

PRODUCT PACKAGING CRITERIA THAT AFFECT  
CONSUMER INTENTION TO BUY

KAM JIA YING

BACHELOR OF INTERNATIONAL BUSINESS  
(HONOURS)

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF ACCOUNTANCY AND  
MANAGEMENT  
DEPARTMENT OF INTERNATIONAL BUSINESS

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BY

KAM JIA YING

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Student ID

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KAM JIA YING

I8UKB03955



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## DEDICATION

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## LIST OF ABBREVIATION

TRA	Theory of Reasoned Action
CPI	Purchase Intention
PI	Packaging Information
PM	Packaging Material
PA	Packaging Attractiveness
SPSS	Statistical Packages for Social Science
SUPs	Single Use Plastic
MPMA	Malaysian Plastics Manufactures Association

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## PREFACE

In this typical rushing life, most of the consumers prefer to spend lesser time on searching for and purchasing the certain products they require. Nowadays, the technology development in product manufacturing and distribution have resulted in a massive increase in the number of products available in the market. In the circumstances where the products are identical and hard to differentiate, enhance in the brand parity can lead to consumers more difficult to make the purchase decision. Manufacturer and marketers should set themselves out from their competitors. Hence, product packaging has become a key technique to distinguish and attract consumers intention.

## ABSTRACT

Nowadays, many industries are facing intense competition, which causes manufacturers to make more efforts to improve the communication ability and quality of their product packaging to help following the changes of consumer needs and attract consumers. Therefore, this study ‘Product Packaging Criteria that affect Consumer intention to buy’ aims to understand consumers' perception of product packaging design and examine whether the packaging elements can affect consumers' purchase intention to purchase certain product. This study may provide for those manufactures and marketers with a clear knowledge of the packaging elements that affect consumers purchase intention when shopping. Besides, this study may also be as a source or references of knowledge for those researchers who intend to conduct relevant research in the future.

The theory that applied in this study is TRA because it is relevant to this research and may assist the researchers and viewers have a better understand on consumer purchase intention. Besides, the quantitative research method to collect the analysing and collect the relevant data for this study. In addition, Klang Valley has been selected as the data collection location for conducting the contribution of questionnaire in this study. To undertake the analysis, which include descriptive analysis, pilot test, reliability test, and inferential analysis, all data collected was analysed using SPSS Version 25.



# **CHAPTER 1: INTRODUCTION**

## **1.0 Introduction**

Product packaging is regarded as a sales promotion technique for businesses. Product packaging improvement is thought to be one of the most viable techniques that organisations can use to attract consumers. Appealing and distinctive packaging help the product stand out from similar products and act as a primary motivator of purchase intent.

## **1.1 Research Background**

Products refer to a tangible subject that use to fulfil people' requirements. Not only the product entity that consumer purchase, but also purchase the core benefits of the product. The entity of product is the basic form of the product and build-up of various elements such as quality, protect ability, satisfaction of needs and wants, as well as packaging. Only by relying on the entity of the product, the core benefits of the product just can realize. The expectation of product is a range of attributes and conditions that consumers expect when purchasing. According to Ansari & Siddiqui (2019), consumers adept in seeking on new products to satisfy their needs and wants through the product attractiveness, consumer' perception and preferences.

Nowadays, packaging plays an important role in this highly competitive field of marketing and business, meanwhile packaging is one of the issues that concern among companies by maintain the market trend, attract consumers, expand business entity (Adebisi & Akinruwa, 2019). Consumers have the potential to include in the target market with their own purchase experience; hence, instead of 4P marketing mix, product packaging also can be considered as one of the minor elements in marketing strategy, which can stimulate the consumer purchase intention (Ansari & Siddiqui ,2019). Other than that, packaging is often the first and last impression of products that represent for the consumers. It is essential to ensure the packaging can secure the well imagery, brand value and products functionally. It is a must for those

development companies who manufacture same product category to differentiate their product packaging with competitors in the same market environment. Adebisi & Akinruwa (2019) mentioned that, consumers may not have pre-knowledge or information towards certain products; thus, the consumer's intention to buy is mostly affected by what the products would like to be communicated for consumers. In addition, packaging can be referring as the container for the product by adding extra value through some criteria or features on the packaging such as packaging material, packaging colour and packaging information, which is the characterizes most of the purchase behaviour (Ansari & Siddiqui, 2019).

Packaging design is a purchase touch point that consumers often experienced and enriched the consumers perception towards the products. Mutsikiwa & Marumbwa (2013) stated that, packaging appearance can be the factor which is more powerful than advertising to influence the consumers' purchase decision. Therefore, it is essential for marketers fully identified the consumers' requirements, as well as the attitude and impression on the packaging, which can affect the purchase decision. Packaging is an opportunity for marketers to persuade consumers what are the brand and what is believe in and act as a potential method to emphasize the brand identity. It is important to classify the elements on packaging design such as company logo, fonts, colours, trademarks, symbol that associated with company to represent the accurate brand story and let consumers to recognize easily Furthermore, packaging also use to protect the product to avoid or reduce the risk of damage. Packaging is a potential promotion tool which can attracting consumers towards the certain product and help to increase the product sale and reduce the marketing costs.

Based on Henkes, Cloetingh & Winter (2018), identified that the landscape of packaging is undergoing a transformation and resulted three notable changes. Firstly, the rising trend of sustainable packaging. About 40% of brand marketers mentioned that most of the brand was planning to switch half portion of volume to sustainable packaging in the future such as conduct shorter and high profitable packaging process. People change their product choice through express the concern on sustainability. About 61% of consumers have limited the use of SUPs whereas the 34% of consumers choose the brand value or practice which has environmentally sustainable (Stanley, 2021). The brand image is built up from

packaging; thus, the aim for brands switch to sustainable packaging is wished to connect the adding value with consumers. The concept of circular economy become more influential in this recent year; the recycled packaging design also become a critical part during the packaging process. Most of the brand developers try to reduce the volume of packaging, because 'less is more' is the touch point that strength the sustainable credentials. Stanley (2021) stated that, Plastic become one of the environment enemy; thus, the trend of sustainable substitutes gradually increases.

Secondly, brand owners founded that the concern on healthy and natural products perform a good image. A result showed that, 23% of respondents cited that the alternative of healthy and natural can become the main driver of market growth (Henkes et al., 2018). For example, consumers who are concern on the healthy lifestyle will start taking care to have a look on the nutrition labels of food and ingredients, which try to seek out the products that are suitable for them with health benefits. Consumers try to reduce the indulgence products and seeking the natural and organic substitute snacks to achieve their health lifestyle (Hassan, Lee & Wong, 2012). Consumers have high requirements on products and will decide to buy from different perception. People are more concern on healthy lifestyle, meanwhile eager to pursue a more knowledgeable life. They will habitually acquire extra or more consultation through Internet. Ordinary packaging standards or consulting content are no longer satisfy people's desire. People request explore more new knowledge. Thirdly, innovation is a design language. Product innovations motivated the changes of packaging with adding value and leads become creative and differentiated packaging. Packaging can communicate the diversity through launch out new flavour profiles, latest technology features and creative packaging design. For instance, the innovation of Japanese packaging design. For Japanese innovation' design is more concern about function and quality. Such as using the scientific theoretical concept, technology advanced to improve the packaging functional.

## **1.2 Research Problem**

According to Malaysian Plastics Manufacturers Association (MPMA) (2021), plastics play a vital role in food packaging because it helps to protect and preserves food, which have the greater hygiene, barrier properties, waterproof and easy to deliver, as well as the cost of plastics is relatively low. Non-plastics packaging material is one of the materials that commonly used by food and beverage industries, also knowns as single-use plastic (SUPs). However, the plastic pollution is admitted, especially on the food packaging plastics account for most of the plastic waste that pollutes the environment (Ncube, Ude, Ogunmuyiwa, Zulkifli, & Beas, 2020). Most of the packaging of food product is designed as single use. According to Bodamer (2016), many food packaging found in waterways and be seen on the road anytime, anywhere. Thus, the problem of food packaging on the environment is huge. There are around 10370 littered pieces of food packaging containers had been clear out across 90 regions of the US and the plastics had occupy 20% of the total waste in 2019 (Chu, 2019). Food packaging is the largest growth sector in the synthetic plastic packaging market. Different types of materials are used to make packaging materials, and the food industry alone uses more than two-thirds ("Why do we need plastics for food packaging", 2021). Due to changes in food preparation and consumption habits, as well as positive developments in various regions and markets, this number is constantly increasing. Before the emergence of Covid-19, Malaysia had reached the highest annual per capita plastic use with the 16.78kg per person ("WWF Releases Report Proposing Effective Solution to Mitigate Plastic Pollution in Malaysia", 2020). Follow with the trend of take away culture and online delivery services had significant assimilate into Malaysians' life, this issue become worst in 2020. Because it is much easier and convenient on online purchasing but also easy to cause the impact of environment due to more of them using SUPs packaging. MPMA stated that, the demand of plastic increase and the production of plastics rose 0.7% in 2020 (Yeo, 2020). As a result, there are 148000 tonnes of plastics food packaging used by Malaysians ("Why do we need plastics for food packaging", 2021). Hence, plastic pollution already become one of the spotlights in Malaysia.

Each consumer having different background and culture so they may perceive different value and understanding towards the significance of packaging design. It is important for marketers to take consideration of culture differences, especially

for those international industries. According to Raheem, Vishnu & Ahmed (2014), the perception on colours is quite different on the perspective of packaging. For example, the brand of British chocolate producer, Cadbury had conducted a market research based on various culture background towards their purple wrapper. The result showed that the purple wrapper has different perceptions from different countries (Wooten, 2011). Hence, the perceived of product packaging and sale marketing strategy of products in different countries are based on the culture differences. Moreover, the standardization of packaging can be an efficient tool for marketers to recognize which packaging criteria is more appropriate localization by respecting different cultural taste and preferences. For example, a Swedish tampon brand, Libresse had launched out a limited-edition collection tampon ‘V-Kebaya’ in Malaysia with a new packaging design that include the combination elements of Nyonya-style Kebaya outfits and feminine parts. The purpose is to educate ladies about their bodies, breaking down the V-zone taboos, normalizing the perspective of V-Zone taboos by an open and respectful manner. However, this new packaging design had caused a backlash in the Muslim society. The Malaysia’ Women’s Council criticism that, the packaging design will not be accepted from the cultural and religion value because the decency norms is violate of the Malaysian society. Hence, they shout for Libresse to remove those relevant advertisements (Ragavan, 2021). In short, consumers may misunderstand the purpose and meaning of packaging, obscuring the potential of designers to interact with consumers through packaging because consumers may have negative comments due to lack of thorough understanding as they only rely on the first impression and appearance of package to judge the first instinct.

To guide the health-conscious consumers towards healthy products, marketers amend packaging design, add extra labelling information, or change the brand name, especially for the food products. Consumers able to intuitively differentiate various types of food product into ‘healthy’ and ‘unhealthy’ categories (Theben, Gerards & Folkvord, 2020). However, from the research of Trinidad, West Indies, Peters-Teixeira and Badrie (2005), due to the complexity of product packaging, consumers may lazily go through each product information that labelling on the packaging. Meanwhile consumers may look on some of the slogan on the packaging. To save the shopping time, consumers may only focus on key words or trademarks, such as

'low-in-fats', 'zero-calories', 'less sugar' or they may use some personal senses to judge whether a product meets their requirements which denote health, such as believe in the green colour act as the natural colour to increase their purchase intention (Theben et al., 2020). Moreover, according to the Popovic, Bossink & Sijde (2019), there are highly associated between the consumer' purchase intention towards packaging and the individual factors, as well as product ingredients. The product ingredients which label on the packaging was quite essential for the consumers such as Muslim consumers. For example, packaging information and personal knowledge are important for Muslim consumers making decision because they need to classify product ingredients, which help them choosing the right Halal-products (Ruangkanjanases, Sermsaksopon & Simamora, 2019). In addition, the issues of familiarity on the product ingredients on packaging and the safety product content also become one of the elements for Muslim consumers to take consideration. In short, it has not been clear how consumers use to determine whether the products they want to buy meet their desired health standards and unclear whether different personal perceptions affect consumers' attitudes and consumption intentions (Theben et al., 2020).

### **1.3 Research Objective**

The objective of this research is to study how the packaging elements affects the consumers' intention to buy products in Malaysia. To be more specific, the study was conducted through few objectives as follows:

- To ascertain the effect of product packaging information towards consumers' purchase intention
- To examine the quality of product packaging material towards consumers' purchase intention
- To identify the relationship between the aesthetic elements and the consumers' purchase intention

## **1.4 Research Question**

The questions of this research are:

1. Is there a relationship between consumer purchase intention and packaging information?
2. Is there a relationship between consumer purchase intention and packaging material?
3. Is there a relationship between consumer purchase intention and packaging attractiveness?

## **1.5 Significance of Study**

This research will able provide the valid and reliable information among packaging area, which may be beneficial for researchers who are interested in this relevant topic in the future. Besides, assist marketers to implement effective and sufficient marketing strategy on the product packaging process, which will ultimately to stimulate the market awareness and product sale. From the respondents' feedback, marketer can be more grasp on ascertain the most attractive packaging strategy and criteria through the classification of prospective consumer' behaviour in the future. Lastly, this study may contribute benefits for marketers explore more innovation idea, which allow to deliver more advanced technology, enhance quality of packaging, and to be more efficient and effective features.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.0 Introduction**

This chapter is devoted to a broad discussion of previous researchers' literature reviews, as well as the issues and motives for conducting this research. This chapter also serves as a basis for the rest of the study, which include theoretical model, conceptual framework, and hypothesis development.

### **2.1 Review of Relevant Theoretical**

#### **2.1.1 Theory of Reasoned Action (TRA)**

TRA indicated the development of a system for observing two categories of variables, namely attitudes and subjective norms. Attitude known as a positive or negative sensation in relation to the achievement of an objective whereas subjective norms are the reflections of the individuals' perceptions in relation to the ability for reach the goals with the product (Salgues, 2016). TRA placed a greater emphasis on the intention is more important than the reality of usage. In fact, people purchase with intention because it's what they want to do, not because they have genuine need for the model they belong to (Salgues, 2016).

Alternative explanation could be found in the research of Belleau, Summers & Pinel (2007), TRA is the assumption that people are rational and utilize knowledge in a systematic way. The addition of perceived behavioural control considerably improved the prediction of intention and behaviour. TRA is capable of accurately predicting behaviours that are simple and under volitional control. As a result, employing the TRA will yield a reliable prediction of purchase intention. Additional external variables like past experiences, involvement or past behaviour also might also be incorporated in the model to contribute in the predict of behaviour (Belleau et al., 2007).



A series of recent studies have indicated that the concept of engagement for the crucial role, which plays in understanding consumer. The research of packaging elements Raheem et al., (2014) and Purwaningsih, Surachman, Pratikto & Santoso (2019) concurred that different involvement levels on purchasing can result to diverse consumer responses.

Others past studies also looked at the effects of the marketing variables and external stimulus such as advertising, promotion and packaging towards the consumer intention and behaviour. Past studies can help to have a better understanding of the differences between the various product brands, but it still not clarifies clearly whether these differences contribute to purchase decisions. Hence, to fulfil this research gap, it is recommended to introduce an extensive model to explain purchase behaviour of consumers through a social psychology point of view.

## **2.2 Review of Variables**

### **2.2.1 Purchase Intention**

Purchase intention refers to the initiative to purchase a product or service. Intention is an ability to act with certainty. Purchase intention can define as "a possibility that a consumer will intend to purchase a product or service in future" (Mahmoud, Ibrahim, Ali & Bledy, 2017). A positive purchase intention encourages a customer to make a purchase, whereas a negative purchase intention discourages a customer from making a purchase. Research of Yeo, Lim, Goh & Tan (2015) classify that, purchase intention is a useful tool for marketers understand the purchasing process of consumers; therefore, purchase intention is a critical aspect for firms to obtain the competitive advantages in the market. Chi (2013) further stated that purchase intention also discovered through the benefits and values of a given product or service.

The process of consumers purchase is influenced by several elements, including price, packaging, advertising, and previous experience. Internal and external search are used by consumers while purchasing products. Internal searches are based on consumer's previous product experience whereas external search is based on the opinions of other consumers who have shared their experiences (Waheed, Khan & Ahmah, 2018). Besides, purchase intentions also influenced by product types, demography, and customer emotion. Consumer purchase intentions are the probability of buying a product in the future. In other words, customers are more willing to buy a particular product after analysing it. (Waheed et al., 2018). From the past study of Liat & Wuan (2014), if an individual has planned to buy a specific product over a period, then the purchase intention will gradually arise. If there is a considerable period between intention and action, then the purchase intention will be diminished. Thus, consumer purchase intention also depends on time.

### **2.2.2 Aesthetics Concept**

Aesthetics concepts can designate as a set of philosophy that combine with the nature, beauty appreciation and artistic taste. Aesthetics can be represented by the beauty, good taste or appreciation of colour and form, the beauty and art on the packaging design of the outward features for the product is essential (Pathak, 2014). Aesthetics elements used to attract the target market and further to stimulate purchase behaviour of consumers. The principle is to highlight from various of competing products and brands through unique and attractive packaging, thus outwit products and ultimately triggering buying behaviour; hence, packaging design is important for the marketers. In this study, the emotions and related physiological responses can be produced through the aesthetics design elements on packaging, which include graphics and colour, material, and information. Visual stimuli on packaging capture consumers' attention and

lead to the formation of product perceptions, which have substantial impact on consumers' purchasing decisions (Mohebbi, 2014).

### **2.2.2.1 Packaging Information**

One of the main functions of packaging is deliver the product details to the consumers. A good packaging can become a good communication tool at the point of sales. It is essential to include more details information and understood symbols on the packaging ("What is Packaging? - Meaning, Importance & Qualities of Good Packaging", 2019). Information that labels on the packaging able to communicate the entire product to the consumer and plays an important role in consumer purchase decision (Imiru, 2017). Handfield (2017) classify that, too much of product information that marketers want to deliver to the consumers; however, marketers should take consideration to the strict requirements and regulations of product packaging and labelling.

Consumers concern on the extrinsic packaging attributes to guide their purchase intention and decision; hence, marketers plan to expand the information on packaging labelling as the marketing strategy and tools. A considerable of literature on packaging information can be known as one of the potential predictors to influence the consumer buying decision. According to Hassan et al., (2012), when consumers make their buying decision, they may frequently rely on the packaging information. They tend to read the information on the label more frequently to check quality, even if graphics, colour, size, or shape could confuse them. Therefore, nutritional information, country of origin, and manufacturer information on the item are samples of information on the packaging that has substantial impact on the consumers' purchasing choice. Research of Imiru (2017) suggested that, packaging as one of the valuable tools which need to detailed analysis to affect the consumer buying behaviour such as more detailed analysis on the nutritional information on the packaging, which able to provide higher value to the consumers compare to other packaging information displayed.

Besides, Ehsan & Samreenlodhi, (2015) discovered that, the packaging information able to deliver and have the influence on buying preference of consumers. From this study, the packaging information able to enhance and boost reliability of product to the consumers such as guide them the method of usage and other appropriate information.

#### **2.2.2.2 Packaging Material**

Packaging material is one of the vital elements that use to wrap the products and protect it to avoid from damaged thus incurring losses. The most common material that marketer use includes plastic, glass, metal, paper, cardboard, and composites (Rahman, Harun & Johari, 2020). Material can influence the perceive quality of products, which deliver the value from consumers towards certain product (Farooq, Habib & Aslam, 2015). Nowadays, consumers request more stylish and uniqueness because materials and packaging have the power to affect the product' sales; hence, they prefer better outlook of packaging. A product with good quality, but without effective and greater packaging materials, will reduce its attractiveness. Furthermore, the perception of consumers towards the certain packaging materials may different the product' perceived quality. Ehsan & Samreenlodhi (2015) stated that, the high quality of packaging is more attractive than low quality packaging. From their research, they proven that an equal connection between buying behaviour and quality of material use. Hence, consumer purchase decision on product may depend on the packaging material.

Nowadays, the selection of packaging material can be evaluated with the criteria of material types, environmental protection, economic trend, and product design. However, due to technology advanced, materials gradually evolved into the material which being processed to improve it quality and durability on packaging. Packaging material can attract consumers because

it can improve the shelf life of products and protect from external as well as easily on shipment (Ahsan Ansari & Siddiqui, 2019). For instance, consumers may need to store unconsumed products until the next use, so a good packaging material that can effectively preserve the product for the next use is quite important for consumers. Therefore, Adebisi & Akinruwa (2019) suggested that, marketers should focus on the nature of the product packaging material which help on preservation.

### **2.2.2.3 Packaging Attractiveness**

Packaging attractiveness refers to the ability of packaging to entice consumers through its appearance and make the product self-sellable with vibrant colours, eye-catching images, and inventive packaging forms (Bob-Alli, 2020). Graphics and colour are important variables in influencing consumer's buying choice, so marketers should not overlook them in packaging because it plays a vital role in attracting. Mohebbi (2014) explain that, image arrangement, colour combinations, typography, and product photography are all examples of graphics. As a result, it has been discovered that external product cues, such as packaging colour, have an impact on purchasing decisions. Consumers who are rushing might concentrate on colour and packaging design to make purchasing judgments; hence, consumers can make a purchase decision immediately differentiation between similar competitor products is achieved through graphics and colour (Ahsan Ansari & Siddiqui, 2019).

Color is an important part of design since it usually vivid and memorable. Colour should choose carefully to create an attractive design packaging (Rahman et al., 2020). Pathak (2014) stated that, colour choices are impacted by trends; consumers may choose colours based on current fashion trends. Consumers are greeted with a selection of products in numerous packaging colours when they visit a supermarket. With different product categories, each packaging colour has a distinctive contribution that varies, so that it is necessity to ensure that colours are properly matched to

maximise the efficiency and efficacy of their eventual synergistic contribution to consumers' buying behaviour (Mutsikiwa & Marumbwa, 2013).

Consumers are more likely to buy products whose packaging colours catch their eye. In management perspective, the packaging colours has the potential of triggering the consumers purchase intention; hence, colour is crucial in a potential customer's decision-making process since different hues evoke different moods (Waheed et al.,2018) & (Rahman et al., 2020). Another explanation is that consumers also tend to identify certain colours with their personal tastes and values (Yeo et al., 2020). Many color-coded signals relate to specific product categories in packaging applications. As Ashaduzzaman & Mahbub (2016) discovered that, colour is one of several visual elements that influence consumers' purchasing decisions. Consumers who enjoy novelty may be drawn to and choose colours that are dissimilar, or unusual. Colour selection is crucial in establishing the impression that will impact brand and product decision. Ashaduzzaman & Mahbub (2016) further stated that, in photography perspective, females are more attracted to colour than males.

The graphic on packaging is described as the images that appear on the product packaging. Graphics are becoming increasingly important in modern marketing since they help to make things stand out on the shelf and capture the attention of customers (Mohebbi, 2014). According to Yeo et al., (2020) 's research, the graphic design of the package, such as the image on the packaging, will help to construct the product's brand and create its own identity, allowing consumers to distinguish it from comparable products supplied by competitors.

Furthermore, the higher the quality of the image for packaging, the greater the possibility of buyers feeling confident about the product's quality (Farooq et al., 2015). The image on the packaging is used to entice purchase decision of consumers. Yeo et al., (2020) stated that, the right picture for a product packaging that is associated and identifiable to the brand can aid to

attract consumers' attention and influence their purchase intention. The packaging graphics make the product brand stand out, help it preserve its identity, provide weight to the brand, and help it stand out on the shelf. Graphics adds value to a brand's appearance and improves its aesthetic quality. Furthermore, it's to produce a favourable sensation and match graphics or to fulfil a customer's long-held secret aspirations.

Product graphics enable customers to recognise their favourite goods in a variety of products; even if they don't have strong preferences for the brand, visuals will attract their interest. Graphics characteristics driven buyers' decisions to make a purchase. Based on Lynsey Hollywood (2013), graphics on product packaging might pique a consumer's interest in that product.

## 2.3 Conceptual Framework

Figure 2.1: Proposed Conceptual Framework

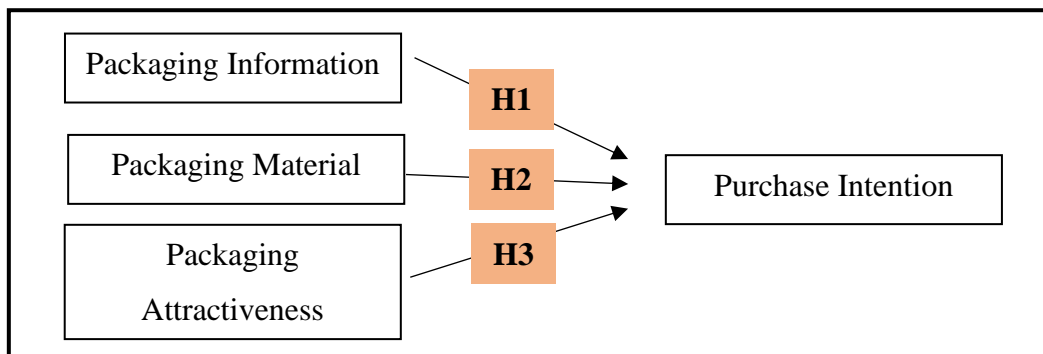


Figure above depicts the proposed research framework of this study. There are three independent variables which include packaging information, packaging material and packaging attractiveness whereas purchase intention is the dependent variable. Refer to the some of journal's articles and research papers, these three independent variables have correlation towards consumer' purchase intention toward products.

## **2.4 Hypothesis Development**

### **2.4.1 The relationship between packaging information and consumer purchase intention.**

Several studies have showed the relationship between packaging information and consumer purchase intention. The research of Carneiro, Minim, Deliza, Silva, Carnerio & Leao (2005), they apply a specific product to explore how the attributes of product packaging information affect the consumers' purchasing intentions. They explored that the study by creating 16 hypothetical questions about soybean oil packaging and categorizing consumers into four different groups with different needs. The results showed that consumers in two groups were placed a high value on the on the label characteristic "information on soy-bean type". It is proving that the sub-elements of product packaging information could affect the consumers' purchase intentions. Other than that, 79% of respondents prefer to look out on the organic food' information which printed in it packaging; thus, the information that printed on the product packaging had positively affected the consumer purchase intention (Lucia, Minim, Silva, & Minim, 2007). However, the research of Waheed et al., (2018) stated that, the printed information on packaging was remain statistically insignificant with the dependent variable, purchase intention.

**H<sub>1</sub>: Packaging information has significant relationship on influence consumers' purchase intention.**

### **2.4.2 The relationship between packaging material and consumer purchase intention**

From the finding of Mohamed, Medina & Romo (2018), packaging material is the most attractive features, which becomes the most important elements on packaging and direct affect the consumer purchase intention. In fact, consumers are more tend to user-friendly material, which has better practical to resistance to any sort of damage. The results showed that consumers



prefer plastic packaging on cosmetic products because of the convenience and attractive appearance of plastic to convey the image of quality products. Another past study examines the most important packaging factors that have that strong affection on the consumer' purchase intention. As a result, all the packaging elements that used to conduct in that certain study have the significant relationship with the consumers purchase intention; however, the packaging material is the most important factors which able to strongly influence the consumer' purchase intention (Zekiri & Hasani, 2015). Several studies argue that, there is negative relationship between the packaging material and consumer purchase intentions. From the past study of (Mazhar, Daud, Arz Bhutto & Mubeen, 2015) and (Waheed et. al., 2018) clear stated that the packaging material has not ability to affect the consumer purchase intention and the hypothesis had been rejected.

**H<sub>2</sub>: Packaging material has significant relationship on influence consumers' purchase intention.**

### **2.4.3 The relationship between packaging attractiveness and consumer purchase intention**

Adapting from the research of Waheed et. al., (2018) and Chan & Anuar (2019), both researches discovered that the packaging aesthetics elements can help consumers to differentiate various brand in same product category and release the attractiveness to catch the attention and interest of consumers. Hence, there is a considerable of literature on packaging colour has significant relationship with purchase intention. Next, Deliya & Parmar (2012) mentioned that consumer able to adopt the product on the behalf of the packaging background, which beneficial for marketer to create the innovative products with suitable background image. A finding demonstrated the visual elements affected the purchase intention of consumers, there are 36.43% of respondents mentioned that colour had been classified as one of the attractive visual elements on the packaging (Mohamed et. al., 2018). Thus, it proved that the impact of colours arouses

the interest of consumers purchase intention and motivates their purchase decision.

322 respondents had participants into the Mohebbi (2014)'s packaging research. From this study, packaging graphic and purchase intention of consumers have significant relationship, which means the graphic design on junk food package can affect consumer purchase intention in the end. Moreover, extensive past study discovered that, the packaging elements which include design, graphics, colour, shape and size, and material affect the dependent variables. All the hypothesis that tested in both study (Farooq et al., 2015) and (Yeo et al., 2020) had showed that, all the elements on packaging are positively correlated with the purchase intention of consumers. Therefore, it is proved that attractive packaging graphics able to attract consumers and effect their purchase intention. In addition, the study of Yeo et al., (2020) will be quite useful for Malaysia' marketers because there is little research on the packaging business in Malaysia, so that marketer can take consideration on this.

**H<sub>3</sub>: Packaging attractiveness has significant relationship on influence consumers' purchase intention.**

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.0 Introduction**

The chapter cover on the numerous ways that must be employed to collect data from 200 respondents. The methodologies and ideas utilised to gather, analyse, and evaluate the secondary data collected from the 200 respondents are also covered in this chapter.

### **3.1 Research Design**

Research design is a strategy that guides the researchers choose to incorporate into the research through a logical manner; hence, the formation of a framework with collecting, measuring, and analysing data to effectively solve the research problems (Uma & Sekaran, 2013). This research adopted quantitative approach and descriptive research to investigate the determinants of consumer purchase intention towards product packaging elements. This aided in the analysis of the responses received in terms of how they affect consumers purchase intention.

#### **3.1.1 Quantitative Approach**

Quantitative approach that involves gathering and analysing numerical data objectively to characterise, predict, or regulate variables. According to McLeod (2019), the goal of a quantitative method is to look for causal relationships between variables, make a prediction, and extrapolate results to a broader group of people. Therefore, quantitative approach will be conducted and implemented to collect the data from the targeted respondents in Klang Valley area.

### **3.1.2 Descriptive Research**

Descriptive research can correctly and methodically characterise the characteristics of the population being researched (McCombes, 2020). Descriptive research entails observing a phenomenon and determining its properties, or exploring the relationship between two or more variables (Williams, 2007). Hence, it used to determine which packaging elements could affect the consumer purchase intention.

## **3.2 Sampling Design**

### **3.2.1 Target Population**

Zikmund, Babin, Carr, & Griffin (2013) mentioned that, the target population is the entire group of people who share similar features and have information that researchers want to generalise. In this research, the target population are Malaysians who could determine their own purchase intention. There is no age and income restriction because the respondents can purchase on behalf of their parents, peers, or friends even they do not have independent economic ability.

### **3.2.2 Sampling Location**

Klang Valley is a huge metropolitan area centred in Kuala Lumpur. Malaysian citizens are being targeted as the respondents in this research and will mainly focus in Klang Valley areas which are easier to reach out to more target respondents. The reasons of choosing Klang Valley because there are many different grocery retailers, which constantly updated with a series of new products, and mixed with many different types of products, so most of the participants will have experience buying in a physical store. Consumers in this area may be concerned about the informativeness of

packaging, the attractiveness of packaging and environmental concerns, as well as the considerations run parallel to dependent variables.

### **3.2.3 Sample Size**

To obtain trustworthy and accurate results, high sample size should use with a broad population. Based on the principles of determining sample, sample size larger than 30 but smaller than 500 is adequate for the research (Roscoe, 1975). In addition, Hill & Alexander (2000) propose that, a research should have between 200 to 500 respondents, which is sufficient for the research and the sample size at least have the minimum of 200. Kyriazos mentioned that, if the research has only 3 indicators per latent variable, the sample size of 200 or more than 200 were nearly no failures. Therefore, this study will be evaluated using a sample size of 200 people.

### **3.2.4 Sampling Technique**

In this research, non-probability sampling was selected as the sampling technique, which includes 4 types sampling methods: convenience, judgement, referral, and quota. As a result, convenience sampling will be selected to apply in this research because it is cost effective and simple to conduct. Sathiaseelan & Mahmud (2020) stated that, convenience sampling is a simple way for generating hypotheses and useful in pilot studies. Another alternative explanation is convenience sampling also known as availability sampling because generally this method entails gathering individuals wherever the researchers would be able to notice them at a convenient location (Convenience Sampling, n.d.). Besides, convenience sampling is most readily available to participate and able to fill up necessary information in the research. Convenience sampling was chosen due to the limitation of time and costs, because not all the respondents have the research's ideal characteristics; hence, the researchers can ignore the population' traits due to prior to the selection of individuals, no inclusion

criteria were defined in convenience sampling. All individuals are welcome to participate and answer the questionnaire questions (Convenience sampling, n.d.).

### **3.3 Data Collection Method**

#### **3.3.1 Primary Data**

Currie & Development (2005) justify that, the collection of primary data knowns as the first-hand information that was collected by the researchers to conduct the study. As indicated in the problem description, many previous studies focused on other countries' situations or studies specific on a particular product category, which cause to lack of past research in the purchase intention on the product packaging elements in Malaysia context. Thus, online survey methods are used in this study since they are less expensive and easier to conduct. The advantages of using online surveys include the ability for respondents to fill out the questionnaire based on their time.

#### **3.3.2 Questionnaire**

Questionnaire is a research technique that is low-cost, efficient, and effective method to collect large amounts of data from large numbers of people (McLeod, 2018). In this research, questionnaires are distributed over the Internet in the Google form to those respondents who can comprehend the contents of the questionnaire. Internet-based surveys are currently popular because they are low-cost, faster, and give a greater response rate than traditional survey methods (Fricker, Jr, & Schonlau, 2002).

### **3.4 Research Instrument**

### **3.4.1 Questionnaire Design**

The questionnaire in this study is divided into three sections. Section A is demographic profile of respondents; Section B is the general question about the topic whereas Section C is respondents' perspectives on the factors linked to the questions. Section C of the questionnaire is divided into four parts, each of which comprises three independent variables and one dependent variable.

Section C requests to answer questions using the Likert scale, which intends to gather information on the variables that influence purchase intention on a product through packaging. The Likert scale is the most used rating scale in survey research because it allows the questionnaire to readily operationalize personality traits or impressions. The Likert scale allows respondents to define how strongly they agree or disagree with certain question or statement (McLeod, 2019).

### **3.4.2 Pilot Testing**

Pilot test is a form of research method to test the research within a small group of people. Pilot tests can ensure that the research proceeds smoothly and that the study's yield is greatly increased (Matt Wright, 2021). To produce a high-quality survey, a pilot test is undertaken before publishing the final version of the questionnaire to assess its usefulness, relevance, and reliability (Trakulmaykee et al. 2013). The consistency of a measure in a questionnaire is referred to as reliability. The rule of thumb is do the pilot test within 30 to 100 participants (Ruel, Wagner III, & Gillespie, 2015). To conduct the pilot test, 30 sets of questionnaires were delivered to the target respondents, and the results are shown in the table below. Since the construct' components have a Cronbach' Alpha of greater than 0.6; hence, the data collection can be done in the future.

Table 3.1: Cronbach's Alpha Results for Pilot Test

Variable	No. of Items	Cronbach's Alpha	Strength of Association
Packaging Information	5	0.833	Very Good
Packaging Material	4	0.771	Good
Packaging Attractiveness	6	0.763	Good
Purchase Intention	4	0.683	Moderate

Source: Developed for the research

### 3.5 Construct Measurement

#### 3.5.1 Origins of Construct

Table 3.2 List of Construct Items

Latent Variables	Original Statements	Modify Statements	Resource
IV: Packaging Information	The nutritional or health related information on the label of vegetable oil determines whether I buy it or not	The nutritional or health related information on the label of product packaging determines my decision of purchasing.	Bob-Alli (2013)
	I always check the Shelf-life/ Expiry date on product labels before I buy	I always check the Shelf-life/ Expiry date on product labels before I buy.	
	I always buy products that the label is very clear and readable.	I always buy products that the label of information and content of product is clear and readable.	
	I check the manufacturer and origin of vegetable oil before I buy it	I will check the manufacturers or country of origin of that product before I buy it.	
	I only buy vegetable oil that the label reads "Cholesterol-free"	I only buy the product that the labelling of description which fulfil my personal expectations. (e.g., organic, fresh, healthy, safety)	



IV: Packaging Material	Material quality of food product packaging influences my purchase decision.	The material of packaging that protect that product from damages is my concern of purchasing.	Ansari & Siddiqui (2019)
	Versatility of food product packaging (i.e. can reuse the package) influences my purchase decision.	The versatility of product packaging (i.e. can reuse the package) influences my purchase decision.	
	Ability to recycle food products packaging influences my purchase decision.	The recyclable of products packaging material influences my purchase decision.	
	Food product packaging material influences my purchase decision.	The product packaging materials influences my purchase decision (e.g., plastic/aluminium/paper).	
IV: Packaging Attractiveness	The colour of food packaging influences my purchase decision	The colour of product packaging influences my purchase decision.	Ansari & Siddiqui (2019)
	The colour combination that can easily be remembered influences my purchase decision	I always recognize the brand/product through the colour of packaging.	
	The colour combination that makes the product stand out among other competitive products influences my purchase decision.	I always get attracted on the eye-catching packaging colour to make the purchase decision.	
	The picture quality of the product packaging influences my purchase decision.	The graphic quality of the product packaging influences my purchase decision.	
	The picture of the product packaging that reflects the fact that it is high quality influences my purchase decision.	I always prefer to buy the product with packaging graphic which shows the content of product.	
	Attractive packaging influences my purchase decision	Attractive packaging influences my purchase decision.	

DV: Purchase Intention	I would intend to buy those products attached with celebrity.	I would intend to buy those products attached with clear packaging information.	Shafiq, Raza & Zia-ur-Rehman, (2011)
	I would actively seek out those products have higher perceived value.	I would actively seek out those products used sustainable material on packaging.	
	I would consider buying those products whose perceived value is high	I would consider buying those products which attractiveness is high.	
	I would intend to buy those products have excellent packaging	I would intend to buy those products have excellent packaging.	

Source: Developed for the research

### 3.5.2 Scale Measurement

Uma & Sekaran (2013) mentioned that, "measurement" refers to the process of collecting data in the form of numbers. Each level of measurement has its own characteristics, so it's crucial to figure out which is best for research. In Section A and Section B are about demographic information and general question will use the Nominal and Ordinal Scale to determine. The concept of nominal data refers to the data that can be categorized such as gender and occupation (C. Morris, 2008). Ordinal data are the results of rating scales that allow objects to be organized based on how much of a concept that can be understood, such as the Likert Scale used in this research. Section C refers to the respondent's main concerns on packaging elements, such as packaging information, packaging material, packaging attractiveness and consumer purchase intention. In this section, respondents are requested to be ranked using a 5-point Likert scale, with 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly disagree

## 3.6 Proposed Data Analysis Tools

### 3.6.1 Descriptive Analysis

Descriptive analysis known as a simple description that the research has returned from the questionnaire. It also explains how to display quantitative data in a readable format (Uma & Sekaran, 2013). Hayes (2021) stated that, descriptive statistics are a set of descriptive coefficients that define a set of data. By giving summaries of the sample and data measures, descriptive statistics can help this study identify and characterise the properties of a dataset

#### 3.6.1.1 Reliability Test

Uma & Sekaran (2013) dedicated that, the stability and consistency of a system can be determined through the reliability test. Uncontrollable testing settings and variables will influence the data's reliability and consistency. Cronbach's alpha is a measure of a set of data's internal consistency and reliability. Table 3.2 demonstrate the usefulness of Cronbach's alpha in determining data consistency.

Table 3.3 Rules of Thumb of Cronbach's Alpha Coefficient Size

<b>Coefficient Alpha Range</b>	<b>Strength of Association</b>
$\alpha < 0.6$	Poor
$0.6 \leq \alpha < 0.7$	Moderate
$0.7 \leq \alpha < 0.8$	Good
$0.8 \leq \alpha < 0.9$	Very Good
$\alpha \geq 0.9$	Excellent

Adapted from: Hair, J. F. Jr., Babin, B., Money, A. H., & Samouel, P. (2003). *Essential of business research methods*. John Wiley & Sons: United States of America.

### **3.6.2 Inferential Analysis**

Much of the research study used inferential analysis because it can determine whether there is a relationship between intervention and result, including the relationship's strength (Trochim, 2002).

#### **3.6.2.1 Pearson Correlation Coefficient Analysis**

The association among each independent variable and the dependent variable is examined using Pearson's correlation coefficient approach. It refers to a method for probing the relationship and determining the strength of the link between all variables (Uma & Sekaran, 2013). 'r' value is always between -1.0 and +1.0. If the R-value is exactly -1.0, then show a perfect negative relationship; whereas, if the R-value is exactly +1.0, then show a perfect positive relationship. If the R-value is equal to 0, then there is no linear relationship between two variables.

#### **3.6.2.2 Multiple Linear Regression Analysis (MLR)**

This analysis develops a relationship between all the independent variables and investigate how they are linked to one dependent variable (Zikmund et al., 2013). It can determine the degree between independent variable and dependent variable are related. A major part of the dependent variable is expressed by the value of coefficient of every independent variable, as well as let the researchers clearly grasp and identify the components that affect dependent variable. Thus, multiple regression is recommended to examine the entire sample size to have an understanding and perspective on which independent variable has the most affection on the purchase intention.

The multiple linear regression model' equation is provided below:

$$Y = a + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \dots + \beta_nX_n$$

According to the study, multiple regression analysis is conducted to examine the relevancy between independent variables.

The multiple regression analysis of this study is given below:

$$Y = a + \beta_1PI + \beta_2PM + \beta_3PA$$

Where,

PI = Packaging Information

PM = Packaging Material

PA = Packaging Attractiveness

## **CHAPTER 4: DATA ANALYSIS**

### **4.0 Introduction**

This chapter involves the analysing and interpreting the data from 200 respondents by evaluating the data using SPSS version 25.0. This chapter also describes how the hypotheses are accepted and the importance of the investigation is demonstrated.

### **4.1 Descriptive Analysis**

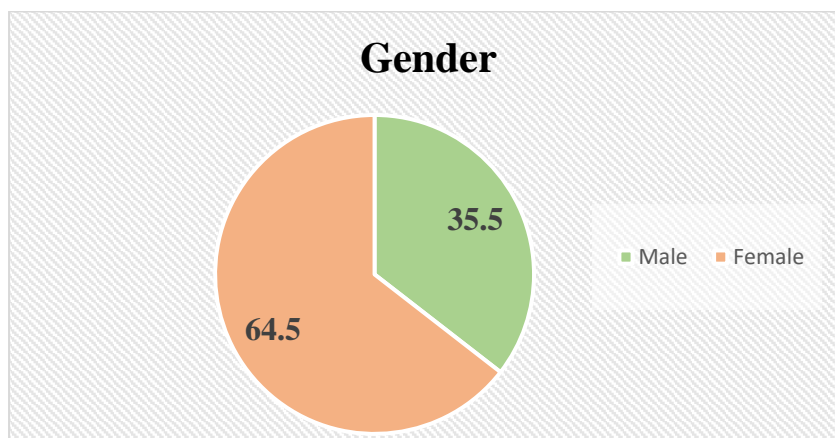
#### **4.1.1 Respondents Demographic Profile**

##### **4.1.1.1 Gender**

Table 4.1: Gender

<b>Gender</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Male	71	35.50
Female	129	64.50
<b>Total</b>	<b>200</b>	<b>100.0</b>

Figure 4.1: Gender



Source: Developed for the research

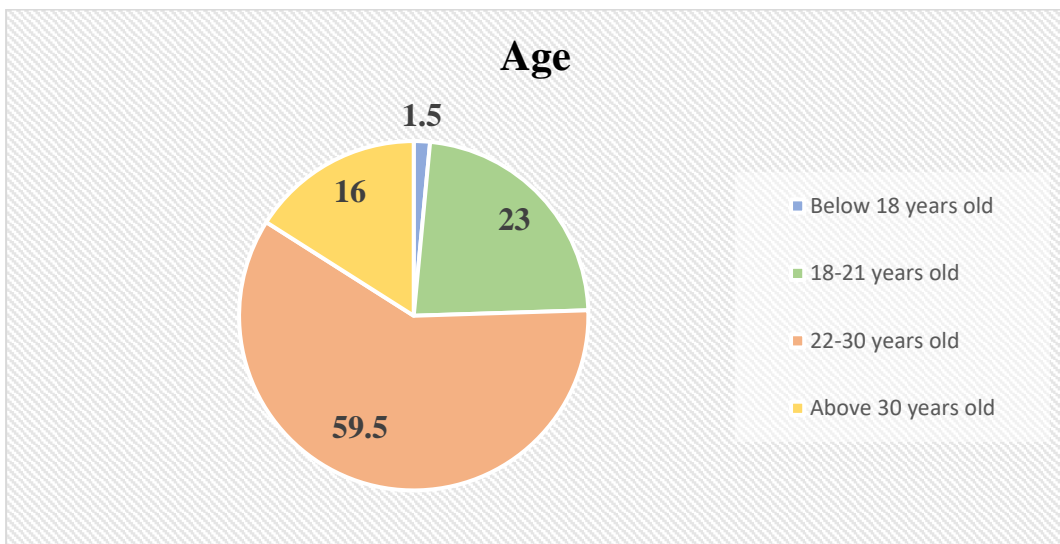
Table 4.1 and Figure 4.1 reveal the gender of respondents. There is total 200 respondents, 71 of male respondents (35.50 %) and 129 of female respondents (64.50%) respectively. The number of male respondents is less than the number of female respondents

#### 4.1.1.2 Age

Table 4.2: Age

Age	Frequency	Percentage (%)
Below 18 years old	3	1.50
18-21 years old	46	23.0
22-30 years old	119	59.50
Above 30 years old	32	16.0
<b>Total</b>	200	100.0

Figure 4.2: Age



Source: Developed for the research

Table 4.2 and Figure 4.2 exhibit that the largest age group is between the ages of 22 to 30, accounting for 119 respondents (59.5%) of all 200 respondents. Subsequently, 46 respondents (23%) between the age of 18 to

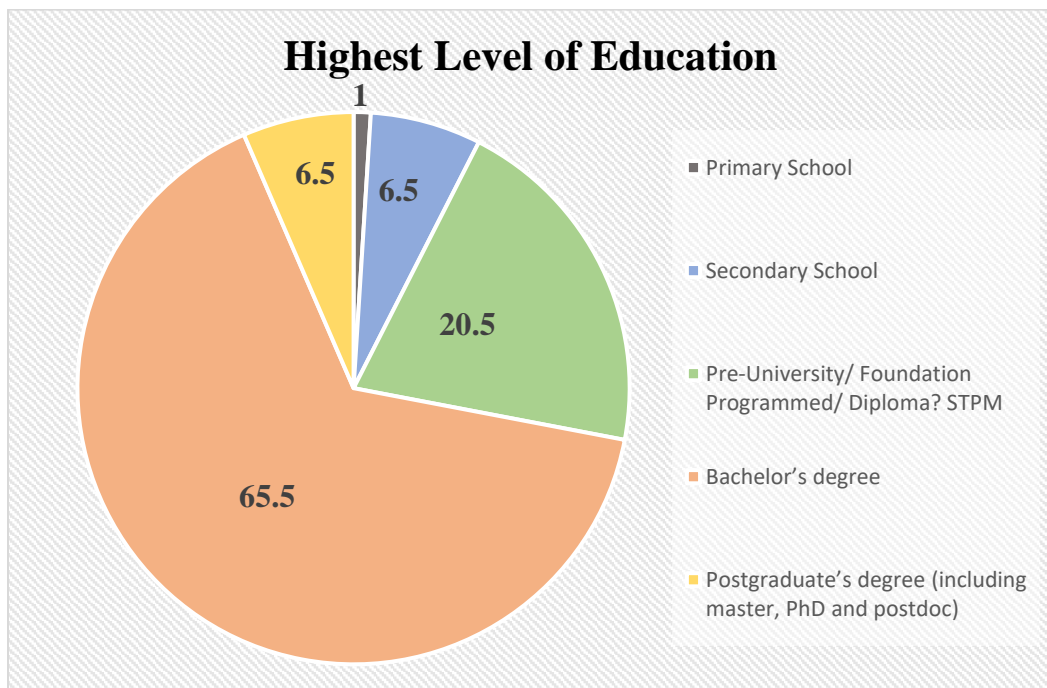
21. Whereas there are 32 respondents (16%) and 3 respondent (1.5%) accounting for the age under 18 and above 30 respectively.

#### 4.1.1.3 Highest Level of Education

Table 4.3: Highest Level of Education

Highest Level of Education	Frequency	Percentage (%)
Primary School	2	1.0
Secondary School	13	6.5
Pre-University/ Foundation Programmed/ Diploma/ STPM	41	20.5
Bachelor's degree	131	65.5
Postgraduate's degree (including master, PhD and postdoc)	13	6.5
<b>Total</b>	<b>200</b>	<b>100.0</b>

Figure 4.3: Highest Level of Education



Source: Developed for the research

Refer the Table 4.3 and Figure 4.3 above, 131 respondents are having the Bachelor of degree with the percent of 65.5. Follow by the education level



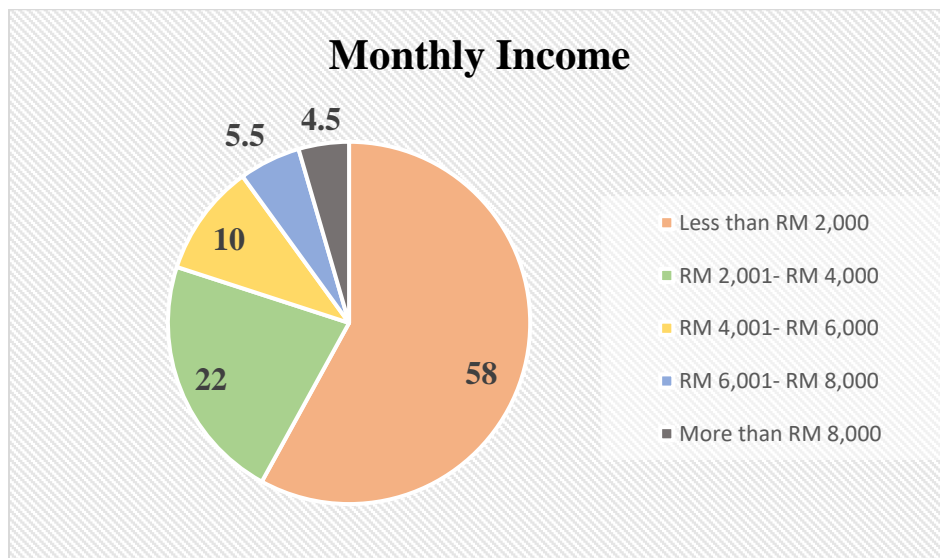
of Pre-University/ Foundation Programmed/ Diploma/ STPM, which consists 41 respondents (20.5%). Next, the Postgraduate's degree and Secondary School both have 13 respondents (6.5%) respectively. The remaining of 2 respondents (4%) are holding the education level of primary school.

#### 4.1.1.4 Monthly Income

Table 4.4: Monthly Income

Monthly Income	Frequency	Percentage (%)
Less than RM 2,000	116	58.0
RM 2,001- RM 4,000	44	22.0
RM 4,001- RM 6,000	20	10.0
RM 6,001- RM 8,000	11	5.5
More than RM 8,000	9	4.5
<b>Total</b>	200	100.0

Figure 4.4: Monthly Income



Source: Developed for the research

Five separate income groups of respondents are demonstrated in Table 4.4 and Figure 4.4. Based on the result above, the group of respondents earning less than RM2,000 per month accounts for 58% of the total 116 respondents. However, only 4.5% (9 respondents) make RM8,000 or more every month. Monthly income between RM 2,001 to RM 4,000 consists 22% of the total respondents (44 respondents). Besides, 5.5 % (11 respondents) and 4.5% (9 respondents) are earned RM 4,001- RM 6,000 and RM 6,001- RM 8,000 respectively.

## 4.1.2 Respondents General Information

### 4.1.2.1 Proportion of respondents' attention paid to product packaging when shopping

Table 4.5: Proportion of respondents' attention paid to product packaging when shopping

	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	184	92.0
No	16	8.0
<b>Total</b>	200	100.0

Figure 4.5: Proportion of respondents' attention paid to product packaging when shopping



Source: Developed for the research

Table 4.5 and Figure 4.5 represented the proportion of respondents' attention paid to product packaging when shopping. 184 respondents (92%) indicated that they have pay the attention on the product packaging during the shopping time, whereas the remaining of 16 respondents (8%) are not pay the attention on the product packaging.

### 4.1.3 Central Tendencies Measurement of Constructs

Table 4.6: Descriptive Statistics

<b>No.</b>	<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
1.	Packaging Information (PI)	200	4.0250	0.64471
2.	Packaging Material (PM)	200	3.8575	0.71704
3.	Packaging Attractiveness (PA)	200	4.0575	0.65709
4.	Purchase Intention (CPI)	200	4.0562	0.63772
<b>Valid</b>		<b>200</b>		

Source: Developed for the research

Table 4.6 show that, majority of respondents agreed with the statements of packaging attractiveness which resulting the greatest mean value of 4.0575 while the packaging material has the lowest mean value of 3.8575 which show the respondents decided to disagree or neutral with the statements. On the other hand, the standard deviation of the packaging material is the greatest of all variables whereas the consumer purchase intention has the lowest standard deviation value of 0.63772.

## 4.2 Reliability Test

Table 4.7: Reliability Test

Variable	No. of Item	Cronbach's Alpha ( $\alpha$ )
Packaging Information (PI)	5	0.712
Packaging Material (PM)	4	0.699
Packaging Attractiveness (PA)	6	0.824
Purchase Intention (CPI)	4	0.674

Source: Developed for the resource

The reliability test includes a total of 19 items derived from the questionnaire in this study. According to Table 4.7, a total of 4 variables has an alpha coefficient of greater than 0.6, indicating that all variables have adequate internal consistency reliability (Zikmund et al., 2013). Table 4.7 exhibits that the packaging attractiveness has the highest alpha coefficient of 0.824 out of all 4 variables with a strong association. Followed by the packaging information had an appropriate strength of association among the set of 0.712. Whereas the alpha value of packaging materials and consumer purchase intention has the moderate associations of 0.699 and 0.674 respectively.

## 4.3 Inferential Analysis

### 4.3.1 Pearson's Correlation Analysis

Table 4.8: Pearson's Correlation Analysis

		Packaging Information (PI)	Packaging Material (PM)	Packaging Attractiveness (PA)	Purchase Intention (CPI)
PI	Pearson Correlation (r)	1			
	Sig. (2-tailed) (p)				
	N	200			

<b>PM</b>	Pearson Correlation (r)	0.539**	1		
	Sig. (2-tailed) (p)	0.000			
	N	200	200		
<b>PA</b>	Pearson Correlation (r)	0.320**	0.448**	1	
	Sig. (2-tailed) (p)	0.000	0.000		
	N	200	200	200	
<b>CPI</b>	Pearson Correlation (r)	0.476**	0.676**	0.602**	1
	Sig. (2-tailed) (p)	0.000	0.000	0.000	
	N	200	200	200	200

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

Source: Developed for the research

The association is statistically significant, if the p-value is equal or less than 0.05 (Saunders et al., 2019). Hence, Table 4.8 exhibit the Pearson Correlation Coefficient results of this study, which reveal that all the independent variables have the same p-value of 0.000 when it comes to the dependent variable. According to the result, this also implies that all the independent variables and the dependent variable have a significant relationship. PI, PM, and PA have a moderate correlation with the dependent variable, which equating to the coefficient value of 0.476, 0.676 and 0.602 respectively throughout the study.

### 4.3.2 Multiple Regression Correlation Analysis

Table 4.9 Model Summary

<b>Model</b>	<b>R</b>	<b>R-Square</b>	<b>Adjusted R-Square</b>	<b>Std. Error of the Estimate</b>	<b>F</b>
1	0.761 <sup>a</sup>	0.579	0.572	0.41708	89.743

a. Predictors: (Constant), Mean\_PA, Mean\_PI, Mean\_PM

Source: Developed for the research

Based on the Table 4.9 above, the R-Square of this model is 0.579, means that all independent variables (Packaging Information, Packaging Material and Packaging Attractiveness) have 57.9% of explanatory power for the dependent variable (Consumer Purchase Intention). Other unknown variables account for the remaining 42.1% of variation in the dependent variable.

Table 4.10 ANOVA

<b>Model</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	46.834	3	15.611	89.743	0.000 <sup>b</sup>
	Residual	34.095	196	0.174		
	Total	80.930	199			

a. Dependent Variable: Mean\_ CPI

b. Predictors: (Constant), Mean\_ PA, Mean\_ PI, Mean\_ PM

Source: Developed for the research

F-value, 89.743 shown on Table 4.10, which reveal a statistically significant result and this model is fit to the data. Besides, the sig. value is 0.000 indicates that the probability value is lower than 0.05, which indicating that the significant relationship between all independent variables and dependent variable. Hence, PI, PM, and PA able to indicate the variation in the consumer purchase intention on product packaging.

Table 4.11: Coefficient

<b>Model</b>		<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>		
		<b>Beta</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>
1.	(Constant)	0.617	0.229		2.687	0.008
	Mean_ PI	0.116	0.599	0.117	2.115	0.036
	Mean_ PM	0.401	0.052	0.451	7.685	0.000
	Mean_ PA	0.352	0.051	0.362	6.948	0.000

a. *Dependent Variable: Mean\_ CPI*

Source: Developed for the research

The multiple regression equation for this research can be derived from the data in Table 4.11 as follows:

$$Y = a + \beta_1PI + \beta_2PM + \beta_3PA$$

$$CPI = 0.617 + (0.116)PI + (0.401)PM + (0.352)PA$$

Where,

PI= Packaging Information

PM= Packaging Material

PA= Packaging Attractiveness

CPI= Purchase intention

Using the equation above, it was shown that if one unit of independent variable increased will resulting in an increase in the dependent variable, while the others remain constant. For instance, 1 unit increase in packaging information can explain an additional 0.116 unit increase in the consumer purchase intention on product packaging when the other predictors or independent variable being the same. Therefore, it has been shown that all the independent variables have a strong impaction on dependent variable. Meanwhile, the consumers are more likely to have a strong purchase intention on the product packaging when the independent variables have great value.

The level of influence among the independent variables as shown by the standardised coefficients beta. 0.451 is the highest beta value, which means PM has the greatest influence on the consumer purchase intention on product packaging. On the contrary, PI has the lowest beta value of 0.117 that has the least influence. PI has 0.036 sig. value whereas PM and PA have the value of 0.000; thus, all the independent variables demonstrate a positive relationship with the dependent variable because all the sig. value is below 0.05.

## 4.4 Hypothesis Testing

Table 4.12: Summary of Hypothesized Relationship

<b>Hypothesis</b>	<b>Outcome</b>	<b>Determination</b>
H <sub>1</sub> : Packaging information has significant relationship on influence consumers' purchase intention.	$\beta = 0.117$ $p - value = 0.036 < 0.05$	<b>Accepted</b>
H <sub>2</sub> : Packaging material has significant relationship on influence consumers' purchase intention.	$\beta = 0.451$ $p - value = 0.000 < 0.05$	<b>Accepted</b>
H <sub>3</sub> : Packaging attractiveness has significant relationship on influence consumers' purchase intention.	$\beta = 0.362$ $p - value = 0.000 < 0.05$	<b>Accepted</b>

Source: Developed for the research



## **CHAPTER 5: DISCUSSION AND CONCLUSION**

### **5.0 Introduction**

Chapter 5 will explain the results of descriptive and inferential analysis are summarised. Following that, the study's consequences, conclusions, and recommendations will be addressed, discussed, implemented, and presented to enhance better future research.

### **5.1 Summary of Statistical Analysis**

#### **5.1.1 Descriptive Analysis**

To summarise, more female respondents participated in this study than the male respondents. Majority of the respondents are between the ages 22 to 30 (119 respondents) and the largest group of respondents (131 respondents) holding at the education level of Bachelor of Degree. Lastly, most of the respondents' monthly income is less than RM2,000 (116 respondents) and followed by the income level between RM2,001 to RM4,000 (44 respondents). Therefore, the bulk of those who take part in this study may be students or fresh graduates.

As a result, only 16 respondents among 200 respondents do not pay attention to the product packaging during the shopping time while the remaining 184 respondents normally will pay attention to the product packaging before they make the purchase decision.

#### **5.1.2 Reliability Test**

Since the alpha coefficient of variables is more than the minimum of 0.6; therefore, all the variables have been proved to be reliable and

consistent. From the analysis in Chapter 4, the extent of value among 0.674 to 0.824 is acceptable.

### **5.1.3 Inferential Analysis**

#### **5.1.3.1 Pearson's Correlation Coefficient Analysis**

It was discovered that, all independent variables have a positive relationship with the dependent variable, according to the result of Pearson's Correlation Analysis. The packaging material has the highest correlation ( $r=0.676$ ) whereas the lowest correlation is packaging information ( $r=0.476$ ).

#### **5.1.3.2 Multiple Regression Analysis**

In this section finding, the independent variables (packaging information, packaging material and packaging attractiveness) account for 57.9% ( $R^2=0.579$ ) variant in the dependent variable (consumer purchase intention). Based on the standardized coefficients result, packaging material has the greatest impact on the consumer purchase intention than other 2 variables. As a result, packaging information, packaging material and packaging attractiveness exhibit positive relationship with consumer purchase intention since the p-value are less than 0.05. Besides, F-value of 89.743 indicating that the result is statistically significant, and this model fits the data in this investigation.

## **5.2 Discussion on Findings**

### **5.2.1 Packaging Information**

*H<sub>1</sub>: Packaging information has significant relationship on influence consumers' purchase intention.*

Refer to the table 4.11, this hypothesis is accepted because the p-value of the packaging information (0.036) is lower than 0.05; hence, packaging information is positively affecting the consumer purchase intention on the product packaging when shopping. The result is similar with the past studies of Carneiro et al (2005), which also proved that information labelling on the product packaging able to influence the consumer purchase intention and their purchase decision in the end. As a result, packaging information is a significant aspect in this study.

### **5.2.2 Packaging Material**

*H<sub>2</sub>: Packaging material has significant relationship on influence consumers' purchase intention.*

Table 4.11 represented that packaging material has the p-value of 0.000 which is less than 0.05, where this can be demonstrated that the packaging material has significant relationship with the purchase intention of consumers. Meanwhile, packaging material has a significant affection on the consumers' purchase intention; hence, this hypothesis is also accepted. This finding can be proven by the research from Mohamed et al., (2018), consumers decided which packaging material is best for the relevant product based on the product they want to buy, to ensure that the items they buy are significantly less likely to be damaged and material are more sustainable

### **5.2.3 Packaging Attractiveness**

*H<sub>3</sub>: Packaging attractiveness has significant relationship on influence consumers' purchase intention.*

Based on the result of Table 4.11, there is a relationship between the packaging attractiveness and consumer' purchase intention due to the p-value of packaging attractiveness (0.000) also being lower than 0.05.

Therefore, the hypothesis is accepted. The past studies had supported these findings where packaging colour is a packaging' aesthetic elements which use to attract the massive consumers to the products; thus, the packaging colour has related to the consumer purchase intention (Ehsan & Samreenlodhi, 2015). Besides, this finding also similar with the study of Mohebbi (2014), which having a significant relation between packaging graphic and consumer purchase intention.

## **5.3 Implications of Study**

### **5.3.1 Theoretical Findings**

This study applies the TRA framework to investigate the determinants of consumer' purchase intention towards the product packaging elements (PI, PM and PA). The theoretical framework can be used as a guide for other researchers who want to do similar research in the future. Because most previous research has focused on consumer' purchasing decision on the products rather than evaluating consumers' purchasing intentions on the product packaging. TRA in this research provide better understand the consumer behavioural control aspects that influence purchase intent. Despite the fact that product purchasing can be considered a normal behaviour, but the consumption decisions are frequently symbolic in character and can mean a lot to consumers and others in their lives. Moreover, the data analysis identifies key factors that activate CPI, which helping the marketers to dig deeper into packaging development. The data is evaluated with SPSS; as a result, all the independent variables are significance of correlations with dependent variables.

### **5.3.2 Managerial Implications**

#### **5.3.2.1 Research Objectives 1**

As the H1 is supported which shows the relationship between packaging information and consumer purchase intention. As a consumer, respondents think that they have the right to know what they purchased, how and where the product is made, as well as the expiration date through the packaging. For example, to demonstrate the relevance of food labelling awareness: The rise in the consumption of healthy foods has highlighted the necessity of labelling, allowing consumers to seek for substitute options while picking informed items (Chung et al., 2006). This also represented that consumers are more careful on viewing the information that labelling on the packaging. Due to the highly competitive market, which marketers' tendency to copy identical designs from competitors and leading consumer misunderstanding to purchase certain products. When the product packaging is lacks product information or brand identity, this will cause the consumers had a bad in-store purchasing experience because consumers' intent to purchase is determined by how well the product meets their requirements (Stewart, 2004). Therefore, marketers need to enhance the packaging informational aspects on a product to deliver relevant message on the packaging to deliver a proper of communication through packaging. From this, marketers able to increase the confidence of consumer purchase intention and at the end will meet the consumers' criteria and requirements.

### **5.3.2.2 Research Objectives 2**

The result also supported the H2, it classifies that the packaging material is one of the elements which affect the consumer purchase intention when shopping. The packaging' durability and sustainability can affect the consumer perception and decision making. Consumers believe that future product package design should be environmentally friendly, which advocated that the packaging could be recycled and reused. They also concerned on the protective ability of packaging, packaging storing function, carrying valuable secondary functions that may provide direct value to the consumers (Gopinathar, Prabha and Ravichandran, 2016). Hence, researchers can focus on the package features in the future research which

can help the marketers have more innovation idea to design more secure packaging that can withstand exterior harm. For instance, manufacturers can use the biodegradable materials like paper to reduce the plastic pollution and they also can be aware of the importance of packaging materials development, which can help them to rise their sale if they can attract potential customers who are concerned about environmentally friendly packaging.

### **5.3.2.3 Research Objectives 3**

Proceed to H3 being supported, aesthetic elements shown a significant role in affecting the purchase intention of consumers. The findings of this study on visual elements are important to the consumers which revealed that beautiful graphic and pleasant colour are more essential, which will influence consumers' purchasing decisions. It is critical to utilise the right colour and graphics to make a brand and or company powerful and easy recognized from other competitors (Rundh. 2009). Thus, marketers might focus more on the type of illustration, colour tone, or how the design of a product packaging appeals to the consumers and resulting the final package does not cause the consumers to lose interest in purchasing the product.

## **5.4 Limitations of Study**

First limitation is the unbalance of age group of respondents. As a result, from Table 4.2, there are over 119 of the totals of 200 respondents are come from the age group between 22-30 years old, which may fall into the “youth adults” category. Although the survey does not have a specific target age group of respondents, it may be inefficient because the respondents have similar demographic backgrounds. For instance, young consumers have the purchase intention on those product packaging have attractiveness visual elements whereas elderly consumers may more concern on the ingredients of the labelling packaging. From this, it has limited the findings on various perspectives supplied by the respondents because different age groups

will have different perspectives, life experiences and thinking. Therefore, it may be difficult to receive other diverse set of data if the data collections were majority in one age group, which unable to get wide investigation.

Besides, the lack of independent variables may be one of the limitations of this study since this study only proposed 3 independent variables to examiner the consumer purchase intention towards product packaging. There still have other potential packaging elements or others factor that may also have the ability to affect the consumer purchase intention. Therefore, this will lead to a limitation viewpoint for those marketers when looking other visual elements on the consumer perspective.

In addition, the research study's questionnaire would leave respondents perplexed because this study did not particularly specified range of products, so it could cause some problems or arguments of questionnaire to respondents. This is because of different kinds of product will lead consumers may have different ideas and perception on product packaging decision.

## **5.5 Recommendations for Future Research**

Following the identification of the study's limitations, some recommendations can be provided to improve the level and quality of future research. In future research, the researchers might broaden and maintain the accuracy of the data analysis, which should balance the quantity of respondents among age groups. This can help the researchers in delving further into the findings of the research with the respondents from various age groups which have diverse mindsets and ideologies.

To accurately reflect the entire Malaysian population, it is typical to incorporate more than three independent variables in a study in order to boost the reliability and accuracy. Therefore, adding more independent variables in the future studies such as attitude towards behaviour, subjective norms to enhance the theoretical framework in this study, which can provide marketers useful information.

Furthermore, to give the respondents opportunity to contribute accurate, unbiased, and comprehensive data, researchers can concentrate on a specific research topic. Current research focuses on all range of product categories; Therefore, future research may focus on designated product categories, such as fast consumption products, cosmetic products, etc to ensure that respondents have a solid comprehension of the topic of research. In order to help different product marketers understand the view of the target consumers on packaging, researchers may also investigate topics linked to digital marketing since the current market trend emphasises rapid and effective online selling methods.

## **5.6 Conclusion**

In this study, all findings answered the research question and revealed a strong positive relationship between all independent variables and dependent variable. The limitations and recommendations are refined in this study in order to improve the quality of future research. In conclusion, researchers and marketers can emphasise crucial discoveries when doing future research and executing marketing strategies; hence, this research able to assist both theoretical and managerial elements.



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## APPENDICES

### Appendix A Questionnaire



## Universiti Tunku Abdul Rahman

### PRODUCT PACKAGING CRITERIA THAT INFLUENCE CONSUMER INTENTION TO BUY

Dear Respondent,

I am Kam Jia Ying, student of Bachelor of International Business (Hons), from Universiti Tunku Abdul Rahman (UTAR). I am conducting my final year project (FYP) on “Product Packaging Criteria that influence Consumer intention to buy.” This survey is aimed to investigate the consumers purchase intention towards product packaging contribution. As a result, you are kindly encouraged to participate in this survey.

This survey consists of 2 sections and it will take approximately few minutes (10-15 minutes) to complete it. Please be assured that your answers will be treated with confidentiality. For any suggestion and enquires regarding to this survey, please do not hesitate to contact me at [jiayingkam1009@lutar.my](mailto:jiayingkam1009@lutar.my) or +60 19-267 1009. We will compile and share information from many questionnaires but will not link your name to any of the information.

Thank you for taking the time to participate and your prompt response.

I hereby consent on my voluntary participation in this survey which will be conducted anonymously.

- |                          |                                       |
|--------------------------|---------------------------------------|
| <input type="checkbox"/> | Agree - proceed to the questionnaire. |
| <input type="checkbox"/> | Disagree - thank you for your time.   |

## **Section A: Demographic Profile**

### 1. Gender

<input type="checkbox"/>	Male
<input type="checkbox"/>	Female

### 2. Age

<input type="checkbox"/>	Below 18 years old
<input type="checkbox"/>	18-21 years old
<input type="checkbox"/>	21-30 years old
<input type="checkbox"/>	Above 30 years old

### 3. Highest Level of Education: \_\_\_\_\_

<input type="checkbox"/>	No formal education
<input type="checkbox"/>	Primary school
<input type="checkbox"/>	Secondary school
<input type="checkbox"/>	Pre-University/Foundation Programme/Diploma/STPM
<input type="checkbox"/>	Bachelor's degree
<input type="checkbox"/>	Postgraduate's degree (including master, PhD and postdoc)
<input type="checkbox"/>	Others, please state _____

### 4. Monthly Income:

<input type="checkbox"/>	Less than RM2,000
<input type="checkbox"/>	RM2,001-RM4,000
<input type="checkbox"/>	RM4,001-RM6,000
<input type="checkbox"/>	RM6,001– RM8,000
<input type="checkbox"/>	More than RM8,000



**Section B: General Information**

Do you always pay attention on product packaging when shopping?

	Yes
	No

**Section C: Construct Measurements**

The followings are related to the packaging contribution towards consumer purchase intention.

Please indicate the extent to which you agreed or disagreed with each statement using 5 points Likert Scale.

(1) = Strongly Disagree (2) = Disagree (3) = Neutral (4) = Agree (5) = Strongly Agree

	Strongly Disagree	→			Strongly Agree
The nutritional or health related information on the label of product packaging determines my decision of purchasing.	1	2	3	4	5
I always check the Shelf-life/ Expiry date on product labels before I buy.	1	2	3	4	5
I always buy products that the label of information and content of product is clear and readable.	1	2	3	4	5
I will check the manufacturers or country of origin of that product before I buy it.	1	2	3	4	5
I only buy the product that the labelling of description which fulfil my personal expectations. (e.g., organic, fresh, healthy, safety)	1	2	3	4	5
The material of packaging that protect that product from damages is my concern of purchasing.	1	2	3	4	5
The versatility of product packaging (i.e. can reuse the package) influences my purchase decision.	1	2	3	4	5
The recyclable of products packaging material influences my purchase decision.	1	2	3	4	5

The product packaging materials influences my purchase decision (e.g., plastic/aluminium/paper).	1	2	3	4	5
The colour of product packaging influences my purchase decision.	1	2	3	4	5
I always recognize the brand/product through the colour of packaging.	1	2	3	4	5
I always get attracted on the eye-catching packaging colour to make the purchase decision.	1	2	3	4	5
The graphic quality of the product packaging influences my purchase decision.	1	2	3	4	5
I always prefer to buy the product with packaging graphic which shows the content of product.	1	2	3	4	5
Attractive packaging influences my purchase decision.	1	2	3	4	5
I would intend to buy those products attached with clear packaging information.	1	2	3	4	5
I would actively seek out those products used sustainable material on packaging.	1	2	3	4	5
I would consider buying those products which attractiveness is high.	1	2	3	4	5
I would intend to buy those products have excellent packaging.	1	2	3	4	5

**Thank you for sharing your viewpoints and perceptions.**

## Appendix B SPSS Output

### 1. Output of Demographic Profile

#### Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	129	64.5	64.5	64.5
	Male	71	35.5	35.5	100.0
	Total	200	100.0	100.0	

#### Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-21 years old	46	23.0	23.0	23.0
	22-30 years old	119	59.5	59.5	82.5
	Above 30 years old	32	16.0	16.0	98.5
	Below 18 years old	3	1.5	1.5	100.0
	Total	200	100.0	100.0	

#### Highest Level of Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor's degree	131	65.5	65.5	65.5
	Postgraduate's degree (including master, PhD and postdoc)	13	6.5	6.5	72.0
	Pre-University/Foundation Programme/Diploma/ST PM	41	20.5	20.5	92.5
	Primary school	2	1.0	1.0	93.5
	Secondary school	13	6.5	6.5	100.0
	Total	200	100.0	100.0	

### Monthly Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than RM2,000	116	58.0	58.0	58.0
	More than RM8,000	9	4.5	4.5	62.5
	RM2,001-RM4,000	44	22.0	22.0	84.5
	RM4,001-RM6,000	20	10.0	10.0	94.5
	RM6,001- RM8,000	11	5.5	5.5	100.0
	Total	200	100.0	100.0	

## 2. Output of General Information

Do you always pay attention on product packaging when shopping?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	16	8.0	8.0	8.0
	Yes	184	92.0	92.0	100.0
	Total	200	100.0	100.0	

## 3. Output of Descriptive Statistics

### Descriptive Statistics

	N	Mean	Std. Deviation
Mean_PI	200	4.0250	.64471
Mean_PM	200	3.8575	.71704
Mean_PA	200	4.0575	.65709
Mean_CPI	200	4.0562	.63772
Valid N (listwise)	200		

## 4. SPSS Output: Cronbach's Alpha Reliability Test

### Packaging Information

Case Processing Summary				Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
		N	%			
Cases	Valid	200	100.0			
	Excluded <sup>a</sup>	0	.0			
	Total	200	100.0			

Packaging Material

**Case Processing Summary**

		N	%	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Cases	Valid	200	100.0			
	Excluded <sup>a</sup>	0	.0			
	Total	200	100.0			

Packaging Attractiveness

**Case Processing Summary**

		N	%	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Cases	Valid	200	100.0			
	Excluded <sup>a</sup>	0	.0			
	Total	200	100.0			

Purchase Intention

**Reliability Statistics**

**Case Processing Summary**

		N	%	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Cases	Valid	200	100.0			
	Excluded <sup>a</sup>	0	.0			
	Total	200	100.0			

## 5. Output of Pearson's Correlation Analysis

### Correlations

		Mean_PI	Mean_PM	Mean_PA	Mean_CPI
Mean_PI	Pearson Correlation	1	.539**	.320**	.476**
	Sig. (2-tailed)		.000	.000	.000
	N	200	200	200	200
Mean_PM	Pearson Correlation	.539**	1	.448**	.676**
	Sig. (2-tailed)	.000		.000	.000
	N	200	200	200	200
Mean_PA	Pearson Correlation	.320**	.448**	1	.602**
	Sig. (2-tailed)	.000	.000		.000
	N	200	200	200	200
Mean_CPI	Pearson Correlation	.476**	.676**	.602**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	200	200	200	200

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

## 6. Output of Multiple Regression Analysis

### 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	.761 <sup>a</sup>	.579	.572	.41708	.579	89.743	3	196	.000

a. Predictors: (Constant), Mean\_PA, Mean\_PI, Mean\_PM

### ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.834	3	15.611	89.743	.000 <sup>b</sup>
	Residual	34.095	196	.174		
	Total	80.930	199			

a. Dependent Variable: Mean\_CPI

b. Predictors: (Constant), Mean\_PA, Mean\_PI, Mean\_PM

### Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.617	.229		2.687	.008
	Mean_PI	.116	.055	.117	2.115	.036
	Mean_PM	.401	.052	.451	7.685	.000
	Mean_PA	.352	.051	.362	6.948	.000

a. Dependent Variable: Mean\_CPI

## 7. Output of Pilot Testing

### Packaging Information

#### Case Processing Summary

		N	%		
Cases	Valid	30	100.0	Cronbach's Alpha	N of Items
	Excluded <sup>a</sup>	0	.0		
	Total	30	100.0		

a. Listwise deletion based on all variables in the procedure.

### Packaging Material

#### Case Processing Summary

		N	%		
Cases	Valid	30	100.0	Cronbach's Alpha	N of Items
	Excluded <sup>a</sup>	0	.0		
	Total	30	100.0		

a. Listwise deletion based on all variables in the procedure.

### Packaging Attractiveness

#### Case Processing Summary

		N	%		
Cases	Valid	30	100.0	Cronbach's Alpha	N of Items
	Excluded <sup>a</sup>	0	.0		
	Total	30	100.0		

a. Listwise deletion based on all variables in the procedure.

## Purchase Intention

### **Case Processing Summary**

		N	%		
Cases	Valid	30	100.0	Cronbach's Alpha	N of Items
	Excluded <sup>a</sup>	0	.0		
	Total	30	100.0	.683	4

a. Listwise deletion based on all variables in the procedure.



