

Project dissertation report on

UNDERSTANDING THE IMPACT OF

PRODUCT VISUALS ON CONSUMER

BUYING BEHAVIOUR

Submitted by:
Udit Gupta 2K20/DMBA/141

Under the guidance of:
Dr. Rajan Yadav
Professor, DSM, DTU



DELHI SCHOOL OF MANAGEMENT

Delhi Technological University

Bawana Road Delhi 110042

DECLARATION

I declare that this report is entirely my own work. It is being submitted to the Delhi School of Management, Delhi Technological University, in partial completion of the Master of Business Administration degree. It has never been submitted to any other university for any degree or examination.

Udit Gupta (2K20/DMBA/141)

CERTIFICATE

This is to certify that the work titled '**UNDERSTANDING THE IMPACT OF PRODUCT VISUALS ON BUYING BEHAVIOUR**' is submitted to Delhi School of Management, Delhi Technological University in partial fulfilment of the requirement for the award of the degree of Master of Business Administration.

Prof. Rajan Yadav

Faculty Advisor

Dr Archana Singh

Head of Department (DSM, DTU)

ACKNOWLEDGEMENT

Before getting into the thick of things, I would like to add a few words of appreciation for people who have been a part of this project right from its inception. This project's writing has been one of the significant academic challenges I have faced. This project would not be completed without the support, patience, and guidance of the people involved. It is my deepest gratitude to them.

It gives me incredible pleasure to present my project report on "Understanding the impact of product visuals on buying behaviour". It has been my privilege to have a team of project guides who have assisted me from this project's commencement. This project's success results from sheer hard work and determination put in by my project guide. I now take this opportunity to thank **Dr. Rajan Yadav**, who acted as my mentor despite her many academic and professional commitments. Her wisdom and insight inspired and motivated me. Without her understanding and support this project would not have been exciting, and neither would have reached productivity.

EXECUTIVE SUMMARY

Product visuals or say the tangible thing of the product or related things such as: packaging. The consumers first and only interaction during buying process. Product visuals work as simulation in minds of customer to think and not only take but also to make the decision of buying the product. The packaging is one or the most important, who work as a product visual for the customers. It work as a platform where the product visuals are designed. As self-service becomes more prevalent and consumers' lifestyles change, package as a sales promotion tool and stimulant of impulsive buying behaviour is becoming more popular. As a result, the packaging plays a crucial role in marketing communications, particularly at the point of sale, and might be considered one of the most important aspects affecting the purchase choice of consumers. The literature analysis the different elements of packaging. The individual study of every element and other broad factors to critically study the impact of such elements on consumer buying behaviour. The variables, primary research methodology and hypothesis are extracted for research purpose. The 6 elements: packaging colour, background image, font style, wrapper design, printed information and brand name is used to derive the impact of product visuals on buying behaviour. The results showed that the elements affected the buying behaviour, whereas brand name, printed information and wrapper design has more impact. The visual elements puts more impact than verbal elements. Future study proposals are presented to aid in the development of a deeper knowledge of consumer response to product graphics.

PAPER NAME

141_uditgupta_plag check.docx

WORD COUNT 9859

Words

CHARACTER COUNT 54351

Characters

PAGE COUNT 43

Pages

FILE SIZE

955.8KB

SUBMISSION DATE

May 6, 2022 4:29 PM GMT+5:30

REPORT DATE

May 6, 2022 4:31 PM GMT+5:30

● 9% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

- 4% Internet database
- 3% Publications
- Cross ref database
- Cross ref Posted Content
- 7% Submitted Works database
- database
- database

● Excluded from Similarity Report

- Bibliographic material
- Small Matches (Less than 14 words)
- Quoted material

Table of Content

S/No.	Particulars	Page No.
1	List of Tables	1
2	List of Figures	2
3	Chapter 1 Introduction	3
	1.1. Packaging elements	4
	1.2. Packaging colour	5
	1.3. Background Image	5
	1.4. Font style	6
	1.5. Wrapper design	6
	1.6. Printed Information	6
	1.7. Brand Name	6
	1.8. Brand logo	8
4	Chapter 2 Literature review	9
	2.1. The role of packaging.	9
	2.2. Elements of a package.	9
	2.3. Visual elements	9
	2.4. Informational elements	13
	2.5. Brand Name	16
5	Chapter 3 Research Methodology	18
	3.1. Theoretical Framework	18
	3.2. Tools of Data Collection	19
	3.3. Sampling technique	19
	3.4. Analysis of Data techniques	20
6	Chapter 4 Data Analysis and Interpretation	21
	4.1. Study 1	21
	4.2. Results (Study 1)	33
	4.3. Study 2	35
	4.4. Results (Study 2)	40
	4.5. Recommendations	42
	4.6. Limitations of the study	42
	4.7. Future Research Scope	42
7	Chapter 5 Conclusion	43
8	References	44
9	Annexure	45

List of Tables

1. Table 4.1.1.1: Descriptive analysis of Domino's Pizza box
2. Table 4.1.1.2: Regression model summery (All variables)
3. Table 4.1.1.3: Regression model summery (Selected variables)
4. Table 4.1.1.4: Regression model ANOVA
5. Table 4.1.2.1: Descriptive analysis of nice biscuits packet
6. Table 4.1.2.2: Regression model summery (All variables)
7. Table 4.1.2.3: Regression model summery (Selected variables)
8. Table 4.1.2.4: Regression model ANOVA
9. Table 4.1.3.1: Descriptive analysis of Snickers packet
10. Table 4.1.3.2: Regression model summery (All variables)
11. Table 4.1.3.3: Regression model summery (Selected variables)
12. Table 4.1.3.4: Regression model ANOVA
13. Table 4.1.4.1: Descriptive analysis of Admire soap packet
14. Table 4.1.4.2: Regression model summery (All variables)
15. Table 4.1.4.3: Regression model summery (Selected variables)
16. Table 4.1.4.4: Regression model ANOVA
17. Table 4.2.1: Study 1 Summery
18. Table 4.2.2: Wrapper design correlation with other packaging elements
19. Table 4.2.3: Verbal element and Visual Element
20. Table 4.2.4: Chi square test of verbal and visual
21. Table 4.3.1.1: Descriptive analysis (Good package vs Bad Package)
22. Table 4.3.1.2: Chi Square frequency (Good package vs Bad Package)
23. Table 4.3.1.3: Chi Square test (Good package vs Bad Package)
24. Table 4.3.2.1: Descriptive analysis (Image 1 & Image 2 Quality Assurance)

- 25. Table 4.3.2.2: Chi Square frequency of Image 1 and Image 2
- 26. Table 4.3.2.3: Chi Square test (Image 1 & Image 2 Quality Assurance)
- 27. Table 4.3.3.1: Descriptive analysis (Product quality vs product price)
- 28. Table 4.3.3.2: Chi Square test (Product quality vs product price)
- 29. Table 4.3.3.3: Chi Square test (gender and age)

List of Figures

- 1. Fig 1. Domino's Pizza box (source: Google Image)
- 2. Fig 2. Nice biscuits packet (source: Google Image)
- 3. Fig 3. Snickers chocolate packet (source: Google Image)
- 4. Fig 4. Admire Soap packet (source: Google Image)
- 5. Fig 5. Doritos chips packet (source: Google Image)
- 6. Fig 6. Well & Truly chips (source: Pinterest)
- 7. Fig 7. Image 1 (source: Google Image)
- 8. Fig 8. Image 2 (source Google Image)

Chapter 1 : Introduction

Seeing is believing. A picture is worth a thousand words. A first impression is something that you never get a second chance to make. There are a plethora of idioms that seek to illustrate how what we see controls us. It would be a contentious argument to determine which of the five senses is the most significant, but when it comes to which is the most influential, "seeing" may have the greatest case. Every judgement and decision we make is based on visual experiences. Furthermore, when it comes to our ability to absorb and retain knowledge, they are at the forefront. We respond 60,000 times faster to images than text, 65 percent of the world's population is visual learners, and it's been demonstrated that integrating visual aids in the classroom may boost learning tremendously.

However, the impact of visual experience is not limited to learning and memory; it also has social consequences. Within 50 milliseconds (less than a glance for those doing the math), we develop our "initial impression" of someone. This is a terrifying prospect for everyone who has ever strolled through a room full of people, worried that our new haircut was ugly or our attire was unsuitable.

Around this time, the product marketing discipline began to acquire traction, in part because these practitioners were instrumental in establishing the link between the power of images and commerce. "People believe what the camera tells them because they know nothing else can give them the truth as well as the camera can."

For the next several decades, photography progressed slowly but steadily, with film being the focal point. With the rise of digital media, everything changed. It opened up a virtual Pandora's box of image creation. However, the union of a digital camera with a smartphone was the ultimate quantum leap. Everyone became a photographer all of a sudden, and our perceptions of imagery—how it's made and how much is enough—were forever altered.

Product graphics function similarly to a product image. It not only refers to the product's appearance, but also to the product's basic principles, such as credibility, empathy, and endurance. Packaging elements, brand name and logo, and business values are only a few of the visual components of a product. Let's take a look at each of a product's visual elements.

1.1 Packaging elements

The product's face is its packaging (Sagar and Kumar, 2005). The design and production of the product's container and wrapper are included in packaging. The three layers of packing materials that can be employed are primary package, secondary package, and shipping package. Several marketers have termed packaging a fifth "P," in addition to the four Ps of product, price, placement, and promotion. (2004) Kotler. As a result, packaging is employed to promote a product. Convenience and promotional value can be created with well-designed packaging (Kotler, 2004). It helps to achieve acceptance of the product, persuade customers to buy the product (Etzel et al., 2005), support self-service, consumer affluence, company and brand awareness, and innovation opportunities (Etzel et al., 2005). (Kotler, 2004). Packaging's primary goal was to keep the product safe. Because of its expanding importance in marketing, it has become a key aspect in obtaining clients.

Package draws attention to a specific brand, improves its image, and influences consumer impressions of that brand (Rundh, 2005). Also, packages provide items a distinct value (Silayoi & Speece, 2004), serve as a tool for differentiation, i.e., they assist consumers in selecting a product among a large number of comparable products, and they encourage customers to buy (Wells, Farley & Armstrong, 2007). As a result, packaging plays an important role in marketing communications and is one of the most influencing factors in a consumer's purchasing decision. Both in the retail store and at home, the competition is becoming increasingly fierce. Packaging's main attribute as the "salesman on the shelf" at the point of sale grows as self-service retail forms become more prevalent. As packaging becomes a main vehicle for communication and branding in such competitive market conditions, the importance of packaging design is expanding (Rettie and Brewer, 2000). This discussion examines how the packaging of packaged foods affects consumer purchase decisions. How effectively a product shines out in the store influences consumer decision-making, and packaging design must ensure that consumers respond favourably. Several opposing trends in consumer decision-making add to the complexity of the challenge. On the one hand, as people's concerns about health and nutrition grow, some customers are paying more attention to label information (Coulson, 2000). These customers are more engaged in the buying process and use package information more extensively. Modern clients, on the other hand, are always looking for ways to save time when it comes to grocery shopping and

meal preparation. This can also have an impact on decision-making processes, as time constraints limit full analysis of package components (Warde, 1999). While these are important issues that are becoming even more important in today's competitive environment, little study has been done on how packaging components influence brand choice when humans are engaged and time is limited.

The study's goal is to conduct a hypothetical analysis of package components and their impact on customer purchasing decisions.

1.2 Packaging colour

One of the most essential variables in differentiating your goods from other products on the market and from rival companies is colour. The colours you use on your package should send a subliminal message to your target market, encouraging them to buy your goods. Consider colour in relation to the marketing goals of the product. Using a lot of bright colours, for example, will appeal to kids, whilst softer shades will appeal to adults. Similarly, as we've seen more of in recent years, employing hues like green or blue might help to depict healthier selections.

Colours and their impact on human emotion and behaviour have been examined and linked by scientists, psychologists, and marketing professionals. "Colour influences consumers not just on the conscious level but also on the subconscious one," says Jenn David Connolly, a packaging design creative consultant, "therefore finding the correct colour for your product's package is just as important as picking the right ingredients."

1.3 Background Image

The product, as well as hidden features such as benefits and the story behind its creation, are represented through the image. This contributes to the product's increased reputation. The colour of the box can sometimes have a greater impact on human emotions than the image. Carefully designing the packaging necessitates the essential positioning of image. The value of packaging design is eroded by over-created images.

1.4 Font style

Typography is an important component of graphic design that enhances its professional and appealing appearance, as well as having the ability to subconsciously impact how people perceive things. Typography is described as a typeface in a variety of font, size, and spacing combinations in graphic design. It's also a textual style or appearance that's intentionally produced on posters, brochures, logos, and websites to convey a brand statement. As a result, it is a crucial tool that businesses should carefully consider when promoting their products; otherwise, their message will be misunderstood.

People find it tough to understand the exact meaning of artwork without typography on graphic design since typography helps voice the information up at first glimpse. Furthermore, the typefaces that are utilised to effectively attract more audience and inspire them to eagerly read the information are employed for more than just allowing people to deeply comprehend the text.

1.5 Wrapper design

Customers are attracted by the entire design. The box design affects children between the ages of ten and eighteen in particular. Companies go to great lengths to design attractive packaging.

1.6 Printed Information

When consumers see printed information on a product's packaging, it creates a good image in their thoughts. When it comes to the relationship between product, packaging, and impact on customer purchasing behaviour, aesthetic appeal vastly outweighs the qualitative and quantitative aspects of packaging. The significant association between packaging colour, written information language utilised on the box, and the product's impact on consumer purchase behaviour suggests this.

1.7 Brand Name

In today's world, a country's brand plays a critical role in boosting its economy. Only the brand has the power to influence a buyer's decision. Brand awareness is higher today than it was previously. People's purchasing patterns in response to a specific brand name or image, according to the literature. People's purchasing patterns in

response to a specific brand or image, according to the literature. People's purchasing patterns in response to a specific brand name or image, according to the literature. People's purchasing patterns in response to a specific brand or image, according to the literature. In today's hectic world, customers require shortcuts, as well as a corporate identity in product choices. There are a variety of cues in the environment that help people make decisions. Branding is one of them. In terms of selection, it is thought to be a more powerful mental shortcut. Brand awareness has an impact on consumer behaviour. Customers will be drawn to a more enticing product. What makes it unique? Customers like to buy more appealing items. We disregard around half of the products available on the market or in a specific retailer, according to estimates. People often buy branded cars because they are familiar with their performance (Alamgir, Nasir, Shamsuddoha, and Nedelea, 2010). Their research focused on the impact of brand name on car purchases. Market data is used, and the brand is then positioned in the market according to the market plan, with the majority of consumers believing that the brand is a guarantee of quality (Krizanova and Stefanikova, 2012).

Brand equity has a positive impact on consumer purchase decisions and happiness. They prefer to make purchase selections using brands that are marginally aware of their name and convey value that this worth has created for them for the first time after consumption. Purchasing decisions are influenced positively by brand fairness aspects. You must utilise marketing methods that are suited to certain products in order to develop a brand. If brands are successfully managed, customers' perceptions of product value and brand loyalty will be increased. Customers see a brand as a promise that product attributes will remain equivalent in the future, and sales increase as a result of this confidence. Customers think about a company's reputation while making purchases, but "demographic variables" have no influence on brand awareness. People prefer higher-priced branded goods because they believe that branded goods are more valuable than locally produced goods. (2010) (Khasawneh and Hasouneh).

The brand name gives each product graphic its own unique identity. Manufacturers want to know what traits will help them stand out when there are a lot of competitors and customers switch brands. Promotion influences both men and women's brand choices in the same way. Individuals favour television commercials the most. To increase their market share, businesses should take due care in publicising their items.

1.8 Brand logo

The golden arches, bitten apple, Aflac duck, Michelin guy, and Starbucks mermaid are always the first things that come to mind when you think of legendary brands such as McDonald's, Apple, Aflac, Michelin, and Starbucks. The two charging red bulls in front of a yellow sun distinguish Red Bull from many other companies and symbolise the brand's commitment to providing energy.

The golden arches, bitten apple, Aflac duck, Michelin guy, and Starbucks mermaid are always the first things that come to mind when you think of legendary brands such as McDonald's, Apple, Aflac, Michelin, and Starbucks. Brand logos are a powerful but underutilised tool that brand managers can use to accomplish these goals. The brand logo can serve as a connector for a company's marketing efforts, as well as a reflection of those efforts and a sign of what the firm stands for to its customers. To put it another way, a good logo can serve as a brand synthesiser, helping customers recognise, differentiate, and develop positive associations with a company.

Five key aspects influence consumers' purchasing decisions: psychological, social, cultural, personal, and economic circumstances. The logo took into account psychological, social, and personal variables that influenced consumers' purchasing behaviour. The brand's identity is symbolised by its logo. The factors incorporated in the logo, such as size, shape, colour, texture, and space, influence customers' purchasing behaviour. Your potential clients' first impressions are extremely important. Consumers form snap judgments about a product or service based on their initial perceptions. Having an impactful Logo delivers an excellent first impression in the minds of the customer. Humans respond and process visual data better than any other sort of data, according to the research. The logo, according to statistics, had a much greater influence than the other design aspects. The fantastic logo was remembered by the customer.. Their thoughts persuaded them to buy the product they placed the logo. We also look at the impact of a customer's recall of the logo and how that influences their purchasing behaviour in this study.

Chapter 2 : Literature review

2.1 The role of packaging.

The basic purpose of packaging is to prevent a product from damage while it is being transported, stored, sold, or exploited (Gonzalez, Thorhsbury, & Twede, 2007; Wells et al., 2007; Kuvykaite, 2001), as well as to make these activities more convenient. In the instance of supermarket, when consumers buy unbranded products, Sogn-Grundvag & Stli (2009) pointed out the relevance of packaging. They perceive product packaging as a way to safeguard consumers from contamination by allowing them to touch items freely and without having to worry about smudging their hands. They recommend adopting packaging with a "window" to allow consumers to evaluate products based on their look while simultaneously minimising "consumer ambiguity over quality by branding and marking the product" (Grundvag & stli, 2009, p.225).. It may be said that identification and communication functions have become increasingly important throughout time, particularly for consumer products in the convenience goods category. Text is processed 60,000 times faster than visual content by the human brain. In other words, a picture is worth 60,000 words! Furthermore, the brain receives 90% of its information visually. As a result, the package's importance in marketing communications grows: it must capture the attention of consumers and communicate the product's worth to them in a short amount of time, right at the point of sale. As a result, a more thorough evaluation of the package and its components is necessary to identify which of these aspects is most important to the consumer's purchasing decision.

2.2 Elements of a package.

In the scientific literature, there are several alternative techniques for classifying package constituents. According to Smith and Taylor (2004), while constructing an efficient packaging, producers and designers must consider six variables: form, size, colour, graphics, material, and flavour. Size, form, material, colour, text, and brand are among the six variables that Kotler (2003) believes must be considered when making package decisions. Similar to Underwood (2003), Vila & Ampuero (2007) identified two types of package elements: graphic elements (colour, typeface, forms used, and images) and structural elements (form, size of the containers, and materials). It's worth noting that, unlike Smith and Taylor (2004), these two blocks don't feature package

spoken sections. Rettie and Brewer (2000) emphasised the need of excellent package placement, categorising the factors into two types: verbal (for example, brand slogans) and visual (for example, visual appeal, picture, etc.) aspects. They differentiate between non-verbal package features (colour, form, size, imageries, graphics, materials, and smell) and verbal package elements (product name, brand, producer/country, information, special offers, and usage instructions) while studying consumer decision-making processes. Although Keller (2003) considers packaging to be one of the five aspects of the brand, along with the name, logo, graphic symbol, personality, and slogans, it is included as a verbal component in their classification. Silayoi & Speece separate visual elements (graphics, colour, shape, and size) and informational components (Silayoi & Speece, 2004; 2007) into two groups (2004). (information provided and technology) When researching consumer decision-making processes, they differentiate between non-verbal package aspects (colour, form, size, images, graphics, materials, and smell) and verbal package elements (product name, brand, producer/country, information, special offers, and usage instructions). Although they classify brand as a verbal component, Keller (2003) believes packaging to be one of the five aspects of the brand, along with name, logo, graphic symbol, personality, and slogans. Silayoi & Speece separate visual elements (graphics, colour, shape, and size) and informational components (Silayoi & Speece, 2004; 2007) into two groups (2004; 2007). (information provided and technology). According to Silayoi & Speece (2004), visual aspects are associated with the affective portion of the consumer decision-making process, whereas informational elements are associated with the cognitive aspect. In summary, the visual and linguistic aspects of the package can be divided into two categories. Visual features include graphic, colour, size, form, and material, according to the literature studied, whereas verbal elements include product information, producer, place of origin, and brand.

Packages play an important role in marketing communications and are one of the most important factors influencing a consumer's purchase decision. As a result, packaging features and their influence on customer buying behaviour have become a hot topic. Based on a theoretical assessment of package features and their impact on consumer buying decision, he experimentally exposes the aspects that have the final effect on customer choosing. Rita used systematic and comparative examination of scientific literature as well as empirical investigation as research methodologies. Six factors

must be considered by producers and designers when designing effective packaging: form, size, colour, graphics, substance, and flavour. Size, shape, material, colour, and text are all aspects that Kotler (2003) mentions when evaluating packaging alternatives. According to Rita's research, packaging features may have a stronger influence on consumer purchasing decisions. He concludes that Package might be considered one of the most valuable tools in today's marketing communications, needing a more detailed examination of its components and their effects on customer purchasing behaviour. The importance of each of the package's individual aspects for the consumer's choice can be shown by studying the influence of the package and its elements on the consumer's buying decision.

Bed Nath Sharma In December 2008, researchers in Nepal investigated novel consumer product branding, packaging, and labelling. This article focuses on contemporary branding, packaging, and labelling practises in consumer goods manufacturing. The research approach was descriptive presentation of data gathered by a questionnaire survey on several consumer new product categories (soap, biscuits, noodles, cigarettes, and so on). The investigation continues with a look at the new consumer product packaging and labelling status in manufacturing plants. Labeling and packaging are important to them. The majority of consumer products utilise a product label as a simple tag attached to the product or as an extensively created image that is part of the package.

2.3 Visual elements

2.3.1 Graphics and colour Layout, colour combinations, typography, and product photography are all examples of graphics, and they all contribute to the creation of an image. Marketing communications, particularly image development, have a significant impact on consumer decision-making, even with limited involvement. In low-involvement decisions, attribute evaluation is less important, therefore graphics and colour play a bigger role (Grossman and Wisenblit, 1999). The package is the product for many low-involvement consumers, especially because first impressions can last a long time. The design elements of the package must stand out in a display of numerous other options as the product attribute that most directly communicates with the intended consumer (Nancarrow et al., 1998). Today's shoppers are under more time pressure than ever before, and they tend to buy fewer items than they planned

(Herrington and Capella, 1995). Products appear to be chosen on the spur of the moment, implying that they were purchased on impulse (Hausman, 2000). If a product stimulates customers at the time of purchase, they will make speedier in-store decisions. When a customer's eye tracks across a display of packages, different new items can be seen in comparison to competitors. Focus does not always mean eye movement. When scanning items in the supermarket, differences in perception and the placement of graphic components on the packaging can mean the difference between identifying and missing an item (Herrington and Capella, 1995). Brain laterality causes asymmetry in the perception of features in packaging designs, according to psychology studies (Rettie and Brewer, 2000). Memory is likely to be influenced by the lateral positioning of package elements, as well as font style, size, and colour. Recall is better for verbal stimuli when the copy is on the right side of the package, but recall is better for non-verbal stimuli when it is on the left. To maximise consumer recall, pictorial materials such as product photographs may be placed on the package's left side.

Colour associations are also learned by consumers, causing them to choose specific colours for different product categories (Grossman and Wisenblit, 1999). When colour is used as a signal on packaging, it can create a strong association, especially if it is unique to a company. People from various cultures, on the other hand, are exposed to a variety of colour associations and acquire colour preferences depending on those associations. Simply transferring the colours of a logo, package, or product design from one market to another requires a full grasp of how colours and colour combinations are viewed in each place (Madden et al., 2000).

2.3.2 Packaging size and shape

Package size, shape, and elongation all have an impact on consumer judgement and decisions, but not necessarily in obvious ways. These things appear to be used as visual heuristics by consumers when making volume judgments. People tend to perceive more elongated containers to be larger, even when they purchase these items regularly and can detect actual volume. This means that disconfirmation of package size after consumption may not cause consumers to change their volume judgements in the long run, especially if the difference isn't significant (Raghubir and Krishna, 1999). Customers of various sizes are likewise attracted to various sizes. Low prices for some low-involvement products, such as generics, are possible thanks to reduced

packaging and promotional costs. Generics are typically packed in greater sizes, which communicates to consumers who are looking for bargains. The low cost of generics in the right container size delivers outstanding value for money for these consumers (Prendergast and Marr, 1997). Additionally, when product quality is difficult to assess, such as with generics, the packing size effect may be higher.

2.4 Informational elements

2.4.1 Product information Image difficulties and visual response have less of an impact on customer behaviour toward items with a high level of participation (Kupiec and Revell, 2001); in these circumstances, consumers require more information. Consumers can use written information on the package to help them make informed judgments when considering product features. Packaging information, on the other hand, might be confusing if it conveys either too much information or information that is deceptive or false. To fit a lot of information onto a label, manufacturers frequently employ small fonts and dense writing styles, which results in poor readability and occasionally confusion. Consumers can lessen their perplexity from information overload by narrowing their decision sets, according to Mitchell and Papavassiliou (1999). Limiting option alternatives and evaluative attributes decreases the chance of confusion caused by excessive choice and information overload.. Because heavy users may look at fewer brand choices, this method may be appropriate for more experienced consumers. In other words, consumer experience limits the extent of their investigation by causing them to be selective in their observation (Hausman, 2000). Consumers do not want to read labels every time they purchase a product, therefore this is effectively a form of brand loyalty.

2.4.2 Packaging technology

Packaging technology is based on current product and customer trends. In order to please more demanding and intelligent consumers, powerful merchants expect increased responsiveness and flexibility from producers, including packaging (Adebanjo, 2000). Customers are regularly willing to pay a little more for a better product. In terms of creating things that met all of the customer and channel needs, product and packaging development was limited. Limitations on ingredients, processing, and pricing are just a few examples. Customers are regularly willing to pay a premium for a higher-quality goods. In terms of creating things that met all of the

customer and channel needs, product and packaging development was limited. Limitations on ingredients, processing, and pricing are just a few examples. Packaging technology is based on current product and customer trends. In order to please more demanding and intelligent consumers, powerful merchants expect increased responsiveness and flexibility from producers, including packaging (Adebanjo, 2000). Customers are regularly willing to pay a little more for a better product. Product and packaging development, on the other hand, was limited in terms of generating items that met all of the consumer and channel requirements. Ingredient, processing, and cost limits are examples of such limitations. Innovation must respond by developing new goods that are more efficiently manufactured, packaged for a longer shelf life, ecologically friendly, nutritionally relevant to each of society's rising sectors, and meet the highest levels of food safety (McIlveen, 1994). The technology in the package helps to achieve this, turning it into a new type of informational item. Packaging technology serves two purposes: it informs consumers about their lifestyles while also serving a technical purpose. As a result, in order to compete in high-growth, competitive markets, technology becomes increasingly important in the development of packaging, materials, and processes. The importance of packaging creation is evident from the literature review, as packaging has a significant influence on customer decisions for fast-moving packaged foods.

2.4.3 Food Image

Food images are common visual triggers, according to study (see Spence et al., 2016, for a review). As a result, it appears that this could present food producers with a relatively low-cost and simple option to attract customer attention in-store. Food appears to have more than only attentional capture effects when it is viewed. Wansink, Painter, and Lee (2006) discovered that providing sweets in clear jars versus opaque jars led in higher intake. Participants ate an average of 7.7 sweets each day when a jar was close and transparent, compared to 4.6 when the jar was opaque. The same impact was observed when the jar was positioned 2 metres away: an average daily consumption of 5.6 sweets when the jar was visible, and 3.1 sweets when it was opaque. The treats were both harder to resist and more attention-grabbing when placed in a transparent jar, according to the participants. When participants were given sandwich quarters, Wansink (2004) observed a similar effect: when they were wrapped in a transparent wrap, they consumed more than when they were wrapped in a non-

transparent wrap. Furthermore, Bodenlos and Wormuth (2013) discovered that this impact can occur even if food is not readily available. Participants consumed more calories after watching a food-related show than after watching a nature-related programme, confirming prior fears that the rich and rapidly expanding world of 'gastroporn' might be pushing individuals to consume more food (see Spence et al., 2016, for a review). Passamonti et al. (2009) concluded that "external food signals, such as the sight of appetising food, may elicit a desire to eat, even in the absence of hunger."

According to the research, the ability for a consumer to examine a product through or on packaging has a substantial impact on consumer behaviour. As a result, incorporating product graphics and/or transparency into packaging design has a substantial impact on product performance in the marketplace. However, there is a dearth of literature on transparent packaging at the moment, with many areas requiring additional research (: Simmonds, G., & Spence, C, 2016).

The particular elements effect on buying behaviour is studied in literature. Now, the effect along with the relation on buying behaviour is to analyse in this study

Hypothesis H1: There is a relationship between packaging elements and buying behaviour.

The weightage of particular elements and the comparative impact of each elements is also studied in this paper.

Research R1: The weightage of different packaging elements on packaging to influence buying behaviour.

2.5 Brand Name

Brand image has a strong progressive control on consumer purchasing behaviour, and young people are gaining more attention for goods with brand names to show off their character sign as an implicit technique that can favourably effect people's purchasing behaviours. If consumers are aware of a brand and have a positive impression of it, as well as positive brand perception, trustworthiness, and affiliation, the brand's image will strengthen in their minds, and the brand will become a part of their purchasing

behaviour. Advertisement is a powerful tool for attracting customers and keeping them interested in your brand (Wen, Holly, Alan et al., 2004).

The brand name of a product influences the risk perceptions of customers making an online purchase. As previously stated, research has shown that in a typical retail context, a product's brand name can reduce consumers' perceived risk; however, this issue has never been investigated in an online setting. The presence of a product's brand name was found to have a considerable impact on online shoppers' perceptions of service and security risk in the current study; nevertheless, this effect was unexpected. The presence of a brand name heightened risk perceptions, particularly in the context of online purchases. Furthermore, the perceived risk of consumers was found to be unaffected by brand status (well-known versus lesser-known brand names). Furthermore, as expected, internet shoppers perceived less danger than non-shoppers (Wen, Holly, Alan et al., 2004). According to study, online customers aged 18–29 are more sensitive to brand names than those of other age groups while buying online, and they are more likely to purchase their favoured brands repeatedly (Whelan, 2001). In this study, more than 95% of internet consumers were aged 19 to 25. Respondents may be more sensitive to the presence or absence of a product's brand name when purchasing online because of this age group's preoccupation with brands. If consumers don't like the brand, the fact that it's prominently displayed on the goods may increase their fear of it, and therefore their risk perception. To put it another way, non-branded products may make this group perceive less risk than branded items outside of their evoked set. Another explanation for the findings is that this study discovered two categories of perceived risk: perceived sales risk and perceived service risk. Both of these categories of risk are associated with the shopping environment rather than the items that participants were pushed to "purchase."

2.5.1 Brand name as risk reducer

According to previous study, one of the most important extrinsic cues that consumers use to evaluate items is the brand name. Extrinsic cues are product-related features that are not related to the product's physical or functional aspects (Richardson and Dick, 1994). When consumers don't know much about a product category, they rely on extrinsic cues to guide them (Dean, 1999). When buyers are unsure about a product, according to Dawar and Parker (1994), the brand name is the most crucial signal (cue).

Furthermore, Richardson and Dick (1994) discovered that products with a well-known national brand are rated higher than private label products. Within many brand-related situations, important marketing elements such as product quality, relative price, and purchasing intent have been investigated (eg Brucks et al., 2000; Grewal and Krishnan, 1998). According to research, brand names can assist customers save time and effort when evaluating products (Landes and Posner, 1987), as well as lower their perceived risk of poor quality (Landes and Posner, 1987). (Moon and Millison, 2000). According to prior study, consumers are more inclined to choose a well-known brand over a lesser-known brand because brand awareness reduces perceived risk (Erdem and Swait, 1998). As a result, brand names may be able to successfully reduce consumer misunderstanding about product quality and their sense of risk while making purchases in typical retail environments. Knowing the packing, on the other hand, can help to lessen the danger. Here are some hypotheses:

Hypothesis H2: Risk will be low, When packaging is good for the product then the product without the good packaging.

Chapter 3 : Research Methodology

The experimental research design along with the descriptive is adopted to conclude the inferences of hypothesis testing and research.

The study is centred on evaluating the hypothesis and study obtained from the literature review to determine the impact of product images on purchasing behaviour.

- To understand how product images affect quality assurance (work as risk reducer).
- To understand how package characteristics affect consumer purchasing decisions
- To understand the influence of visual vs. verbal packaging aspects.

3.1 Theoretical Framework

The theoretical framework emphasises the connection between dependent and independent variables. The distinction between dependent and independent variables is significant in both comparative studies and regression analyses. The possibility, degree of willingness, and tendency of customers to acquire a product or service within a given time period is referred to as buying intent, also known as buyer or purchasing intent. A buyer's intent to buy can be demonstrated in a variety of ways that you can track, including demographics, previous purchases with your firm, and the material they consume. By explicitly questioning survey respondents about their purchasing intentions, we were able to determine this.

3.1.1 Dependent Variable:

Buying intent of the product

Buying intent, also known as buyer or purchasing intent, refers to the likelihood, willingness, and propensity of customers to purchase a product or service within a specific time frame. A buyer's intent to buy can be demonstrated in a number of ways that you can track, including their demographics, previous purchases with your firm, and the material they consume. We gathered this information by directly questioning survey respondents about their purchasing intentions.

3.1.2 Independent Variable:

- the colour of the package The overall hue, tone, and colour mix all play a significant part in a potential customer's decision-making process.
- Product image, Images of food constitute salient visual stimuli in the mind of the consumer. The food in transparent packaging, product creative image, product story based image and background image consist in this variable
- Font style, Typography on the packaging, the way and the style to write all printed information.
- Wrapper Design, The overall design size, shape, material, placement of other packaging elements.
- Printed information, the labelling, price, about the product, nutrition details, stories and all other verbal information printed on packaging.
- Brand name, The brand unique identity, brand logo and brand unique taglines.

Theoretical framework also focusses on the validation and relation with the age group and gender to know the segmented differentiation of buying behaviour among them. The descriptive analysis, factor relations, significant and hypothesis test is also included in this study.

3.2 Tools of Data Collection

In order to collect the data about the impact of product visuals, we will collect the data through questionnaire (method: google forms) which also including the experimental questions.

3.3 Sampling technique

A sample size of 107 respondents will be employed for the study, which will be done using a basic random sampling technique, in order to generalise the findings in the particular sector. All of the respondents and their purchasing habits are unique to India's demographics.

3.3.1 Measures

The questionnaire consists of 14 questions, where 6 questions collect data based on intentions and descriptive study and the other 8 questions is based on experimental

analysis. Some questions are based on photo, where the respondents answer the question based on the photo presented to them for experiment purpose.

The questionnaire clearly mentions the non-considering of price as variable in decision making and personal data of respondents is not collected to remove personality biasness from the research.

The questions are based on multiple choice and Likert scale ranges from 1 to 5, where 1 refers to unaffected and 5 refers to highly affected behaviour.

3.4 Analysis of Data techniques

To analyse the data, SPSS software is used after cleaning the data on excel in which analysis are performed in three parts. Were, the first related to the categorical test where chi-square test, descriptive test is used then the second one is correlation and interrelatedness of the element variables and the third is based on the multiple regression analysis.

3.4.1 Chi-square test

A chi-square test for independence examines two variables in a contingency table to see if they are linked.

3.4.2 Descriptive analysis

A chi-square test for independence is used to determine if two variables in a contingency table are related.

3.4.3 Correlation

The type of data analysis that aids in the constructive explanation, presentation, or summarization of data points so that patterns emerge that satisfy all of the data's requirements.

3.4.4 Multiple regression

Data analysis in which data points are constructively characterised, presented, or summarised so that patterns emerge that satisfy all of the data's requirements.

Chapter 4 : Data Analysis and Interpretation

4.1 Study 1

The Study is based to test hypothesis 1, The study of packaging elements impact on buying behaviour.

Procedure

The experimental study is conducted by presenting the 4 images (as shown below) in questionnaire, each question asked about the perception towards different packaging elements including the brand name. one question after every image-based question is asked about the buying intention of the product. All the data are based on Likert scale ranges from 1-5 for image question and 1-7 for buying intention-based question.

4.1.1 Experiment 1



Fig 1. Domino's Pizza box (source: Google Image)

The experiment is based on the dominos packaging. The variables and the descriptive analysis are:

Table 4.1.1.1: Descriptive analysis of Domino's Pizza box

	Mean	Std. Deviation
Dominos (Buying Intention)	4.39	2.159
Dominos [Packaging colour]	3.00	1.078
Dominos [Background Image]	2.64	1.183
Dominos [Font Style]	2.61	1.083
Dominos [Wrapper design]	3.18	0.995
Dominos [Printed Information]	3.14	1.047
Dominos [Brand name or logo]	3.98	0.902

(Source: Own Analysis)

The centred mean value of the elements is 3 and for buying intention is 4. The descriptive analysis represents that the wrapper design, printed information and brand name has mean value above than centred mean. Whereas the background image and font style have low mean value. The packaging colour mean is neutral in this experiment responses.

The buying intention is greater than the centred mean value ($4.39 > 4$). Which results that the wrapper design, brand name and printed information impacts the buying behaviour than other elements.

In this experiment of dominos, the pictures selected is the pizza box. Where the main buying intent is pizza for the customer. Here, the overall impact of packaging is less. However, the impact put by designing and information convince the buyer for buying that product apart from the brand name element.

To know the quantitative impact on element, the following regression analysis are:

Before removing insignificant variables

Table 4.1.1.2: Regression model summary (All variables)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.511	0.261	0.142	2.000	1.622

(Source: Own Analysis)

After removing insignificant variables

Table 4.1.1.3: Regression model summary (Selected variables)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.475	0.226	0.146	0.435	1.386

(Source: Own Analysis)

Table 4.1.1.4: Regression model ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2.155	4	0.539	2.843	.037 ^b
Residual	7.391	103	0.190		
Total	9.545	107			

(Source: Own Analysis)

The positive auto-collinearity is increased after removing the background image and font style from this analysis (Durbin Watson coefficient reduced from 1.622 to 1,386). The model significance value ($.037 < .05$) with F Value = 2.843 implies that the variable is significant to derive the dependent variable i.e. the buying intention of domino's pizza with the R^2 (22.6%) variability captured by the model.

Packaging elements selected: Packaging colour, Wrapper design, Printed information and Brand name.

4.1.2 Experiment 2



Fig 2. Nice biscuits packet (source: Google Image)

The experiment is based on the Nice biscuits packaging. The variables and the descriptive analysis are:

Table 4.1.2.1: Descriptive analysis of nice biscuits packet

	Mean	Std. Deviation
Nice Biscuits (Buying Intention)	4.07	2.214
Nice Biscuits [Packaging colour]	2.75	1.222
Nice Biscuits [Background Image]	2.61	1.298
Nice Biscuits [Font Style]	2.64	1.203
Nice Biscuits [Wrapper design]	2.91	1.030
Nice Biscuits [Printed Information]	2.98	1.171
Nice Biscuits [Brand name or logo]	3.02	1.303

(Source: Own Analysis)

The centred mean value of the elements is 3 and for buying intention is 4. The descriptive analysis represents that the brand name has mean value above than centred mean. Whereas the background image, font style, Packaging colour, and Wrapper design have low mean value. The printed information mean is neutral in this experiment responses.

The buying intention is very close to mean value which results to indecisive result of impact of packaging through descriptive analysis.

In this experiment of nice biscuits, The unpopular packaging is used to derive the impact of packaging elements. The results is based on the personal choice where the analysis shows the neutral results. To know the impact of packaging, a regression model is framed after hit and trial method of removing and adding independent variables.

To know the quantitative impact on each element, the following regression analysis are:

Before removing insignificant variable

Table 4.1.2.2: Regression model summery (All variables)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.373	0.139	0.000	2.214	1.935

(Source: Own Analysis)

After removing insignificant variables

Table 4.1.2.3: Regression model summery (Selected variables)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.391	0.152	0.111	0.472	1.833

(Source: Own Analysis)

Table 4.1.2.4: Regression model ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1.646	2	0.823	3.689	.034 ^b
Residual	9.149	105	0.223		
Total	10.795	107			

(Source: Own Analysis)

The positive auto-collinearity is increased after removing the background image, font style, Wrapper design and printed information from this analysis (Durbin Watson coefficient reduced from 1.935 to 1.833). The significance gain is .407. The model significance value ($.034 < .05$) with F Value = 3.689 implies that the variable is

significant to derive the dependent variable i.e. the buying intention of nice biscuits with the R^2 (15.2%) variability captured by the model.

Packaging colour shows the negative impact whereas the brand name shows the positive impact. The combined analysis describes the descriptive analysis of neutral buying intention of nice biscuits.

Packaging elements selected: Packaging colour and Brand name.

4.1.3 Experiment 3



Fig 3. Snickers chocolate packet (source: Google Image)

The experiment is based on the Snickers chocolate packaging. The variables and the descriptive analysis are:

Table 4.1.3.1: Descriptive analysis of Snickers packet

	Mean	Std. Deviation
snickers (Buying Intention)	4.91	1.890
snickers [Packaging colour]	3.25	1.102
snickers [Background Image]	2.86	1.047
snickers [Font Style]	3.11	1.146
snickers [Wrapper design]	3.14	0.955
snickers [Printed Information]	3.32	1.116
snickers [Brand name or logo]	3.70	0.978

(Source: Own Analysis)

The centred mean value of the elements is 3 and for buying intention is 4. The descriptive analysis represents that the packaging colour, font style, wrapper design, printed information and brand name has mean value above than centred mean. Whereas the background image has low mean value.

The buying intention is high than the centred mean value ($4.91 > 4$). Which shows the strong buying intention of the product.

The Snickers chocolate wrapper is used for this experiment. Snickers is a very famous brand, mainly known for impulse buying during shopping. The responses are in line with the pre-thoughts about the product. There is no background image present in this picture. i.e. the background image variable is of no use in this experiment. To know the impact of packaging elements, regression model is created after removing background image and other variables if needed.

To know the quantitative impact on each element, the following regression analysis are:

Before removing insignificant variable

Table 4.1.3.2: Regression model summary (All variables)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.309	0.096	-0.051	1.938	1.805

(Source: Own Analysis)

After removing insignificant variables

Table 4.1.3.3: Regression model summary (Selected variables)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.380	0.145	0.103	0.415	1.910

(Source: Own Analysis)

Table 4.1.3.4: Regression model ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1.192	2	0.596	3.463	.041
Residual	7.058	105	0.172		
Total	8.250	107			

(Source: Own Analysis)

The positive auto-collinearity is reduced after removing the background image, font style, packaging colour and printed information from this analysis (Durbin Watson coefficient increased from 1.805 to 1.910). The significance gain is .64. The model significance value ($.041 < .05$) with F Value = 3.463 implies that the variable is significant to derive the dependent variable i.e., the buying intention of snickers chocolate with the R^2 (14.5%) variability captured by the model.

Wrapper design highly impact the impulse buying whereas the brand name give confidence to the buyer about the product that they have purchasing. During regression analysis, some positive variables are removed that they didn't explains the dependent variable. The variables are inter-related as removing variables also reduces the auto-collinearity. Wrapper design itself work as a sum up of all other positive independent variable.

Packaging elements selected: Wrapper Design and Brand name.

4.1.4 Experiment 4



Fig 4. Admire Soap packet (source: Google Image)

The experiment is based on the Admire soap packaging. The variables and the descriptive analysis are:

Table 4.1.4.1: Descriptive analysis of Admire soap packet

	Mean	Std. Deviation
Admire Soap (Buying Intention)	3.80	2.041
Admire Soap [Packaging colour]	3.02	1.210
Admire Soap [Background Image]	2.77	1.054
Admire Soap? [Font Style]	2.64	1.163
Admire Soap [Wrapper design]	2.75	0.967
Admire Soap [Printed Information]	2.89	1.125
Admire Soap [Brand name or logo]	2.89	1.166

(Source: Own Analysis)

The centred mean value of the elements is 3 and for buying intention is 4. The descriptive analysis represents that the packaging colour has mean value above than centred mean. Whereas the background image, font style, wrapper design, Printed information, and brand name have low mean value. The buying intention of admire soap is also less than the mean value.

The Admire soap wrapper is chosen for experimental study, The unknown brand, beautifully designed but no as good as to increase purchase intention of the customer. The lines in packaging made for the dimensions of box shaped packaging may also affect the buying intention. The image is best fit for the fourth experiment of unknown brand with the unfamiliar packaging. To know the specific impact of packaging elements on buying intention, multiple regression model is run with hit and trails method of variable selection.

To know the quantitative impact on each element, the following regression analysis are:

Before removing insignificant variable

Table 4.1.4.2: Regression model summery (All variables)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.510	0.260	0.140	1.893	1.844

(Source: Own Analysis)

After removing insignificant variables

Table 4.1.4.3: Regression model summery (Selected variables)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.566 ^a	0.320	0.231	0.436	1.547

(Source: Own Analysis)

Table 4.1.4.4: Regression model ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3.406	5	0.681	3.580	.009
Residual	7.231	102	0.190		
Total	10.636	107			

(Source: Own Analysis)

The positive auto-collinearity is increased after removing the packaging colour from this analysis (Durbin Watson coefficient reduced from 1.844 to 1.547). The significance gain is .06. The model significance value ($.009 < .05$) with F Value = 3.580 implies that the variable is significant to derive the dependent variable i.e., the

buying intention of snickers chocolate with the R² (32%) variability captured by the model.

The packaging colour provide the base on the physical wrapper design, where other elements are printed on it. The five factors are critically affecting the buying intention of the admire soap. The unknown brand with less printed information along with the unconvincing designing and font style. The background image didn't connect the customer to the product. Overall only the packaging colour didn't impact the buying behaviour.

Packaging elements selected: Background image, font style, Wrapper design, Printed information, and Brand name.

4.2 Results (Study 1)

From all four experiments, the independent variables impacted the buying intention are:

Table 4.2.1: Study 1 Summery

Packaging Elements	Dominos Packaging	Nice Biscuits Packaging	Snickers Packaging	Admire Soap Packaging
Packaging colour				
Background Image				
Font Style				
Wrapper design				
Printed Information				
Brand name or logo				

(Source: Own Analysis)

- The packaging colour element is independent from any other packaging element, It puts the independent effect on buying behaviour, along with that the other packaging elements controls the impact of packaging colour. In

Dominos pizza and Nice Biscuits, The packaging colour overwhelms the other elements. Whereas in other two, even with the fine colour the packaging colour didn't impact at all.

- The background image and font style is least impactful packaging elements in the experiments. According to literature, The background image puts an high impact, but in our study, there is very little role of background image in experiments. The font style didn't matter much as compared to other materials.
- The wrapper design highly impact the buying behaviour of the consumer. Both physical and illustration design of the wrapper impacted the buying behaviour. In Nice biscuits, wrapper design didn't impact much but it is highly correlated with other variables.
- The packaging elements contains two broad variables according to literature review. i.e., The visual elements and the verbal elements. According to our research as following,

Table 4.2.2: Wrapper design correlation with other packaging elements

Nice Biscuits	[Packaging colour]	[Background Image]	[Font Style]	[Wrapper design]	[Printed Information]	Brand name
[Wrapper design]	0.628	0.617	0.705	1.000	0.654	0.539

(Source: Own Analysis)

- The printed information also put the high impact on buying behaviour, It works as a risk reducer of the customer towards the product. As, positive correlated with brand name.
- The brand name is one of the most impactful packaging elements. The brand name on the packaging highly increases the buying intention of the customer.

Font Style < Background Image < Packaging colour < Printed information < Wrapper design < Brand name or logo.

- The hypothesis is studied and H1 hypothesis is accepted that the packaging elements impacts the buying behaviour of the consumer.

Table 4.2.3: Verbal element and Visual Element

	Observed N	Expected N	Residual
Verbal	27	26.0	1.0
Visual	80	81.0	-1.0
Total	107		

(Source: Own Analysis)

Table 4.2.4: Chi square test of verbal and visual

	Verbal vs visual
Chi-Square	.000
df	1
Asymp. Sig.	1.000

(Source: Own Analysis)

The test is highly significant (100% > 5%) that the visual elements and verbal elements are not the same and visual elements impacted more than the verbal elements.

4.3 Study 2

The Study is based to test hypothesis 2, Risk will be low, when a product have a good packaging then the product with bad packaging

Procedure

The pictures of two companies of same product is used for the study. The survey 1 is based on one picture is based on bad packaging but the known brand and second one is for good packaging with a unknown brand (specially create for analysis). The chi square test and the descriptive analysis is done to find out the statistical validation of the hypothesis. The survey 2 is based on asking product assurance through packaging, where two images of same product but different companies is given for choice and asked for which image provide assurance about the product.

4.3.1 Survey 1

The survey is based on buying choice based on the images shown below.



Fig 5. Doritos chips packet (source: Google Image)



Fig 6. Well & Truly chips (source: Pinterest)

The frequency table are following as:

Table 4.3.1.1: Descriptive analysis (Good package vs Bad Package)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Doritos Chips	17	15.9	15.9	15.9
	Well & Truly Chips	90	84.1	84.1	100.0
	Total	107	100.0	100.0	

(Source: Own Analysis)

Well & truly chipis is selected by 84.1% of respondents (90) and 15.9% respondents chooses doritos chips. The doritos chips is the brand but the packaging is bad at some time. The same packaging is taken for analysis. Well and truly chips is a example of good packaging, a unknown or say artificially created brand for study purpose.

The majority of participants like well & truly packaging. Doritos is the known brand in chips industry but the packaging impact the buying intention as packaging reflects the product. It is derived that the packaging increase or decrease the confidence of the customer.

A chi-square test is also conducted to the significance and test the hypothesis. The analysis are following as:

Table 4.3.1.2: Chi Square frequency (Good package vs Bad Package)

	Observed N	Expected N	Residual
Doritos Chips	17	26	-9.0
Well & Truly Chips	90	81	9.0
Total	107		

(Source: Own Analysis)

Table 4.3.1.3: Chi Square test (Good package vs Bad Package)

	Good package vs Bad Package
Chi-Square	1.939
df	1
Asymp. Sig.	0.164

(Source: Own Analysis)

The chi-square value is 1.939, with the significance difference of 16.4% > 5%. This indicates that there is the significance difference between both the images.

The above study depicts that the responses of two images is different, and the well & truly chips has more frequency.

4.3.2 Survey 2

The survey 2 is based on asking about quality assurance.



Fig 7. Image 1 (source: Google Image)



Fig 8. Image 2 (source Google Image)

The frequency table are following as:

Table 4.3.2.1: Descriptive analysis (Image 1 & Image 2 Quality Assurance)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Image 1	49	45.5	45.5	45.5
	Image 2	58	54.5	54.5	100.0
	Total	107	100.0	100.0	

(Source: Own Analysis)

The both are D-Tan product, where both products have their own characteristics in packaging and the responses are purely based on the judgement derived by the respondents during survey. The image 1 provide assurance to 49 respondents whereas, the image 2 provide assurance to 58 respondents. The image 2 provide more assurance but the frequencies are undecisive to come at any conclusion.

The chi square test to test the hypothesis and model significance are:

Table 4.3.2.2: Chi Square frequency of Image 1 and Image 2

	Observed N	Expected N	Residual
Image 1	49	26	23.0
Image 2	58	81	-23.0
Total	107		

(Source: Own Analysis)

Table 4.3.2.3: Chi Square test (Image 1 & Image 2 Quality Assurance)

	Image 1 & Image 2
Chi-Square	9.818 ^a
df	1
Asymp. Sig.	0.002

(Source: Own Analysis)

The chi-square value is 9.818, with the significance of $0.002 < 5\%$. This indicates that no significance difference between both the images.

The above study depicts that the responses of two images is same, and there is no difference in choice of both the images.

4.4 Results (Study 2)

- The packaging work as a risk reducer as shown in survey 1.
- The literature reflects the brand name work as a risk reducer along with that the good packaging is also needed and interrelated with brand name to reduce the risk related to product quality.
- The product quality impacted the buying behaviour than price.

Table 4.3.3.1: Descriptive analysis (Product quality vs product price)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	29	27.3	27.3	27.3
	Yes	78	72.7	72.7	100.0
	Total	107	100.0	100.0	

(Source: Own Analysis)

Table 4.3.3.2: Chi Square test (Product quality vs product price)

		Quality over price
Chi-Square		.121
df		1
Asymp. Sig.		0.728

(Source: Own Analysis)

- The Chi square value of quality over price is 0.121 with significance difference of 72.8% > 5%. So, there is a significance difference between choices and result are derived that the preference is given to quality over price.
- The other variables such as age and gender are also considered as variable for impact on buying behaviour.

Table 4.3.3.3: Chi Square test (gender and age)

	Gender	Age
Chi-Square	4.364 ^a	75.758 ^a
df	1	1
Asymp. Sig.	0.037	0.000

(Source: Own Analysis)

- The gender and age have significance difference less than 5%. So, there is no difference among these variables and hence no impact on buying behaviour.

4.5 Recommendations

- It is strongly recommended that marketing and commercial divisions pay great attention to packaging. To better maintain and advertise a product, a packaging standard and plan should be established.
- Other researchers are advised to include other aspects of marketing, such as price and product quality, when studying packaging.
- The majority of new consumer product manufacturers use this label. They basically explain who created it, where it was created, when it was created, what it contains, how to use it, and so forth. They also believe that the product labels provide adequate information to consumers about how to use the products. The information on the label, as well as its value, must be stressed while promoting the product on the market. It has to be more practical from a technical standpoint.
- It is advised that the package designer should critically focus on brand name placement, wrapper design and printed information.

4.6 Limitations of the study

The study assumes the non-consideration of price in decision making. The assumption was taken to remove biasness in surveying package elements. But the price has impact on buying behaviour process.

4.7 Future Research Scope

- The packaging elements and which packaging elements affect the most is studied in this research. The quantitative study of interrelatedness will be conducted to more deeply analyse the packaging elements and more helpful in designing packaging for the product.
- The product used to know the packaging elements will also be studied and the scope of more extensive experimental research based on choice of products and difference of impact on different products is left for knowing impact on buying behaviour.

Chapter 5 : Conclusion

The goal of the study is to determine the impact of packaging graphics on purchasing decisions. The questionnaire approach and a basic random sampling methodology were utilised for this aim. The goal of the study is to determine the impact of packaging graphics on purchasing decisions. The questionnaire approach and a basic random sampling methodology were utilised for this aim. The packaging elements of different products and packaging i.e. known brand-unknown packaging (Nice biscuits), known brand-known packaging (Domino's pizza), unknown brand-unknown packaging (Admire soap) and impulse buying product (snickers). The results are derived after combining the results of all experiments that the brand name as packaging elements puts a maximum impact based on experimental analysis then wrapper design then printed information then packaging colour then background image and then font style.

After applying all SPSS test results, we conclude that the packaging elements impact the buying behaviour of the individual.

The majority of buyers are satisfied with the product quality after acquiring their favourite packaged item, according to the data. Based on those data, we can't declare that good packaging equals good product quality 100 percent, but there is a favourable thinking and tendency that well-designed packaging equals high product quality.

The people are more influence from visual elements then verbal elements, The visuals have more impact on buying behaviour then verbal elements. The age and gender didn't show any impact on buying behaviour process.

The buying behaviour is a constant. That changes from time to time. Varies from people to people and demographics etc. The study was conducted to focus on broad perspectives and deriving the results based on statistical tests to replicate the current behaviour as much as possible.

References

1. Dubinsky, A. J. (n.d.). *Effect of brand name on consumers' risk perceptions of online shopping*.
2. *Indian Residential Real Estate Consumer Sentiment Survey*. (2019).
3. Kuvykaite, R., Dovaliene, A., & Navickiene, L. (n.d.). *IMPACT OF PACKAGE ELEMENTS ON CONSUMER'S PURCHASE DECISION*.
4. Mansor, M., Irfan Malik, M., Shehzad, U., Ahmad, S., Iqbal, K., Nawaz, M., Usman, S., & Scholar, P. (2014). *Influence of Brand Name on Consumer Choice & Decision Related papers Impact of Brand Image and Advertisement on Consumer Buying Behavior Mellica Smit h Impact of Brand Image and Advertisement on Consumer Buying Behavior Qasim Nisar Academia (M.Phil Scholar) (M.Phil Scholar) (M.Phil Scholar) (M.Phil Scholar) (M (Vol. 16)*. www.iosrjournals.org
5. Parmar, V., Steinberg, A. M., Raheem, A. R., Vishnu, P., & Ahmed, A. M. (2014). IMPACT OF PRODUCT PACKAGING ON CONSUMER'S BUYING BEHAVIOR. *European Journal of Scientific Research*, 122(2), 125–134. <https://doi.org/10.13140/2.1.2343.4885>
6. Silayoi, P., & Speece, M. (2004). Packaging and purchase decisions: An exploratory study on the impact of involvement level and time pressure. In *British Food Journal* (Vol. 106, Issue 8, pp. 607–628). <https://doi.org/10.1108/00070700410553602>
7. Simmonds, G., & Spence, C. (2017). Thinking inside the box: How seeing products on, or through, the packaging influences consumer perceptions and purchase behaviour. In *Food Quality and Preference* (Vol. 62, pp. 340–351). Elsevier Ltd. <https://doi.org/10.1016/j.foodqual.2016.11.010>
8. Zirra Tizhe Oaya, C., Newman, O., & Ezie, O. (2017). Impact of Packaging on Consumer Buying Behavior in Nasarawa State. *International Journal of Sciences: Basic and Applied Research (IJSBAR) International Journal of Sciences: Basic and Applied Research*, 36(4), 28–46. <http://gssrr.org/index.php?journal=JournalOfBasicAndApplied>
9. Rundh, B., 2005. The multi-faceted dimension of packaging. *British Food Journal*, 107 (9), 670-684.
10. Silayoi, P., & Speece, M., 2007. The importance of packaging attributes: a conjoint analysis approach. *European Journal of Marketing*, 41 (11/12), 1495-1517.
11. Kotler, Ph. (2003) *Marketing management*, 9th ed. Upper Saddle River: Prentice-Hall.
12. Keller, K. L. (2003). *Strategic brand management: Building, measuring and managing brand equity*, 2nd ed., Englewood Cliffs, NJ: Prentice-Hall.
13. Hausman, A. (2000), "A multi-method investigation of consumer motivations in impulse buying behaviour", *Journal of Consumer Marketing*, Vol. 17 No. 5, pp. 403-19.
14. Khasawneh, & Hasouneh. (2010). The effect of familiar brand names on consumer behaviour: A Jordanian Perspective. *International Research Journal of Finance and Economics*, 43, 33-57.
15. Smith, P., & Taylor, J. (2004). *Marketing communications: an integrated approach* (4th edition). London: Kogan Page.

Annexure: Questionnaire

What impact your buying behaviour

The form is meant to know about the factors or visuals that affect your buying behaviour.

We respect your privacy

* Required

1. Gender *

Mark only one oval.

Male

Female

2. Age *

Mark only one oval.

16-24

25-34

35-44

45-54

55+

3. Do you prefer quality (based on packaging) over price? *

Packaging includes all visuals, details and design of the product.

Mark only one oval.

Yes

No

4. Does the product visuals (packaging) provide some assurance about quality? * (please take help of images).

Mark only one oval.



Is image 1 provide quality assurance than image 2

Is image 2 provide quality assurance than image 1

5. What affect you the most? visual element or verbal element on packaging? *

Verbal element is text on packaging. example: product information, brand name etc. Visual information is colour, design etc. Generally, visual element attracts the customers first and then verbal element. you can refer the time spend on buying a unknown product.

Mark only one oval.

Verbal

Elements

Visual

Elements

6. What would you choose among the following when you see both product on * shop rack with a same price?

Mark only one oval.



Doritos chips



Well & truly chips

Your Preferences

To Know what you prefer!, Don't consider pricing in decision making

7. What attracts you the most to buy this product? *



Mark only one oval per row.

	1	2	3	4	5
Packaging colour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Background Image	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Font Style (ex: Arial font style)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wrapper design (ex: pizza in pizza shape box)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Printed Information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brand name or logo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Will you buy dominos pizza after looking at its packaging? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

9. What attracts you the most to buy this product? *



Mark only one oval per row.

	1	2	3	4	5
Packaging colour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Background Image	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Font Style (ex: Arial font style)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wrapper design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Printed Information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brand name or logo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. Will you buy nice biscuits after looking at its packaging? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

11. What attracts you the most to buy this product? *



Mark only one oval per row.

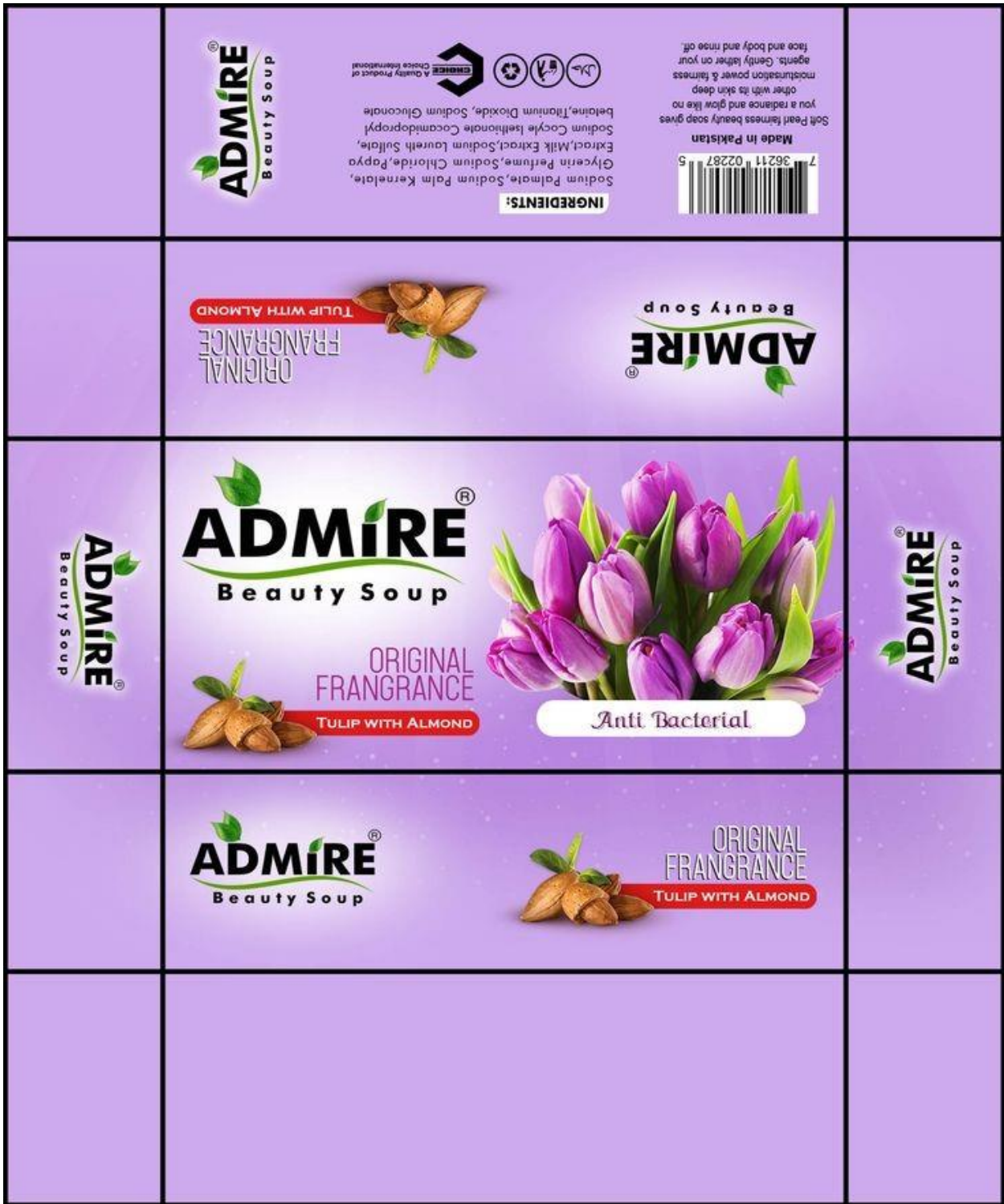
	1	2	3	4	5
Packaging colour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Background Image	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Font Style (ex: Arial font style)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wrapper design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Printed Information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brand name or logo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Will you buy snickers after looking at its packaging? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

13. What attracts you the most to buy this product? *



Mark only one oval per row.

	1	2	3	4	5
Packaging colour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Background Image	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Font Style (ex: Arial font style)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wrapper design	<input type="radio"/>	<input checked="" type="radio"/> 55	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Printed Information



Brand name or logo



14. Will you buy admire soap after looking at its packaging? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

This content is neither created nor endorsed by Google.

Google Forms