes best to focus on its functions to tackle several aspects of consumer trends in FMCG. **Livingstone (2014)** – This paper defines packaging as coordinated system of processing goods for transportation, distribution, storage, retailing and end-use, which ensures safe delivery to the end customer at a condition of minimum cost and packaging is a techno-economic function aimed at minimizing costs of delivery while maximizing sales and hence profit. **Sparks (2009)** - This research paper depicts packaging has an important and significant impact on logistics and supply chain performance and on creation of value, and it also describes the various roles and function of packaging in reducing the trade-off and key performance measurements which leads to several impacts on consumer, economic and environment ergonomic and legal requirements in packaging **Louis peter (2015)** - He describes various form of packaging which includes smart packaging, active packaging and intelligent packaging which offers something extra in addition to the containment of product, such "extras" could be anything from extended shelf life to temperature, pH, moisture, and freshness monitors and indicators, to a tracking device. Intelligent packaging in this context is closely linked to other concepts for creative packaging items, such as active packaging and smart packaging. **Rostand (2012)** - In the food chain, packaging has become an important technology for ensuring safety, preventing adverse reactions, meeting consumer expectations and increasing food shelf life. The paper also indicates that the food and beverage industry is currently the biggest sector for smart marketing. Many smart packaging strategies have been developed and based on the food supply chain in an effort to reduce food loss and waste. **Pollard (2010)** - The primary goal of supply chain management has always been satisfying customer keeping in mind multiple obstruct to this process, in particular to packaging which can affect the product dependability, quality, speed, costs, and flexibility, while also having an impact on its life cycle which invariably enhances the labeling and traceability of goods at any point of time from the manufacturer to the ultimate consumers. **Crystalline (2016)** The author describes that all products moved from manufacturer to ultimate customers are contained in packages to analyze the flow of physical logistics in order to design manufacturing process, improvement of layout and increase companies efficiency thus reduces food waste and loss of sales in the production house by eliminating hazardous substances in the food material packages of final user. **Daniel (2009)** The author defines packaging is very important element in product quality maintenance which has great influence and quality assurance is necessary for the betterment of the company's performance in integrated supply chain operations which helps organization in molding raw materials into finished products which deteriorate some of the packing features, so their monitoring and proper conditions of storage, transport and suitable protection are important. **Pienaar (2010)** the author describes packaging as the material in which the product or product category is wrapped and which consists of the storage, security, distribution and unitization of the products. This contributes to consumer comfort and provides them with the necessary information about the packaged goods it further improves the handling and presentation of goods, thereby increasing the flow of goods through the logistics system. **De wit (2008)** He describes green packaging as "ecological packaging" or "environmentally friendly packaging" which is made entirely by natural plants and is resistant to deterioration and encourages sustainable development even throughout its entire lifecycle, which is harmless to the environment as well as to the health of human bodies and livestock.

3. OBJECTIVES

- To understand the consumer preferences about the green packaging.
- To study the impact of green packaging in the supply chain management.
- To find the importance of packaging in the FMCG industry.

4. RESEARCH DESIGN

The research design used is Exploratory research. This study is conducted to understand the concepts of packaging in the FMCG industry, and its influence on consumer purchasing pattern.

Sampling design

Non- probability sampling technique is used in the above study, under non-probability sampling technique, convenience sampling will be used to identify the target sample size.

Sample Size

The sample size for this study is 56.

Target population

The target population for the research includes age group from 18-45 years

Data collection

Data will be collected through primary sources which is through structured surveys and the secondary sources are from research articles and journals.

5. DATA ANALYSIS AND INTERPRETATION

Objective 1:

Descriptive Statistics

	Mean	Std. Deviation	N
PREFERENCE	1.32	.636	56
AGE	.89	.888	56
INCOME	1.16	.682	56

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	.836 ^a	.698	.687	.356	.698	61.289	2	53	.000

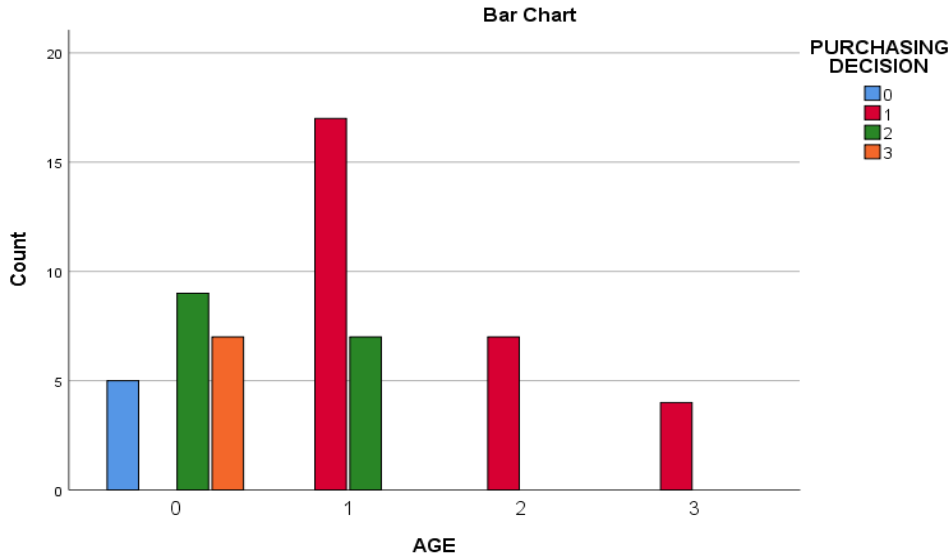
a. Predictors: (Constant), INCOME, AGE

The above results are obtained by testing variables through regression analysis, the results infer R value is 0.836 which is greater than 0.5 significance value with a mean score of 1.32 which means the consumer decisions are always based on the impact of product packaging, and there is a greater influence of demographics on customer purchasing patterns.

Objective 2:

Age* Purchase Decision

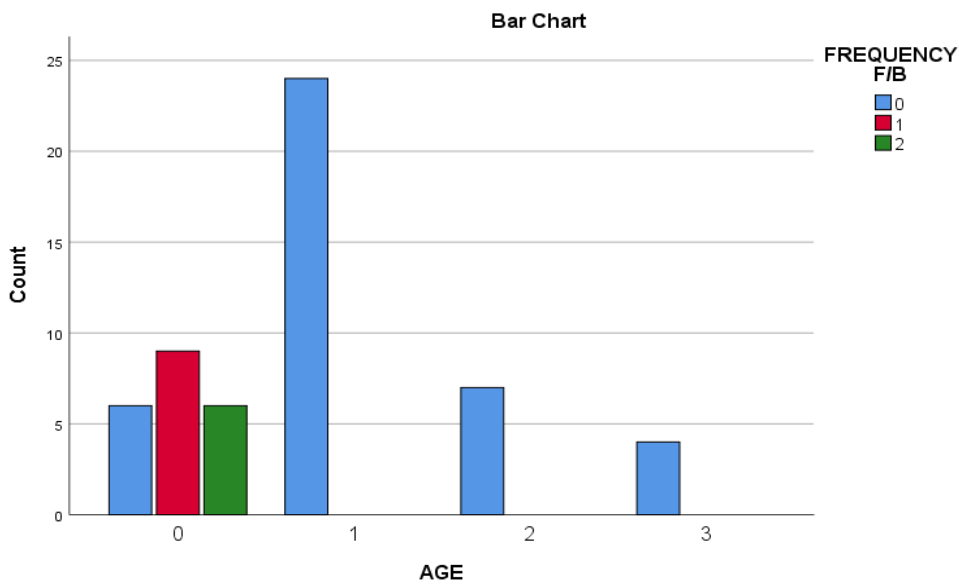
		PURCHASING DECISION				Total
		0	1	2	3	
AGE	0	5	0	9	7	21
	1	0	17	7	0	24
	2	0	7	0	0	7
	3	0	4	0	0	4
Total		5	28	16	7	56



From the above data, we can infer that age group between 24-30 makes purchase decision based on the product packaging which is considered as most influencing purchase decision factor. Thus it can said that there is positive relation between age and purchasing decision

Age * Frequency of Food And Beverage

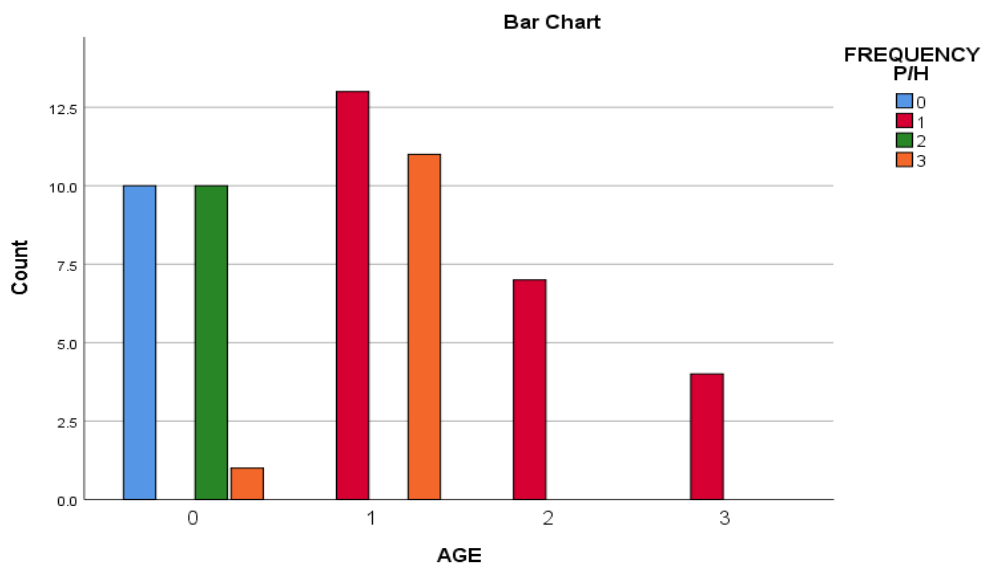
		FREQUENCY F/B			
		0	1	2	Total
AGE	0	6	9	6	21
	1	24	0	0	24
	2	7	0	0	7
	3	4	0	0	4
Total	41	9	6	56	



In case of above data, it can be said that age group of 24-30 prefers packaging of food and beverage products plays a vital role in the purchase pattern of consumer and influences the customers to frequently make purchase decision.

Age*Frequency of Personal and Health Care Products

		FREQUENCY P/H				
		0	1	2	3	Total
AGE	0	10	0	10	1	21
	1	0	13	0	11	24
	2	0	7	0	0	7
	3	0	4	0	0	4
Total		10	24	10	12	56



In the above data, Age group of 18-24 people prefer packaging method of personal and home care products drives the highest frequency of purchase decision which mostly influences the purchase pattern of customers compared to other factors.

Objective 3:

Descriptive Statistics

	Mean	Std. Deviation	N
IMPORTANCE F/B	3.29	.456	56
P/H	3.38	.489	56
PACKAGING DECISION	2.14	1.445	56

From the above data we can infer that the mean score of packaging decision is 2.14 which means the customers tends to give for more importance for personal and health care products(3.38) rather than food and beverage packaging (3.29) which leads to higher consumption pattern, thus it can be said that packaging influence customer preference towards purchase decision.

6. FINDINGS

- 37% of customers check packaging labels for information before the purchase decision
- 33% of customers believe having a sustainable life cycle is an important attribute of the packaging for those products they buy.
- 32% of customers believe efficient transportation of the packaging for the products they buy is an important factor.

7. CONCLUSION

This study aimed to understand the role of packaging in a new perspective, i.e. in the design and development of supply chain-focused packaging. This study complements previous product design and development work with successful packaging. In addition, it adds to the body of literature concerning supply chain management packaging systems. In practice, applying product development techniques for the production of packaging and using requirements management approaches provide a standardized and consistent methodology for the development of successful packaging that meets requirements across supply chains. This paper suggests improved packaging methods for meeting supply chain needs imposed on organizational subsystems, resulting in increased efficiency and effectiveness.

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