

Investigating the relationship between intrinsic and extrinsic product attributes with customer satisfaction: implications for food products

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Abstract

Purpose – This research aims to investigate intrinsic and extrinsic product attributes as well as the relationship between these features and customer satisfaction by confirming the moderating role of competitive intensity.

Design/methodology/approach – The study is conceptual and exploratory in nature, drawing on current literature and real-time experience with conceptual framework development. The information was gathered by the face-to-face survey conducted with a sample of products, specialists and customers of the Iranian food industry. A total of 19 Kalleh products and 17 industry experts were selected to identify intrinsic and extrinsic product attributes as well as competition intensity for every product. For investigating the relationship between product attributes and customer satisfaction, 342 customers' viewpoints were received and analyzed.

Findings – The results show that the nature of competition moderates the effects of interaction between product attributes and customer satisfaction. The major findings of this research include (1) when competitive intensity is low, appropriate focus on intrinsic attributes can create better customer satisfaction; (2) When a competitive level is low, better focus on appropriate external attributes can lead to customer satisfaction; and (3) When competitive intensity is high, offering proper external attributes would lead to customer satisfaction if intrinsic attributes are already offered with high quality; (4) When competitive intensity is high and a firm is focusing more on intrinsic attributes, the lack of proper intrinsic attributes can negatively affect repurchase intentions.

Originality/value – The findings of this study can be used as a reference for food companies developing new products in various competitive environments and making the decision whether to focus on intrinsic or extrinsic attributes.

Keywords Competitive intensity, Customer satisfaction, Extrinsic attributes, Intrinsic attributes, Product attributes, Repurchase intention

Paper type Research paper

Introduction

Product quality is a critical component in fulfilling customer needs and increasing user satisfaction. Product quality generally refers to the various attributes that define a product and ultimately lead customer's purchasing decisions. However, this quality is a multidimensional concept, and it is a necessity for companies to focus and excel at specific attributes of their



products (Matzler and Sauerwein, 2002; Witell and Lofgren, 2007). The purpose of this study is to show how product features have a significant impact on customer satisfaction. Recognizing key product attributes that are primary drivers of customer satisfaction can be a valuable tool for marketers when allocating resources or modifying offerings to each segment of customers (Harrington *et al.*, 2017). Prior research had clearly explored the importance of intrinsic and extrinsic product attributes (e.g. Lee and Lou, 2011; Brechan, 2006), but the importance of these attributes of food and beverage products in terms of customer attitude has not yet been investigated (Brečić *et al.*, 2017). Food choice is influenced by a variety of factors, including (1) sensory features (e.g. taste, odor and texture), (2) non-sensory aspects (expectations and attitudes) (Shepherd, 1999) and (3) health-related attributes (Prescott *et al.*, 2002). However, Prior studies in consumer behavior are mostly focused to examine extrinsic and intrinsic attributes that the majority of customers use while selecting and ordering food items (Espejel *et al.*, 2007). In order to investigate the relationship between product qualities and consumer satisfaction, this study evaluates such characteristics in a variety of competitive contexts. It is aimed to extend prior research by focusing on product attribute type to analyze whether there is more focus on intrinsic attributes or extrinsic ones. Companies can find the most useful attributes for their products using such studies that have not yet been done. Any product must accommodate customers' wants in order to be accepted by customers, hence food producers must have knowledge about customer preferences for food products before placing their products on the market. It also conceivably ensures that they are in line with customer expectations lowering the chance of product failure (Van Kleef *et al.*, 2005). It is noticeable that product attributes are key drivers of customers' food choices (Koster, 2009). Therefore, the purpose of this article is to determine which intrinsic and extrinsic product attributes have the most impact on customer satisfaction and repurchase decisions in the food industry.

In this research for clarification of the relationship between product attributes and customer satisfaction, a systematic literature review was applied in several stages. Consistent with prior studies, the study collected bibliographic data by accessing the Scopus and ScienceDirect bibliographic databases. Firstly, authors defined the inclusion and exclusion criteria. The research string was "Product attributes" AND "customer satisfaction" OR "product characteristics" AND "customer satisfaction" in the title, abstract and keywords. The "Business, Management and Accounting" area of these databases were searched as the most relevant scientific database in our research field (Chandra *et al.*, 2020; Kumar *et al.*, 2020; Yas *et al.*, 2020). The database was restricted to English-language articles published between 1992 and at the end of March 2022 (there was not any time limitation for reviewing published papers). Furthermore, to avoid bias, the authors did not limit the primary pool of articles to specific journals. Therefore, as a result of these criteria, a total of 649 articles were found. However, in the first review of the document title, many irrelevant articles were excluded. For example, those focusing on the supply chain, or those discussing six sigma. After it, the remaining sources were reviewed by authors for relevance (Ravasi and Stigliani, 2012). A total of 124 potential studies for further consideration were revealed. In this step, to select the studies for the final analysis, inclusion and exclusion criteria were applied. The abstracts of these potential articles were reviewed in detail by two of authors that it led to more exclusions based on the quality of the articles as well as their relevance to the research topic (Tranfield *et al.*, 2003). At this phase, 58 highly relevant articles were selected as the main sources of current research for the final analysis (see Figure 1).

Literature review

Product attributes

A product is a set of attributes that influence consumers' preferences and, as a result, their purchase decisions (Lancaster, 1966). When evaluating the quality of a product, consumers may evaluate a variety of information or features (Olson and Jacoby, 1972). Several studies

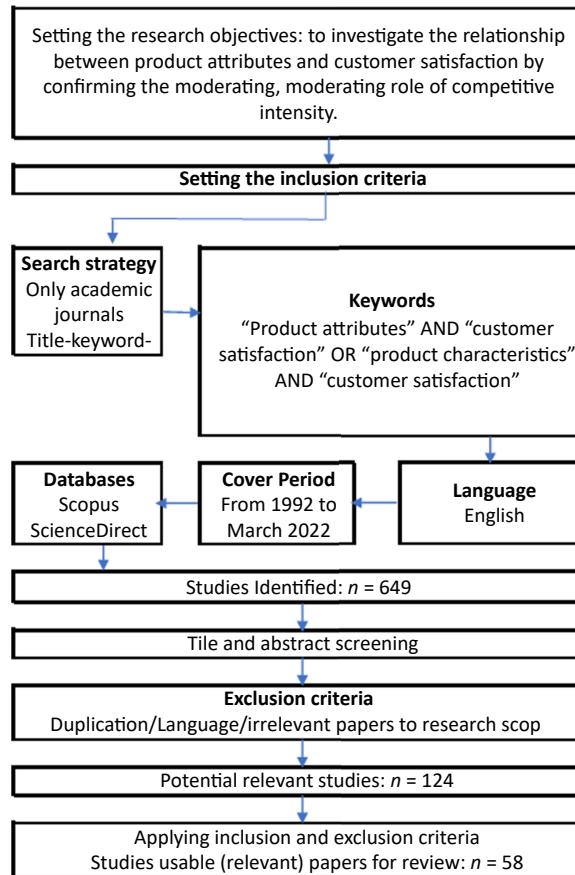


Figure 1.
Research Protocol

and theories have classified product attributes. [Kano et al. \(1984\)](#) present five groups of attributes related to customer satisfaction: (1) dissatisfiers, (2) one-dimensional attributes, (3) delighters, (4) indifferent and (5) reverses attributes. [Ahmad et al. \(2012\)](#) propose four categories of product attributes: basic, performance, excitement and random attributes. Some studies describe a three-factor approach.

For example, among many others, [Rust et al. \(1996\)](#) and [Harrington et al. \(2017\)](#) define product attributes as dissatisfiers, satisfiers and delighters. [Mathe-Soulek et al. \(2015\)](#) also believe there are three categories of attributes: basic, performance and excitement types. In the marketing literature, however, the distinction between intrinsic (core) and extrinsic (non-core) product attributes is well understood, and the two-factor approach is the most generally used classification of product attributes. In his research (1980), Levitt distinguished between core and non-core product attributes. As previously stated, [Brečić et al. \(2017\)](#) distinguish between sensory and non-sensory attributes. [Butcher et al. \(2003\)](#) categorized these features into non-core product attributes and core product attributes. Similarly, [Kotler and Armstrong \(2004\)](#) discovered that product attributes can be divided into two categories: primary and secondary. [Rondoni et al. \(2021\)](#) have recently divided product attributes into two categories: intrinsic and extrinsic attributes. Following [Brečić et al. \(2017\)](#), [Butcher et al. \(2003\)](#) and [Rondoni et al. \(2021\)](#), the current study employs the following categories: intrinsic vs.

extrinsic product attributes. To begin with, primary or intrinsic attributes are an important aspect of providing a solution for a customer's individual problem (Brechan, 2006). Extrinsic attributes, on the other hand, are not necessary to solve the customer's problem. These attributes are those that are not related to the physical component of the product and include brand name, price and packaging (Fandos and Flavián, 2006). The next sections look at the relationship between customer satisfaction and product attributes, as well as how these attributes influence buy and repurchase intentions.

Customer satisfaction

Davras and Caber (2019) define customer satisfaction as the assessment of product or service characteristics by the customer. There are myriad studies those have worked and accepted the relationship between product attributes and customer satisfaction (Andaleeb and Conway, 2006; Zhang *et al.*, 2013), because consumer purchase decisions have altered in recent years, and marketing strategies are being developed to differentiate products by taking into account relationships between customer traits and satisfaction with intrinsic and extrinsic attributes (Topcu and Dağdemir, 2017). Additionally, prior studies (e.g. Gregory *et al.*, 2015) point out that all product characteristics do not have equal effect on customer satisfaction. Therefore, it is vital to investigate how product attributes affect customer satisfaction (Wang *et al.*, 2018) and determine what product attributes are more important for customers (Jang *et al.*, 2018) in order to improve consumer satisfaction. Many researchers have tried to understand customers and the motivations behind their food choices (Brečić *et al.*, 2017). Kotler (2000) defines customer satisfaction as the feelings of a customer's delight or disappointment stemming from comparing a product's perceived performance in relation to his or her expectations. According to previous studies, there is an evident relationship between product characteristics and customer satisfaction. To give an example, Bennur and Jin (2009) discovered that high quality of product attributes has a positive impact on customer satisfaction and loyalty. Therefore, we understand the importance of these attributes in generating customer satisfaction. However, given the complexity of consumers' preferences and behavior, manufacturers must explore consumers' preferences for each category of product attributes in order to develop their product correctly and according to the literature.

Gaps in theories of attribute-satisfaction relationships

Different perspectives exist on the impact of product characteristics on customer satisfaction. For example, Levitt (1980, 1983), Chung *et al.* (2006) and Raisanen (2010) discovered the importance of focusing more on the core product (intrinsic attributes), while Richardson *et al.* (1994), as well as Lee and Lou (2011), found a greater impact of non-core (extrinsic features). As such, Butcher *et al.* (2003) predicted that non-core product attributes are more important than core attributes. In addition, there are some novel perspectives on the importance of these attributes. Brechan (2006), for example, agrees with Levitt (1980, 1983) that primary attributes have a greater impact on customer satisfaction than secondary ones, but he also discovered that the relationship between secondary attribute quality and customer satisfaction is moderated by primary attributes. A hierarchical relationship between core and non-core attributes was also identified by Kotler and Armstrong (2004). They discovered that if the quality of the core (main) qualities is inadequate, non-core attributes should have little impact on customer satisfaction. On contrary, among many others, Torres-Moreno *et al.* (2012), believed that if customers accept non-sensory (extrinsic) features, they will accept sensory (intrinsic) attributes as well. To fill this void, current research looked at the importance of competition level. For each selected product, supposing it to be one of the most important predictors of a firm's focus on intrinsic, extrinsic, in varying levels of competition intensity. However, exploratory research was done, which included interviews with industry experts and customers. Customers' preferences for the selected products, as well as intrinsic and extrinsic product attributes, were investigated.

Competition

Consumers will pay attention to a company that differentiates its products from competitors. Competition is a determinant in the relationship between product attributes and customer satisfaction, according to previous studies. According to [Aaker and Joachimsthaler \(1999\)](#) with the presence of so many competing brands, addressing customers' core or primary needs is clearly insufficient for success. Similarly, [LaTour and Peat \(1979\)](#) believe that there is a comparison level for each product attribute that this comparison level is created by past experiences with product attributes of similar products. Therefore, we assume that if a product is produced by several companies and a customer has past experiences regarding consumption of it, it seems focusing on intrinsic attributes will not be sufficient for creating customer satisfaction. In this way and regarding the importance of emphasis on extrinsic characteristics, [Fandos and Flavián \(2006\)](#) believe extrinsic attributes of a product include the unique feature that distinguishes a product from the competitor's products and it is obvious that this difference may indicate a competitive advantage in the market. As a result, competition's mediating role should be acknowledged.

Repurchase intention

Cumulative (long-term) satisfaction ([Suchánek and Králová, 2019](#)) is a broader definition of satisfaction that is based on repeated purchases and the customer's total experience with a product. Repurchase intention refers to a customer's willingness to buy a product again in the future ([Fang et al., 2011](#)). Prior studies have shown that perceived value has a major impact on behavioral intention ([Chang and Tseng, 2013](#)). Quality expectation and actual experience of quality, according to [Oliver et al. \(2006\)](#), are drivers of product satisfaction and, as a result, the likelihood of repurchasing the product. Many research works depict that customer satisfaction leads to higher repurchase intentions ([Back and Lee, 2009](#); [Matzler et al., 2004](#)). Other researchers, on the other hand, disagree. For instance, [Ostrom and Lacobucci \(1995\)](#) believe, product qualities affect satisfaction and repurchase intentions in distinct ways. [Mittal et al. \(1988\)](#) argued that product attribute quality may become important for repurchase intentions, but not for satisfaction. According to the aforementioned research, studies examining the relationships between product attributes and satisfaction have a number of flaws, as others have pointed out. To address these shortcomings, and given the differing interpretations of these studies about the importance of intrinsic or extrinsic product attributes, and the relationship between them and customer satisfaction, we avoid summarizing these viewpoints and instead look at the relationship directly, examining the moderating role of competition in this relationship through this research.

Conceptual framework and hypothesis development

There are positive relationships between product attributes and customer satisfaction. However, while previous studies appear to be adept at distinguishing product attributes related to customer satisfaction, it is likely that they fall short in that and they do not address new issues facing the industry today ([Stringam, 2010](#)). To give an example, [Suchánek and Králová \(2019\)](#) stated that competitiveness in the food industry is generated by the large number of companies and their influence of customers over time through their products. It is obvious that when customers have more choices, companies should improve customer satisfaction by offering higher-quality products to maintain their market share ([Mazzeo, 2003](#)). Based on the literature analysis, two categories of products were evaluated in this study: low-competition-intensity products and high-competition-intensity products. Customers' attitudes about these products, according to the writers, would be different. For finding these relationships, current research considered whether the firm's focus is more on intrinsic or extrinsic attributes. To the best of our knowledge, no published research has

examined the function of competition as a mediating factor in the relationship between product attributes and customer satisfaction.

Figure 2 shows the proposed matrix for developing and testing research hypotheses, which reflects the expected relationships between two types of product attributes (intrinsic vs. extrinsic attributes), customer satisfaction and repurchase intention, with the mediating role of competition taken into consideration.

Research hypotheses

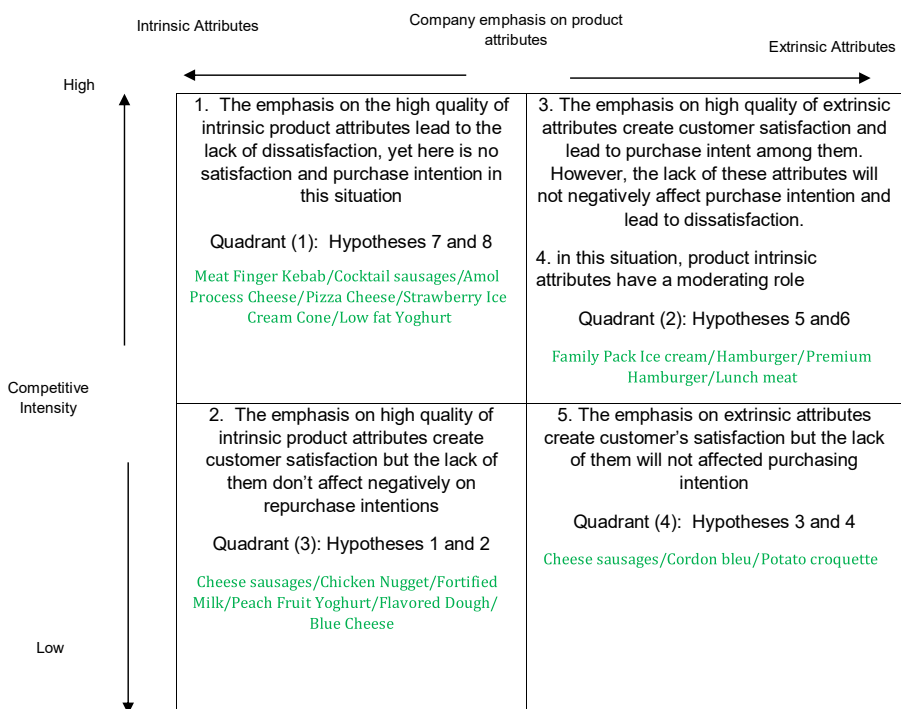
The influence of the independent variables on the dependent variable was considered in this study. Using the literature research and logical reasoning, the following hypotheses were proposed:

Main hypothesis

There is a significant relationship between product attributes and customer satisfaction.

Sub-hypotheses

H1. When the intensity of competition for a specific product is low and a firm's focus is more on intrinsic attributes, providing the appropriate intrinsic attributes will lead to customer satisfaction.



Source(s): Authors data elaboration

Figure 2. Proposed research matrix/Product placement according to competitive intensity together with Company emphasis

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- H2.* When the competitive intensity for a certain product is low and a firm's focus is more on intrinsic attributes, poor intrinsic attribute quality will not affect purchasing intentions, but customers will not be satisfied.
- H3.* When the intensity of competition for a certain product is low and a firm's emphasis is primarily on extrinsic attributes, offering the suitable extrinsic attribute will contribute to customer satisfaction.
- H4.* When the competitive pressure for a particular product is low and a firm's focus is more on extrinsic attributes, the lack of appropriate extrinsic attributes will not have a negative impact on purchasing intention, but if the intrinsic attributes are appropriate, customer's satisfaction will be generated.
- H5.* When the competitive pressure for a particular product is high and a firm's emphasis is more on extrinsic attributes, offering the high quality of external attributes will lead to customer's satisfaction if internal attributes be offered with high quality.
- H6.* When the intensity of competition for a particular product is high and a firm's focus is more on extrinsic product attributes, the lack of good quality of extrinsic attributes will have a negative impact on purchasing intentions and lead to dissatisfaction.
- H7.* When the competitive intensity for a specific product is high and a firm's focus is more on intrinsic attributes, offering the proper internal attributes does not create customer satisfaction but, it will lead to the lack of dissatisfaction.
- H8.* When the intensity of competition for a specific product is high and company's emphasis is more on intrinsic attributes, the lack of appropriate intrinsic attributes will have a negative impact on repurchase intention.

Research methodology

The first part of exploratory research: an interview with industry experts and selecting Kalleh products

A case study of the Kalleh Company in Iran is explored for testing research hypotheses. According to some international reports (e.g. Wageningen Economic Research report conducted by [Beldman et al., 2017](#)) about Iranian market, Kalleh Company acts as a successful market leader. [Euromonitor International \(2016\)](#)'s report, also mentions Kalleh Dairy Company as a part of Solico Group acts as an undisputed leader in Iranian market with the help of product quality. This Company is placed in the top 50 global brands, just two places behind Nutella ([The Guardian, 2016](#)). In this regard, the authors choose to focus on the products of this company.

Some Kalleh products were chosen in the initial stage of this study, and a questionnaire was designed to categorize selected product qualities into intrinsic and extrinsic categories. Industry professionals operating in the Iranian market filled out this questionnaire. The most-used product attributes in the last two years ago were specified by them. Individual opinions were used to determine the strength of competition for each product.

Study design: recruitment of industry experts as well as selecting products

For selecting the sample size of Kalleh products as well Kalleh expert, as the both of them had a finite population, the authors used [Sarmad and et al. \(1998\)](#) formula ($\frac{n}{N} \geq 0.05$) for estimating sample size. the number of Kalleh products is 400, therefore, the first sample size was calculated as 20, (through this research 19 products were considered). Regarding the second sample size, the number of Kalleh experts was 200 ($N = 200$), as a result, the sample size was

predicted to be 10, for this group, judgmental sampling was used, and 17 industry experts were interviewed (10 from Kalleh Meat Company and seven from Dairy Co.). It should be mentioned that, the competition level was the most significant determinant in selecting Kalleh products, and two groups of products were chosen: products with low and high competitive intensity.

The questionnaire used to inform top managers (industry experts) about the study, was sent in advance by email. After Kalleh managers reviewed the questionnaire, the authors were invited to Kalleh factories to fill out and deliver research questionnaires. This questionnaire began with a definition of intrinsic and extrinsic product attributes, followed by some examples of soft drink attributes for clarity. Table 1 show their viewpoints on product attributes for meat and dairy products, respectively. After completing the questionnaire, industry experts were asked to determine whether the firm's focus is more on intrinsic or extrinsic characteristics. Different experts may classify an attribute into different categories, but the most frequent response determined whether the firm focused on intrinsic or extrinsic attributes (Table 1). Furthermore, Kalleh experts were asked to express their opinions on the level of competition for each product. The numbers 0, 1, 2 and 3 represented low competitive intensity. It is notable that all 17 experts agreed on the competitive intensity of all products (see Table 1).

Following the completion of the questionnaire according to the firm's focus on the specific category of product attributes as well as the level of competition, a two-dimensional research matrix was created. As a result, our selected products were placed in each quadrant based on the opinions of Kalleh experts (see Figure 2).

The second part of exploratory research: screening survey (customer's questionnaire development)

In the second part of this research, customers were asked to fill our questionnaire distributed in five major supermarkets in the North of Iran. The individuals who consumed at least one of the selected products were included in the sample. Because it is difficult to use probability sampling techniques in public places, convenience sampling was used for this group (Wang and Yu, 2016). Potential participants were approached individually and asked to participate in an academic study. If they agreed to participate, they were asked a filter question (i.e. "Have you ever consumed Kalleh Chicken Nugget?") to exclude participants who did not belong to the target sample. It should be noted that the product attribute questions were drawn from expert interviews. A quantitative research approach was applied and the Statistical Software Package for Social Sciences (SPSS) was used to ensure that all of the relevant issues were covered and studied thoroughly. The questionnaire asked customers' viewpoints toward the value of product attributes. For illustration, if a company's focus (according to experts) was more on extrinsic attributes, customers were asked to express their opinions about these attributes as well as to measure their satisfaction levels. Another inquiry concerned the customers' plans to repurchase.

For example, for Chicken Nugget, which was placed in quadrant 3, the questionnaire included the following questions: the introductory question: Have you ever consumed Kalleh Chicken Nuggets? The next two questions were derived from expert opinions about Kalleh's emphasis on intrinsic Nugget features, and because these experts highlighted color or appearance and taste as intrinsic Nugget attributes, the following two questions were posed: How pleased are you with the taste of Kalleh Chicken Nugget on a scale of 1–5? How satisfied are you with the color and appearance of Kalleh Chicken Nugget? The following question concerned overall client satisfaction with the product: How satisfied are you with Kalleh Chicken Nugget? The last question was regarding repurchase intention; if you needed Chicken Nugget, would you buy it from Kalleh Company again?

Product name	Intrinsic attributes	Extrinsic attributes	More frequency of expert responses	The competitive intensity	The number of competitors
<i>Kalleh meat products</i>					
Cordon bleu	Taste, Texture	Packaging design, Hygienic packaging, Product appearance	Extrinsic	Low	Without any competitors
Cheese sausages	Taste	High quality of packaging, Product appearance	Extrinsic	Low	Without any competitors
Potato croquette	Taste	Hygienic packaging, Product appearance	Extrinsic	Low	Without any competitors
Cocktail sausages	Taste		Intrinsic	High	9
Lunchmeat	Taste	Packaging design	Extrinsic	High	9
Chicken Nugget	Taste, Color		Intrinsic	Low	Without any competitors
Hamburger Premium	Taste, Texture	Price	Extrinsic	High	12
Hamburger	Taste, Texture	Hygienic packaging, Product appearance	Extrinsic	High	12
Meat Finger	Taste, Texture		Intrinsic	High	12
Kebab					
Cheese Chicken sausages	Taste, Texture		Intrinsic	Low	2
<i>Kalleh dairy products</i>					
Blue Cheese	Taste, Nutritional value		Intrinsic	Low	Without any competitor
Fortified Milk	The source of energy		Intrinsic	Low	Without any competitor
	Taste, Nutritional value, color				
Pizza Cheese Amol Process Cheese	Taste, Stretchy		Intrinsic	High	4
	Taste, Nutritional value, The source of energy		Intrinsic	High	4
Peach Fruit Yoghurt	Taste, Nutritional value		Intrinsic	Low	Without any competitor
Low-fat Yoghurt	Taste, Nutritional value		Intrinsic	High	8
Strawberry Ice Cream Cone	Taste, Texture		Intrinsic	High	5

Table 1. Expert opinion consensus for determining intrinsic and extrinsic product attributes/ determination of competitive intensity

(continued)

Table 1.

Product name	Intrinsic attributes	Extrinsic attributes	More frequency of expert responses	The competitive intensity	The number of competitors
Family Pack Ice cream	Taste, Texture	Packaging design, product appearance	Extrinsic	High	6
Flavored Dough	Taste		Intrinsic	Low	2

Source(s): Authors data elaboration

Validity and reliability test

Prior to survey administration, academic reviewers from ESIC University (Spain) reviewed the questionnaire for clarification, and their comments and opinions were taken into account to make necessary changes, and some of the questions were redesigned. The questionnaire was then completed by five people to see if there were any ambiguities and if it was easy to comprehend. Cronbach's alpha was employed in the measurement of the reliability of questionnaires. This index is determined as 0.818 in the current study, indicating adequate reliability.

Because the population included all of the consumers of the considered products, it is obvious that the customer population is unlimited. Cochran calculated the sample size to be 384 people. After distributing 384 surveys to participants in order to assess customer satisfaction, 352 were completed and delivered; however, 10 questionnaires were eliminated from the study due to incomplete information, leaving 342 questionnaires to be completed. It should be mentioned that according to the demographic features of the study's sample, the majority of participants were female (63%) compared to male (37%) and the average age group was 26 years old.

Data analysis and findings

The first situation: low competitive intensity/focus on intrinsic attributes (products in quadrant 3)

As shown in Figure 2, products placed in quadrant 3 were used to test the first hypothesis and the participants were divided into two groups. Customers in the first group claimed that Kalleh product's intrinsic attributes (e.g. Peach Fruit Yoghurt) have poor quality, while customers in the second group considered these attributes as appropriate. The first group's satisfaction was investigated next. Participants were asked to rate whether the intrinsic attributes did not meet, meet or exceed expectations. A total of 291 participants of 342 customers who consumed these products believed intrinsic attributes were proper. Therefore, for the testing first hypothesis, these customers' viewpoints were measured. To confirm the association between intrinsic product attributes and customer satisfaction, the binomial evaluate and Spearman's correlation coefficients were used to test this hypothesis. The number of satisfied customers about intrinsic product features is shown in Table 2 (p). As seen in the table, 13 out of 291 customers were dissatisfied, with the frequency of each category displayed in Table 2 (the section of H1). As is observed, 96% of customers fall into the second category, meaning those who are satisfied with intrinsic products attributes.

Additionally, this study used Spearman's correlation coefficient to see if there was a correlation between intrinsic product attributes and customer satisfaction, and the

			Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)
H1	Binominal Test: NPar Tests	Satisfaction	Group 1	<=3	13	0.4	0a
			Group 2	>3	278	0.96	
			Total		291	1.00	
	Spearman's correlation coefficients	Spearman's rho	Intrinsic	Correlation Coefficient		1.000	0.617**
Satisfaction			Sig. (2-tailed)	N	291	0	291
			Correlation Coefficient		0.617**	1.000	
			Sig. (2-tailed)	N	291	0	291
			Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)
H2	Binominal Test: NPar Tests / H2-Part 1	Repurchase intention	Group 1	<=0	21	0.35	0.27a
			Group 2	>0	39	0.65	
			Total		60	1.00	
	Frequency – H2-part 2			Frequency		Percent	Valid Percent
Dissatisfaction		1	22	36.7	36.7	36.7	
		2	31	51.7	51.7	88.3	
		3	7	11.7	11.7	100.0	
		Total	60	100.0	100.0		
			Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)
H3	Binominal Test: NPar Tests	Satisfaction	Group 1	<=3	17	0.14	0.00 0a
			Group 2	>3	107	0.86	
			Total		124	1.00	
	Spearman's correlation coefficients	Spearman's rho	Extrinsic	Correlation Coefficient		1.000	0.568**
Satisfaction			Sig. (2-tailed)	N	124	0.000	124
			Correlation Coefficient		0.568**	1.000	
			Sig. (2-tailed)	N	124	0.000	124
			Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)
H4	Binominal Test: NPar Tests	Repurchase	Group 1	<=0	4	0.2	0.12
			Group 2	>0	16	0.8	
			Total		20	1.00	
	Spearman's correlation coefficients	Spearman's rho	Intrinsic	Correlation Coefficient		1.000	0.793**
Satisfaction			Sig. (2-tailed)	N	16	0.000	16
			Correlation Coefficient		0.793**	1.000	
			Sig. (2-tailed)	N	16	0.000	16

Table 2.
Summary statistics

(continued)

			Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)	
H5	Binominal Test: NPar Tests- H5- first part	Satisfaction	Group 1	<=3	69	0.22	0.50	0.000a
			Group 2	>3	240	0.78		
			Total		309	1.00		
H5	Binominal Test: NPar Tests- H5- second part	Intrinsic Attributes	Group 1	<=3	9	0.04	0.50	0.000a
			Group 2	>3	230	0.96		
			Total		239	1.00		
H6	Binominal Test: NPar Tests- H6- first part	Repurchase	Group 1	<=0	51	0.47	0.50	0.631a
			Group 2	>0	57	0.53		
			Total		108	1.00		
H6	Binominal Test: NPar Tests- H6- second part	Dissatisfaction	Group 1	<=0	38	0.75	0.50	0.001a
			Group 2	>0	13	0.25		
			Total		51	1.00		
H7	Binominal Test: NPar Tests- H7- first part	Dissatisfaction	Group 1	<=3	92	0.15	0.50	0.000a
			Group 2	>3	528	0.85		
			Total		620	1.00		
	Spearman's correlation coefficients- H7- second part	Spearman's rho	Dissatisfaction	Correlation Coefficient Sig. (2-tailed)		1.000	0.572**	**. Correlation is significant at the 0.01 level (2-tailed).
				N		620	620	
Spearman's correlation coefficients- H7- second part	Spearman's rho	Intrinsic attributes	Correlation Coefficient Sig. (2-tailed)		0.572**	1.000		
			N		620	620		
H8	Binominal Test: NPar Tests	purchase	Group 1	<=0	57	0.70	0.50	0.000a
			Group 2	>0	24	0.30		
			Total		81	1.00		

Note(s): ^aBased on Z Approximation

Table 2.

significant correlations ($r = 0.617, p < 0.01$) were found. The results from the correlation coefficient also supported our first hypothesis. As a result, our H1 is supported.

The group of customers who did not perceive intrinsic product qualities in an acceptable level, were considered to test H2 regarding examining repurchasing intentions as well as customer satisfaction. A set of analysis employing binomial test as well as frequency were performed to test it. A total of 60 participants expressed a negative attitude about intrinsic qualities for products in quadrant 3, with 65% indicating that they would purchase the product again (see Table 2, H2 section). However, binomial test was used and $\text{sig} = 0.027$ and $\frac{\alpha}{2} = 0.025$, therefore, this hypothesis is rejected.

Customer satisfaction among these participants was measured for the second part of H2. By frequency test which depicted 36.7% = strongly dissatisfied, 51.7% dissatisfied and 11.7% somewhat satisfied, customers who considered intrinsic attributes as poor, were clearly dissatisfied. However, according to the first and second sections of this hypothesis, H2 is rejected.

The second situation: low competitive intensity/focus on extrinsic attributes (products in quadrant 4)

A set of tests utilizing the Chi-squared test and Spearman's correlation coefficient were done to evaluate H3. Following then, two categories of customers were separated. The first group (124 customers) thought extrinsic features were appropriate, while the second were disagree. The results depict that 17 (13.7%) and 107 (86.3%) customers of the first group were dissatisfied and satisfied respectively. Extrinsic product attributes lead to consumer satisfaction, according to the results of the binomial test (Table 2, H3 section). Additionally, Spearman's correlation coefficient shows a significant correlation ($r = 0.568, p < 0.01$) between extrinsic attributes and customer satisfaction. Thus, H3 is accepted, which means when the competitive intensity is low and a firm focuses more on extrinsic attributes, providing high-quality extrinsic attributes will result in customer satisfaction.

To test H4, the group of customers who mentioned extrinsic products attributes have poor quality was examined and after it, the authors considered their purchase intention used binomial test, frequency and Spearman's correlation coefficient. For the first part of H4, frequency and binomial test were used. The frequency depicts 16 of 20 customers (who they believed extrinsic attributes are poor), mentioned that they will purchase again (80%). Additionally, Sig = 0.012, and thus, this section of the hypothesis is accepted.

Furthermore, for the second part of the hypothesis, Spearman's correlation coefficient shows a significant correlation ($r = 0.793, p < 0.01$) between intrinsic product attributes and customer satisfaction. The results from the correlation coefficient (Table 2, H4 section) also supported H4 that when competitive intensity is low and a firm's emphasis is mainly on extrinsic attributes, the lack of appropriate extrinsic attributes will not affect purchase intention, but if the intrinsic attributes are appropriate, customer satisfaction will be generated. This finding is consistent with Brečić *et al.* (2017) that showed consumers are very concerned about intrinsic food attributes such as taste.

The third situation: highly competitive intensity/focus on extrinsic attributes (products in quadrant 2)

A set of analyses utilizing the Binomial Test and frequency were performed to test H5 and two categories of customers were considered. Extrinsic attributes were appropriate, according to the first group, and we measured their satisfaction. With extrinsic qualities, 77.7% of customers were satisfied, while the remaining were dissatisfied. Therefore, frequency analysis accepts the first half of H5. Furthermore, the binomial test was used to test this part of the hypothesis. As is observed from Table 2, H5 section, *N* column shows that 240 customers (78%) were satisfied with appropriate extrinsic attributes. Since sig = 0, we may conclude that proper extrinsic attributes lead to customer's satisfaction and the first part of the fifth hypothesis is accepted.

Now, the second part of H5 should be tested and those customers who thought extrinsic attributes were appropriate and were satisfied were considered. The authors debated whether intrinsic attributes are proper or not. You can see from illustration that 230 customers (96%) mentioned that if intrinsic attributes are proper, providing appropriate extrinsic attributes will lead to satisfaction, whereas only 4% stated that they are satisfied with extrinsic attributes even if intrinsic attributes are inappropriate.

Therefore, H5 is accepted. This result is in line with Brechan's (2006) finding that the relationship between secondary (extrinsic) attributes and satisfaction is moderated by primary (intrinsic) attributes. He points out if a café employee delivers you a low-quality coffee intern of tasting with a smile and the best behavior, you will be dissatisfied.

The binomial test and frequency were used to test H6. To begin, several consumers who stated that the quality of extrinsic qualities is low were investigated and their repurchase intentions were reviewed. As shown in Table 2, H6 section, 53% of consumers claimed they would purchase again, with a sig = 0.631. As a result, this study concludes that bad extrinsic attributes will not affect negatively on purchase intentions, and this part H6 is rejected.

Measuring dissatisfaction level customers who stated that extrinsic attributes are unappropriated shows 75% of customers were dissatisfied with extrinsic attributes, and Sig = 0.001, hence this section of our hypothesis is accepted. However, according to the first part, H6 is rejected.

The fourth situation: highly competitive intensity/focus on intrinsic attributes (products in quadrant 1)

For analyzing this situation, products in quadrant 1 as well as a group of customers who believed intrinsic attributes had proper quality were evaluated. However, prior research has shown that when there are many competitors in the market, focusing on intrinsic attributes does not lead to customer satisfaction (Aaker and Joachimsthaler, 1999), and it is necessary for a company to focus on extrinsic attributes to gain a competitive advantage. In this situation, H7 hypothesizes providing high quality of intrinsic attributes leads to a lack of dissatisfaction. As such, Harrington *et al.* (2017) state that dissatisfiers are “must-be” attributes that are linked to some specific attributes that are expected to be present and, if not, lead to dissatisfaction. More spending, on the other hand, is unlikely to result in higher satisfaction; in this way, customers will accept our product when these attributes are presented but will be dissatisfied if they are not. This index was studied, and the data depicted that 85% of customers believe that the proper intrinsic attributes do not lead to satisfaction, but rather to a lack of dissatisfaction. Furthermore, H7 section of Table 2 shows that Sig = 0, therefore H7 is accepted.

Using Spearman’s correlation coefficient, the authors evaluated whether there was a link between intrinsic product qualities and lack of customer dissatisfaction in the second part of this hypothesis. The results show that there are no correlations ($r = 0.572, p < 0.01$) between intrinsic product attributes, indicating that there is no consumer dissatisfaction. The results from the correlation coefficient support H7.

Binomial test was employed to investigate H8. As shown in Table 2, 70% of customers stated that if the quality of intrinsic product attributes was inadequate, they would not purchase again; also, Sig = 0, and therefore H8 is accepted.

As a result, Kalleh Company must focus more effectively on providing high-quality intrinsic attributes for some products if competitive intensity for them is high and the most important characteristics of these products are intrinsic attributes such as taste or color to achieve customer satisfaction.

Main hypothesis testing

Using the Chi-squared test, we examined the relationship between intrinsic product attributes and customer satisfaction for all products in quadrants 1 and 3, as well as the relationship between extrinsic product attributes and customer satisfaction for all products in quadrants 2 and 4. As it can be seen in Table 3, sig = 0, implying that our hypothesis is accepted. There was a significant relationship between product attributes and customer satisfaction, according to the Chi-squared test.

The summary of our testing results

Thus, H1, H3, H4, H5, H7 and H8 receive support from the results and were accepted while H2 and H6 were rejected. The main hypothesis of this research also was accepted.

	Satisfaction					Total
	1	2	3	4	5	
Attributes 0	10	54	135	61	10	270
1	2	17	148	659	317	1,143
Total	12	71	283	720	327	1,413

Chi-square tests

Table 3.

Chi-squared test for testing main hypothesis: Product attributes and customer satisfaction cross-tabulation

	Value	df	Asymp. sig (2-tailed)
Pearson chi-square	437.889 ^a	4	0.000
Likelihood ratio	390.534	4	0.000
Linear-by-linear association	368.286	1	0.000
N of valid cases	1,413		

Note(s): ^a1 cell (10%) have expected count less than 5. The minimum expected count is 2.29

Discussion and implications

This paper presents insights into food products and provides evidence that there is a correlation between product attributes and customer satisfaction. Additionally, competition has a mediating role in this relationship. Managers and policy-makers have a great interest in identifying product attributes that are important drivers of customer satisfaction or dissatisfaction (Mikulic and Prebezac, 2011). In this aspect, using our suggested framework to classify product features and considering competition level at the same time gives managers useful information that may be utilized to create new successful products or improve their existing ones. Information on consumers' attitudes toward product attributes in various competition intensities, and their relationship with customer satisfaction makes the main contribution to the literature. Appropriate attributes may be developed by food manufacturers according to different focus levels on intrinsic or extrinsic product characteristics as well as the competition level of the product. Offering the high-quality product attributes (intrinsic or extrinsic) according to different competition levels (low vs. high) by a food company can help in creating customer satisfaction. Additionally, manufacturers should understand the effects of various product quality attributes in order to adequately allocate resources to increase customer satisfaction or minimize dissatisfaction (Lin *et al.*, 2010). As mentioned above, this study paid attention to the mediating role of competition in the relationship between product attributes and customer satisfaction which was neglected in this relationship by prior research and managers should be aware of the important role of this factor in having satisfied customers.

The summary of the propositions is seen in Figure 3. Therefore, this research suggests the following:

- (1) When the level of competition is minimal and a firm's emphasis is more on the intrinsic attribute, providing high-quality of these attributes will lead to customer satisfaction. For instance, Kalleh is the only manufacturer of fruit yogurt in Iran and the company places a greater emphasis on intrinsic qualities such as product taste. As a result, in this situation, Kalleh Company must concentrate on providing the highest quality intrinsic features that will result in customer pleasure. Previous research also found similar results about the importance of intrinsic attributes. For instance, as mentioned earlier, Brečić *et al.* (2017) show that customers are very concerned about intrinsic product attributes like food taste. Honkanen and Frewer (2009) and Januszewska *et al.* (2011) point out similar results toward the importance of intrinsic

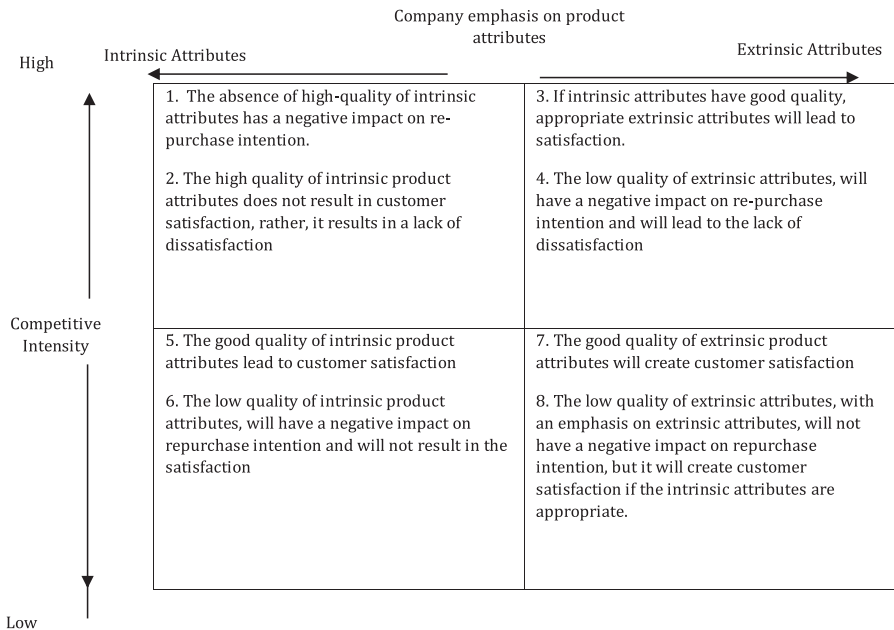


Figure 3.
The matrix of relationship between intrinsic and extrinsic product attributes

attributes for customers. Of course, they neglected that in which situation customers are satisfied by focusing on intrinsic attributes.

- (2) When the competitive intensity is low and a firm's focus is more on intrinsic attributes, poor intrinsic attributes will have a negative impact on repurchase intentions and the customers would not be satisfied. For example, if Kalleh fruit yogurt is produced with low intrinsic quality like as taste, it is obvious that customers are unlikely to buy it again and they will not be satisfied. In this situation (firm focus and competition intensity), we should say that these attributes are similar to utility-preserving (Kahn and Meyer, 1991) or core attributes (Levitt, 1983; Kotler *et al.*, 2003) that have a strong association with customer dissatisfaction.
- (3) When the competitive intensity is low and a firm's focus is more on extrinsic characteristics, providing the appropriate (high quality) extrinsic product attributes will result in customer satisfaction. Cordon bleu is an example of this situation that the competitive pressure is low and Kalleh Company focuses on the extrinsic attributes. As a result, if these attributes, such as packaging, are appropriate, it will result in customer satisfaction. In this situation in terms of competition level as well as firm's focus, these extrinsic attributes are similar to "satisfiers" (Berman, 2005) or "utility-enhancing" (Kahn and Meyer, 1991) in the prior research that have a high potential for creating satisfaction.
- (4) When the competitive intensity is low and a firm focuses on extrinsic attributes, the lack of appropriate external attributes has no effect on purchasing intention. Customer satisfaction will be generated, however, if the intrinsic product attributes are appropriate. Maybe we should say that this situation is somewhat similar to Brechan (2006) point of view about the moderating role of primary attributes in the relationship between secondary attributes and customer satisfaction. Additionally,

Oliver (1997) in his research point out about facilitating attributes (secondary attributes) and found that consumers are more tolerant about the lack of these attributes. However, he neglected in which situation customers have this attitude. Our study opens a new insight about the relationship between intrinsic and extrinsic product attributes and says customers are tolerant about the lack of extrinsic attributes low when the competitive intensity is low.

- (5) When the competition intensity is high and the company's emphasis is more on extrinsic features, offering the proper external attributes would lead to customer satisfaction if intrinsic attributes were already offered with high quality.
- (6) When the competition intensity is high and a firm's focus on a particular product is more on extrinsic attributes, the lack of appropriate extrinsic attributes will not negatively affect purchase intention and lead to dissatisfaction.
- (7) When the competitive intensity is high and a firm's emphasis is more on intrinsic attributes, providing the appropriate intrinsic features will not result in customer satisfaction, but it will result in a lack of dissatisfaction. In this situation, our suggested product attributes are similar to Harringtona *et al.* (2017)'s dissatisfiers (must-be) attributes that when these attributes are provided customer will accept the product or service, however, in the lack of these attributes, he (she) will be dissatisfied. Low-fat yogurt is the best example for this situation that providing the proper taste does not result in customer satisfaction but rather in a lack of dissatisfaction. In other word, these attributes serve to fulfill minimum customer requirements (Lin *et al.*, 2010).
- (8) When the competition intensity is high and a firm's focus on a specific product is more on intrinsic attributes, the lack of good quality of these attributes, will negatively affect repurchase intention.

Conclusions

Understanding the interplay of intrinsic and extrinsic product attributes is vital for practitioners and decision makers to be able to create a successful product in the market. The current study improved understanding of the relationship between food product attributes and customer satisfaction by using competitive intensity as a moderating factor for each product. This research model was operationalized based on product attribute descriptions for two-category product attributes as well as competitive intensity, and it addresses concerns and weaknesses identified in previous studies. Our analyses show that the relationship between product attributes and customer satisfaction is regressing, and as a result, it is critical for every company to consider their competitive situation and offer the best possible product attributes based on customer preferences. As mentioned earlier, every company faces low to high competition pressure for its products. On the other hand, depending on its decision, any company may focus on intrinsic or extrinsic product attributes to create customer satisfaction and generate re-purchase decisions based on different product attributes and various competition pressures.

Limitations and future research directions

There are some limitations to this study. Kalleh Company is the market leader in Iran and therefore data for product attributes were collected only from market leader industry experts. As a result, the extent to which the results are generalizable across all food manufacturers is somewhat limited, and we suggest that this information will be obtained from a market-

follower company as well. Future research should look into additional food companies, different types of food products and customer satisfaction with their product characteristics. Another limitation of the study is that it did not examine differences in demographic profiles. The majority of respondents (63%) were female, and the average age group of participants was 26 years old. Future research could separate age groups as well as gender to see if there are any differences.

Future research could divide age groups as well as gender to see whether there are any differences in customer satisfaction depending on age and gender when it comes to product attributes. Last but not least, the study only explored participants' perceptions to product attributes and measured their satisfaction according to their viewpoint, future studies should explore and evaluate participants in scenarios where they actually make product choices.

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