

The Growing Organic Market: Factors that Influence Consumers' Evaluation and Choice

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A Thesis

in

John Molson School of Business

Presented in Partial Fulfillment of the Requirements  
for the Degree of Master of Science (Administration) at

Concordia University

Montreal, Quebec, Canada

May 2011

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**CONCORDIA UNIVERSITY**  
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**Master of Science in Administration (Marketing)**

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## **ABSTRACT**

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The growth of organic products has been considerable over the last decade. The annual growth rate of organic food from 1995 to 2007 in the United States has been around 19% (Monier, Hassan, Nichèle, & Simioni, 2009), and in Canada of 20% (Anders & Moeser, 2008); making of this industry a relevant area of study. This research examines whether and to what extent brand and consumer characteristics influence consumers' attitude toward and choice of organic food products. It considers the impact of brand history (organic versus non-organic brand) and brand credibility (low versus high), as well as the impact of consumer factors, such as scepticism, concern for the environment, price sensitivity, and knowledge. The results of a laboratory study show that the organic brand was better evaluated in terms of quality perceptions than the non-organic brand. This study was also able to demonstrate that, among consumers with high price sensitivity, quality perceptions towards organic products were amplified for the organic brand and diminished for the non-organic brand compared to their low price sensitivity counterparts. Consumer knowledge influences overall evaluation of the brands, being the organic one the best rated; and with respect to concern for environment and scepticism, significant effects were not found. Suggestions for future research and managerial implications are also discussed.

## ACKNOWLEDGEMENTS

I would like to extend my most sincere gratitude to the following persons that have made this project possible. Bianca Grohmann, my supervisor for her patience, constant guidance, support and hard work throughout this process; this thesis wouldn't have been possible to do without her.

I would also like to thank my father Rodolfo for his constant support and trust, my mother Naoko for her guidance and empowerment and my brother Ken for his emotional support; as well as Marc-Antoine for his encouragement during my studies and my friends John, Jessica, Bernard, Samie, Argie and Steve for their help when I most needed it.

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## **1. Introduction**

The growth of organic products has been considerable over the last decade. By definition, organic products are products that are processed by means of organic practices (Food and Agriculture Organization, 2009). According to FAO (2009) these organic practices entail avoiding the usage of pesticides, fertilizers, artificial flavours, preservatives, irradiation, etc. and aim at achieving social, ecological and economical sustainability. In developed countries, the demand for these products has increased at an accelerated pace. The annual growth rate of organic food from 1995 to 2007 in the United States has been around 19%. Moreover, the agriculture soil dedicated to organic food from 1999 to 2007 has tripled (Monier, Hassan, Nichèle, & Simioni, 2009). In Canada, the growth of organic food is estimated to be 20% per year (Anders & Moeser, 2008). This growth has made organic products very attractive to food retailers and manufacturers. For instance, Walmart introduced more than 400 organic products in 2006, and many transnational companies such as General Mills, Kellogg, Kraft, Unilever, and Groupe Danone have entered the organic products sector (Hall, 2008).

Recent research has considered several consumer factors pertaining to organic products, such as the lack of information on organic farming practices and resulting lack of consumer awareness (Harper & Makatouni, 2002; Hill & Lynchehaun, 2002), motives underlying organic product purchases (e.g., environmental concern; (Essoussi & Zahaf, 2008a; Hughner, McDonagh, Prothero, Shultz II, & Stanton, 2007), as well as perceived restrictions on organic product purchases such as price, limited availability, or scepticism toward organic labels (Padel & Foster, 2005). There is a lack of research on consumers' attitude toward and choice of brands in the organic food product category, especially in

light of increasing competition between purely organic food brands and organic products introduced by brands with previously non-organic product lines. This research examines whether and to what extent brand and consumer characteristics influence consumers' attitude toward and choice of organic food products. This study considers the impact of brand history (organic versus non-organic brand) and brand credibility (low versus high), as well as the impact of consumer factors, such as scepticism (Forehand & Grier, 2003), concern for the environment (Thogerson & Ölander, 2002), price sensitivity, and knowledge. The relevant literature is discussed next.

## **2. Brand-level Factors**

The literature on organic product brands is limited. Some studies, however, have addressed brand factors concerning health food products, such as Hu et al.'s (2010) study on brand performance and equity in the health food market. These authors argue that consumer trust is an important determinant of brand performance. Therefore, the reputation of the brand is the first thing customers take into consideration when evaluating brands in this food segment (Hu et al., 2010). Desai and Rathneswar (2003) state that brand associations affect new product variants and show that when a food product variant of a highly familiar brand is placed in an atypical food product attribute (e.g. healthy potato chips), consumers perceive these brands less favourably (Desai & Ratneshwar, 2003). This research extends the current literature by considering the influence of brand history (organic vs. non-organic brand origins) and brand credibility (low vs. high) on brand evaluation and choice of organic food products.

## ***2.1 Impact of Brand History on Consumer Evaluations and Choice***

Brand name and history are crucial for the success of a new product introduction (Cooper, 1994; DelVecchio, 2000). Brand name creates product awareness, positive associations and brand image. These factors are the foundation of brand history (Kotler, Keller, & Cunningham, 2006). Some of the attributes that create brand image are: the typical user, the company that produces the brand and product related features such as packaging, product category, advertising, or distribution (Aaker, 1997).

Brand history refers to the contact that customers have had with a particular brand and the experiences they have had with it. If the experiences are positive, they may have a positive effect on brand conviction, hence affecting consumers' evaluation and choice (DelVecchio, 2000). Exposure to a brand may create personal relevance and predilection towards the brand. This contact may also enhance brand-knowledge, and brand associations (Kirmani, Sood, & Bridges, 1999). Brand knowledge and brand exposure generate a conceptual map by linking associations to the brand/product (Keller, 1993). However, brand associations only affect brand preferences when product features are relevant to consumers' judgment or personal interests (Aaker, 1999). For instance, Aaker (1999) posits that consumers often buy products for self-expressive and social desirability motives. Moreover, a further study found that consumers' brand purchase intentions are affected when "high social consequences" are induced (Batra & Homer, 2004, p. 328). Birdwell (1968) carried out a study of self-image congruence and consumer choice using automobiles and found that there is a high degree of similarity in the way the owners perceive themselves and their cars, especially for high end cars. Consequently, it can be

inferred that consumers' preferences and choice are driven by individual opinion and feelings of personal product relevance.

When introducing new products, companies either create new brands or take an existing brand name, creating brand extensions (Klink & Athaide, 2010). Smith and Park (1992) state that consumers may prefer brand extensions to new brand names. Since stable brands are perceived as reliable, well-established brand names eliminate consumers' purchase uncertainty by reducing perceived risk (Roselius, 1971). Consumers may also prefer brand extensions to new brands due to the fact that they are able to predict the extension's quality based on the parent brand's historical performance (Jacoby, Olson, & Haddock, 1971). Furthermore, brand extensions facilitate product trial since consumers are able to choose the product based on previous brand knowledge and make their purchase decisions by choosing already well-known brands (Alba & Hutchinson, 1987). In other words, openness to a new product is easier when consumers are familiar with a brand (McNeal, McDaniel, & Smart, 1983). It can be inferred that a reputable brand history can boost the success of a brand extension; hence companies might choose extensions over new brands. Furthermore companies can benefit from extensions in ways other than reputation. The established parent brand and its extension can benefit from shared advertisement. Whenever the extension or the core brand is advertised, they both gain awareness and increased demand (Klink & Athaide, 2010). In the grocery product arena, only 30% of new product introductions are accepted by buyers and approximately half of the accepted products are removed from the shelves a year after the product launch (McLaughlin & Fredericks, 1994). McLaughlin and Fredericks (1994) argue that the decisive factors for new grocery product introduction are

growth/demand potential, product quality and uniqueness, and durable profit gains. Accordingly, well-established brands profit from consumer awareness and knowledge and are more likely to succeed in the grocery market.

We therefore expect that brand history affects consumers' evaluation and choice of organic products, such that brands with a history in the organic food category (i.e., traditionally organic brands) are chosen more often and evaluated more positively compared to brands without a history in the organic food category (i.e., traditionally non-organic brands).

## ***2.2 Impact of Brand Credibility on Consumer Evaluations and Choice***

Brand credibility refers to the perceived capability of the products contained in a brand to fulfill consumers' expectations constantly (Erdem & Swait, 1998). This brand credibility is built by the marketing actions carried out by the brand over time. These actions include the marketing mix (Erdem, Swait, & Louviere, 2002). The authors also discuss that credibility comprises two concepts trustworthiness and expertise. For a brand to be credible, it needs "to be able and willing to deliver" (Erdem et al., 2002, p. 4). As a consequence, the more reliable a brand, the less is the perceived purchase risk (Shugan, 1980). Furthermore, a brand with high credibility is most likely seen as higher in quality and consumers generate higher expectations (Wernerfelt, 1988).

Many organic products are launched as line extensions (e.g., Ben and Jerry's organic ice cream) and some others are introduced as new brands (e.g., General Mill's Sunrise organic cereal). Some companies use their established brand names to penetrate new markets more easily. These brand extensions are used especially for new products with a high risk of failure, hence the use of parent brand image to reduce this risk (Aaker

& Keller, 1990). In addition, a strong brand can decrease marketing costs such as promotional expenditures and distribution (Morein, 1975). The principle of launching extensions relies on the notion that associations that consumers have with the parent brand (e.g., credibility, quality, corporate social responsibility) are transferred to the extension (Aaker & Keller, 1990). For a brand extension to achieve success, it is necessary that consumers hold positive brand associations towards the parent brand, and that these associations are transmitted to the brand extension (Aaker & Keller, 1990). Hence, brand image and brand associations are a very important part of brand extension success. Corporate associations might also influence product attitudes. Products are launched as brand extensions in two ways: companies can launch a product with a separate brand name (endorsed) or they can introduce a product with the same parent brand name (dual) (Laforet & Saunders, 1999). When companies use the dual strategy corporate brand dominance is higher than when the endorsement strategy is employed (Berens, Van Riel, & Van Bruggen, 2005). In other words, when a product is endorsed the corporate associations influence product attributes and hence brand evaluations more weakly.

Brand image is defined by Keller (1993, p. 3) as “perceptions about a brand as reflected by the brand associations held in customer memory”. One of the most important brand associations regarding brand extensions is brand attitude (Aaker & Keller, 1990). Attributes such as quality, reliability, conformance, features, performance and aesthetics (“fit and finish”) comprise the basis of brand attitudes (Garvin, 1984). Tauber (1988) argues that a brand extension’s successful introduction and credibility on a new category depends on its fit and leverage. Fit concerns the consumers’ perception of the product’s

logical adequacy to the category entered and from the parent brand; and leverage refers to the consumers' ability to connect the brand image and its associations (Tauber, 1988). Likewise, Keller (1993) argues that brand associations have five main characteristics: favorability, strength, uniqueness, interaction among characteristics of brand associations, and congruence. Favorability refers to the product's ability to satisfy customers' needs and wants effectively. Strength deals with the level of awareness and recognition of a particular brand; uniqueness is the distinctiveness of the selling proposition; the interaction among characteristics of brand associations can lead to creating exclusive and long-lasting associations; and congruence refers to the amount of content and meaning that brand associations share and thus gives cohesiveness to the brand image (Keller, 1993). Accordingly, brand image cohesiveness can lead to credibility. Moreover, Völckner and Sattler (2006, p. 29) find five decisive factors for brand extension success: "fit between parent brand and extension, marketing support, parent-brand conviction, retailer acceptance, and parent-brand experience".

In general, congruence between a core brand and an extension has been proven to be important. If the fit between the core brand and the extension is high, the characteristics of the core brand are relevant to determine the image of the extension (Keller & Aaker, 1992). Park, Milberg and Lawson (1991) found that customers hold positive attitudes towards the brand extension when it is consistent with the core brand and they have greatly similar features. Therefore the more features the core brand and its extension share, the higher the perception of quality similarity between the parent and the extended brand (Keller & Aaker, 1992). These features similarity derive into brand image cohesiveness and brand credibility. Brand credibility may help reducing perceived risk

and thus information gathering as well (Shugan, 1980). At the same time, Wernerfelt (1988) suggests that high brand credibility can lead to an increase in brand quality perception and a reduction in price sensitivity (Kahneman & Tversky, 1979). We therefore expect that brands with high credibility are evaluated more positively and chosen more often compared to brands with a low level of credibility.

It is important to note that the effect of congruence in line extensions may vary according to product type. Park et al. (1991) studied brand extensions and divided the products into prestige and functional. The authors found that when the brand is a prestigious brand, the lower the feature similarity with the brand extension, the greater the extendibility of the core brand. In contrast, this relationship is the opposite for functional brands. Furthermore, some studies have found that the influence of congruence in product extensions may vary also according to consumers' level of motivation. Gurhan-Canli and Maheswaran (1998) show that under high motivation, the transformation of brand perception follows the bookkeeping model, whereas under low motivation, brand perceptions change according to the subtyping model. Webber and Crocker (1983) posit that in the bookkeeping model, each piece of additional information transforms a current stereotype, whereas in the subtyping model stereotypes are hierarchically organized, meaning that when incongruent information is presented to a stereotype, a subgroup is formed. Monga and John (2010) carried out a similar study, but instead of utilizing level of motivation, they considered holistic versus analytic thinkers. Holistic thinkers are the consumers that examine a situation as a whole, and concentrate more in the product's relationships with its environment. Analytic thinkers are able to detach a product from its surroundings and focus on its attributes (Nisbett, Peng, Choi, &



Norenzayan, 2001). The study results showed that for utilitarian products with incongruent extensions, holistic thinkers present more favorable attitudes than analytical thinkers. For hedonic products, both types of thinking behavior show positive perceptions towards the extension regardless of its congruency (Monga & John, 2010). Positive perceptions can lead to high brand credibility. Erdem and Swait (1998) argue that companies sometimes use their brands to communicate costumers about their products' positioning and by this means gain credibility.

### **3. Consumer-level Factors**

Current research about consumers' evaluation of organic products has found that many consumers are not aware of organic practices or lack information on organic farming practices (Harper & Makatouni, 2002; Hill & Lynchehaun, 2002). Furthermore, some studies (Essoussi & Zahaf, 2008a; Hughner et al., 2007) found that the motives that elicit organic product purchases are that organic food is perceived as healthier and better tasting than non-organic food. In addition, consumers who purchase organic food also display environmental concern. However, these studies also found that some consumers perceived restrictions on organic product purchases such as price, lack of availability, and scepticism toward organic labels. Essoussi and Zahaf (2008b) showed that consumers have three trust orientations toward organic food: brand and store trust, prior experiences and uncertainty. Furthermore, they discovered that quality is an important factor that is usually associated with organic products. Consumers view organic products as "safe" (chemical-free), this perception elicits positive attitudes towards organic brands (Michaelidou & Hassan, 2008).

There are two consumer factors that are likely to drive evaluation of organic products: the first is an increasing concern or interest in organic products. In the past, consumers of organic food were often vegetarians and environmentalists. However, current consumers of organic food are individuals who are concerned with nutrition and health (OACC, 2004). Krystallis et al. (2008) found that consumers that score high on universalism and benevolence factors are more likely to purchase organic products regularly. Similarly, some other studies (Grankvist & Biel, 2001; Thøgersen & Olander, 2002) have found that these consumers hold environmentally conscious consumer attitudes. Nevertheless, people who place a greater value on price than on environmental concerns are less willing to purchase organics (Lusk & Briggeman, 2009). Consumers reinforce values such as health, taste and freshness, and environmental and animal conservation when purchasing organics (Anders & Moeser, 2008; Essoussi & Zahaf, 2008a; Padel & Foster, 2005). People who think that fairness is an important organic food attribute place low values on self-centered values such as price, taste, convenience, and appearance (Lusk & Briggeman, 2009). Consumers who are concerned about the environment or prioritize health are more likely to choose to buy organics whereas consumers who place more importance on factors such as pricing are less likely to consume these products.

Second, consumer inferences regarding the credibility of claims that a product is organic may also influence product evaluations. Consumers interpret the term 'organic' in a variety of ways and in a multitude of contexts (Anders & Moeser, 2008). Customers sometimes do not have access to organic product information and therefore rely on the organic certification body and the reputation of the retailer or producer (Pearson &

Henryks, 2008). Moreover, people perceive the availability of information from the organic producers as a source of credibility and trust (Padel & Foster, 2005). Consumers' perceptions of organic certification and the organizations that control them are distorted due to the lack of information on organic practices and the uniformity in labels (Barnes, Vergunsts, & Topp, 2009). There is a lack of information regarding organic food products and there is no unity in certification bodies, hence consumers may have sceptical feelings towards organic products. As a consequence, brand reputation may play an important role regarding organic foods perceived reliability. This research focuses on the impact of following consumer variables on attitude toward and choice of organic food products: scepticism (Forehand & Grier, 2003), concern for the environment (Thogerson & Ölander, 2002), price sensitivity, and knowledge. These topics are discussed in detail in the following sections.

### ***3.1 Skepticism***

Consumer skepticism can be defined as “consumer distrust or disbelief of marketer actions (Forehand & Grier, 2003, p. 350).” Sometimes companies exaggerate their marketing claims eliciting consumers' mistrust and skepticism (Obermiller & Spangenberg, 1998). According to MacKenzie and Lutz (1989, p. 51) advertisement credibility is based on ad congruency, the advertiser credibility and the advertising credibility.

Some authors (Folkes, 1988; Forehand & Grier, 2003; Sparkman & Locander, 1980) use attribution theory to further explain how consumers develop feelings of skepticism. Attribution theory studies people's interpretation of actions or behavior based on its causes, and how this interpretation affects their perception and attitudes (Kelley &

Michela, 1980). Based on this theory, consumers derive conclusions about companies' real advertisement purposes and these assumptions have an effect on the company/brand image (Campbell & Kirmani, 2000). Moreover, Forehand and Grier (2003) posit that consumers attribute to companies two main selling objectives: public-serving and firm-serving. Public-serving objectives refer to the company's constant search for the well-being of the customer outside the company and firm-serving deals with the company's quest for benefit to the company itself. The attribution of these objectives is relevant due to the fact that when consumers perceive a company's actions as firm-serving driven, they will have a negative opinion towards the company (Ellen, Mohr, & Webb, 2000). However, Forehand and Grier (2003) suggest that the company's/brand's credibility will only be damaged when the firm-serving attributions are not congruent with the firm's conveyed purposes.

A further factor that can elicit skepticism from consumers is product fit. Some studies (Brown & Dacin, 1997; Sen & Bhattacharya, 2001) have found that the company's corporate ability (CA) and its corporate social responsibility (CSR) have an effect on products evaluations. Madrigal (2000) proposes that the fit between the company and the brand has a positive perception towards CA and CSR associations. CSR programs have been proved to increase customer loyalty, creating positive attitudes towards the company and reducing consumer skepticism (Pirsch, Gupta, & Grau, 2007). However, the CSR program has to be congruent with the company's image and there has to be a product fit. When corporate brand dominance is high, CSR and CA have a larger significance on consumer product evaluations than when corporate brand dominance is low (Berens et al., 2005).

Consumers are also likely to develop feelings of skepticism according to the type of information delivered by the company. Consumers prefer objective rather than subjective information because it is easier to validate. Thus they may become suspicious towards subjective claims and this creates feelings of skepticism (Ford, Smith, & Swasy, 1990; Nelson, 1970). Nelson (1970) conceived the concept of search qualities, a term that refers to the features a brand possesses that consumers are able to detect by simple examination, and experience qualities which consist of brand characteristics that consumers notice only after purchase. Some studies have confirmed that consumers react more skeptical towards experience qualities than against search qualities (Ford et al., 1990; Nelson, 1970). In the context of organic brands, in order to avoid consumer skepticism, brands should display search characteristics, such as certifications by third parties. If a brand does not have a history of organic products or a low level of brand credibility in the organic food market, consumers who are skeptics are especially likely to infer profit driven motivations for an extension into the organic food market. An established brand history in the organic food market as well as high levels of brand credibility should have a positive impact on consumer opinions, on the other hand, especially for highly skeptical consumers. We therefore expect that skepticism moderates the effect of brand history and brand credibility such that organic brand history and high levels of brand credibility result in more favorable evaluations and greater choice likelihood for high versus low skeptics.

### ***3.2 Concern for the Environment***

The growth in consumption of organic food is mainly attributed to health concerns, yet it can also be linked to an increase in consideration of environmental issues

(Sparks & Shepherd, 1992). Ethical consumers, those who purchase environmental/society-friendly products, are more likely to consume organic products (Harper & Makatouni, 2002). These conscientious consumers are characterized by being tolerant to new ideas and eager to understand how things work (Kinnear, Taylor, & Ahmed, 1974). Webster (1975) defines the concept of socially conscious consumers as consumers who think about public consequences of their purchases.

Maineri et al. (1997) carried a study to understand what kind of consumer was more likely to utilize “green products”. The authors found that consumers with high levels of environmental concern were more likely to acquire products based on environmental claims, display strong feelings toward environment protection at the time of purchase, and engage in further environmental-friendly activities (e.g. switching brands due to environmental reasons, (Mainieri et al., 1997). On the other hand, environmental/ethical concern is not always well-represented in the market. Kinnear et al. (1974) argue that concern for ecology increases as harm avoidance (i.e., fear of being harmed by pollution) increases. Nevertheless, those who achieve the highest scores on harm avoidance are the least concerned about ecological issues. This may suggest that the level of harm avoidance may reach an extreme point where a person may react by overlooking pollution/ecological issues (Kinnear et al., 1974).

Consumers deal with difficulties in decision making and feelings of emotional distress when acquiring ethical or “green” products (Irwin & Spira, 1997). This emotional distress can lead consumers to delay or avoid making decisions, or evade the use of certain information when making brand choices (Anderson, 2003). According to Ehrich and Irwin (2005), consumers try to stay away from situations—such as decision making

that cause them stress, even if the possible outcomes of their choices are positive. Moreover, the authors discuss that consumers willfully ignore information regardless of its availability just to avoid negative emotions. This intentional unawareness behavior is enhanced when brands have been already chosen (i.e., consumers have already made a purchase decision). In addition, consumers employ evasion strategies such as distorting information or omitting part of it in order to fit it to their brand preferences (Russo, Meloy, & Medvec, 1998). We expect that consumers with high levels of environmental concern are less likely to disregard information about a brand's history and its credibility in the organic food market, as the attribute "organic" is of high relevance to them. This should not be the case for consumers low in environmental concern. Thus, concern for the environment should enhance evaluations and choice of brands with organic brand history and high levels of brand credibility in the organic market, especially for consumers high in environmental concern compared to consumers low in environmental concern.

### ***3.3 Price Sensitivity***

Price sensitivity can be defined as "the extent to which consumers vary their purchases of a product as its price changes" (Tellis, 1988, p. 331). Tellis and Gaeth (1990) suggest that there are three types of consumer approaches towards prices: best value, price-seeking, and price aversion. According to the authors, best value shoppers seek the lowest price and the best quality possible; price-seekers select the highest priced brand in order to assure the best quality; and price aversion refers to choosing the lowest priced brand. However, it is important to acknowledge what triggers price sensitivity regardless of the price strategy chosen.

One of the reasons why consumers are price sensitive is brand credibility. When consumers are uncertain about a brand, they develop a risk aversion. Under uncertainty, consumers become more price-sensitive to reduce their risk (Kahneman & Tversky, 1979). Quality may decrease price sensitivity, as a result of price – perceived quality inferences. In other words, consumers often perceive a positive relationship between premium prices and high quality (Aaker, 1991). Consumers who are sensitive to quality uncertainty react with price-seeker behavior, while insensitivity to quality leads to price-aversion behavior (Tellis & Gaeth, 1990). Huber, Holbrook and Kahn (1986) found that consumers become less price-sensitive when the brand is advertised and considered of high quality and when brand names information is combined with quality information. Similarly, Saywer, Worthing and Sendak (1979) showed that when there is no brand information available, consumers become extremely price sensitive. Advertising seems to have an effect on price sensitivity since it helps discerning among brands, and as a consequence, helps to decrease price sensitivity (Kaul & Wittink, 1995; Mitra & Lynch, 1995). Moreover, Mitra and Lynch (1995) argue that when customers have to retrieve brands from memory, advertising enhances price sensitivity; on the other hand, when consumers make decisions at the point of sale (when they are able to see all the available brands), price sensitivity decreases. Kaul and Wittink (1995) state that customers are more likely to be price sensitive when brands are advertised based only in their price rather than in their unique attributes. Advertisement may provide a considerable amount of information about the brand, and reduction in information search costs (information seeking, gathering, and processing) decreases consumers' price sensitivity (Lynch &



Ariely, 2000). However, Eskin and Baron (1977) found that the higher the number of brand advertisements, the higher consumers' price sensitivity.

Based on this literature, it seems possible that price sensitivity is situation specific. For instance, hedonic versus utilitarian purchases, social influence, time pressure, seasonal effects, shopping environment (e.g., crowding), and even mood constitute factors that can cause shifts on price sensitivity (Wakefield & Inman, 2003). For example, Wakefield and Inman (2003) posit that consumers are less price sensitive when shopping hedonic products and become more price-sensitive when shopping for utilitarian products. Furthermore, other studies (Simonson, 1989; Wood, 1989) have found that when shoppers purchase in the presence of others, they make their choices based on what others may think, and this is stronger when the purchase is seen as socially risky (e.g., ethical products; (Midgley, 1983). Product involvement is also relevant for price sensitivity in that it is inversely related to price sensitivity: product involvement leads to brand loyalty and brand loyalty diminishes price sensitivity (Wakefield & Inman, 2003).

This discussion leads us to expect the following: Price sensitivity is likely to moderate the effect of brand history and brand credibility such that organic brand history and high levels of brand credibility result in less favorable evaluations and lower choice likelihood for consumers high in price sensitivity versus consumers low in price sensitivity. This is due to the fact that organic products are often perceived as more expensive, and thus less attractive to price sensitive consumers. Thus, the negative effect of price sensitivity on evaluation and choice of organic products is mediated by perceived price levels. However—similar to product involvement (Wakefield & Inman, 2003)—

concern for environment should attenuate the effect of price sensitivity on choice of organic products, such that greater levels of consumer concern for environment will result in lower price sensitivity and hence a higher choice possibility than for the lower concern for environment counterparts.

### ***3.4 Consumer Knowledge***

Brand knowledge consists of associations linked to people's memory and comprises two main dimensions: brand awareness and brand image (Keller, 1993). Brand awareness allows consumers to retrieve and identify the brand from memory (Rossiter & Percy, 1987) and is measured in terms of brand recognition and brand recall (Keller, 1993). Brand recognition refers to consumers' ability to remember prior contact with the brand, while brand recall deals with consumers' ability to retrieve the brand from memory (Keller, 1993). Keller (1993) further argues that brand recognition is very important because product choices very often occur at the point of sale. Brand awareness is crucial in consumer decision making because it helps the brand to be included in the customers' consideration sets (Nedungadi, 1990). This awareness also enhances the brands' probability to be selected from the consideration set, since it has been demonstrated that some consumers tend to choose only well-known brands (Jacoby, Szybillo, & Busato-Schach, 1977). Moreover, brand awareness has an effect on brand image. Brand image consists of consumers' brand associations assembled together to construct brand perceptions (Newman, 1957). Brand awareness can also have an effect in information processing. The lack/availability of product information affects consumers' choices and their decision making processes (Bettman & Park, 1980).

Sujan (1985) suggests that consumers engage into two types of information processing: attribute by attribute (piecemeal) and categorization. In piecemeal processing, consumers evaluate a brand attribute by attribute, and the final decision is based on a combination of all these attribute evaluations (Anderson, 1974). When a categorization strategy is used, consumers create mental buckets for all brands, making classification easier (Mervis & Rosch, 1981). As a consequence, when consumers come into contact with a brand it is allocated to one of the mental buckets by means of memory retrieval (Fiske, Neuberg, Beattie, & S. J. Milberg, 1987). Furthermore, Fiske et al. (1987) argue that in this process, retrieval is driven by affect rather than in an objective attribute review, such that previous brand experiences direct affective responses.

Consumers create expectations about products through contact with them, and they classify these products by establishing representative brands in each category (Sujan, 1985). Sujan (1985, p. 32) further argues that representative brands can be classified into “exemplars” or “prototypes”. Exemplars are well-known examples of a brand category, whereas prototypes are attribute-built conceptual images of what a category should encompass. The author found that expertise/knowledge is the main driver of what strategy is applied by consumers. Expert consumers build their brand evaluations around the product category (categorization) only when new information is congruent with the product category. When the given information is not a fit with the product category, consumers engage into more an analytical way of thinking, the category-based strategy. Neophyte consumers tend to engage into attribute by attribute evaluation regardless of the congruency of the provided information with the brand category expectations (Sujan, 1985). Along the same line, Bettman and Park (1980) posit that experienced consumers

employ brand-level processing, whereas less-experienced consumers are more likely to use attribute-based evaluations.

Since many organic products might be launched as brand extensions it is also relevant to understand how consumer knowledge affects them. As mentioned before, positive affect for the parent brand is relevant so that it can be transmitted to the extension, thus understanding the way in which this transfer occurs is essential. Brand breadth is a characteristic that can affect brand knowledge. It refers to the number of different product types that a brand name stands for (Boush & Loken, 1991). Consumer knowledge affects perceptions of brand extension typicality. Sensitivity towards typicality is stronger for narrow brands than for broader brands. Brand breadth and brand extension typicality have been proved to affect brand evaluations and choice (Boush & Loken, 1991). Boush and Loken (1991) discovered that when extensions do not fit the parent brand, consumers developed negative attitudes towards the extension, especially for grocery products. Conversely, when the breadth of the brand was larger, the extension was not seen as atypical. When the brand had a low variety of products, an atypical extension was highly noticed. This study also showed that consumers engaged into categorical information processing when they perceived high fit between the extension and the core brand, whilst consumers evaluated incongruent extensions by means of the piecemeal strategy (Boush & Loken, 1991). Overall, we expect that consumer knowledge affects evaluation and choice of organic products because the notion of “organic” can serve as a means of categorization (especially for high knowledge consumers) or an attribute used in brand evaluations. Due to affect transfer in the categorization process,

we expect that highly knowledgeable consumers evaluate organic brands more positively and chose them more often than low knowledge consumers.

#### **4. Hypotheses**

Based on the literature reviewed, the following hypotheses are tested in this research:

H1: Brand history affects consumers' evaluation and choice of organic products, such that brands with a history in the organic food category (i.e., traditionally organic brands) are chosen more often and evaluated more positively compared to brands without a history in the organic food category (i.e., traditionally non-organic brands).

H2: Brand credibility influences consumers' evaluation and choice of organic products, such that brands with high credibility in the organic food category are chosen more often and evaluated more favorably compared to brands with a low level of credibility in the organic food category.

H3: Consumer knowledge affects evaluation and choice of organic products, such that highly knowledgeable consumers evaluate organic brands more positively and chose them more often than low knowledge consumers.

The following moderating effects of consumer individual difference variables are also expected:

H4: Consumer skepticism moderates the effect of (a) brand history and (b) brand credibility such that organic brand history and high levels of brand credibility result in more favorable evaluations and greater choice likelihood for high versus low skeptics.

H5: Consumer concern for the environment moderates the effect of (a) brand history and (b) brand credibility such that organic brand history and high levels of brand

credibility result in more favorable evaluations and greater choice likelihood for consumers high in environmental concern versus consumers low in environmental concern.

H6: Price sensitivity moderates the effect of (a) brand history and (b) brand credibility such that organic brand history and high levels of brand credibility result in less favorable evaluations and lower choice likelihood for consumers high in price sensitivity versus consumers low in price sensitivity.

H7: The moderating effect of price sensitivity on evaluation and choice of organic products is mediated by perceived price levels.

H8: Consumer concern for environment moderates the effect of price sensitivity on choice of organic products such that greater levels of consumer concern for environment will result in lower price sensitivity and hence a higher choice possibility than for the lower concern for environment counterparts.

## **5. Pretests**

### ***5.1 Product Category Selection***

The objective of the first pretest was to select a product category for the main experiment. The focus of this research was on food product categories for which both organic and non-organic products are available, and for which product positioning and line extensions along the non-organic/organic continuum was realistic. Product categories were thus included in the pretest based on an analysis of current market developments:

### **5.1.1 Juice**

In the juice segment, consumers are moving away from high sugar beverages and are looking for healthier options. Due to the fact that organic products are regarded as beneficial, many companies are introducing them in their portfolios, whereas others reduce the amount of sugar in their juices or increase nutritional content or revamp the brand's image. Some examples of launches of organic products include New Leaf Natural Lemonades that recently started to sweeten its lemonades with organic evaporated cane juice. Following the same approach, Sunsweet Naturals launched a whole line of herbal juices sugared with organic white grape juice. Viva Beverage LLC released a new brand, Marley Beverage Co. Under this brand name, they are planning to launch healthful organic beverages including juices (Scott, 2010). Coca-Cola's Odwalla Mojito Mambo Juice is sweetened with truvia a stevia-based sweetener with organic evaporated cane juice. The current trend in the organic juice industry is that many of the big producers have consolidated: R.W. Knudsen, Santa Cruz Organic, and After the Fall are in the J.M. Smucker Co. portfolio, whereas Mountain Sun was acquired by Hain Celestial and Coca-Cola bought Odwalla in 2001 ("Organic Juice Companies Pursue Leading Brands and Broader Distribution.," 2004). This means that some companies are acquiring existing brands instead of creating new organic brands.

### **5.1.2 Cold Cereal**

Cold cereals currently redefine their portfolio in an attempt to fulfill consumers' new demands and needs. In 2008, cold cereal sales increased 13.4% over the previous year, lead by organic manufacturers such as Nature's Path, which grows around 26% each year (Rubino, 2008). While organic brands continue to launch organic new

products, all natural brands such as Barbara's Bakery are introducing new organic products under an existing brand name. Conventional brands are also pursuing the organic market. For instance U.S. Mills, who owns four brands in this category, has launched organic products included in two of these brands. However, small organic producers are the organic new product introduction leaders. In 2001, the majority of organic product introductions were performed by small companies (Nature's Path, Provision Farms, and Hain Celestial Group; (Roberts & Dornblaser, 2003). Moreover, in 1999, General Mills launched Sunrise, the first certified organic cereal launched by a big manufacturer; however, the product was later withdrawn from the market due to lack of demand (Roberts & Dornblaser, 2003). Afterwards, General Mills attempted again to enter the organic market by purchasing Small Planet Foods, an organic food producer company.

### **5.1.3 Pasta Sauce**

Organic pasta sauce sales have increased by 71% since 1999 (Sloan, 2005). As a consequence, many companies are starting to include organic products in their portfolio. For instance, Paesana, a New York based company, introduced an organic line extension of their pasta sauces. Along the same line, Campbell introduced an organic pasta sauce line extension of its brand Prego. Some brands such as Prairie Harvest or Simply Organic have always been in the organic market and keep on launching organic products.

### **5.1.4 Frozen Vegetables**

Sales of frozen organic fruits and vegetables grew by 24.3% in 2005 (Davis, 2007). Frozen organic vegetables are very sensitive to price changes and demand is greatly driven by price (Dimitri & Greene, 2002). However, for some frozen vegetables



there is little purchase crossover between organic and conventional brands (Glaser & Thompson, 1999). Consumers who usually buy organic products do not switch to conventional products and vice versa, even if prices change. Large companies that sell conventional frozen vegetables—such as Birds Eye, Green Giant and Hanover—have not yet entered the organic market. Likewise, companies that specialize in selling organic frozen vegetables only concentrate on organic products.

### **5.1.5 Chocolate Bars**

Sales of organic chocolate bars grow at a fast pace. In the year 2000 alone, sales of organic chocolate bars increased by up to 70% (Vreeland, 2000). The trend in the chocolate bar industry is that many large companies are trying to enter the organic products arena. For instance, the multinational company Cadbury Schweppes acquired the organic chocolate producer Green and Black's. The same strategy was used by Hershey's, when they acquired the organic chocolate producer Dagoba in 2006. A further strategy employed by some companies such as Scharffenberger Chocolate Maker with its Antilles brand involves adding some organic ingredients (e.g. organic milk) to chocolate bars. Another approach is introducing a line of organic chocolate under the same brand umbrella (e.g., Moonstruck Chocolate Co. and Blommer; ("At a glance,," 2007; "Blommer goes organic," 2008). Finally, conventionally organic chocolate producers that keep on launching products in the organic market area claiming their traditionally organic origin.

### **5.1.6 Crackers**

Organic cracker sales have grown by 15 percent from 2009 to 2010. Due to the fact that they are seen as a healthy substitute of bread, sales for this product have

increased steadily over the last years (Budgar, 2009). The brand Late July was the pioneer in the organic crackers market followed by Foods Alive and nine more brands. Kraft entered the organic crackers market by creating a brand extension for their well-known brand Ritz.

### **5.1.7 Canned Soups**

Sales of organic soups grew by 40% in 2005, driven particularly by the organic brands Pacific Foods, Amy's Kitchen and Health Valley (Hain Celestial Group), whereas Campbell Soup Company reported a 5% growth in soup sales. The reason for Campbell's steady growth is the launching of low sodium sea-salt products instead of targeting the organic marketing. Furthermore, since 2005 Campbell has been producing five of its SKUs in aseptic cartons. On the other hand, Wolfgang Puck, a customarily non-organic food manufacturer, introduced an organic soup line extension. Traditionally organic brands, such as Pacific Foods, introduced new products to expand their product portfolio ("Organic Soup Pushes 40% Growth in the Mass Market.," 2006).

### **5.1.8 Coffee**

Organic coffee sales grew by 54% in 2005 (Vosburgh, 2006). The trend in the coffee market shows that companies are trying to get into the organic arena but also achieve many certifications at the same time (e.g. organic, fair trade, and shade grown; (Rice & McLean, 1999). Laureiro and Lotade (2005) found that consumers are willing to pay a price premium for coffee if labeled as fair trade or shade grown rather than organic. The authors argue that customers perceive fair trade and shade grown as associated with greater environmental and ethical benefits (Loureiro & Lotade, 2005). Nevertheless, customers observe a natural link between organic and fair trade, stemming from a

constant growth in environmental and social justice awareness (Browne, Harris, Hofny-Collins, Pasiecznik, & Wallace, 2000). Therefore, a large amount of the new coffee products strive to have both the organic and fair trade certifications. Traditionally non-organic coffee producers are moving into the organic market. An example of this is Gevalia or The Java of Evolution. However, the international brand Nestlé's Nescafé has not entered the organic market. Instead they appeal to consumers with their strong brand name and a vast variety of products ranging from regular coffee to latte macchiato.

### **5.1.9 Snack Bars**

Organic snack bars achieved high demand. In 2004, the sales growth for this product was 55.7%, whereas conventional snack bars grew 0.0%. During this period of time, the organic snack bars segment introduced two new products (equivalent to 14.3% growth over the previous year), whereas the conventional snack bars sector introduced 50 new products (equivalent to 41.3% growth over the previous year; (Vreeland, 2004). However in 2005, 32 organic new products were introduced (equivalent to 71.1% growth over the previous year), while the conventional market lost 59 products (equivalent to -11.3% growth over the previous year); ("Organic Confections Round Up," 2005). The observable trend is that since the demand for organic products in the snack bars division is high, many brands are penetrating the organic market. The high sales growth are attributed to the fact that organic snack bars are perceived as being healthier option to candy bars and as a consequence, consumers are inclined buy them for their children (Vreeland, 2004).

#### **5.1.10 Frozen Pizza**

The organic frozen pizza segment started to grow as consumers seek healthier alternatives. In 2007, organic frozen pizzas experienced a 54.5% growth in dollar sales, whereas the whole category grew by 5.2% (Friedman, 2008). Conventional pizzas still dominate demand and production. Kraft is the number one frozen pizza seller and keeps launching new products (three in 2007, and a new premium brand in 2008). Nestlé entered the thin crust market with a brand extension for Stouffer's Corner Bistro brand. According to AIB International, the largest organic pizza vendor is Amy's Kitchen, occupying the ninth place in the whole frozen pizza category in 2009, even though this brand was not in the top 10 pizza vendors in 2008.

#### **5.1.11 Canned Beans**

This product segment is still dominated by the traditional segment. Nevertheless, concerning the organic market, Amy's Kitchen is the leader in organic prepared food, including beans, with a 38% share of the market (Mogelonsky, 2005).

#### **5.1.12 Frozen Fruit**

Frozen fruit is currently considered an emerging market due to its recent growth in sales based on an increase in health awareness and rising fresh produce prices. The frozen fruit market has few producers and frozen fruit is regularly a private label segment with brands that include Safeway's O and Whole Foods Market. Dole is the market leader, and recently introduced an organic line extension. However, Dole may phase out this line as a result of consumers' "lack of interest" (Wishnow, 2009). On the other hand, there are some established organic brands, such as Cascadian Farms and Woodstock Farms.

### **5.1.13 Ice Cream**

The organic ice cream market is increasing since customers are seeking healthy alternatives. As a consequence, several companies introduced organic brands. In 2006, the overall ice cream category underwent a .05% drop in sales but the organic sector has been growing constantly with a 55% increase from 1997 to 2004. This has made the organic market very attractive especially for large companies. For instance, Unilever introduced an organic brand extension for its brands Breyer's and Ben and Jerry's. There are also established ice cream organic companies such as Organic Ice cream Company, Green and Black's and Stoney Field that only sell organic ice cream.

### **5.1.14 Chips**

Tortilla chips consumption has increased in North America due to the recent Hispanic community growth. The registered growth for September 2008 to September 2009 was 6%, representing 2,452 million USD (Schroeder, 2009). In addition, many of the new product introductions in this product category are made with organic ingredients, whole grains, and less fat (Cassell, 2008).

## **5.2 Pretest 1**

In order to identify an appropriate product category for the main study, a sample of undergraduate business students (n = 83; 56.6% men, 43.4% female) participated in an online study. They were asked to rate their usage, willingness to pay (WTP), and attribute importance for six out of 18 product categories included in this pretest (juice, cold cereal, pasta sauce, yogurt, frozen vegetables, chocolate bars, crackers, soda, canned soups, coffee, milk, pasta, snack bars, frozen pizza, hot cereal, canned beans, tea, frozen fruit, ice cream and chips). The objective of this analysis was to select the product categories

for which familiarity, usage, attribute importance and willingness to pay was similar for men and women.

### **5.2.1 Usage**

Participants were asked to rate the usage on a seven-point scale (never/daily). Mean usage scores are presented in Table 1. To identify the product categories for which usage does not differ across female and male consumers, we conducted an independent samples t-test. Usage by men and women only differed for soft drinks ( $M_{\text{men}} = 4.64$ ,  $M_{\text{women}} = 3.42$ ;  $p < .01$ ) and tea ( $M_{\text{men}} = 3.49$ ,  $M_{\text{women}} = 5.28$ ;  $p < .01$ ), but not for other product categories ( $p$ 's  $> 0.11$ ). Soft drinks and tea were thus excluded from the main study.

**Table 1. Average Product Category Usage**

<b>Product Category</b>	<b>Average Usage</b>
Milk	5.96
Fruit Juice	5.21
Tea	4.64
Yogurt	4.58
Pasta	4.46
Coffee	4.38
Cold Cereal	4.33
Soft Drink	4.31
Pasta Sauce	4.04
Snack Bars	3.88
Chips	3.88
Frozen Fruit	3.67
Crackers	3.58
Chocolate Bars	3.58
Ice Cream	3.45
Frozen Vegetables	2.67
Canned Beans	2.48
Hot Cereal	2.45
Canned Soups	2.31

### **5.2.2 Willingness to Pay**

Willingness to pay was measured with an open-ended question in which participants indicated how much (in \$ CAD) they would be willing to pay for a specified product quantity (e.g., one 12 oz. of soft drink). Mean values of willingness to pay ranged from \$1.86 CAD (snack bars) to \$5.62 (ice cream) and are shown in Table 2.

**Table 2. Average Willingness to Pay by Product Category**

<b>Product Category</b>	<b>Average Willingness to Pay</b>
Canned Beans	\$2.27
Canned Soups	\$2.49
Chips	\$2.66
Chocolate Bars	\$1.97
Coffee	\$3.55
Cold Cereal	\$4.13
Crackers	\$3.03
Frozen Fruit	\$4.73
Frozen Pizza	\$5.11
Frozen Vegetables	\$3.79
Fruit Juice	\$3.28
Hot Cereal	\$4.32
Ice Cream	\$5.62
Milk	\$3.79
Pasta	\$3.49
Pasta Sauce	\$4.38
Snack Bars	\$1.86
Soft Drink	\$1.91
Tea	\$4.32
Yogurt	\$2.99



Furthermore, we carried out an independent samples t-test to make sure that the willingness to pay would not differ across gender. The only product category that showed differences in willingness to pay across male and female consumers was yogurt ( $M_{\text{men}} = 2.29$ ,  $M_{\text{women}} = 3.58$ ;  $p < .05$ ). Yogurt was thus not retained for the main study.

### 5.2.3 Attribute Importance

Participants first completed a listing task in which they indicated what attributes they considered important for each product category. The attributes mentioned most often are summarized in Table 3.

**Table 3. Consumers' Attribute Preference by Product Category**

Product Category	Attributes
Fruit Juice	Taste, sugar content, freshness, nutritional contents, origin (from juice or concentrate), packaging and price
Cold Cereal	Taste, price, nutritional contents
Pasta sauce	Price, taste, texture
Yogurt	Taste, fat/calories content, texture
Frozen Vegetables	Price, taste, freshness, quality and variety
Chocolate bars	Taste, price, fat/calories content, cocoa content
Crackers	Taste, price, salt content
Soda	Taste, price, fat/calories content, sugar content
Canned Soups	Taste, price, nutritional contents
Coffee	Taste, price, quality, brand name
Milk	Price, taste, fat/calories content, freshness
Pasta	Taste, price, quality, variety
Snack bars	Taste, price, nutritional content
Frozen Pizza	Taste, price, quality, toppings
Hot Cereal	Taste, price, quality, nutritional content, ingredients
Canned beans	Taste, price, packaging
Tea	Taste, Price, variety
Frozen fruit	Taste, variety, price, freshness
Ice cream	Taste, fat/calories content, price, quality, packaging, variety
Chips	Taste, price, fat/calories content, variety, packaging and quality

Participants also completed a rating task in which they indicated how important they considered the following attributes for each of the product categories: variety, quality, organic, brand name, and price. A set of ANOVAs was performed on the attributes, with product as the independent variable and product attribute importance as the dependent variables. Across products, we observed a significant effect for variety ( $F(18,503) = 2.63, p < .001$ ), quality ( $F(18,503) = 2.02, p < .01$ ), brand name ( $F(18,503) = 3.08, p < .001$ ), usage ( $F(18,503) = 8.92, p < .001$ ) and to a lesser extent organic ( $F(18,503) = 1.60, p < .06$ ). However, the price attribute did not differ across product categories ( $F(18,503) = .93, p > .50$ ). Across all product categories, quality was considered most important ( $M = 5.82$ ), followed by price ( $M = 5.2$ ), variety ( $M = 5.07$ ), brand name ( $M = 4.58$ ), and organic ( $M = 4.23$ ). Independent samples t-tests were conducted to establish whether attribute importance differed significantly across male and female consumers. There were only few product categories for which attribute importance ratings differed across men and women. For yogurt, there were differences in the importance of variety ( $M_{\text{men}} = 4.36, M_{\text{women}} = 5.69; t(22) = -2.16, p < .05$ ) and price ( $M_{\text{men}} = 4.55, M_{\text{women}} = 5.85; t(22) = -2.14, p < .05$ ). For soft drinks, there were differences in the importance of quality ( $M_{\text{men}} = 6.00, M_{\text{women}} = 5.00; t(24) = 2.48, p < .03$ ). For milk and pasta, there were differences in the importance of variety (milk:  $M_{\text{men}} = 3.81, M_{\text{women}} = 5.00; t(23.17) = -2.45, p < .03$ ; pasta:  $M_{\text{men}} = 4.69, M_{\text{women}} = 6.00; t(23.98) = -2.75, p < .02$ ). Product categories for which importance weights differed across men and women (yogurt, soft drinks, milk, and pasta) were excluded from the main study.

### ***5.3. Summary of the Pretest***

Based on equal product category usage, equal willingness to pay, equal importance of variety and price among men and women, several product categories were identified for the main study. The product that was chosen for the main experiment was chocolate. Due to the fact that chocolate is easy to store, present, manipulate in terms of branding/packaging, and has been used in many studies (Cheema & Soman, 2008; Chernev, 2003; Iyengar & Lepper, 2000; Kardes, Kalyanaram, Chandrashekar, & Dornoff, 1993), it was considered the best option for the purposes of this research.

### ***5.4 Pretest 2***

The objective of this pretest was to select chocolate assortments that would serve as brand history and credibility manipulations in the main study. To this end, this pretest sought to identify chocolate attributes for which importance was similar for men and women. Another objective was to identify the most preferred flavors to construct brand offerings that were similar in attractiveness. In order to identify appropriate chocolate flavors for the main study, a sample of undergraduate business students (n = 50; 64% men, 36% female) were asked to rate from (1 = not at all attractive to 7 = very attractive) a list of chocolate attributes that included different flavors, type, cocoa content, sugar content, type, brand, price, and country of origin. In addition, participants were given instructions to carry out a ranking task in which they were presented with two lists of chocolate flavors (available from the Dolfon brand) and were told to choose from each list their top three most preferred flavors and their three least preferred flavors.

In the attribute rating task, the highest rated attributes were: milk chocolate (M=6.04), flavor (M=5.80), type (M=5.68), cocoa content (M=5.26), and solid chocolate

( $M=5.14$ ). To identify the chocolate attributes for which preference does not differ across female and male consumers, we conducted an independent samples t-test. The chocolate flavors and attributes that presented difference in preference between male and female consumers were: strawberry ( $M_{\text{men}} = 3.84$ ,  $M_{\text{women}} = 2.61$ ;  $t(48) = 2.302$ ,  $p < .03$ ) and anis ( $M_{\text{men}} = 2.68$ ,  $M_{\text{women}} = 2.61$ ;  $t(48) = 2.612$ ,  $p < .02$ ). These two attributes were thus retired from the study. For the ranking task, we recorded the frequencies of the chocolate flavors that the participants chose. The top three most preferred flavors were: milk chocolate, milk chocolate with hazelnuts, and milk chocolate with grilled almonds. The three least preferred flavors were: dark chocolate with lavender, dark chocolate with earl grey tea, and dark (bittersweet) chocolate with pink peppercorns.

After exclusion of the anise and strawberry flavors, a final set of 16 chocolates—available in 70g bars—were used to construct the brand history and brand credibility manipulations for the main experiment: milk chocolate with cinnamon, milk chocolate with hot masala, milk chocolate with green tea, milk chocolate with grilled almonds, milk chocolate with cinnamon, milk chocolate, dark chocolate with lavender, dark chocolate with ginger, dark chocolate with earl grey tea, dark chocolate with coffee, dark chocolate with orange peel, dark chocolate with grilled almonds, dark chocolate with pink pepper corns, dark chocolate 70% cocoa with cocoa beans, dark chocolate 88% cocoa, and dark chocolate 70% cocoa.

## **6. Brand Evaluation and Choice Study**

The objective of this study was to examine the effects of brand history, brand credibility, and consumer skepticism, price sensitivity, knowledge, and concern for the

environment on evaluation and choice of organic food products. The hypotheses were tested in an experiment with the previously mentioned chocolate bars.

### **6.1 Design**

The study used a 2 (brand history: non-organic brand, organic brand)  $\times$  4 (brand credibility: low – 0% organic, 25% organic, 75% organic; high – 100% organic)  $\times$  2 (knowledge: low, high after median split on consumer knowledge scale) experimental design. Price sensitivity, concern for the environment, and skepticism were measured variables.

### **6.2 Stimuli and Manipulations**

Brand history (organic brand, non-organic brand) was manipulated using two fictitious brand names used in prior research: Arnaud Soubeyran and Au Duc du Praslin (Chernev, 2003) in order to avoid familiarity effects. In each choice set, one of the brands was presented as the organic brand, while the other brand was the conventional brand (i.e., the traditionally non-organic brand). The manipulation was introduced via packaging specifically created for this experiment: chocolate wrappers including the brand name, chocolate type, and description of organic attributes (where applicable), nutritional information, a bar code, as well as different colors similar to real chocolate bars. The assignment of brand names to organic versus conventional brand was counterbalanced across participants to eliminate brand name effects on evaluation and choice.

Brand credibility was manipulated via the brand's commitment and focus to the product category (i.e., the brand's assortment in the organic vs. non-organic category): The organic brand consisted of 100% organic chocolates and had thus a high level of

brand credibility with regard to the “organic” attribute. The conventional brand was presented as offering a lower percentage of organic options (i.e., 0% or all non-organic chocolates, 25% or 75% non-organic chocolates, or 75% or 25% no-organic chocolates). The manipulation was thus indicative of no commitment to the organic product category (no credibility in the organic market = 0%), low levels of commitment to the organic product category (low levels of credibility in the organic market = 25%), or higher commitment to the organic product category (higher levels of credibility in the organic market = 50%, 75%). These levels were included for managerial insight: as more brands use line extensions to introduce organic products, an understanding of how the percentage of organic products affects consumer evaluation and choice can be beneficial.

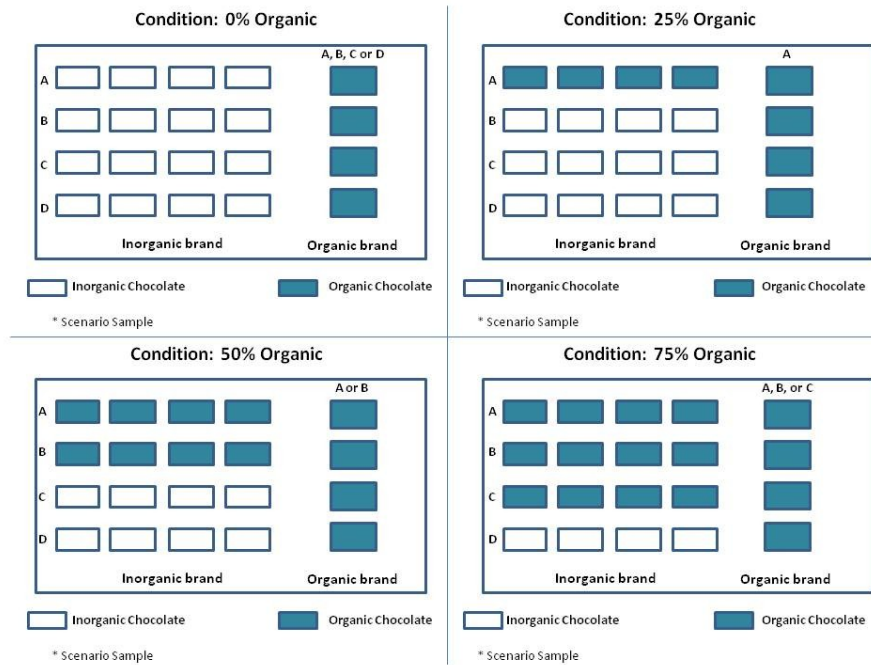
### ***6.3 Procedures***

The study was carried out in a laboratory setting where two types of chocolate (organic, inorganic) were displayed together on a table. Participants were told to look at both chocolate assortments and select one chocolate; one that they would most likely purchase in a retail setting. Once selected, participants filled out a questionnaire. Arnaud Soubeyran (AS) and Au Duc du Praslin (ADP) were used as the chocolate brand names (Chernev, 2003b). This two brand names (AS and ADP) were counterbalanced across conditions to avoid possible brand name-related confounds.

The non-organic brand array included 16 chocolate flavors, whereas the organic brand consisted of four flavors. The inorganic brand was placed in four columns of four chocolates (four rows) each, and next to it, the organic brand was arranged in one column of four chocolates (four rows). The non-organic brand contained a mix of organic and inorganic chocolates creating four conditions: 0% organic (41 respondents), 25% organic

(40 respondents), 50% organic (42 respondents) and 75% organic (50 respondents; see Figure 1). The organic brand was 100% organic across conditions. In order to avoid possible flavor preference confounds, different scenarios per condition for the organic brand were created, each containing a set of different chocolate flavors.

**Figure 1. Study Conditions**



Scenarios	0% Organic	25% Organic	50% Organic	75% Organic
Scenario 1	Organic A	Inorganic A; Organic A	Inorganic A,B; Organic A	Inorganic A,C,D; Organic A
Scenario 2	Organic B	Inorganic B; Organic B	Inorganic A,B; Organic B	Inorganic A,B,D; Organic A
Scenario 3	Organic C	Inorganic C; Organic C	Inorganic B,C; Organic B	Inorganic A,B,C; Organic A
Scenario 4	Organic D	Inorganic D; Organic D	Inorganic C,D; Organic C	Inorganic B,C,D; Organic B
Scenario 5			Inorganic A,D; Organic A	Inorganic A,B,D; Organic B
Scenario 6			Inorganic B,C; Organic C	Inorganic A,B,C; Organic B
Scenario 7			Inorganic C,D; Organic D	Inorganic B,C,D; Organic C
Scenario 8			Inorganic A,D; Organic D	Inorganic A,C,D; Organic C
Scenario 9				Inorganic A,B,C; Organic C
Scenario 10				Inorganic B,C,D; Organic D
Scenario 11				Inorganic A,C,D; Organic D
Scenario 12				Inorganic A,B,D; Organic D



Figure 1 illustrates the experimental setup: The 0% organic condition had four scenarios (1 non-organic  $\times$  4 organic). The non-organic brand array was kept the same across scenarios, while organic brand matched the flavors of one of the non-organic brand's rows. In the 25% organic condition, the non-organic brand had a different row of organic chocolate in each of the four scenarios. The organic brand matched the flavors that the non-organic brand displayed as organic. The 50% organic condition comprised 50% organic chocolate and 50% non-organic chocolate. The organic brand matched the flavors of the rows that the non-organic brand presented as organic, resulting in eight different conditions. The 75% organic condition contained three rows of organic chocolate and one of non-organic chocolate. The rows were balanced across scenarios and the organic brand matched the flavors of each one of these rows.

### ***6.5 Measures***

The dependent variables were brand choice (“write down the option you would be most likely to buy and the name of the brand offering this option.”), brand evaluation (low quality/high quality; unfavorable/favorable; negative/positive; bad/good).

Consumer variables that were predicted to moderate the relationships between brand history and brand credibility were measured as follows: Consumer skepticism toward environmental claims was measured on four items (“Most environmental claims made on package labels or in advertising are true.” “Because environmental claims are exaggerated, consumers would be better off if such claims on package labels or in advertising were eliminated.” “Most environmental claims on package labels or in advertising are intended to mislead rather than to inform consumers.” “I do not believe most environmental claims made on package labels or in advertising.” strongly

disagree/strongly agree; (Mohr, Eroglu, & Ellen, 1998)). Concern for the environment was measured using Dunlap, Van Liere, Mertig and Jones' (2000) NEP scale. The three items concerning fragility of nature's balance were selected ("When humans interfere with nature it often produces disastrous consequences." "The balance of nature is strong enough to cope with the impacts of modern industrial nations." "The balance of nature is very delicate and easily upset," strongly disagree/strongly agree). Consumer knowledge of the category was measured on four items ("If a friend asked me about this product, I could give them advice about different brands." "I feel very confident about my ability to tell the difference in quality among different brands of this product." "I feel very knowledgeable about this product." "If I had to purchase this product today, I would need to gather very little information in order to make a wise decision." strongly disagree/strongly agree; (Smith & Park, 1992)). Price sensitivity was operationalized as price consciousness and measured on a three-item scale ("I compare prices of at least a few brands before I choose one." "I find myself checking the prices even for small items." "It is important to me to get the best price for the products I buy." strongly disagree/strongly agree; (Ailawadi, Neslin, & Gedenk, 2001)). All scales used in this research were measured on seven points. Demographic information (age, sex, knowledge of English) was also measured.

## **6.6 Results**

Data were collected from 173 undergraduate students (43.4% male, 56.6% female).

**Table 4. Participants' Demographics**

Variable	Mean	Median	SD
Age	25.02	23.00	6.74
English Proficiency	3.47 (Fluent)	4.00 (Perfectly fluent)	.70
Time Living in Canada	15.12	18.00	11.59

*H<sub>1</sub>: Brand history affects consumers' evaluation and choice of organic products, such that brands with a history in the organic food category (i.e., traditionally organic brands) are chosen more often and evaluated more positively compared to brands without a history in the organic food category (i.e., traditionally non-organic brands).*

For H1 the dependent variables were brand choice and evaluation. Choice was a dichotomous variable and referred to the chocolate chosen (1 = organic, 0 = inorganic). For brand evaluation, the three-item scale (unfavorable/favorable; negative/positive; bad/good) loaded on one factor and had a Cronbach's  $\alpha$  of .95 (90.63% variance explained). The independent variable, brand history refers to whether the brand was presented as traditional or fully organic.

In order to test the effect of brand history on choice, a chi-square test was performed. The results do not support H1: the inorganic brand was chosen more often ( $n_{\text{organic}} = 62$ ,  $n_{\text{non-organic}} = 111$ ;  $\chi^2 (1) = 13.879$ ,  $p < .00$ ). To test the effect of brand history on evaluation, a paired samples t-test was carried out. Results did not support the hypothesis: for the organic and non-organic brands brand evaluations did not differ significantly ( $M_{\text{organic}} = 4.88$ ,  $M_{\text{non-organic}} = 4.81$ ;  $t (173) = .65$ ,  $p > .5$ ). Perceived quality is also a type of evaluation and refers to the judgment consumers make about the superiority of a product (Zeithaml, 1988). Given that prior studies consider perceived quality separately

from other types of product evaluation (Aaker & Keller, 1990; Keller & Aaker, 1992), product quality judgments were considered in an additional test of H1. A paired samples t-test was completed for perceived quality of the organic and the non-organic brand. Quality perceptions indeed differed across brands: the organic brand was regarded as of being of higher quality ( $M_{\text{organic}} = 4.84$ ,  $M_{\text{non-organic}} = 4.58$ ;  $t(172) = 2.73$ ,  $p < .01$ ).

*H2: Brand credibility influences consumers' evaluation and choice of organic products, such that brands with high credibility in the organic food category are chosen more often and evaluated more favorably compared to brands with a low level of credibility in the organic food category.*

To test the influence of brand credibility on choice, a logistic regression was performed with brand credibility of the traditional brand (0% organic options, 25% organic options, 50% organic options, 75% organic options) as the independent variable and choice as the dependent variable. The test results showed that H2 was not supported for choice ( $R^2 = .001$ ;  $F(3,169) = .05$ ,  $p > .95$ ). To test the influence of brand credibility on brand evaluation a one-way ANOVA was carried out. Brand credibility was introduced as the independent variable and overall brand evaluation as the dependent variable. Results show that H2 was not supported for overall evaluation since there were not significant differences across brand credibility levels ( $F(3,169) = .54$ ,  $p > .65$ ). The effect of brand credibility on quality was also tested. The results did not indicate any differences in perception of quality across brand credibility levels ( $F(3,169) = .13$ ,  $p > .90$ ).

*H3: Consumer knowledge affects evaluation and choice of organic products, such that highly knowledgeable consumers evaluate organic brands more positively and chose them more often than low knowledge consumers.*

In the test of H3, the independent variable was consumer knowledge and the dependent variables were chocolate choice and brand evaluation. Consumer knowledge was measured on Smith and Park's (1992) consumer knowledge scale. A factor analysis revealed a single component (63.63% variance explained), with a Cronbach's  $\alpha$  of .81. A median split resulted in two groups (high knowledge, low knowledge;  $M_{\text{high}} = 5.08$ ,  $M_{\text{low}} = 2.73$ ,  $t(171)$ ,  $p < .001$ ). To assess the effect of consumer knowledge on chocolate choice, a logistic regression was used. Results indicate no influence of consumer knowledge on chocolate choice ( $R^2 = .00$ ,  $F(1,171) = .50$ ,  $p > .45$ ). To test the influence of consumer knowledge on brand evaluation an independent sample t-test was executed. The results show a significant effect of knowledge on evaluation. High knowledge consumers evaluated the organic brand more positively than low knowledge consumers ( $M_{\text{high}} = 5.06$ ,  $M_{\text{low}} = 4.75$ ;  $t(171) = -1.82$ ,  $p < .05$ ). The test was carried again this time with quality as the dependent variable. There was no significant relationship between consumer knowledge and perceived quality ( $t(171) = -.41$ ,  $p > .65$ ).

*H4: Consumer skepticism moderates the effect of (a) brand history and (b) brand credibility such that organic brand history and high levels of brand credibility result in more favorable evaluations and greater choice likelihood for high versus low skeptics.*

A factor analysis on Mohr, Eroglu and Ellen's (1998) consumer skepticism towards environmental claims scale resulted in one component (skepticism; 53.74% variance explained), with a Cronbach's  $\alpha$  of .70. A median split on label skepticism was performed ( $M_{\text{low\_skept}} = 2.97$ ,  $M_{\text{high\_skept}} = 4.76$ ;  $t(171) = -16.72$ ,  $p < .001$ ).

To test for moderation a mixed factorial design 2 (brand history: organic, inorganic; within-participants)  $\times$  4 (brand credibility of traditional brand: 0%, 25%, 50%, 75%; between-participants)  $\times$  2 (skepticism: high, low; between-participants) ANOVA was conducted using overall evaluation as the dependent variable. There was no effect of label skepticism on the relationship between brand history and brand credibility and brand evaluation; in other words, there is no moderation and H4 was not supported ( $F(1,165) = 1.78$ ,  $p > .50$ ). The same test was performed with perceived quality as the dependent variable. The main effect of history was significant ( $F(1,165) = 9.75$ ,  $p < .01$ ), with higher quality perceptions for the organic brand ( $M = 4.84$ ) than for the non-organic brand ( $M = 4.58$ ). There were no significant results regarding skepticism.

*H5: Consumer concern for the environment moderates the effect of (a) brand history and (b) brand credibility such that organic brand history and high levels of brand credibility result in more favorable evaluations and greater choice likelihood for consumers high in environmental concern versus consumers low in environmental concern.*

First, a factor analysis on the scale on consumer concern for the environment (Dunlap et al., 2000) was carried out. The result was one component (51.25% variance explained) with a Cronbach's  $\alpha$  of .50. A median split was performed ( $M_{\text{low\_concern}} = 4.20$ ,

$M_{\text{high\_concern}} = 6.02$ ;  $t(171) = , p < .001$ ). A mixed factorial design 2 (brand history: organic, inorganic; within-participants)  $\times$  4 (brand credibility of traditional brand: 0%, 25%, 50%, 75%; between-participants)  $\times$  2 (concern for the environment: high, low; between-participants) ANOVA with overall evaluation as the dependent variable was carried out. The results showed no support for this hypothesis ( $F(1,165) = .31, p > .50$ ), concern for the environment was not a moderator. When perceived quality served as the dependent variable, there was a significant main effect of history ( $F(1,165) = 8.37, p < .01$ ), confirming that the organic brand ( $M = 4.84$ ) was seen as of been of higher quality than the inorganic brand ( $M = 4.58$ ). There were no significant results concerning concern for environment.

*H6: Price sensitivity moderates the effect of (a) brand history and (b) brand credibility such that organic brand history and high levels of brand credibility result in less favorable evaluations and lower choice likelihood for consumers high in price sensitivity versus consumers low in price sensitivity.*

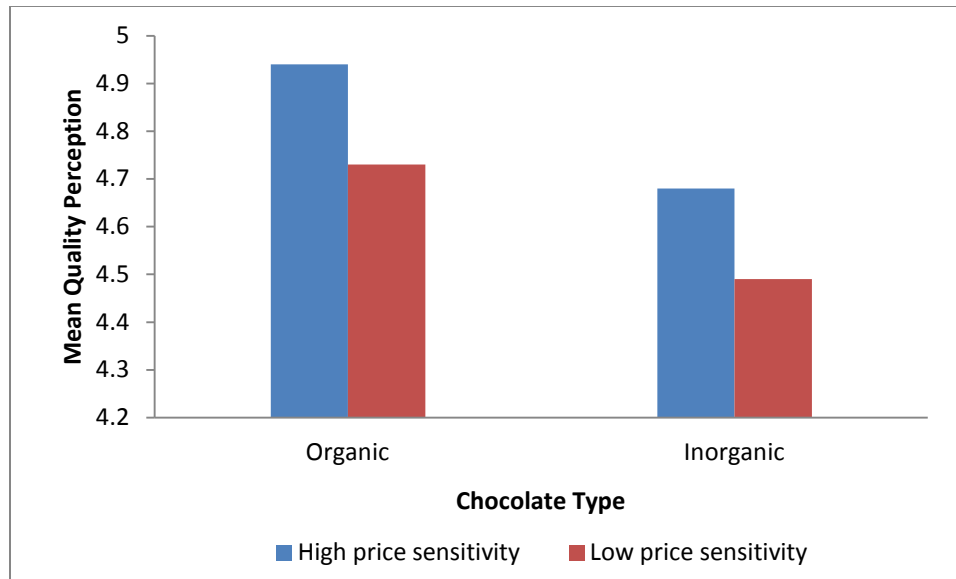
A factor analysis was performed on Ailawadi et al.'s (2001) price sensitivity scale. One component (price sensitivity) was obtained (73.71% variance explained) with a Cronbach's  $\alpha$  of .82. A median split was performed on this variable ( $M_{\text{low\_pricesens}} = 3.51, M_{\text{high\_pricesens}} = 6.23$ ;  $t(127) = -20.42, p < .001$ ). A mixed factorial design 2 (brand history: organic, inorganic; within-participants)  $\times$  4 (brand credibility of traditional brand: 0%, 25%, 50%, 75%; between-participants)  $\times$  2 (price sensitivity: high, low; between-participants) ANOVA with overall evaluation as a dependent variable was conducted. The results indicated that H6 was not supported for price sensitivity ( $F$

(1,165) = 2.66,  $p < .11$ ). However, it is relevant to mention that the price sensitivity  $\times$  brand history interaction almost reached significance. The low price sensitivity group evaluated the organic brand more positively ( $M = 4.93$ ) than the high price sensitivity group ( $M = 4.82$ ). Concerning the non-organic brand, people with low price sensitivity evaluated the brand slightly less favorable ( $M = 4.70$ ) than their high sensitivity counterparts ( $M = 4.92$ ).

The same mixed ANOVA was performed with perceived quality as the dependent variable. The analyses showed a moderating effect of price sensitivity ( $F(1,165) = 4.73$ ,  $p < .05$ ). The organic brand was perceived of higher quality by participants with high price sensitivity ( $M = 4.94$ ) compared to those with low price sensitivity ( $M = 4.73$ ). On the other hand, the non-organic brand was regarded as of being of higher quality by participants with low price sensitivity ( $M = 4.68$ ) than those with high price sensitivity ( $M = 4.49$ ). Finally, there was no interaction between price sensitivity and brand credibility (see Figure 2).



**Figure 2. Price Sensitivity and Quality Perceptions by Chocolate Type**



*H7: The moderating effect of price sensitivity on evaluation and choice of organic products is mediated by perceived price levels.*

Since there was no moderating effect of price sensitivity in the relationship between brand history and brand credibility on overall evaluation (H6), the mediation hypothesis was not tested for overall evaluation. However, there was a moderation effect of price sensitivity on the relationship between brand history and quality and therefore, H7 was tested with quality as the dependent variable. First a linear regression was performed to understand if price perceptions had an impact on quality perception ( $R^2 = .40$ ). The results indicated that price perceptions do have an impact on quality perception ( $b = .64$ ,  $t(344) = 15.24$ ,  $p < .001$ ). The two variables showed a positive correlation ( $r = .64$ ): when the perceived price was higher, perceived quality was also higher. Another regression was performed with quality as the dependent variable and history, price sensitivity and the interaction between price sensitivity and brand history were introduced as the

independent variables ( $R^2 = .05$ ). Brand history ( $b = -.34$ ,  $t(169) = -1.43$ ,  $p > .15$ ) and price sensitivity ( $b = -.04$ ,  $t(169) = -.41$ ,  $p > .60$ ) alone did not have an effect on perceived quality; however, there was a significant interaction effect of brand history and price sensitivity on perceived quality ( $b = .27$ ,  $t(169) = 2.08$ ,  $p < .04$ ). A further regression was done with perceived price as the dependent variable and history, price sensitivity and the interaction between price sensitivity and brand history as the independent variables ( $R^2 = .11$ ). Brand history ( $b = -.44$ ,  $t(169) = -1.90$ ,  $p > .05$ ) and price sensitivity ( $b = -.15$ ,  $t(169) = -1.41$ ,  $p > .15$ ) did not show a significant relationship with perceived price; whereas the interaction between brand history and price sensitivity had a significant effect on perceived price ( $b = .73$ ,  $t(169) = 3.04$ ,  $p < .01$ ). A final regression was run with quality as the dependent variable and perceived price, price sensibility, brand history and the interaction between brand history and price sensibility as the independent variables ( $R^2 = .38$ ). This time brand history ( $b = -.08$ ,  $t(168) = -.38$ ,  $p > .70$ ), price sensitivity ( $b = .05$ ,  $t(168) = .52$ ,  $p > .60$ ) and its interaction ( $b = .07$ ,  $t(168) = .34$ ,  $p > .70$ ) showed no effect on perceived quality. Interestingly, when entered, perceived price ( $b = .61$ ,  $t(168) = 9.46$ ,  $p < .001$ ) presented a significant effect on quality eliminating the effect of the interaction between brand history and price sensitivity. Mediation (H7) was thus supported for quality perceptions.

*H8: Consumer concern for environment moderates the effect of price sensitivity on choice of organic products such that greater levels of consumer concern for environment will result in lower price sensitivity and hence a higher choice possibility than for the lower concern for environment counterparts.*

To test for this hypothesis a one way ANOVA was used. Price sensitivity and concern for the environment (both median splits) were introduced as independent variables and chosen brand as the dependent variable. Price sensitivity ( $F(3,169) = 1.29, p > .25$ ), concern for the environment ( $F(3,169) = .96, p > .30$ ) and its interaction ( $F(3,169) = .11, p > .70$ ), did not show any significant effects on chosen brand. H8 was not supported.

## **7. Discussion**

This study explores the effect of brand history, brand credibility, consumer skepticism, price sensitivity as well as the knowledge, and concern for the environment on evaluation and choice of organic food products. In doing so it contributes to the literature on organic food consumption. This research examined whether and to what extent brand and consumer characteristics influence consumers' attitude toward and choice of organic food products.

Contrary to previous findings and the hypotheses, the non-organic brand was chosen more often than the organic brand. A potential explanation may be that participants based their decision on taste or variety, and since the non-organic assortment had a larger assortment of flavors (to realistically reflect the greater assortment that is usually associated with traditional, non-organic chocolate brands); it might have been chosen more often. This statement is consistent with the findings in pretest 1, where participants ranked taste as the most important chocolate attribute. In addition, a follow-up analysis involving a small sample ( $n = 20$ ) taken randomly from the study, showed that when the inorganic brand was chosen, the selected flavor was not included in the organic assortment. This suggests that the non-organic brand was selected when the desired flavor was not available in the organic array. The results of this study also

revealed that both the organic and non-organic brands were evaluated similarly in terms of brand evaluations. However, in terms of quality, the organic brand was rated significantly higher than the non-organic brand. It has been previously discussed that subjective brand evaluation (good/bad, positive/negative, favorable/unfavorable) is an attitude measurement more related to affect (Mano & Oliver, 1993) whereas quality has more to do with cognitive judgment (Zeithaml, 1988). It can be concluded that since the products were packaged and presented in similar ways, affect attitudes were similar across brands, whereas chocolate type (organic/inorganic) elicited higher levels of rational judgment, thus affecting perceived quality.

One exception to this finding of overall evaluation of the organic compared to the non-organic brand occurred when participants had high levels of product knowledge, whereas quality perceptions did not vary across levels of knowledge. In order to understand these results, it is relevant to go back to the literature review. It has been shown that the lack/availability of product information affects consumers' choices and decision making processes (Bettman & Park, 1980). When the information provided by the brand matches the product category, savvy consumers' evaluations are related to the product category rather than its attributes (global evaluations vs. specific evaluations; (Sujan, 1985). The chocolate information provided in the study (label, flavors, etc.) matched the product category. Thus, it is possible that knowledgeable consumers focused more on global information (good/bad, favorable/non-favorable, negative positive) rather than on specific attributes such as quality. In addition, since product retrieval is driven by affect (Fiske et al., 1987), it is likely that participants focused more on overall evaluation than on quality. Regarding choice, the lack of effect for consumer knowledge can be

explained partially by the importance of taste. Knowledge did not affect the relationship between brand history and quality.

Contrary to expectations, brand credibility did not affect evaluations or choice. A plausible reason for this result is that the chocolate brands were intentionally unfamiliar to the participants in an effort to reduce choice confounds. Unfamiliarity can lead to a deficit of trustworthiness and perceived expertise, and given that there is no previous history developed with the brand, corporate and brand associations did not exist. In addition, brand credibility may have been perceived as absent due to the fact that it is built over time with marketing actions, usage, and so on (Erdem et al., 2002). As a result, participants may not have been able to make a judgment regarding credibility. Along the same lines, there was no effect of consumer skepticism on overall brand evaluations or perceived quality. Since the two chocolate brands and companies were unfamiliar to participants, feelings of distrust were absent. As a consequence, it is possible that participants did not engage in feelings of skepticism. In the literature, research has shown that levels of skepticism are higher in experiences involving after purchase evaluations rather than those made from simple examination (Nelson, 1970). Given that participants were told to evaluate the brands simply by looking at them, reduced levels of mistrust were elicited. Follow-up studies might thus be more successful in employing real brands rather than fictitious brands.

Concern for the environment also did not have an effect on overall brand evaluations and perceived quality. It seems like flavor was a more important attribute than quality, thus driving consumers' choices. Health concerns may play a larger role in the evaluation of chocolate than concern for environment. This is potentially due to the

fact that health and well-being may be of more immediate concern than the environmental impact of consuming the product. In this case, quality could be more easily relatable to health due to the fact that chocolate is a product that is ingested and could have immediate repercussions on consumers' body. Health and food safety concerns have been shown to be the primary reason for organic food consumption (Harper & Makatouni, 2002). As a consequence, participants may have concentrated more on the health aspect of the product than on its environmental impact. In light of this finding, concern for the environment did not moderate the relationship between price sensitivity on choice of organic products either.

Price sensitivity did not moderate the effect of brand history and brand credibility on overall perceptions. However, it was found to moderate the relationship between brand history and quality perceptions. All participants considered the organic brand as being of higher quality than the non-organic brand. People with high price sensitivity perceived the organic brand to be of higher quality and the non-organic brand to be of lower quality compare to their low price sensitivity counterparts. It seems from these results as though individuals sensitive to high prices are more susceptible to product unawareness or uncertainty. The only available product information was flavor and chocolate type. Given that product uncertainty is a function of available information (Tellis & Gaeth, 1990), perceptions of uncertainty might have been high. In the presence of uncertainty, participants with high price sensitivity may have been more prone to be more quality sensitive. Accordingly, the results revealed that the moderating effect of price sensitivity on evaluation and choice of organic products is mediated by perceived

price levels. Without perceived price levels, people would not have been able to rate the products' quality.

Previous research shows that perceived price has a positive effect on quality evaluations (Erickson & Johansson, 1985). Considering that price was not disclosed to the participants; they were given the ability to set any price to the chocolate that they saw fit. High price sensitive consumers associated higher prices with the organic brand than less price sensitive consumers, and lower prices with the non-organic brand. This also explains the difference in quality ratings between high and low price sensitive individuals, since as mentioned above, the higher the perceived price the higher the quality evaluations. In the same study, Erickson and Johansson (1985) determined that perceived price had no effect on attitudinal evaluations, supporting the lack of effect of perceived price on quality perceptions in this study. However, the authors found that quality perceptions help to build up on attitudinal evaluations. It can be inferred that if there is not a lot of information available, quality perceptions vary based on price, influencing subjective product evaluations.

## **8. Managerial Implications**

This research raises several managerial implications for the marketing of organic products. First, this research shows that consumers consider organic brands to be of higher quality than non-organic brands. Despite the quality perceptions, the non-organic brand was chosen more often, possibly due to flavor or variety being the main driver of choice. Organic companies should consider emulating their non-organic competitors' most popular product flavors or assortments. By ensuring that breadth of their assortment is as attractive as those of their non-organic competitors, organic products may improve

chances of increasing their sales due to consumers' high quality perceptions. However, it is important to consider the role of prices in product selection and purchase intention.

The results also demonstrate that if a non-organic company wants to make an incursion into the organic market, their best approach may be to create a new brand or purchase an existing organic brand (rather than going for a brand extension). Companies purchasing an independent organic brand have found more success in the organic market (e.g. Coke and Odwalla) than those launching a product under the same brand umbrella (e.g. General Mills and Sunrise). The acquisition of an existing organic brand may also be the best choice in terms of brand credibility. Brand credibility is built over time and through marketing efforts. Hence, existing brands are more likely to possess these characteristics.

Informing the consumers about organic products seems to be another relevant way to market these products. It is plausible that many consumers are not aware of the benefits and implication of purchasing organic products. A cause for the lack of effect of concern for the environment on product choice and evaluation may have been in part due to misinformation. As part of their marketing strategy, organic companies can inform consumers about organic products in terms of both their health and environment-related benefits. Informed consumers, especially those with high concern for the environment, may feel inclined to buy organic products. In addition, by highlighting the beneficial effects of organic products on personal health—especially in the context of food—consumers may be more willing to purchase these products as they perceive more immediate benefits from consuming healthy food.



## 9. Limitations and Future Research

There are some limitations in this research that can be addressed in future research. First, the study was only carried out with chocolate, and it may be interesting to test other types of products. Perceptions, evaluations, as well as choice can be different according to the product category (cereals, dairy, meat, etc.) and product type (durable versus non-durable). Future research should examine and generalize the effects of organic branding to other product categories in order to better understand consumer behavior in the organic market.

Price level is another important variable that was not fully tested in the study. Price information can be used by consumers “as an indicator of level of sacrifice needed to purchase a product and as an indicator of level of quality” (Dodds, Monroe, & Grewal, 1991, p. 308). Price may be used as a quality cue, affecting consumers’ product evaluation and choice. However, the usage of price as a signal of quality varies according to the available information (Szybillo & Jacoby, 1974). When no information is available, consumers often base their decisions only on price. It is also important to consider that consumers develop reference prices or a range of acceptable prices. If the price is above this range, consumers desist from purchasing the product while if they consider the price to be too low they may become wary of the product’s quality (P. Cooper, 1969). Dodds et al. (1991) posit that if price is high, but within the customers’ price range, the perception of quality increases, and as a result the perceived product value rises as well. Prices also affect consumers’ brand preference depending on their socioeconomic status such as household income, educational level (Shocker, Ben-Akiva, Boccara, & Nedungadi, 1991). For these reasons, it may be relevant to acknowledge the

price “yield point”: the price which consumers are willing to pay for organic products and the point at which the trade-off between price and quality takes place. Also, the role that available product information takes in terms of the relationship between price levels, perceived quality, and purchase intention should be examined with regards to organic products.

Further research can also focus on the role of product availability on product choice and evaluation. Brand unavailability may alter consumers’ evaluation and choice at the point of sale. Product stock-outs and unavailability often bring about negative consumer evaluations (Fitzsimons, 2000) and brands may lose consumer loyalty when the product is not available. Peckham (1963) argues that 58% of customers that don’t find the brand they want buy a substitute brand, while 42% buy nothing. Thus, consumers may stop acquiring certain brands or substitute them due to brand unavailability. Product stock-outs are a relevant factor regarding product loyalty and evaluation and therefore, their effect on organic products should be examined.

## **10. Conclusions**

The findings of this study suggest that the main difference between organic and non-organic products was perceived quality. Quality perceptions differed significantly across chocolate types: the organic chocolate brand was perceived as of being of higher quality than the competing non-organic brand. This attribute is considered to be an integral aspect to the product decision making process. When present, it builds positive attitudes towards a product. However, in this study, the main driver of chocolate choice appears to have been flavor. According to the pre-test, it is the most important brand feature for consumers considering chocolate. It is likely that if the two products offered

the same flavor assortment, the organic brand would have been chosen more often than the non-organic option due to higher quality perception.

Price sensitivity and perceived price levels played a major role in the relationship between brand history and quality perceptions. Apparently, people with high price sensitivity are more responsive to product unfamiliarity (uncertainty) and therefore to quality perceptions. Also, individuals with high price sensitivity have higher or lower perceived price levels compared to the ones with low price sensitivity. Perceived price levels may vary according to the type of product. In this study, organic brands perceived price levels were higher than for the non-organic alternative. High perceived prices lead to better quality evaluations and high quality evaluations can result into favorable overall (affect related) evaluations. Knowledge is another variable that could have been affected by product unfamiliarity. Due to lack of brand awareness and established brand image, even the most knowledgeable consumers may have been unable to make an objective judgment but were able to conduct affective evaluations. Contrary to what was expected, some variables such as brand credibility and concern for the environment did not have an effect on the evaluation or choice of organic and non-organic brands. Brand credibility is built over time. Unfamiliarity with the chocolate brands may have contributed to the non-significant effects on product evaluations. Regarding concern for the environment, it seems as though organic products— and in particular food products—are more easily associated with health than with the environment. This association with personal health might have weakened the effect of concern for the environment on evaluations and choice.

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