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Consumers'

Purchasing Behavior

- The impact of product innovation

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Abstract

- Title:** Consumers' purchasing behavior – the impact of product innovation
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- Authors:** Xin Guo and Weijun Yin
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- Keywords:** Consumers' purchasing behavior, product innovation, intention to purchase, F&B industry, fresh fruit juice
- Research Purpose:** The main objective of this study is to investigate the way in which consumers' attitude toward attributes of product innovation influences their purchasing behavior in grocery stores. The study is based on an investigation of the fresh fruit juice category of the F&B industry.
- Theoretical Framework:** The concept of product innovation in the F&B industry is firstly introduced with the aim of providing a broader understanding of its four attributes. This is followed by a description of the TRA model which is widely used to predict consumers' purchasing behavior before establishing a new model of the way in which product innovation can affect consumers' purchasing behavior and using it to make a further analysis.
- Methodology:** This thesis is based on qualitative research and the data was collected from semi-structured interviews with eight ICA consumers.
- Conclusion:** The findings show that consumers have an extremely positive attitude toward the different attributes of product innovation because of their beneficial effect. Product innovation generates greater value, which increases their intention to purchase new or improved F&B products. However, not all aspects of the four attributes of product innovation affect consumers' purchasing behavior and the findings of this study are expected to assist manufacturers and retailers to develop the most useful of them in order to enhance consumers' purchasing behavior and thereby increase their competitive advantage in the field of grocery marketing.

Content

1. Introduction.....	1
1.1 Overview of Research Problem	1
1.2 Research Area	3
1.3 Research Purpose and Research Question	5
1.4 Literature and Practical Relevance.....	6
1.5 The Structure of Thesis	7
2 Theoretical Framework	8
2.1 Four Attributes of Product Innovation	8
2.1.1 Increasing of F&B quality	8
2.1.2 Improving useful F&B properties	11
2.1.3 Changing of F&B design	13
2.1.4 Reducing environmental impacts.....	16
2.2 The Theory of Reasoned Action (TRA).....	18
2.3 Framework	23
3. Methodology	26
3.1 Research Design.....	26
3.1.1 Qualitative Research.....	26
3.2 Research Method of Data Collection	27
3.2.1 Qualitative interviewing.....	27
3.2.2 Sample Selection.....	29
3.2.3 Interview procedure	30
3.2.4 Use of collected data.....	32
3.3 Data analysis	32
3.4 Reflection of data collection	33
4. Analysis and Discussion.....	35
4.1 The impact of improving food quality	35
4.2 The impact of improving useful F&B properties	45
4.3 The impact of changing food design.....	48
4.4 Impact on environmental protection	54
6. Conclusion	57
6.1 Theoretical and practical contribution	59
6.2 Limitations and suggestions for Future research	60

7. References.....	62
8. Appendix.....	68

1. Introduction

1.1 Overview of Research Problem

The fierce competition in today's global market has driven manufacturers and retailers to focus their efforts on product innovation in order to obtain a competitive advantage, or even just to survive. The rapid changes in the grocery market, especially due to technological advances, have led to evolving consumer demand and intensified competition, so that most manufacturers and retailers are constantly seeking novel approaches to sustain their growth (Cooper, Edgett & Kleinschmidt, 2002). Several researchers suggest that product innovation is a great method to improve the quality, packaging, and other aspects of a product (Kumar & Steenkamp, 2007). Therefore, product innovation is essential to the long-term viability of manufacturers and retailers (Im, Montoya & Workman, 2013), and those who have successfully launched innovative products to the market tend to have more of a competitive advantage than those who have not. Sriram, Balachander and Kalwani (2007) indicate that the adoption of product innovation could have a strong positive impact on consumers' purchasing behavior and the benefits of successful product innovation can be observed from a growth in sales and profits. In the competitive grocery market, both manufacturers and retailers need to be innovative in order to compete with other players and meet customers' changing demands and expectations. However, it may be challenging for them to meet the requirements of contemporary consumers, who are generally better educated and demand more product diversification to enhance their intention to purchase. Kandampully (2002) points out that consumers have become more individualistic and discerning when making a decision to purchase, especially in the grocery market, and this has engendered a great deal of interest from manufacturers and retailers. Since today's consumers are confronted with a variety of innovative products, this gives rise to different purchasing behavior. Therefore,

insights into consumers' purchasing behavior can assist manufacturers and retailers to understand their customers' thoughts and feelings about products and their attitude toward product innovation.

It is debatable whether this situation is the result of competition or simply manufacturers' response to the needs and desires of consumers. Attracting consumers to buy goods and services is the fundamental way for companies to attain success; therefore, it is important for manufacturers and retailers to focus on consumers' needs and expectations and provide instant satisfaction. Product innovation is typically employed to launch new products in the grocery market (Adner, 2006). Manufacturers and retailers rely on product innovation to deliver value to consumers and differentiate their products among others in the marketplace. The main reason manufacturers and retailers engage in product innovation is to attract consumers to buy their products or services (Abril & Martos-Partal, 2013); Pleschak and Sabisch (1996) summarize that manufacturers and retailers participate in four essential attributes of product innovation, namely 'increasing quality', 'improving the useful properties of the product', 'changing the design' and 'reducing environmental impacts' (cited from Menrad & Feigl, 2007, p.6). However, although this is vital for their survival and growth, it also entails a high level of risk and not all product innovation is successful. In fact, according to Cooper (2008), only 56% of product innovation achieves its sales target; thus, it is evident that a significant amount of product innovation fails, and this is mainly due to encountering resistance from consumers (Liao & Cheng, 2013). In other words, product innovation fails because it cannot satisfy consumers' demands and consequently, they will not purchase them. Although enhancing sales and profits is the main goal of manufacturers and retailers who become involved in product innovation, achieving successful product innovation is challenging for them because consumers' attitude toward innovative products influences their purchasing behavior. Therefore, it is essential for manufacturers and retailers to understand consumers' attitude toward their products before they make a

decision to purchase them, including the innovation in different attributes, such as the quality, packaging, properties, etc., since consumers' attitude to different attributes of product innovation could be instrumental in enhancing their sales and profits. A prior study has indicated that it is hard for companies to identify appropriate customers and collect comprehensive information about their expectation of product innovation and their attitude toward it (Hoffman, 2007).

The dramatic development of product innovation has led to a series of theoretical research on product innovation by a number of academics. However, the conclusions are inconsistent and some limitations exist, which need to be further explored. Product innovation is not suitable for all manufacturers and retailers. Once a product range has formed its brand using product innovation, consumers' attitude toward the different attributes of innovative product is worth investigating. Hence, the impact of consumers' attitude toward different attributes of product innovation on their purchasing behavior is extensively analyzed and discussed in this study.

1.2 Research Area

The Food and Beverage (F&B) industry is the research area being investigated in the present study. The rationale for choosing this research area is multi-faceted. Firstly, the F&B industry in the grocery market is typically driven by advanced technologies for product innovation in order to respond to consumers' demand (Tepic, Fortuin, Kemp & Omta, 2014). Secondly, manufacturers and retailers are under pressure to constantly optimize their products via product innovation to attract and retain customers in order to thrive, or even just survive, in today's fiercely competitive grocery market. This appears to be a long-term situation, and according to Food & Beverage Outlook 2013, the F&B industry will continue to utilize technological advances to make new breakthroughs in order to fulfill consumers' needs and desires. Furthermore, it is difficult to attract and maintain loyal consumers because of the wide variety of products for sale in the F&B industry (Sutherland,

2009). Consumers have become more and more discerning and the constant variations in demand mainly involve healthier choices, convenient packaging and unique flavors (Rockwell Automation, 2008).

The demand for healthier choices has arisen from consumers' awareness of healthier products due a growth in obesity. They are increasingly concerned about their health and require manufacturers and retailers to introduce healthier products into existing categories of foods and beverages (Sutherland, 2009). The inclination for convenient packaging relates to the rise in awareness of environmental protection. Consumers are more concerned about whether products are environmentally-friendly and conveniently packaged to contribute to sustainable development (Sutherland, 2009). The inclination for a unique flavor means that consumers are becoming bored with the same taste of F&B products and demand manufacturers and retailers to provide products with diverse flavors.

As customers become better educated and more demanding, it is more difficult for manufacturers and retailers in the F&B industry to influence their purchasing behavior through product innovation. In order to satisfy rapidly changing consumer needs and desires and enhance their purchasing behavior, manufacturers and retailers need to engage in more product innovation, and this necessitates a thorough understanding of consumers' attitude toward different aspects of a product. Understanding consumers' attitude and expectation is crucial for manufacturers and retailers to achieve product innovation in an accurate and effective manner, and thus, enjoy the fruits of their product innovation in terms of increased sales, profits, and growth.

The extreme unpredictability of the F&B industry appears to have attracted intense interest from researchers, most of whom have studied product innovation from the perspective of manufacturers or retailers (Corso & Pavesi, 2000; Liao, Hsieh & Huang, 2008; Jong & Slavova, 2014), rather than focusing on consumers' attitude and specific behavior. Therefore, it is difficult to acquire an in-depth understanding of

why consumers decide to purchase or refrain from purchasing a certain product, which is necessary for product innovation and the introduction of new F&B products. (Liao et al., 2008).

Therefore, the present study seeks to fill this gap in the literature by investigating consumers' attitude toward attributes of product innovation from their own perspective, with a focus on the fresh fruit juice segment of the F&B industry. According to Menrad and Feigl (2007), around 20% of F&B companies currently devote more than 1% of their turnover to product innovation activities. They also indicate that beverages constitute one of the highest numbers of new products in the F&B industry (Menrad & Feigl, 2007). The demand for fresh fruit juice has increased during the past few years because of the increasing awareness of healthy consumption (Kraus & Popek, 2013). Consumers are seeking nutritional products that are beneficial for health and fresh fruit juice contains many essential and rich nutrients. According to the Bureau Labor of Statistics 2008, consumers spend more money on all kinds of fruit and vegetables, including fruit juice, in order to stay healthy. Davis, Gunderson, Brown and House (2005) observe that, although fresh fruit juice is consumed by a large percentage of global consumers, little is known about consumers' behavior and their attitude toward this healthy food product. ICA, a popular grocery retailer in Sweden, displays many different private-label products in the fresh fruit juice category in its stores (ICA online). It also utilizes a unique method to create bottles in order to retain the flavor and freshness of the fruit juice for a longer period of time. Therefore, this study seeks to explore consumers' attitude toward attributes of product innovation within fresh fruit juice and its connection with their purchasing behavior.

1.3 Research Purpose and Research Question

The main purpose of this study is to investigate how consumers' attitude toward attributes of product innovation influences their purchasing behavior in grocery stores.

The attributes of product innovation in this thesis refers to increasing quality, improving the useful properties, changing the design, reducing environmental impacts (Pleschak and Sabisch, 1996 is cited from Menrad & Feigl, 2007, p.6). The study is based on an investigation of the fresh fruit juice category in the F&B industry, and the first step to achieving the main objective of the study is to clearly understand consumers' attitude toward four attributes of product innovation in fresh fruit juice in grocery stores.

Therefore, the main question of this thesis is:

How consumers' attitude toward attributes of product innovation (increasing quality, improving the useful properties, changing the design, reducing environmental impacts) influences their purchasing behavior in grocery stores?

1.4 Literature and Practical Relevance

This study contributes to existing literature and has practical value. Firstly, in terms of the relevant literature, a limited number of studies have been devoted to the relationship between different attributes of product innovation and consumers' purchasing behavior. Therefore, the findings of this research can broaden the existing knowledge and serve as a reference for further research in this field. Secondly, the way in which product innovation is engendered and mobilized by manufacturers and retailers in the F&B industry remains unclear. In addition, a better understanding of the influence of attributes of product innovation on consumers' purchasing behavior is vital and meaningful for both grocery retailers and manufacturers. Thirdly, although Abril and Martos-Partal (2013) assert that product innovation is an important market dynamic, previous literature has failed to consider how various attributes in product innovation influence consumers' intention to purchase and lead to positive purchasing behavior.

1.5 The Structure of Thesis

Introduction	This thesis starts with introducing the research background and provided areas for underlying research. Further, providing research purpose is to investigate <i>how consumers' attitude toward attributes of product innovation influences their purchasing behavior in grocery stores.</i>
Theoretical Framework	In this chapter, the theory behind the research area will be described in detail. The concept of product innovation in the F&B industry is firstly introduced with the aim of providing a broader understanding of its four attributes. This is followed by a description of the TRA model which is widely used to predict consumers' purchasing behavior before establishing a new model of the way in which product innovation can affect consumers' purchasing behavior and using it to make a further analysis.
Methodology	It consists of research approach, research strategy, research methods, research design and data collection. At the end of this part with a short description of the reflection of the research.
Analysis and Conclusion	Based on the empirical finding and theoretical framework to make an analytical discussion of attributes of fresh fruit juice innovation affects consumer purchase behaviors.
Conclusion	This part presents research finding to answer research question. Furthermore, the contribution, limitations and future research are summarized that are related to this study.

2 Theoretical Framework

2.1 Four Attributes of Product Innovation

Product innovation refers to the development of a new innovative or improved product, different from existing products, which is launched in the market in order to satisfy consumer demand (Corso & Pavesi, 2000). Since Pleschak and Sabisch (1996) summarized four attributes of product innovation, some researchers found consumers have positive attitude towards different attributes of product innovation. For example, Huddleston, Good and Stoel (2001) observe that most consumers prefer to purchase new and high-quality products rather than existing ones, and Ang (2000) indicates that beneficial properties are a significant factor of individuals' purchasing behavior. Based on Sundin, Lindahl and Ljomah (2009), product design can help consumers to make a purchasing decision among different products. Several studies have found that consumers' attitude toward environmentally-friendly products is linked to positive purchasing behavior (McCarty & Shrum, 1994; Cheah & Phau, 2011).

However, the factors within four attributes of product innovation in F&B differ from that in other product categories. Since this study is devoted to investigating different attributes of product innovation in the category of fresh fruit juices, literature related to the four attributes of product innovation and product innovation in the food and beverage industry is examined below.

2.1.1 Increasing of F&B quality

Improved quality plays a critical role in consumers' evaluation of a product at the point of purchase (Rijswijk & Frewer, 2008). In fact, their purchasing behavior is generally based on product quality, especially in the area of F&B products (Rijswijk & Frewer, 2008). Therefore, product innovation to increase the quality is significant, not only for selling the products, but also for enhancing their perceived value, thereby

improving consumer satisfaction and loyalty (Hansen, 2005). For this reason, retailers and manufacturers need to gain insight of consumers' attitude toward increasing quality and fully understand their purchasing behavior in order to acquire the desired market share (Hansen, 2005). Woodside and Taylor (1978) focused on product quality and consumers' intention to purchase and found that consumers' intention to purchase increased when they assessed products to be higher in quality. The level of production of quality depends on the F&B value (Hansen, 2005), which is usually perceived as being the product's size, shape, appearance, damage, and its composition, such as nutritional content, percentage of fat, energy, etc. (Ortega-Rivas, 2010). According to Ortega-Rivas (2010), the level of quality of F&B products can be determined from a wide range of components, including taste, sense of smell, color and appearance, food texture, price, convenience, etc., as shown in Figure 2.1 below.

Figure 2.1 Factors of food and beverage quality

Source by Ortega-Rivas (2010)

Factors of F&B quality
Taste; the sense of smell; chemesthesis – chemical irritation; food texture; appearance; auditory texture Price; convenience; branding; food processing; ethical concerns and animal welfare; credence attributes; cultural differences; contextual influences; food traditions

Other researchers have also shown that quality innovation is more obviously perceived in the fresh fruit juice category in terms of taste, color and appearance, sense of smell, price and convenience (Bonilla, 2010; Rijswijk & Frewer, 2008; Krasaekoopt & Kitsawad, 2010; Davis, Gunderson, Brown & House, 2008; Smith & Margolskee, 2006; Gofton & Marshall, 1995). The perception of taste is elicited by the mouth and tongue and this is the sensorial factor to perceive flavor (Ortega-Rivas, 2010). A survey of 400 consumers who drink fruit juice revealed that the taste of the

juice is the most vital factor by which they evaluate the quality (Krasaekoopt & Kitsawad, 2010). Therefore, since consumers purchase fruit juice because of the taste rather than other factors, improving the taste to fulfill consumers' demands could motivate them to purchase (Krasaekoopt & Kitsawad, 2010). Soeiro (2012) points out that consumers' expectation of the flavor could drive them to make a purchase; therefore, if the new taste of a certain fruit juice meets their expectation, they will purchase it more frequently than any other.

According to Hutching (2003), appearance is perceived by visible features, such as shape, size, color, etc., all of which are essential for consumers to make a positive evaluation of food quality (Hutching, 2003). They derive their first impression from the appearance of the food and this has a great impact on their evaluation of its quality (Hutching, 2003; Ortega-Rivas, 2010). According to Bonilla, 2010 color has been found to be the strongest visible factor by which consumers assess the quality of fruit juice. Also, in his research, Hutching (2003) found that enhancing the color of fruit juice could contribute to raising consumers' intention to purchase it.

The perception of smell is similar to that of taste, but Ortega-Rivas (2010) claims that the major differentiation is derived from the olfactory system. It is generally difficult to identify the smell of fruit juice, although it has a great impact on appreciation and palatability (Smith & Margolskee, 2006). Each fresh fruit has its own unique aroma, and if the aroma is pleasant, it will attract consumers to purchase the fruit juice (Smith & Margolskee, 2006).

According to Bagwell and Riordan (1991), price is one of the most significant factors to evaluate food quality. Consumers invariably believe that higher prices are a sign of better quality (Bagwell & Riordan, 1991), and price is one of the non-sensory factors that influence their intention to purchase fruit juice (Davis et al., 2008). For example, the intercept survey by Mowat and Collins (2000) discovered that 46 percent of consumers ranked price as the most essential factor that affected their assessment of product quality. In consumers' minds, lower prices are probably

associated with inferior quality, but a higher price may force them to buy a less preferred product (Bagwell & Riordan, 1991). The higher-priced product may or may not meet the expected quality, which will either lead to re-purchase in the first case or refusal to re-purchase in the second (Oliveira-Castro, 2003). Lin and Fang (2013) find that there is a relationship between price and intention to purchase. The intention to purchase will be stronger if there is a big difference in price between alternatives, whereas it will be weaker if the difference is small. This is because a big difference in price could motivate consumers to make a careful evaluation of the difference in food quality before making a purchase, and if they perceive the price to be unfair, their intention to purchase will decline (Xia & Monroe, 2010).

Convenience aims to reduce the time spent on tasks and it is often related to food preparation (Ortega-Rivas, 2010). Pre-cooked food enables today's busy consumers to save time when preparing a meal and fruit juice is becoming a convenient substitute for fresh fruit (Silayoi & Speece, 2004). From the perspective of convenience, consumers believe that ready-made fruit juice is not only easy to purchase, but also saves time making fresh fruit into juice (Gofton & Marshall, 1995).

2.1.2 Improving useful F&B properties

The properties of F&B products are any observable attributes or characteristics. F&B properties are a measure of products' material behavior, and this can be reflected in their interaction with people's senses, health promotion and good-will (Rahman, 2008). Having a brief insight of F&B properties can help to create the optimal quality (Wang, 2013) because classifying different F&B properties can enable the product to be improved (Rahman, 2008). According to Rahman and McCarthy (1999), F&B properties are divided into four categories, namely, physical and physicochemical properties, kinetic properties, sensory properties, and health properties (cited from Rahman, 2008, p. 3), and consumers can usually easily perceive sensory properties and health properties (Rahman, 2008; Rahman & McCarthy, 1999) because these are

the two with which they are most concerned. However, not all health properties are positive and it is important to avoid negative health properties during product innovation (Rahman & McCarthy, 1999). Additionally, sensory properties, such as taste, aroma, color and appearance, are also related to the evaluation of product quality, as discussed in Section 2.2.1 of this chapter. The positive health properties, as proposed by Rahman & McCarthy (1999), will be used to analyze the most useful properties and these are listed in Figure 2.2 below.

Figure 2.2 Useful F&B properties

Source: Rahman and McCarthy (1999)

Class	Components
Positive Health properties	Nutritional composition; Medical properties; Functional properties

Health properties are related to health and good-will (Rahman, 2008). The useful F&B properties related to the positive aspects of health are categorized as nutritional composition, medical properties, and functional properties. The medical properties are beneficial for preventing and treating diseases, while the functional properties have an impact on people's general physical and mental health (Rahman, 2008). The nutritional composition refers to different nutritional values and it is also advantageous for consumers' health. Several studies indicate that positive health properties are usually perceived by the nutritional value of an F&B product (Wang, 2013; Somerset, 1991).

Consumers have begun to focus heavily on health issues in recent years (Somerset, 1991), and they constantly evaluate the interaction between the nutritional value and the F&B they eat and drink in their daily lives (Somerset, 1991). Since today's consumers are willing to pay a premium price for products with a rich

nutritional value in order to stay healthy (Somerset, 1991), some new or improved food products have been introduced to the market in order to respond to these nutritional concerns (Somerset, 1991). Therefore, food manufacturers and retailers are now paying greater attention to product innovation in terms of producing healthy, nutritional food and beverages (Ghosh, Bagchi & Smarta, 2012).

According to Siricururatana (2008), today's consumers are more likely to drink nutritional beverages, such as fruit juice, to maintain their health, rather than consuming carbonated beverages. Fruit juice has plenty of essential nutritional value and contains fewer calories for people's daily diet (Siricururatana, 2008). Its inherent fruit content could be comparable to fresh fruit, which is beneficial for human health (Siricururatana, 2008). Vitamins also provide fruit juice with essential nutritional value, which can help to preserve health (Kraus & Popek, 2013); for instance, vitamin C has a whitening effect (Kraus & Popek, 2013), as well as strengthening the immune defense system, providing protection from viruses and bacteria, healing wounds and reducing cholesterol.

2.1.3 Changing of F&B design

Product innovation in F&B is a complex process, which involves various parts of food production. Earle (1997) lists the different parts of product innovation in the F&B industry, one of which is creating new ingredients to design a new F&B product, and another is designing new packaging (Earle, 1997). Simon (1981) defines design as making some changes to existing products in order to create newness, which consumers prefer, while Payam (2010) observes that designing an F&B product mainly focuses on two factors, namely product design and packaging design. Product design is known to be a set of activities that can help to develop new F&B products or improve the quality in order to satisfy consumers' needs and desires (Hu, 1999), thereby increasing their intention to purchase (Wang, 2013). In addition, Rahman and McCarthy (1999) indicate that designing an F&B product is associated with

increasing the quality and improving the useful properties, which were presented in sections 2.2.1 and 2.2.2 of this chapter. Therefore, the content of product quality will not be repeatedly described in this study nor will the detailed information of how to design an F&B product; rather, the focus of this section will be changing the packaging design.

Packaging can be defined as “a coordinated system of preparing goods for safe, efficient and effective handling, transport, distribution, storage, retailing, consumption and recovery, reuse or disposal combined with maximizing consumer value, sales and hence profits” (Saghir, 2002, p. 41). According to Rahman (2008), the design of the packaging plays a key role in the containment of the product, the preservation of its quality, presentation, convenience and protection, and it also exhibits its storage history. New packaging has the ability to draw consumers’ attention, deliver important information, and indicate quality and aesthetics (Bech-Larsen, 1996). Different packaging distinguishes one brand from another, and it is also an attractive way to demonstrate information about the product at the point of purchase (Wells, Farley & Armstrong, 2007; Silayoi & Speece, 2004). Moreover, an excellent packaging design can attract consumers and thereby increase their intention to purchase (Wang, 2013). Furthermore, changing the packaging design could strengthen consumers’ brand awareness and create a positive attitude toward a new or improved food product (Wells, et al., 2007). Thus, an attractive packaging design plays a pivotal role in increasing the sales of manufacturers and retailers (Wang, 2013).

Packaging can influence consumers’ decision to purchase in a matter of a few seconds (Bonilla, 2010). Holmes and Paswan (2012) suggest that consumers have two attitudes toward new packaging design, one of which relates to food quality and the other affects their intention to purchase. Consumers evaluate the food quality from an array of cues on the packaging (Wang, 2013). An attractive packaging design is more likely to have a positive impact on consumers’ attitude toward the quality of the food. Conversely, if the packaging design is plain and simple, it will evoke a negative

impression and have an adverse effect on consumers' opinion of the food quality (Silayoi & Speece, 2004). Beckeman (2011) implies that the attributes of food packaging can be categorized into verbal and visual cues, and visual cues on packaging generally influence consumers' evaluation of the food inside the package (Beckeman, 2011), as well as attracting their attention (Wang, 2013). Indeed, visual packaging cues can provide information for consumers who have little knowledge of the product (Wang, 2013). Ahmed, Ahmed and Salman (2005) classify four major F&B product packaging elements into two categories, namely visual elements (graphics and size/shape of packaging) and informational elements (information provided and technologies used in the packaging).

Previous studies have suggested that different sizes of packaging are required in order to meet the needs of different consumers (Rundh, 2005). Generally, bigger sizes of packaging are more noticeable on the shelf than smaller sizes. Therefore, designing different packaging sizes has an impact on consumers' attention at the point of purchase (Silayoi & Speece, 2004), and smaller sizes of packaging design is convenient for consumers to carry home with them (Silayoi & Speece, 2004). Moreover, research conducted by Wells, Farley and Armstrong (2007) found that more than 73 percent of consumers base their intention to purchase on the size of the packaging.

The shape of the packaging is one of the influential factors to raise consumers' expectations of the food product (Ares & Delize, 2010). A survey by Cichon and Ucherek (1999) found that, when consumers decide to buy a product, the shape of the packaging is the most important attribute, followed by capacity/size, and the general look. Clement, Kristensen and Grønhaug (2013) propose that a tall slim packaging shape can attract consumers' attention when they look at the packaging design in a grocery store. New shapes and sizes of the packaging may also draw consumers' attention at point of purchase (Silayoi & Speece, 2004).

Product information, such as image and informational text, has an impact on

consumers' expectations when they purchase unfamiliar fruit juice (Bonilla, 2010). In their study, Tuorila and Cardello (2002) found that the packaging information of fruit juice had an impact on the likelihood of it being purchased. Today's consumers pay more attention to the informational text because they are more concerned with nutritional value and health (Silayoi & Speece, 2004); therefore, manufacturers and retailers need to strengthen the clarity of the nutritional information and place it in a prominent place on the package to meet consumers' needs in this respect (Wang, 2013). Roe, Levy and Derby (1999) propose that information about nutritional value and health should be presented on a label on the front of the package where it is more likely to attract consumers' attention. Research conducted by Mizutani, Okamoto, Yamaguchi, Kusakabe, Dan and Yamanaka (2010) found that the image of packaging design has a noteworthy influence on consumers' evaluation of the expected flavor of fruit juice. They further found that the design of relevant F&B images on the packaging has a positive impact on consumers' attitude toward the contents.

2.1.4 Reducing environmental impacts

Although the development of F&B product innovation brings prosperity for retailers/manufacturers and consumers, it has a detrimental effect on the environment (Rehfeld, Rennings & Ziegler, 2007), and environmental degradation has a negative impact on the safety of F&B. For example, climate change will lead to an increase in microbial ecology, which will then affect the quality and safety of produce (Tirado, Clarke, Jaykus, McQuatters-Gllop & Frank, 2010). Changes in the surrounding environment in the form of temperature, humidity and undesirable odors could have a damaging impact on the shelf life and quality of products (Tirado et al., 2010). According to Kader (2005), up to 50% of food products are wasted all over the world, and the packaging material of the increasing volume of waste is becoming the main form of environmental pollution (Kader, 2005). Previous studies have found that most European consumers recognize the fact that the packaging material is a source of

pollution of the environment (Bech-Larsen, 1996).

Fuller (2011) maintains that recycling or reused packaging materials need to be the focus of environmental protectionists. Consumers' attitude toward the environment is changing and they are much more concerned about global warming than ever before (Beharrell, 1991). While some studies have found that environmental pollution is high on the list of consumers' concerns (Beharrell, 1991), they acknowledge that it is hard to define environmental-friendly packaging materials due to limited awareness. As a result, a great many consumers are willing to pay a premium price to purchase products wrapped in environmentally-friendly packaging material (Beharrell, 1991). Jain and Kaur (2004) conducted a study of consumers' attitude and behavior regarding environmental problems. They found that, while consumers had an acute awareness of environmental problems and were more than willing to engage in environmental-friendly protection activities, it was difficult for them to do so (Jain & Kaur, 2004); more specifically, consumers appeared to be confused about what they could do to protect the environment at their level.

The demand for environmentally-friendly packaging material has grown substantially (Bonilla, 2010). Generally speaking, the packaging material has become an important standard for consumers to assess the product quality (Beharrell, 1991; Bonilla, 2010). Two kinds of packaging materials are generally used to package fruit juice, namely paper and plastic (Hundal, 2001). Since paper is derived from wood, it is a renewable material and recycling paper is beneficial for saving energy, as well as protecting and preserving trees (Hundal, 2001). Although grocery stores contain a variety of fruit juice in plastic packages, plastic has a negative impact on environmental protection and human health (Piringer & Baner, 2008). However, it is easier for consumers to make a correct evaluation of product quality from plastic packaging (Silayoi & Speece, 2004); therefore, it has become a matter of urgency that new packaging material is found to reduce the amount of environmental pollution. According to Bech-Larsen (1996), it has become vital for F&B retailers and

manufacturers to pay greater attention to reducing and recycling packaging material in order to protect the environment, and in fact, many of them have become acutely aware of the importance of material recovery. For instance, the Disney Corporation utilizes material recovery to recycle more than 45 tons of paper, plastic and other packaging materials every day (Hundal, 2001).

The four attributes of product innovation are significant factors for prosperity and economic growth when considering that the aim of product innovation in the F&B industry is to acquire a competitive advantage in the saturated grocery market (Nikdavoodi, 2012). The steady launch of new/innovative or improved products is both the result of consumers' purchasing behavior and the means to increase it (Nikdavoodi, 2012). It is essential for marketers in the F&B industry to have in-depth knowledge of what drives consumers' intention to purchase in terms of what they say, how they evaluate products and what they actually do, in order to generate better product innovation.

2.2 The Theory of Reasoned Action (TRA)

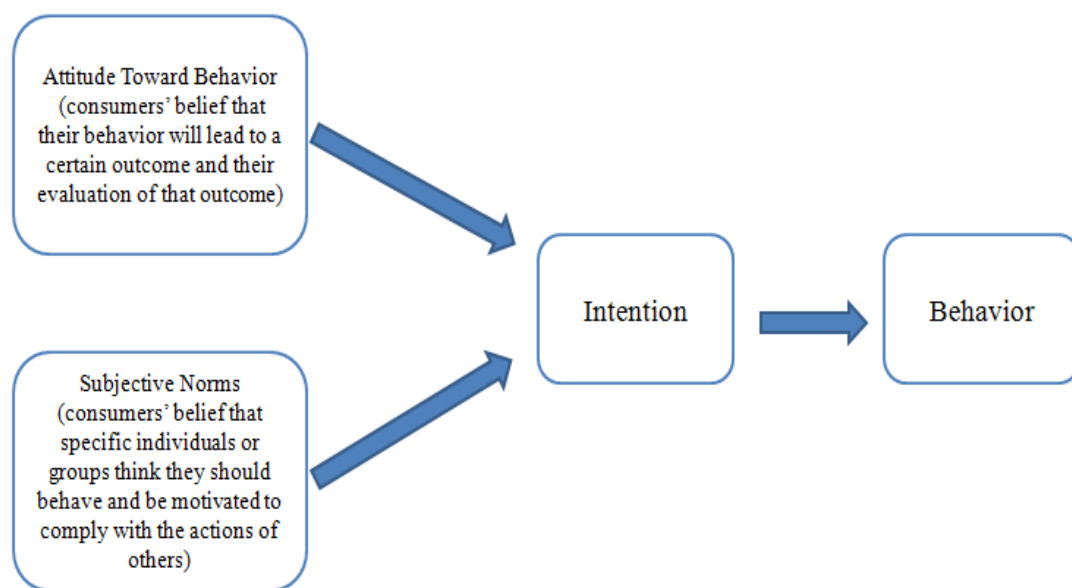
It has been well-established that it is imperative for marketers to deeply understand consumers' attitude in order to predict their purchasing behavior (Barber, Dodd & Kolyysnikova, 2009). The Theory of Reasoned Action (TRA) is a consumer purchasing behavior model, developed by Fishbein and Ajzen in 1967 (Hassandoust, Logeswaran & Kazerouni, 2011). This model is widely used to predict consumers' habit of evaluating a product before they purchase it. It is supported by Sheppard, Hartwick and Warshaw (1988), who describe the TRA as a profound model, which is mainly used to predict consumers' purchasing behavior, when they explain that "the model appears to predict consumers' intentions and behavior quite well. It also provides a relatively simple basis for identifying where and how target consumers' behavior changes" (p.325). The model relies on consumers' attitude and subjective norms to provide a rational explanation for intention to purchase and enact purchasing

behavior (Hassandoust et al., 2011).

The four primary components of the TRA model are ‘attitude toward behavior’, ‘subjective norms’, ‘intention’ and ‘behavior’. In particular, attitude toward the behavior and subjective norms have a coordinating relationship, which contributes to intention (See figure 2.3 below).

Figure 2.3 Theory of Reasoned Action (TRA)

Source by: Ajzen and Fishbein (1980)



Behavior is determined by intention, which the TRA model defines as consumers' subjective probability that they will enact the actual behavior. The greater the intention, the more they are willing to try, and thus, the greater the possibility that the behavior will be enacted (Ajzen, 1991).

Attitude toward behavior and subjective norms are two independent determinants of consumers' intention. The definition of attitude toward behavior is the degree to which consumers have a favorable or unfavorable opinion of a psychological object (Hassandoust & Perumal, 2010). It is generally perceived as consumers' judgment of the performance of the product innovation; in other words, if it satisfies their needs and desires (Hassandoust & Perumal, 2010). The attitude toward behavior is a major

determinant of consumers' intention (Ajzen & Fishbein, 1980). Individuals' intention to enact certain behavior is stimulated by a positive evaluation of the product (Hassandoust & Perumal, 2010); in other words, if consumers have a positive attitude toward product innovation, they are likely to purchase new and innovative products.

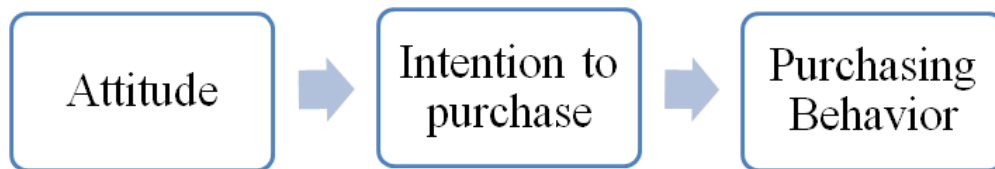
Subjective norms refer to the impact of social pressure on consumers' decision of whether or not to engage in a certain behavior (Venkatesh & Davis, 2000). Social pressure is the degree of approval consumers perceive others to have of their behavior, such as family members, friends, superiors, and even the media (Ajzen & Fishbein, 1980). However, other researchers doubt the relationship between subjective norms and intentions, citing certain inconsistencies. One of these is Mathieson (1991), who conducted research and found that there was no direct significant influence of subjective norms on consumers' intention. Similarly, Davis (1989) confirmed that objective norms did not have a significant impact on intention other than helping to perceive the ease of use and usefulness of a product.

Since consumers' attitude toward has been proved to be a key determinant of their evaluation of product innovation, and this research seeks to investigate *how product innovation affects consumers' purchasing behavior*, it is essential to understand the relationship between consumers' attitude and their purchasing behavior. Attitude and behavior are relevant and corresponding components of the TRA model. Furthermore, the TRA model acts a useful framework for analyzing consumers' attitude toward the different attributes of product innovation. Therefore, the TRA model will be introduced in this paper to interpret the relationship between attitude, consumers' intention to purchase and purchasing behavior (Figure, 2.4); however, the factor of subjective norms will not be included in the study. Although the objective norm can influence the perceived ease of use and usefulness in terms of purchasing behavior, this study focuses on consumers' attitude rather than social pressure. Consumers' attitude toward product innovation can assist retailers to create innovative products that will fulfill the constantly changing demands of contemporary

consumers.

Figure 2.4 The proposed attitude to behavior of product innovation

Adaptation from Ajzen and Fishbein (1980) and developed by authors



This new model describes three variables that are central to this research, namely attitude, intention to purchase, and purchasing behavior, each of which are explained in detail below.

Attitude is the fundamental building block of the model. This relates to consumers' evaluation having a favorable or unfavorable influence on their intention to purchase (Hassandoust & Perumal, 2010). Since attitude is consumers' internal evaluation of the product, it becomes a determinant of their actual or potential purchasing behavior (Kim, Forsythe, Gu & Moon, 2002). Flaherty and Papps (2000) suggest that consumers' attitude toward a product is the vital factor that influences their intention to purchase it. In particular, if individuals have a positive attitude toward a product, they are more likely to intend to purchase it; conversely, if they have a negative attitude toward it, they are less likely to have the intention to purchase it (Verbecke & Vackier, 2005). Other factors, such as product innovation, are likely to also be considered; therefore, product innovation may have an impact on consumers' intention to purchase when they are assessing similar brands (Biehal, Gabriel & Stephens, 1992). According to Rogers (1995), consumers' attitude toward product innovation is formed from an evaluation of the product's characteristics. Their attitude influences their intention to purchase, which then serves as a determinant of their purchasing behavior (Rogers, 1995).

Intention to purchase is "type of judgment about how, in the present context, a

consumer will behave towards a particular brand” (Biehal, et al., 1992, p.25). Ajzen (1991) describes the intention to purchase as being how hard consumers are willing to try and how much effort they are prepared to exert to enact their purchasing behavior. In other words, the stronger the role their intention to purchase plays in their behavior, the more likely they are to make a purchase (Ajzen, 1991). The distinction between intention and attitude is that intention focuses on consumers’ motivation and conscious plan to enact a behavior, whereas attitude is reflected by their evaluation of the product (Ajzen, 1991). The intention to perform a given behavior should be effectively based on the attitude taken (Ajzen & Fishbein, 1980). In this context, the intention to purchase is related to consumers’ expectation of the product in terms of the specific behavior being considered (Davies, Foxal & Pallister, 2002).

Purchasing behavior is predicted by attitude and intention to purchase (Ajzen & Fishbein, 1980). Several studies (Sheppard, et al., 1988; Venkatesh & Davis, 2000; Venkatesh, Morris, Davis & Davis, 2003) have revealed that consumers are more likely to enact a certain purchase behavior if their intention to purchase a product is a positive one. A study of the relationship between the intention to purchase and purchasing behavior conducted by Wilson, Mathews and Harvey (1975) found that 162 housewives signified their intention to purchase one particular brand out of six brands of toothpaste, this illustrating that 85 percent of housewives choose a particular brand according to their intention to purchase it. This finding supports the relationship between intention to purchase and purchasing behavior, and it further indicates that the intention to purchase is an antecedent of consumers’ actual purchasing behavior. The relationship between intention to purchase and actual purchasing behavior is driven by attitude. Consumers attempt to form a rational attitude from an evaluation. Thus, consumers’ intention to purchase and perform a certain behavior is a direct determinant of their subsequent actual purchasing behavior (Ajzen, 1985). Silayoi and Speece (2004) point out that consumers pay more attention to the product’s characteristics and brand because these can influence their purchasing

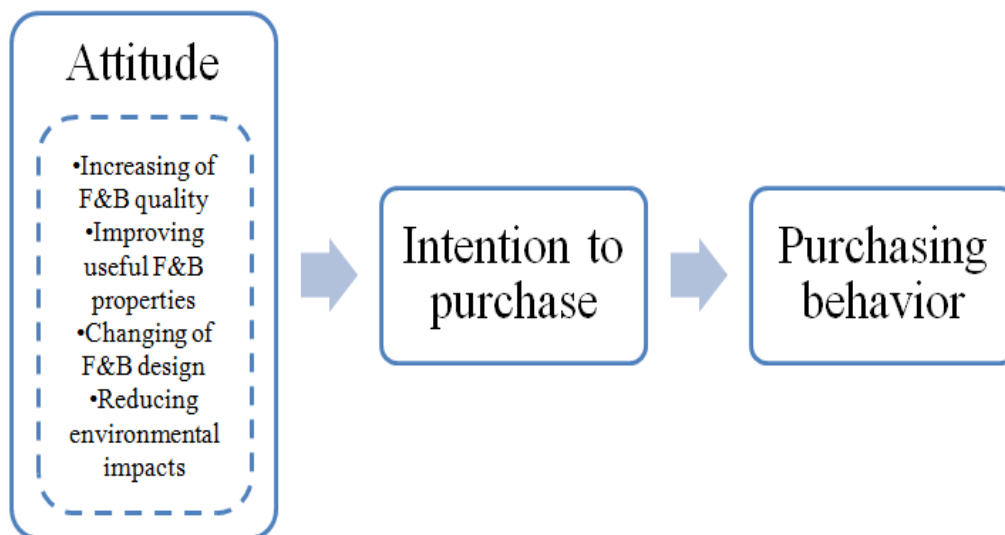
behavior.

2.3 Framework

The previous literature introduced in this chapter contributes to building a framework for this present study, as illustrated below (Figure 2.5). This modified model is composed of three components, including consumers' attitude toward four attributes of product innovation, intention to purchase, and purchasing behavior.

Figure 2.5 The attitudes toward four attributes of product innovation affects consumer purchasing behavior

Adaptation from Ajzen and Fishbein (1980) and developed by authors



In order to predict their intention to purchase and then enact purchasing behavior, it is vital to understand consumers' attitude toward the objective (Ajzen & Fishbein, 1980). In this study, the objective refers to the different attributes of product innovation of fresh fruit juice. Four attributes of product innovation were introduced in the last section, including increasing the F&B quality (e.g. innovation in taste, sense of smell, color, price, and convenience), improving useful F&B properties (e.g. innovation in nutritional value), changing the F&B design (packaging design), and

reducing environmental impacts (innovation in environmentally-friendly packaging materials), all of which have a strong impact on consumers' attitude toward a product.

In this paper, **attitude** refers to consumers' positive or negative evaluation of the above four attributes of product innovation. A favorable or unfavorable attitude is formed by consumers' evaluation of the objective (Hassandoust & Perumal, 2010); moreover, their attitude toward four attributes of product innovation depends on the product characteristics (Rogers, 1995). More specifically, for this thesis, consumers need to evaluate the characteristics of fresh fruit juice to form their attitude, and the result of consumers' attitude can lead to either a strong intention to purchase or a weak one.

Based on the theoretical background, '**intention to purchase**' is defined as an outcome of consumers' attitude toward the attributes of product innovation of fresh fruit juice. Furthermore, a major concern of the intention variable is the link with consumers' attitude, which is the main factor that influences their intention to purchase (Flaherty & Papps, 2000). In other words, consumers' attitude toward different attributes of product innovation will deeply affect their intention to purchase products in the fresh fruit juice category. If they have a favorable attitude toward the fresh fruit juice, they are more likely to have a greater intention to purchase it; conversely, if they have a negative attitude toward the product innovation in the fresh fruit juice category, they are less likely to intend to make a purchase.

Purchasing behavior is determined by the result of the intention to purchase. This study predicts that consumers' intention to purchase is stimulated by their evaluation of the product innovation, and the intention to purchase is a predictor of actual purchasing behavior. According to Ajzen (1985), consumers' intention to purchase is a direct determinant of their acceptance or rejection of purchasing behavior (Ajzen, 1985). Therefore, consumers' positive or negative intention to purchase innovative products would probably determine the performance of their purchasing behavior.

The basis of this model is consumers' attitude toward the four attributes of product innovation, which is determined by the results of an evaluation. Several studies have found that attitude is an important predictor of the intention to purchase, thereby confirming the relationship between consumers' attitude and their intention to purchase innovative products in the area of fresh fruit juice consumption. Based on previous literature, the aim of this model is to provide a comprehensive view of consumers' purchasing behavior and determine how it is affected by different attributes of product innovation.

3. Methodology

3.1 Research Design

Despite product innovation being a hot topic at present, it has not yet been sufficiently researched from the perspective of consumers in the F&B industry. The present study seeks to fill this gap by focusing on the relationship between product innovation and consumers' purchasing behavior in the F&B industry. A combination of the theoretical background and consumers' perspectives will be utilized in order to determine the main attributes and factors that affects consumers' attitude toward product innovation and the way in which it affects their purchasing behavior. This question has been raised because consumers' personal attitude and perspective have been found to be meaningful for improving product innovation in social sciences (Bryman & Bell, 2011). It is essential to choose the correct research design in order to answer the research question clearly and correctly, because the design determines a range of factors in the research process, as well as different frameworks for the collection and analysis of the necessary data (Bryman & Bell, 2011).

3.1.1 Qualitative Research

Bryman and Bell (2011) maintain that qualitative research is a research strategy that uses words rather than numbers to explain and demonstrate the results of the data collection and analysis. In terms of understanding consumers' attitude toward attributes of product innovation in the F&B industry, the kind of verbal information collected rather than the quantity, would be beneficial for a further analysis. Additionally, the qualitative approach is capable of facilitating a deeper understanding and wider knowledge of the relationship between product innovation and consumers' purchasing behavior, which responds to the needs of this research (Bryman & Bell, 2011). The aim of the study is to determine the attitude of consumers when they purchase products due to product innovation in the social reality and to provide

diverse descriptions of their perception and interaction in a natural setting (Bryman & Bell, 2011). Since this research also seeks to create new theoretical evidence rather than revising the current theory, qualitative research is deemed to be more able to answer the research question (Malhotra, 2010). This study also seeks to understand consumers' attitude toward attributes of product innovation in the fresh fruit juice category of the F&B industry. Since it plans to adopt a language-based approach, including discourse and conversation, to collect the necessary data, it can be said to follow a qualitative approach.

In terms of the approach adopted to drive the data collection process and reach the required conclusion, the study will utilize inductive reasoning in terms of what is known in the field of product innovation in the fresh fruit juice category of the F&B industry. According to Bryman and Bell (2011), induction is an approach by which to generate theory via empirical findings. This research mainly deploys the inductive approach because it aims to contribute some new findings about the relationship between product innovation and consumers' purchasing behavior.

3.2 Research Method of Data Collection

3.2.1 Qualitative interviewing

Qualitative interviews will be conducted to collect the data in this study. According to Bryman & Bell (2011), interviews are one of the most widely-used methods to collect data in qualitative research. The advantage of using interviews in this study is that they are flexible means for interviewees to answer questions or provide more information than other research methods. Bryman and Bell (2011) advocate the use of qualitative interviews when researchers are attempting to determine consumers' attitude toward four attributes of product innovation in the fresh fruit juice category, since this means of collecting data is more natural than observation, which may appear to be less natural due to their knowledge and social status (Bryman & Bell, 2011).

The aim of this study is to acquire a deeper understanding of consumers' insights of how different attributes of product innovation affects their purchasing behavior in the fresh fruit juice category of grocery stores, which involves collecting interviewees' shopping experience and feelings about product innovation. According to Denscombe (2010), interviews are the most suitable method for researchers to gain insight into factors like people's opinions, feelings, emotions and experiences. Although analyzing interview transcripts is extremely time-consuming, the results enable researchers to deepen their understanding of specific social phenomena (Bryman & Bell, 2011). In addition, "interviews can provide a useful way for the researcher to learn about the world of others, although real understanding may sometimes be elusive" (Qu & Dumay, 2011, p.239). In the light of the foregoing, qualitative interviews are deemed to be the best method to collect the necessary data for this study.

3.2.1.1 Semi-structured Interviews

According to Easterby-Smith et al. (2008), there are three kinds of interviews, namely unstructured, semi-structured and structured. Semi-structured interviews will be conducted as the first step to collect the primary data in this study in order to obtain more information about consumers' attitude toward attributes of product innovation. Bryman and Bell (2011) define the advantages of semi-structured interviews, the first of which is that they are flexible in that interviewees have more freedom to answer questions during the conversation or discourse than they have in structured interviews. The second advantage is that, unlike unstructured interviews, interviewees in semi-structured interviews are provided with a list of questions, which enables them to have a great deal of leeway to gather their thoughts before they reply (Bryman & Bell, 2011). Therefore, in this case, the semi-structured interviews will enable the researchers to exert a kind of flexible control over the conversation and ask additional questions about attributes or factors of product innovation and consumers'

purchasing behavior if they are deemed to be essential for the collection of in-depth information. Qu and Dumay (2011) maintain that a well-planned interview can provide the study with rich data. Last, but not least, while the aim of this research is to investigate whether or not consumers' attitude toward four attributes of product innovation influences their purchasing behavior in the F&B industry in grocery stores, it is likely that the interviewees may not be able to identify the features of product innovation; therefore, these will be explained to them during the interview.

3.2.2 Sample Selection

The issue of representativeness is rather less important to obtain an in-depth analysis in qualitative research than it is in quantitative research because the population is unknown (Bryman & Bell, 2011). This means that the sample size should be decided by considering the time and cost involved in the selection. Because of time constraints, this research only selected eight members of the population to participate in semi-structured interviews lasting no more than one hour. Thus number was deemed to be sufficient to obtain the required data within the time allowed.

The interviewees were selected based on convenience sampling in the form of non-probability sampling, which means that the interviewees were not selected randomly, but were obliged to meet certain criteria. Therefore, some people were available for interview at a certain time (Bryman & Bell, 2011). Since the aim of this study is to obtain an in-depth understanding of the relationship between product innovation and consumers' purchasing behavior, it focuses on producing knowledge rather than statistical results. Convenience sampling is more commonly used than probability sampling in the field of business and management (Bryman & Bell, 2011). The interviewees were selected using certain criteria, including shopping experience and the ability to express their emotions, feelings and experience of purchasing fresh fruit juice. They were also required to be proficient in the English language because this is a lingua franca and the most common communication tool in today's global

business environment. Since ICA is one of the major players in the grocery retail field in Sweden, it sells many different brands of fresh fruit juice in its stores. Therefore, consumers who have experience of purchasing fresh fruit juice in ICA stores were deemed to be a suitable sample for this paper. The sample consumers were chosen from those who purchased fresh fruit juice from the ICA Tunavägen store. They were approached and asked if they spoke English and if they were willing to participate in a short interview about their attitude toward the effect of fresh fruit juice innovation on their purchasing behavior. They were then asked to provide their email address so that they could be contacted to arrange a mutually suitable date and time for the interview.

3.2.3 Interview procedure

The research utilized individual interviews, which are renowned for obtaining useful information. The main reason for using individual interviews is that they are considered to be the most appropriate for obtaining answers to the research question in qualitative and exploratory studies (Bryman & Bell, 2011). Individual interviews enable a deeper discussion with interviewees on a one-to-one basis, so that they can feel free to provide their opinions and relate their experiences without others' interference or influence. Another benefit of individual interviews is that they ensure that interviewees' thoughts about a problem are independent and secure in an intimate setting. Furthermore, interviewees are able to freely raise any problems, which could assist the interviewer collect some new, unexpected and profound information for the data analysis. Compared to focus group interviews, in which the interviewer may struggle to retain control of the direction of the conversation, individual interviews enable the interview to be organized and managed to obtain more accurate and truthful answers. Individual interviews also save time in the process of transcribing the results.

A few days before conducting the interviews, the interviewees were emailed some information about the purpose of the research and some prepared questions.

This enabled them to have a good idea of the topic and gave them time to prepare some coherent answers in advance of the interviews (Malhotra, 2010). The interview questions were divided into two sections, the first of which contained general questions about the interviewees' perspective of product innovation. The second consisted of open-ended questions regarding the impact of different attributes of the fresh fruit juice category on their attitude toward product innovation and their purchasing behavior. All the open-ended questions can be found in the Appendix.

The interviews were conducted in the authors' corridor restroom, where the interviewees would feel more relaxed than in a meeting room. It was critical to provide comfortable circumstances and a relaxed atmosphere. The interviewees would have felt uncomfortable if they had just been invited to talk on their own, so the interviewers needed to engage in a proper discussion to show their emotions and feelings occasionally. Such a positive atmosphere would encourage the interviewees to talk freely and express their feelings, experience and perception of the questions. In addition, some fresh fruit juice categories were prepared in advance to act as a prompt for the interviewees' thoughts and answers.

As already mentioned, since all the interviewees had no problem with using the English language to express their views, a decision was made to conduct the individual interviews in English. Each interview would last for around 45 minutes. The interviewees were asked if they would agree to the use of an audio recording rather than having to make field notes. An audio recording is able to record the entire context during the interview process in order to ensure the validity of the empirical data. Furthermore, paper and pens were provided for the interviewees to make their own record of the proceedings and any points they feel to be useful for the data analysis of this research. Since the researchers are not English nationals, using audio recordings and interviewees' own records could further help to ensure the validity of the data.

3.2.4 Use of collected data

As already noted, the data collected from the individual interviews was audio-recorded and transcribed afterwards. It was recorded and summarized by each interviewer separately, because it was considered that two summaries would be beneficial for comparison and discussion, and to further ensure the collection of rich and useful data. Moreover, the same attitude or perception of fresh fruit juice of consumers was classified under the same category and analyzed in the next chapter.

3.3 Data analysis

The data analysis is one of the most important parts of an inductive research strategy and one that is essential in this study (Bryman & Bell, 2011). According to the grounded theory, coding would be a key process in analyzing the data, and this should be done soon after the initial collection. Coding in qualitative research is different from quantitative research in that the data needs to fit into pre-conceived standardized codes. Several steps were taken when coding in this study; for example, considering more theoretical ideas in relation to codes and data, maintaining a balanced perspective, which meant regarding coding as being part of the analysis, but different from it. It is important to adhere to the way in which the empirical material is connected to the theoretical framework in the process of coding (Bryman & Bell, 2011). Consumers' attitude depends on their perspective of product innovation, and how this affects their purchasing behavior is used when coding the empirical data. Likewise, Bryman and Bell (2011) observe that the data analysis should focus on a "back and forth" movement in that the findings should combine empirical data with the theory. Analyzing the way in which the interviewees' attitude toward attributes of product innovation can predict their purchasing behavior of fresh fruit juice is relevant to the research purpose.

3.4 Reflection of data collection

It is important to consider the complete range of research methodologies in order to determine the best possible research design that corresponds with the chosen research method. For this reason, a reflective discussion of the empirical data collection is presented below.

The results of a qualitative research cannot be generalized to the entire population; in other words, the results of qualitative research cannot be said to be representative. The generalization of a study relates to whether the findings can be transferred to other settings. The aim of the present study is to provide additional insights into the effect of consumers' attitude toward attributes of product innovation on their purchasing behavior in terms of the fresh fruit juice category in grocery stores. Therefore, the findings may be meaningful for all stores that sell fresh fruit juice.

Although it is hard to avoid some misunderstanding or misinterpretation of research design, methods and data collection, the authors of this study have attempted to ensure the validity of the empirical data as far as possible. Validity is the most prominent criterion for establishing the quality of qualitative research (Bryman & Bell, 2011). One aspect of the validity of this research is that the interviews can be generalized to the research context. Individual semi-structured interviews were conducted to ensure that the interviewees were free to talk about their perception and attitude toward product innovation in fresh fruit juice in the grocery market. Thus, the discussion was arranged to focus on the relationship between consumers' attitude toward four attributes of product innovation and their purchasing behavior, as introduced in the theoretical framework.

Another aspect of the validity is that all the interviewees who participated in this research were frequent ICA customers who had experience of buying fresh fruit juice. Therefore, the participants are an influential factor to ensure the validity of the collected data to some extent. Although it is believed that the information provided by all the interviewees will be similar to the opinions of other consumers, loyal

customers are more familiar with the different categories of products in the ICA store and their attitude would reflect a more reactive and accurate manner than other casual customers. In order to ensure that the information collected would be useful, the questions were piloted in advance by a loyal ICA consumer in order to test their accuracy and significance for the research findings.

In addition, the validity of this research can be reflected in the utilization of different sources of information, including interviews, official websites and articles, with the aim of substantiating the findings. All the questions were formulated based on the theoretical framework. Moreover, none of the questions were found to be misleading, so the answers should all have reflected consumers' true perception of purchasing fresh fruit juice. Due to time constraints, the sample for this study focuses on customers of ICA and the fresh fruit juice category of comparable products sold in that particular store. However, conducting interviews with consumers in more stores may produce other perceptions or attitudes toward attributes of product innovation, which may motivate their intention to purchase. Although it was only possible to interview eight consumers because of time constraints, some valuable empirical data was collected and will be discussed in the next chapter.

4. Analysis and Discussion

The aim of this study is to determine the relationship between four attributes of product innovation and consumers' purchasing behavior in the F&B industry. This chapter presents an analysis of qualitative data related to consumers' insights into the way in which attributes of product innovation affects their purchase of fruit juice, collected by means of individual semi-structured interviews. Eight interviewees participated in this research, and although a great deal of information was collected, some opinions were similar; therefore, these were filtered and merged to obtain the most relevant data for analysis and discussion.

The main object of this research is product innovation, which almost all the interviewees identified as being the way in which retailers or manufacturers create new products and constantly improve existing ones. From their perspective, they are influenced to purchase fresh fruit juice based on creating or improving the quality, price, nutritional value, and packaging, which previous studies identified as being four attributes of product innovation. The findings are presented in this chapter, together with a broad discussion of how attributes of product innovation and consumers' attitude toward it affects their purchasing behavior when they consider whether or not to buy fresh fruit juice in grocery stores. The discussion is divided in terms of the main attributes presented in the empirical data and their relationship with those in the theoretical framework.

4.1 The impact of improving food quality

Previous literature indicates that developing the taste, smell, color, price, convenience and quality of a product will lead consumers to perceive that it provides better value than others (Bonilla, 2010; Rijswijk & Frewer, 2008; Krasaekoopt & Kitsawad, 2010; Davis, Gunderson, Brown & House, 2008; Smith & Margolskee, 2006; Gofton & Marshall, 1995); therefore, continual development will drive

consumers to buy F&B products. Several authors (e.g. Rijswijk & Frewer, 2008) maintain that improving the quality is a critical factor of consumers' attitude toward a product, and the results of the present study also illustrate that improving the quality of F&B products is the main factor that affects consumers' purchasing behavior at the point of purchase. Increasing the quality of F&B products is internally connected with improving useful properties (Rahman & McCarthy, 1999). Furthermore, based on the opinion of the interviewees, increasing the quality of fresh fruit juice relates to improving the taste, color, price, convenience and freshness. In view of the fierce competition in the global grocery market, it has become essential for marketers to understand consumers' attitude toward the quality of a variety of F&B products. Therefore, the present study was undertaken to add to the understanding of how the taste, color, smell, price, convenience and freshness of fruit juice affect consumers' purchasing behavior, and the responses received from the eight interviewees are analyzed below.

Product innovation of taste: A prior study observed that taste in product innovation is often related to consumers' expectation of the product's flavor (Soeiro, 2012). Some of the interviewees in this study also indicated that a new taste is especially attractive when they are buying fresh fruit juice because it builds their curiosity at the point of purchase, as is evident from the following responses;

I am curious about the new taste of products, including fresh fruit juice. I will buy them because I want to experience the difference between them and existing products (Interviewee 2).

I like to try new tastes to satisfy my curiosity (Interviewee 4).

The above comments illustrate that consumers are attracted by a new taste because it is different and this arouses their curiosity and stimulates their intention to

purchase. In other words, a positive intention to purchase may lead consumers to purchase fresh fruit juice in order to satisfy their curiosity. This result corresponds with the findings of several studies (for example, Sheppard, et al., 1988; Venkatesh & Davis, 2000; Venkatesh, et al., 2003).

However, consumers will not repurchase fresh fruit juice when the new taste does not meet their expectations, as shown by the following comments;

If the new taste does not meet the standard of the existing flavor, I will not be willing to buy it (Interviewee 5).

The ICA store always provides free tasting when they introduce new fresh fruit juice. If the new taste does not meet my expectation, I will not buy it (Interviewee 6).

These responses indicate that consumers are able to evaluate the new taste of fresh fruit juice after they have tried it, and the taste has a huge impact on their determination of whether or not the flavor meets their expectation (Soeiro, 2012). If they have a negative attitude toward the new taste, they are less likely to have the intention to purchase it. In other words, consumers may not change their purchasing behavior to buy a new category of fresh fruit juice due to having a lower intention to purchase it. This corresponds with the results of research by Verbecke and Vackier (2005).

Additionally, the need and desire for a new taste in the fresh fruit juice category is strongly related to the product's flavor, as shown by the following response;

I like the taste of strawberry juice. Even though it may not be 100% strawberry, if manufacturers or retailers introduce a mixed taste of strawberry and apple, I will still buy it (Interviewee 5).

This statement reveals that consumers' personal taste also has an impact on their evaluation of new flavors of fresh fruit juice. Although they prefer the new product to fully conform to their personal preference, they can accept fruit juices that are a combination of their personal taste and other fresh fruit. In other words, the interviewees indicated that they would prefer innovative fresh fruit juice to have their own favorite flavor, since this would have a positive result on their purchasing behavior and definitely increase their intention to purchase. This finding matches that of Venkatesh and Davis (2000). Hence, retailers should make every effort to create new flavors in order to fulfill different consumers' demands, which will motivate them to buy more products. The result of the present study corroborates the findings of a great many previous studies, including that of Krasaekoopt and Kitsawad (2010), who found that creating a new taste is one of the most essential criteria for evaluating the quality of fresh fruit juice. In other words, if consumers have a positive attitude toward a new taste in the fresh fruit juice category, this will increase their intention to purchase, which will lead to them to buy more products.

An unanticipated finding was that a new taste of fresh fruit juice is connected with consumers' sense of excitement and pleasure, as indicated by the following comments;

It is exciting for me to try some different and new tastes of fresh fruit juice
(Interviewee 4).

I like to drink fresh fruit juice. It is interesting for me to find a new taste of fresh fruit juice in the ICA store. Although it may not be significantly different from existing tastes, I am still keen to try it (Interviewee 3).

Consumers are willing to purchase fresh fruit juice with a new taste simply to experience special moments of excitement and pleasure. Further, the interviewees indicated that they enjoy trying a new flavor of fresh fruit juice because of the feeling

of high spirits when they find a new product. The excitement and pleasure experienced gives them a favorable attitude toward the new taste. In other words, a favorable attitude toward fresh fruit juice with a new taste could raise consumers' intention to purchase, and the likelihood that they will enact their purchasing behavior. This corresponds with the finding of Flaherty and Papps (2000) that consumers' attitude is what influences their intention to purchase.

The results of this study also accord with those of Krasaekoopt and Kitsawad (2010), who found that taste is more important than other factors. The taste in product innovation is a significant factor that affects consumers at the point of purchase. Some of the interviewees said that taste is a highly-ranked factor when they choose fresh fruit juice, and sometimes, they even buy juice to experience a different taste. Therefore, it appears that changing or creating a new taste in fresh fruit juice has a powerful effect on consumers' purchasing behavior.

Product innovation of color: The interviewees mentioned that color is a visible factor in plastic bottles of fresh fruit juice, since the color of fresh fruit juice can help them to correctly evaluate the product quality. Color innovation relates to the material used to package the juice, because the color can only be distinguished if the packaging is a kind of clear plastic.

According to Hutching (2003), consumers like to buy fresh fruit juice with an enhanced color in order to fulfill their needs and desires; however, the findings of the present study do not corroborate this statement, as indicated by the following responses;

I prefer colors that are closer to the natural fruit. I will not buy it if the color is either lighter or darker because it makes me feel that the quality of the juice is not good (Interviewee 7).

The color helps me to evaluate the quality and freshness of the juice.

Certainly, the color must be natural; otherwise, I will not purchase it
(Interviewee 1).

The results of this study show that, if the color of the fresh fruit juice is close to that of the natural inherent color of the fresh fruit, this will raise consumers' intention to purchase it. There is an explanation for this result, which is that the color of fresh fruit juice is connected with the evaluation of its quality (Bonilla, 2010). Enhancing the color of fresh fruit juice makes consumers doubt its healthy properties. Also, too light a color makes them feel that too much water was added in the production. Both enhancing and reducing the color of fresh fruit juice would make consumers consider the quality to be lower. In other words, the perception of the lower quality of the new fresh fruit juice as a result of the evaluation would have a negative impact on consumers' intention to purchase it, which corresponds to the findings by Woodside and Taylor (1978). In their study, Sheppard, Hartwick and Warshaw (1988) found that consumers' negative intention to purchase would make it less likely that they would engage in purchasing behavior. Thus, it can be confirmed that it is vital for manufacturers and retailers to maintain and display the color of the original fresh fruit when producing a new fresh fruit juice. This can be achieved by packaging the juice in clear plastic bottles so that consumers can evaluate the quality of the new fresh fruit juice by the color of the juice in the bottle. As a result, the natural color of the fresh fruit juice would increase consumers' intention to purchase and engage in purchasing behavior.

Product innovation of aroma: The results of the sense of smell in this study were different from those of Smith and Margolskee (2006), who found that the sense of smell can impact people's appreciation and palatability. Most of the interviewees expressed the view that the sense of smell was not a factor that particularly influenced their purchasing behavior when buying new fresh fruit juice, as shown by the

following comments;

The sense of smell?...actually, I do not care about this. Because the quality of fresh fruit juice is quite good and the sense of smell is close to nature. I think I would not buy fruit juice if it had a strange aroma (Interviewee 2).

I never notice the smell of juice. However, if the ICA store provides free tasting and the aroma is too pungent, I will certainly notice it (Interviewee 8).

The above comments indicate that the sense of smell seldom impacts consumers' attitude toward purchasing fresh fruit juice, since the quality of fresh fruit juice is generally good; therefore, they hardly ever assess the smell at the point of purchase. Consumers will not notice the smell because it is not significantly different among all fresh fruit juice. It is only when manufacturers or retailers add some special aromatic ingredients to the fresh fruit juice that it may attract consumers' attention to the smell. However, consumers prefer the natural aroma of fresh fruit juice because of health concerns. In other words, enhancing the smell of fresh fruit juice would create a negative effect on consumers' intention to purchase due to health considerations, and a negative intention to purchase is a direct determinant of actual purchasing behavior (Ajzen, 1985), and consumers may not purchase new fresh fruit juice for this reason. Therefore, this result shows that the smell of fresh fruit juice has little influence on consumers' purchasing behavior, and it is thus unable to support the finding of Smith & Margolskee (2006), namely that the pleasurable aroma of fresh fruit juice can attract consumers to purchase it.

Product innovation of price: Price is a significant factor that needs to be considered when attempting to understand the impact of increasing food quality on consumers' purchasing behavior. A strong relationship between price and quality has

been reported in the theoretical framework (e.g. Mowat & Collins, 2000). The collected responses from this study also illustrate that price is one of the essential factors when consumers evaluate the quality of F&B products, as shown by the following comment;

I am willing to spend a little bit more to buy high-quality juice. The price difference of fresh fruit juices is not too large. Higher-priced fruit juice may be better for my health (Interviewee 6).

When consumers evaluate an increase in the quality of fresh fruit juice, the price has a major effect on their intention to purchase it. Based on the empirical data, consumers believe that retailers fix the price for practical reasons, and a higher price indicates better quality. The majority of consumers prefer to pay a premium price for fresh fruit juice with better quality because they consider it to be healthier than other products. The finding of the present study is consistent with that of Bagwell and Riordan (1991), who found that consumers believe that the higher the price, the higher the food quality. Furthermore, the interviewees maintained that they would purchase new fresh fruit juice with a higher price and better quality more frequently than other brands with the same taste and the same volume. In other words, better quality fresh fruit juice with a higher price has a favorable impact on consumers' intention to purchase and this affects their actual purchasing behavior. This finding corresponds with that of Mowat & Collins (2000), who suggest that price is a determinant that affects consumers' intention to purchase most F&B product categories, including fresh fruit juice, and since they believe that price reflects the value and quality of the product, it becomes a major factor to be considered when consumers are evaluating a new F&B product.

It appears that the increasing number of fresh fruit juice categories has a positive impact on consumers' purchasing behavior. However, although a number of

high-quality highly-priced fresh fruit juice categories are being introduced in grocery stores, not all consumers are willing to pay premium prices; therefore, most stores still offer other lower-priced fresh fruit juice.

Product innovation of convenience: The present study found that convenience is one of the factors that influence consumers to buy fresh fruit juice in grocery stores. Buying fresh fruit juice from the store means that consumers save time; therefore, convenience is connected to food preparation (Ortega-Rivas, 2010). Consumers would spend more time making their own juice than purchasing fresh fruit juice from the store, as indicated by the following response;

I have a juice-making machine, but I have only used it a few times. It is too complex for me to make juice at home. I need to wash, cut, prepare and clean the fruit. Since the fresh fruit juice sold by ICA has high quality, it is more convenient for me to buy the juice ready-made (Interviewee 4).

Consumers perceive that fresh fruit juice is of good quality, especially 100% fresh fruit juice. This is because it has a similar quality and freshness as home-made juice. This indicates that the convenience of buying high-quality fresh fruit juice has a positive impact on consumers' attitude toward it. Based on previous literature, consumers' attitude influences their intention to purchase and this is a determinant of their actual or potential purchasing behavior (Kim, et al., 2002). The positive attitude toward fresh fruit juice is formed from the convenience of purchasing a high-quality product, and this positive attitude enhances consumers' intention to purchase, which may be translated into actual purchasing behavior. This finding agrees with that of Gofton and Marshall (1995), who ascertained that purchasing fresh fruit juice is convenient because it saves the time to produce fresh fruit juice from the actual fruit, and this convenience affects consumers' purchasing behavior.

Furthermore, the results of this study illustrate a different perception of convenience that affects consumers' purchasing behavior. This was an unexpected finding that refers to the fact that there are a number of grocery stores, which makes it convenient for consumers to purchase fresh fruit juice, as shown by the following comment;

There are lots of ICA stores in Lund. This ICA store (Tunavägen ICA store) is close to my residence. I can walk to the store in 1 minute when I want to buy fresh fruit juice (Interviewee 7).

ICA is one of the major grocery stores in Sweden with 1,321 stores by the end of 2013. It accounts for about 36% of the market share in the fiercely competitive Swedish grocery market (ICA Sweden, 2014). Consumers can easily purchase fresh fruit juice from every ICA store. It appears that convenience has a positive impact on consumers' intention to purchase and this may influence their willingness to purchase fresh fruit juice. In other words, the factor of convenience has a positive effect on consumers' purchasing behavior, which corresponds with the finding of Ajzen (1991).

Product innovation of freshness: It is interesting to note that, apart from the taste, color, price, and convenience, the interviewees in this study also perceived freshness as an important criterion for evaluating product quality. Most consumers will notice the date of the produce at point of purchase and they will choose the most recent date, since this implies that the fresh fruit juice is fresher and of higher quality than others. Furthermore, consumers' estimation of the quality of fresh fruit juice also relies on the expiration date. A short expiration date indicates that the fresh fruit juice has no additives, which can extend the time before F&B products deteriorate, as noted in the following comment;

I take note of the production date and expiration date when I choose fresh fruit juice. They enable me to know if the fruit juice is fresh. The freshness indicates that the quality of the juice is high, so I will buy it (Interviewee 5).

Indeed, the proximity of the production and expiration dates is an additional factor that can influence consumers' purchasing behavior because both of these dates enable them to evaluate the quality of the new fresh fruit juice. Consumers have a favorable attitude toward fresh fruit juice because of its freshness, and this raises their intention to purchase it. The higher the intention to purchase, the more likely they are to engage in purchasing behavior (Venkatesh, et al., 2003). Therefore, in order to motivate consumers to buy fresh fruit juice, manufacturers and retailers need to consider the freshness of product innovation.

4.2 The impact of improving useful F&B properties

A prior study found that the value of beneficial F&B properties can improve consumers' attitude toward products (Ang, 2000). Improving the useful properties of products can motivate consumers to buy fresh fruit juice, because a growing number are beginning to focus on health issues (Somerset, 1991). The results of this study show that improving useful properties, such as positive nutritional properties, could affect consumers' purchasing behavior when they consider buying fresh fruit juice. Positive nutritional properties are revealed and analyzed below in order to enhance the understanding of the way in which improving them can affect consumers' purchasing behavior.

Product innovation of nutrition: In terms of the issue of health, the interviewees strongly advocated the importance of the nutritional value of F&B products' properties, and it appears that this is the primary factor that affects their

purchasing behavior. This finding is consistent with that of other studies (Wang, 2013, Somerset, 1991; Ghosh, et al., 2012), all of which found that positive health attributes are one of the useful properties often perceived from the nutritional value, as explained by the following comments;

Either ICA or Bravo fresh fruit juice is more beneficial for my health than drinking cola. The juice contains nutrition. I prefer to buy new fruit juice products to supplement my nutrition to stay healthy (Interviewee 1).

I like drinking fresh fruit juice, not only for the taste, but also for the rich nutrition. Drinking fruit juice can give me added vitamins and energy. If a new fresh fruit juice has more nutritional value, I will be willing to try it, even if it costs a little more (Interviewee 5).

Based on the empirical data, the interviewees evaluate the product's value from its nutritional content. Rich nutritional content will attract consumers to purchase fresh fruit juice and possibly purchase it more frequently. In other words, if the fresh fruit juice contains richer nutritional value, this will boost consumers' intention to purchase it, and the higher intention to purchase is likely to have a positive effect on their purchasing behavior (Ajzen, 1985). This result is consistent with that of Somerset (1991), who found that nutrition has become an increasingly important factor that impacts consumers' choice of product. The results of the present study correspond with those in previous studies, such as Rahman (2008), and Kraus & Popek (2013), that nutritional value is one of the most important factors that affect consumers' evaluation of health and energy, as illustrated by the following comments;

I pay little attention to health management, but I prefer to buy fresh fruit juice if it contains rich nutritional value. This is because it is good for me to be healthy (Interviewee 5).

I focus on managing my health. I prefer to purchase fresh fruit juice that gives me more nutrition and energy, especially 100% fresh fruit juice (Interviewee 8).

This shows that rich nutritional value and energy is associated with good health, which could impact consumers' attitude toward fresh fruit juice. A positive attitude would directly affect consumers' intention to purchase and may lead to positive purchasing behavior (Ajzen & Fishbein, 1980). In other words, consumers' actual purchasing behavior is determined by their intention to purchase. If they have a positive intention to purchase fresh fruit juice, they may make a purchase, whereas if their intention to purchase is negative, they may not. Likewise, Siricururatana (2008) mentions that consumers prefer to buy fresh fruit juice because it contains most of the inherent nutrients and low-level calories of fresh fruit, which have a positive impact on health.

Furthermore, the present study found that the nutritional value of fresh fruit juice is also connected with product quality. Consumers are satisfied with the improvement of the nutritional value of fresh fruit juice. They perceive that, if fresh fruit juice contains more nutritional value, this is equivalent to better quality, as indicated by the following comment;

To my mind, higher-priced fresh fruit juice has better quality. I am happy to pay more for a better quality product (Interviewee 5).

According to the empirical data, a majority of consumers, like interviewee 5, prefer to pay a premium price in order to ensure the high quality and rich nutritional value of fresh fruit juice, because this provides many more beneficial nutritional supplements to maintain long-term health. The perception of better quality would enhance consumers' intention to purchase, and this may have a positive effect on their

purchasing behavior. The results of this study correspond to the findings of a great number of previous researchers in this field (e.g. Somerset, 1991). This implies that manufacturers and retailers need to use product innovation to improve the nutritional value of useful F&B properties to alleviate consumers' nutritional concerns, and thus positively affect their purchasing behavior.

4.3 The impact of changing food design

The results of the present study show that changing the food design is crucial for consumers. The impact of different F&B product designs is significantly related to consumers' purchasing behavior. The interviewees indicated that a new design, especially in terms of packaging, could attract their attention to products compared to those of competitors, and then may motivate their intention to purchase them. Therefore, changing the packaging design could stimulate consumers' purchasing behavior because packaging is a medium of attention, information, quality and aesthetics (Bech-Larsen, 1996). Ahmed, Ahmed and Salman (2005) and Beckeman (2011) indicate that, as visual cues, the size, shape and product information could affect consumers' purchasing behavior. Thus, it is deemed to be essential for marketers to understand consumers' attitude toward the packaging of fresh fruit juice; therefore, the empirical data about packaging design will be analyzed in the next section in order to provide a clear insight of how visual cues affect consumers' purchasing behavior.

Product innovation of packaging size: According to a great deal of the previous work in this area of research (e.g. Cichon & Ucherek, 1999), changing the size of the packaging could draw consumers' attention to fresh fruit juice. However, surprisingly, most of the interviewees in the present study did not pay attention to changes in packaging size, as shown by the following comment;

I don't care too much about the size. I think the current size of a bottle of juice is acceptable (Interviewee 7).

A possible explanation for this may be that they consider other factors to be more significant, and thus, pay less attention to changes in the size of packaging. However, a few interviewees did refer to the size of new packaging. They perceived that the change in packaging size at the point of purchase relates to a sense of freshness, convenience and health, as indicated by the following comments;

Size of packaging? ...it depends. I will purchase different sizes of fresh fruit juice in different situations. For example, I will buy a small bottle when I want to take it out because it is more convenient. Of course, I like to buy new sizes of fresh fruit juice because they imply a sense of freshness (Interviewee 4).

I prefer a small bottle of fresh fruit juice that I can drink the same day, so the quality of the juice will not be impaired by keeping it for several days (Interviewee 3).

Any change of packaging, such as size, is a novelty that could arouse consumers' intention to purchase in order to classify the difference between the existing size and new size of packaging of fresh fruit juice. The greater consumers' intention to purchase, the more likely they are to engage in purchasing behavior, which is in line with the findings of Verbecke and Vackier (2005). In addition, convenience and health are connected with new packaging size in terms of a small size of packaging, (Mintel, 2008). Additionally, it is healthier for people to drink their own fresh fruit juice without sharing a large bottle when there are no disposable plastic cups. This finding implies that, if new fresh fruit juice is packaged in small sizes, this will meet consumers' needs and desires, which will help to build a positive attitude toward fresh

fruit juice. The more positive consumers' attitude is, the more likely they will be to create an intention to purchase and, as a result, they will buy more fresh fruit juice in the new small packaging.

Product innovation of packaging shape: Some of the interviewees indicated that changing the shape of the packaging could motivate them to purchase more fresh fruit juice. Likewise, Cichon and Ucherek (1999) found that the shape of the packaging is one of the vital attributes that attract people's attention when they are choosing fresh fruit juice. Based on the empirical data, it is surprising that the changing of shape is connected to pleasure. It is difficult to explain this result, but it may be related to consumers' positive attitude toward the new shape of fresh fruit juice packaging, as indicated by the following comment;

I am interested in any change of product including a new shape of packaging. A new and special shape of packaging, such as triangle, will catch my attention. It is interesting to imagine a new packaging shape. It gives a sense of freshness (Interviewee 6).

Consumers believe that they are more likely to find new and unique shapes of packaging among common packaging shapes. These will easily attract their attention and provide a sense of excitement at the point of purchase. The pleasure they experience from finding new packaging will determine the likelihood that they will create an intention to purchase, which is supported by the findings of Flaherty and Papps (2000). In other words, consumers may purchase fresh fruit juice with a new packaging shape due to a positive intention to purchase and several studies have also indicated that consumers are more likely to purchase if they have a positive intention toward buying a particular product because of the shape of its packaging (Sheppard, et al., 1988; Venkatesh & Davis, 2000; Venkatesh Morris, Davis & Davis, 2003). This

finding suggests that manufacturers and retailers should develop and design a unique packaging shape for their products, since this could become an attractive feature that affects consumers' purchasing behavior.

Product innovation of packaging nutritional information: Another aspect of changing the packaging design is the display of information, such as the nutritional value and health claims, as indicated in this study. This finding is supported by previous research (e.g. Bonilla, 2010; Silayoi & Speece, 2004). Such information on the packaging design could influence consumers' purchasing behavior, as indicated by the following comment from one of the interviewees;

I like a new design of packaging as long as it is healthy (Interviewee 2).

It is important that the nutritional value of the product is displayed on the packaging so that I can judge the quality of different brands of fresh fruit juice (Interviewee 4).

According to the empirical data, a clear introduction of the nutritional value and health claims on the packaging is a vital factor that could enable consumers to evaluate the nutritional content of the fresh fruit juice. This is important because one of the motivations for purchasing fresh fruit juice is to stay healthy (Sircururātana, 2008). Therefore, detailed information of the nutritional value and health claims may have a positive impact on consumers' intention to purchase; in other words, their positive intention to purchase may drive them to purchase more nutritious fresh fruit juice. This finding is supported by Venkatesh and Davis (2000).

As a result of their research, Roe, Levy and Derby (1999) also advocated the demonstration of information about the nutritional value and health claims on the front of the packaging because this would be useful to attract consumers' attention at

the point of purchase. However, in the present study, the interviewees tended to buy fresh fruit juice whether or not information about the nutritional value and health claims is displayed on the packaging, apart from one interviewee, who made the following comment;

The nutritional information needs to be clearly stated on the packaging
(Interviewee 4).

This indicates that, whether or not the nutritional content is displayed on the packaging will have no effect on consumers' evaluation of fresh fruit juice. In other words, since consumers' attitude is the primary factor that influences their intention to purchase (Flaherty & Papps, 2000), displaying the nutritional information on the packaging may have no impact on increasing their intention to purchase or affect their purchasing behavior. Furthermore, the intention to purchase is a direct determinant of their actual purchasing behavior (Ajzen, 1985). A possible explanation for this result may be that such information is an essential reference only when consumers find it difficult to make a decision to purchase from different alternatives. Therefore, this implies that retailers need to clearly show nutritional information on the packaging design, although it is less significant for it to be placed on the front of the package.

Product innovation of packaging image: Consumers' desire for product information not only emphasizes nutritional value and health claims, but also focuses on the image of packaging and labels. The packaging image could assist consumers to understand the fruit content of the fresh fruit juice; therefore, this is one of the most powerful factors that affect consumers' purchasing behavior (Silayoi & Speece, 2004). Thus, designing a superior packaging image for fresh fruit juice is significant, as confirmed by the following comment from an interviewee;

The packaging is not like the taste; there is no big difference in the taste apart from the cheapest or most expensive one in the fresh fruit juice category. The packaging can create a difference. I like a colorful image with pictures of different fruit, because it looks like high-quality packaging, and I evaluate the product's quality from its packaging (Interviewee 2).

The results of this study show that a colorful image on the packaging could attract consumers' attention. Furthermore, most of the interviewees said that this was an important criterion for their selection of fresh fruit juice. Consumers' intention to purchase is increased by an attractive image. This is supported by Silayoi & Speece (2004), who found that an excellent packaging image design could have a positive impact on consumers' intention to purchase. Furthermore, the image of a packaging design is associated with the evaluation of product quality. In other words, consumers tend to evaluate the quality of the fresh fruit juice based on the packaging image, and the result of this evaluation determines their intention to purchase. As a result, consumers' intention to purchase decides whether or not they move on to enact purchasing behavior. This result matches an earlier study by Ajzen (1985). Therefore, consumers' intention to purchases is raised by an attractive image on the packaging, and this may lead them to engage in positive purchasing behavior.

Product innovation of packaging label: Additionally, a few of the interviewees perceived that they are also attracted by eye-catching labels on fresh fruit juice. This fact may explain the relatively better correlation between the images on labels and purchasing behavior. Designing eye-catching labels for fresh fruit juice may give consumers a favorable impression of the product, as indicated by the following comment;

A bigger brand logo and vivid color can attract my attention (Interviewee

8).

According to the empirical data, eye-catching labels are a factor that affects consumers' attitude toward F&B products. Bonilla (2010) also indicates that the packaging could influence consumers' attitude and purchasing behavior within a few seconds. If consumers are attracted by the image of the label, their intention to purchase may be enhanced, and they may move on to engage in purchasing behavior. This statement can be associated with Ajzen (1985), who proposes that consumers' intention to purchase is a direct determinant of their actual purchasing behavior.

However, the empirical data also indicates that the interviewees maintained that the labels on most fresh fruit juices, apart from ICA's, are prominent and the images are vivid. This finding is significant for the ICA brand, and it is advised to design more colorful and highlighted packaging for its fresh fruit juice. This is also vital for other retailers, since the design of the correct high-quality images and labels on the product packaging is a significant factor that impacts consumers' purchasing behavior.

4.4 Impact on environmental protection

When commenting on the changes in packaging design, the interviewees identified environmentally-friendly packaging material as another factor that affects their purchasing behavior. In line with the results of the present study, previous researchers have also found that consumers are extremely concerned about the environmental impact and are well aware that packaging material is a major source of environmental pollution (Beharrell, 1991; Bech-Larsen, 1996). Some of the interviewees mentioned that, although they have limited knowledge of environmental protection, they are willing to pay a premium price for products with environmentally-friendly packaging. This result may be explained by the fact that today's consumers are more concerned with the environment than ever before and

they would like the chance to contribute to environmental protection (Beharrell, 1991). Therefore, to some extent, consumers' purchasing behavior is influenced by the packaging material used for new products, as shown below.

Product innovation of packaging material: Hundal (2001) observes that recycling paper is beneficial for saving energy and protecting trees. Likewise, the majority of interviewees perceived that paper is the best packaging material when they purchase fresh fruit juice, since paper is much healthier than plastic. In addition, it is a recyclable material and thus, has less of an impact on environmental pollution, as shown by the following comments from the interviewees;

Of course, paper packaging is much better than plastic in terms of environmental protection. But all the premium brands of fresh fruit juice, like ICA and Bravo tend to use either plastic or paper packaging, which is probably good for the environment (Interviewee 1).

Paper is recyclable material; it has less harmful for the environment (Interviewee 3).

Less waste is one of the reasons consumers prefer to buy products with recyclable packaging. Consumers' preference of packaging materials has a positive impact on their intention to purchase, and this may motivate their choice of fresh fruit juice. However, some of the interviewees pointed out that paper is made from trees, and cutting down scores of trees to make paper may destroy the ecological environment, which is not environmentally-friendly. This result was not very encouraging, since paper is the major packaging material used for fresh fruit juice; moreover, more and more retailers are paying more attention to paper recovery in order to reduce pollution (Hundal, 2001). In summary, manufacturers and retailers should continue to use new technology to recycle paper packaging material, which could become a selling point

and arouse consumers' intention to purchase, and this may have a positive effect on their purchasing behavior.

According to the empirical data, some interviewees suggested that if more biodegradable plastic is used in the packaging material of fresh fruit juice, they would be willing to purchase more due to the environmental protection and convenience, as shown below.

If the manufacturers or retailers use biodegradable plastic, it will attract me to buy, because it is environmentally-friendly and also convenient to take out (Interviewee 5).

Either paper or plastic; as long as it is environmentally-friendly material, I will buy it (Interviewee 4).

Although plastic packaging is less beneficial for health management than paper packaging (Piringer & Baner, 2008), it is also popular for use in the fresh fruit juice category (Hundal, 2001). Compared to paper packaging, the advantage of plastic is that it is easy to take out, and enables the quality of the fresh fruit juice to be evaluated by the color. This statement matches the results of research by Silayoi and Speece (2004), who found that convenience and the correct evaluation of quality could increase consumers' intention to purchase, and this would determine their actual purchasing behavior related to fresh fruit juice. Therefore, if manufacturers or retailers use product innovation to create new plastic material, such as environmental-friendly plastic or plastic that has less of a negative impact on consumers' health, this would probably attract consumers who prefer to purchase plastic bottles of new fresh fruit juice rather than other kinds of packaging.

6. Conclusion

The aim of this paper was to investigate *how consumers' attitude toward attributes of product innovation influences their purchasing behavior in grocery stores*. The relevant data was collected from in-depth semi-structured interviews with eight consumers. The findings are expected to contribute to the literature of consumers' purchasing behavior associated with product innovation and its four attributes within the F&B retail industry. The main findings were divided into four attributes of product innovation for an analysis and discussion.

The study found that product innovation that increases the quality of F&B products, especially in terms of different taste, natural color, reasonable price, convenience and freshness, can have a positive influence on consumers' purchasing behavior. Consumers are well aware of the innovation of these attributes when evaluating F&B quality. In other words, if product innovation in the quality of F&B products fulfills consumers' demands and expectations, they have a favorable attitude toward those products, which leads to a strong intention to purchase them. This is because any change in product quality arouses their curiosity, pleases them, and is better able to attract their attention than existing products. However, not all the aspects of product innovation in F&B have an impact on consumers' purchasing behavior; for example, consumers find it difficult to notice the sense of smell unless the product has a strange aroma.

In terms of improving the beneficial properties within F&B product innovation, this research focused on the innovation of nutrition. Since today's consumers are firmly focused on health, the findings showed that they especially appreciate product innovation in the nutritional value of their daily F&B consumption. They have a positive attitude toward the creation and improvement of the nutritional value of F&B products because it is good for their health and indicates better quality. This inevitably leads to increasing their intention to purchase F&B products that are rich in nutrition.

Changing the design of F&B products, particularly in terms of packaging, was found to have a profound effect on consumers' intention to purchase and purchasing behavior. Product innovation in the form of a unique packaging shape, a colorful image and eye-catching labels with clear information about nutritional value and health claims could attract consumers' attention to F&B products. Furthermore, the sight of an innovative packaging design could influence consumers' decision to purchase in a matter of seconds (Bonilla, 2010). Since a number of consumers have been found to use the packaging design to evaluate the quality of F&B products, designing attractive packaging could make a good impression and enhance their intention to purchase. However, a few of the interviewees in this study indicated that changing the packaging size would not influence their purchasing behavior because the existing size of F&B products fulfilled their need.

The findings showed that consumers are increasingly concerned about the packaging material when they decide to purchase F&B products. They recognize the fact that packaging material is one of the major causes of environmental pollution, and they prefer to buy products packaged in recyclable material. They perceive that this is environmentally-friendly and causes less waste. Moreover, the convenience of the packaging material also enhances consumers' intention to purchase and may affect their purchasing behavior.

According to the findings of this study, consumers have an extremely positive attitude toward different attributes of product innovation because it provides them with better value. This increases their intention to purchase and leads them to purchase new or improved F&B products. However, not all the aspects of the four attributes of product innovation were found to affect consumers' purchasing behavior; for example, the smell of the product and the size of the packaging are less linked to consumers' intention to purchase and it appears that they pay less attention to these factors at the point of purchase. In other words, some factors (such as packaging size) are less important than others (such as price, product information) when consumers

evaluate products. This study found that consumers' attitude toward the four attributes of product innovation was different and this has a direct impact on their purchasing behavior.

Compared to general product innovation, consumers' attitude toward attributes of product innovation in F&B calls for a more coordinated and holistic innovative approach. This will enable manufacturers and retailers to develop the most favorable attributes of attributes of product innovation in order to enhance consumers' intention to purchase and achieve a competitive advantage in the field of grocery marketing. The use of product innovation could be extremely beneficial for the long-term success of retail grocery stores.

6.1 Theoretical and practical contribution

This research makes a theoretical contribution to the field of product innovation and consumers' purchasing behavior. It adds to the existing literature of the relationship between the different attributes of product innovation and consumers' purchasing behavior in the F&B industry. Furthermore, it expands the knowledge of the way in which consumers' attitude toward attributes of product innovation influences their intention to purchase and leads them to engage in purchasing behavior in the F&B industry.

It was without a doubt, clear to notice that not all the factors within four attributes of product innovation can influence consumers' purchasing behavior that was the same with the previous studies' was found in the F&B industry. In addition, the theoretical contribution that this research has made, is including Ajzen and Fishbein's (1980) the Theory of Reasoned Action (TRA). The TRA model of four attributes of product innovation developed by us provides a clear understanding of the relationship among attitude, intention and consumer purchasing behavior under this study and opens a new insight for future research.

In terms of practical contributions, the findings presented in this thesis provide a

valuable knowledge of consumers' purchasing behavior and analysis consumers' attitude toward different factors within four attributes of product innovation to effectively influence consumers' purchasing behavior. Different factors within four attributes of product innovation attract consumers' attention to the product and lead them to reflect on their previous experience and purchasing behavior. Taking into consideration the research into consumers' attitude toward different attributes of product innovation and how it affects their purchasing behavior is relatively scarce. Therefore, the findings of this study are expected to be useful for manufacturers and retailers to better understand consumers' attitude and perspective of new F&B products and how their intention to purchase and purchasing behavior may be affected by different factors of product innovation. In terms of practical purposes, these findings can be interested in practical recommendations and suggestions for manufacturers and retailers to develop effective attributes of product innovation and attract consumers' attention to their products intelligently.

6.2 Limitations and suggestions for Future research

All research has its limitations and this one is no exception. The first limitation relates to time constraints, which have led to several other factors that may have been of interest to this study being omitted from the research. The aim of this study was to determine the way in which different attributes of product innovation affect consumers' purchasing behavior; therefore, it would have been useful to include other aspects, such as type of brand, level of income level and family size, which are aspects that could potentially influence consumers' behavior and their reaction to the different factors of product innovation.

Finally, another aspect that may have influenced the outcome of this study is that the results were obtained via a subjective analysis by the researchers; hence, the findings may inevitably contain some bias.

In this study, consumers' purchasing behavior has been explored in the context of

product innovation. However, due to the time limitation, this was a short-term research. All the participants were aware of the reason for the research and that their answers contributed to this study. Given this situation, it would be interesting for future studies to be conducted over a longer term with a larger sample to ascertain if the findings differed from those of this present study. Furthermore, future research could focus on different product categories, such as the meat sector, canned foods, household goods, etc.

In addition, future research could explore the influence of other aspects of the four attributes of product innovation on consumers' purchasing behavior, or investigate how different product innovation influences companies' sales. Finally, future research could seek to determine how different innovative strategies affect consumers' purchasing behavior.

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8. Appendix

Questions used in interviews

In-depth interview

General Question:

1. What does product innovation mean to you?
2. How often do you purchase fresh fruit juice in ICA?
3. What are important factors when you purchase the new fresh fruit juice? Can you explain?

Increasing of F&B quality:

4. How do you think of the new taste when the ICA store sells a new fresh fruit juice? Do you prefer mixed taste or pure taste of fruit juice? Why? Will the new taste affect your intention to purchase the fresh fruit juice? Why?
5. Do you notice the color of fresh fruit juice? What types of color (light, deep or natural) will influence your intention to purchase fresh fruit juice? Why?
6. Do you notice the aroma when you purchase a new fresh fruit juice? Do you think that manufacturers or retailers should create new or special aroma for their new fresh fruit juice? Will it affect you to purchase? Why?
7. How do you evaluate the price variation when ICA store sells a new fresh fruit juice? Can you accept the higher price of new fresh fruit juice? Why? Will the price influence your intention to purchase the new fresh fruit juice?
8. How do you think the convenience of fresh fruit juice? Could you give an example why the convenience is important in buying fresh fruit juice? Does it can affect your intention to purchase? Why?

Improving useful F&B properties:

9. Do you care about the nutritional value of a new fresh fruit juice? Do you think that manufacturers and retailers should add and create more nutritional value into fresh fruit juice? If the new fresh fruit juice contains rich nutritional value, does it can influence you to purchase?

Changing of F&B design:

10. Do you notice the packaging size of fresh fruit juice? What size of packaging of new fresh fruit juice will increase your intention to buy? Why?
11. Do you notice the packaging shape of fresh fruit juice? If the manufacturers and retailers design a unique packaging shape of fresh fruit juice, will you purchase? Why?
12. Before you making purchase decision, do you notice the packaging information? Such as nutritional content, picture and labels. How do you think the manufacturers or retailers should design these product information? Will the packaging information influence your intention to purchase the new fresh fruit juice?

Reducing environmental impacts:

13. How do you think the packaging materials related to the environmental protection when ICA store sells a new fresh fruit juice? What kind of packaging material you will prefer to buy? Will the environmentally friendly packaging material increase your intention to purchase the new fresh fruit juice? If it sells higher quality, will you like to purchase? Why?