Food anti-consumption and consumer well-being

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Food anti-consumption and consumer well-being

There is a massive interest among scholars examining consumer well-being and anti-consumption behaviours, a movement concerning macro-aspects of organisation and society (Chatzidakis and Lee, 2013). Anti-consumption refers to examination and identification of reasons against consumption with a view that individuals, businesses and society must realise their own and each other’s roles to safeguard human welfare. The relevant themes under this area of investigation are boycotting, activism, cultural jamming, undesired self and brand avoidance.

The anti-consumption centres on the idea that consumers need to be selective while making consumption choices. In this regards, what and when to consume is important but what not to consume something that is more important. Another aspect of anti-consumption is to provide businesses and society an edge through conscious and wise consumption practice. The research has shown some positive results where careful consumption brings positivity among consumers (Lee et al., 2009). However, given an increase in the capitalist orientation followed by governments and the business organisations where consumer (societal) concerns are sacrificed to achieve corporate objectives, anti-consumption seems a consequence that is an imperative to happen. The rising interest of businesses in societal well-being is usually attributed to organisations facing challenges such as consumer power and rising concerns about the limited role (macro, broader in nature) of businesses to contribute to society (Grönroos, 1997; Figueiredo et al., 2015). Consumer well-being is imperative for businesses to grow and earn financial and non-financial returns. There are studies published where consumer welfare has been studied to link it to food, but the macro-perspective of consumer well-being is ignored by large (Goetzke et al., 2014; Devezer et al., 2014).

The achievement of consumer welfare through food (anti)consumption is an interesting discourse to advance knowledge while examining consumers’ food-related behaviours. There are various reasons to it. One aspect of food consumption is that it causes obesity among its users due to the fact that they get addicted to specific types of food (Curtis and Davis, 2014). However, interestingly, how consumers become addicted with special types of food can be an interesting avenue of research. This is especially true in cases where food is marketed to different age groups such as Children (Opree et al., 2014) and older people. Another perspective is intentional non-consumption behaviours that are scarcely studied (Cherrier et al., 2011). This can also include anti-consumption practices such as rituals of Fasting among Muslims and prohibition of eating beef among Hindu communities. These are interesting issues to examine their link with societal welfare. The anti-consumption is a reality in third world countries where a large majority of population has limited access to (quality) food while a fair amount of food is branded (Kashif et al., 2015) – a common man cannot afford to buy it. Finally, consumer welfare in food is an interesting phenomenon as food wastage while consumption is a barrier harnessing societal well-being and welfare, yet scarcely investigated (Block et al., 2016).

There are 14 papers included in this special issue. First paper, “Exploring inside the box: a cross cultural examination of stimuli affecting fast food addiction”, authored by Hania and colleagues is a cross-cultural study and highlights the role of personal, social and demographic factors affecting food addiction. The authors used a mixed-methods research design and found that craving and impulsiveness cause food addiction while mood, obesity concerns and few cultural elements trigger general consumption behaviour. The study of food addiction through a cognitive affective behaviour framework is a unique contribution of this study.
Second paper, “Social media analysis of anti-consumption in Turkey”, authored by Khan and colleagues aims to examine the consumer perceptions of food anti-consumption in a cultural context of Turkey. These researchers content analysed various social media platforms and found that consumers’ negative past experience dominantly drives their anti-consumption behaviour. The identification of some new motives to food anti-consumption is a unique contribution of this study.

Third paper, “Factors influencing Turkish parents’ intentions towards anti-consumption of junk food”, authored by Yarimoglu and colleagues is aimed at investigating the role of attitude, norms and behavioural control to determine junk food anti-consumption among children in a Turkish context. The results of survey highlight important role of attitudes, subjective norms and perceived behavioural control to predict the anti-consumption of junk food. The addition of regret as an emotion to study with theory of planned behaviour (TPB) and the context of junk food are original products of this study.

Fourth paper, “Eating habits of polish university students depending on the direction of studies and gender”, authored by Tarnowska and colleague aims to examine the binge eating habits of university students, intersecting the findings based on gender. With data collected from a large group of university students in Poland, an interesting finding revealed that women eat a highly nutritious food, once compared to their male counterparts. The examination of food anti-consumption in an important cultural context of Poland is unique to this study.

Fifth paper, “The impact of self-congruity (symbolic and functional) on brand hate: a study based on self-congruity theory”, authored by Tahir and colleagues investigates the impact of symbolic and functional incongruity to study brand hate, supported empirically to test the hypotheses. The brand based consumer incongruity to link it to brand hate is a unique contribution. Another paper, “Farmer behavior and perception regarding food waste and unsold food”, authored by Alessandro and colleagues aims to study the farmers’ attitude towards food waste behaviour. With data collected from 35 farmers, serious deficiencies are found in their knowledge about food waste management. The study is original contribution to gain a deeper understanding of farmer behaviours concerning food wastage in this context.

Seventh paper, “Consumers’ anti-consumption behaviour toward organic food purchase: an analysis using SEM”, authored by Mohammad Ali and colleagues highlights the role of TPB-based antecedents of organic food consumption. The data are collected from 337 consumers and findings indicate a stronger role of self-efficacy, trustworthiness, attitude and the subjective norms. The context of study (i.e. a suburban area) and unique combination of diverse variables to put under a TPB-based framework are unique to this study. The paper, “Is Anti-consumption Driving Meat Consumption Changes in Australia?” authored by Malek and colleagues aims to determine the factors which can increase or decrease the meat consumption in Australia. The factors such as price and personal health, age and household income, personal and social benefits gained, and food production were associated with a decreased consumption of food. The study is unique in the context of Australia while using an anti-consumption lens.

The ninth paper, “Organic Shoppers’ involvement in organic foods: self and identity”, authored by Yun-Hee and colleagues aims to understand consumer identity issues related to organic food satisfaction and the resultant word of mouth. With data collected from 512 consumers, the results demonstrate strong support for health and environment issues as pivotal to trigger organic food consumption. The positioning of unique antecedents to predict organic food consumption is unique to this study. Another paper, “Preaching to the middle of the road: strategic differences in persuasive appeals for meat anti-consumption”, authored by Catherine and colleagues explores the strategic differences in marketing communication tactics used by vegan and humane brands. The authors used a content analysis approach and
categorised various advertising appeals used by these brands. Both these brands use a wide range of advertising themes. The unique method of analysis and the advertisements of brands make it another meaningful contribution to the existing body of knowledge.

The paper, “Brand hate: the case of Starbucks in France”, authored by Glyn and colleagues aims to explore the antecedents and consequences of negative affect in the food sector. By employing a mixed-method design, data were collected from 324 business school students. The findings signify an important role of brand hate to trigger extreme brand hate towards Starbucks brand. The discussion of brand hate in the context of a global food brand is unique to this study. Another paper, “Nutritional traffic light and self-regulatory consumption: the role of emotions”, authored by Isabel and colleagues investigated the impact of nutritional traffic lights to reduce consumers’ intention of unhealthy food consumption. With data collected from 330 people, findings reveal that traffic light colours such as red, yellow and green significantly influence consumers’ level of fear and guilt. The use of traffic lights in a combination of consumer emotions of fear and guilt are unique to this study.

The paper, “The role of religious motivation in an international consumer boycott”, authored by Nazlida and colleagues tests the role of intrinsic religious motivation to boycott US-based brands. With data collected from 325 consumers, findings support the proposed hypotheses. The role of religion to examine different types of consumer boycotts towards food brands is unique to this study. Finally, the paper, “Model construction of engagement and outcomes in consumers food life: evidence from chain stores customer”, authored by Saman and colleagues signifies the role of consumer lifestyles and personality to examine their satisfaction and loyalty. The data collected from 384 consumers support the hypothetical relationships. The study is unique as the framework is a combination of personality- and lifestyle-based variables.

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References


Further reading

Exploring inside the box: a cross-cultural examination of stimuli affecting fast food addiction

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Abstract

Purpose – The purpose of this paper, a cross-cultural study, is twofold: first, to identify personal, social, demographical and marketing facets that imply fast food addiction in Pakistan and America, and second to explore the reasons of reduction in fast food consumption in Pakistan.

Design/methodology/approach – The present study followed an explanatory sequential mixed-methods research design. Both quantitative and qualitative data collection methods were used to obtain supportive results of fast food consumption with the help of defining logical relations between independent and dependent variables. Partial least square based structural equation modeling technique was used to analyze quantitative data. For qualitative data, NVivo 11 was used to explore themes.

Findings – Quantitative findings of Pakistani setting suggested that craving and impulsiveness have a significant relation with addiction and have no mediation effect in both the countries. However, these results contradict with US study. Qualitative findings explored many personal, social, marketing and health factors that have affected fast food market of Pakistan which include low income, price-sensitive market, low quality, poor services, PFA, word of mouth, mood, obesity, environment and cultural influence on the consumption behavior of Pakistani consumers.

Research limitations/implications – This study is restricted to the consumption behavior of fast food only in two countries the USA and Pakistan. Hence, the results of this study cannot be generalized to other countries’ cultural and traditional values. In addition, this study only focuses on personal, social and marketing factors that implicate fast food addiction.

Originality/value – The consumption of fast food was the focus of analysis. Therefore, research adds value to service industry and helps in developing growth and marketing strategies for the fast food industry.

Keywords Brand name, Social influence

Paper type Research paper

Introduction

Nowadays, people find it more convenient to consume ready-to-eat meals, offered by fast food chain runners, to cherish their daily consumption needs (Nondzor and Tawiah, 2015). In 1951, Merriam Webster was the one who first introduced the name “fast food” in lexicon (Srivastava, 2015). Fast food is interpreted as an eatery which provides ease, comfort, quick service, quality food and social pleasure to consumers (Aloia et al., 2013). Fast food chains that were first introduced in the region of Southern California greatly changed the eating habits of Americans and several other countries. Fast food consumption is rapidly increasing in many developing countries like Pakistan and a big chunk of the market share has allocated to fast food (Cimadon et al., 2010). In psychology, there are several theories developed to understand consumer buying and consumption behavior. Current study explores two theories to understand the consumption behavior of fast food in Pakistan and America. Sheth et al. (1991) proposed the theory of consumption values which explore various perceived values that affect consumption behavior. Cognitive affective behavior explains decision-making process in three steps: first it begins with cognition, move toward affect and ends with behavior (Holbrook, 1986).
Previous research works focused on consumer buying behavior and attitude regarding fast food consumption; therefore, the amount and pattern of fast food consumption should be investigated in detail (Ghoochani et al., 2018). A study conducted in China shows that fast food chains have an impact on consumer’s life style, diet pattern and food preferences (Zhang et al., 2014). A group of teenagers aged 11–18 years was observed at fast food chains and the most frequent fast food purchased by teens included pizza, burgers, nuggets and fries (Yarmohammadi et al., 2015); consuming more fatty food rich in calories leads toward the behavioral aspects of addiction (Brown et al., 2017). The survey revealed that 86 percent population of Australia and America believed that certain foods have addictive properties (Lee et al., 2013) and 52 percent participants from the UK found themselves to be food addicts (Meadows et al., 2017). Gearhardt et al. (2009) is a pioneer study focusing on fast food addiction, especially youngsters. In the study, the idea of “food addiction” has been discussed in terms of obesity, alcohol addicts, drugs addict and chocolate addicts.

This study contributes contextually and theoretically; theoretically, it expands the size of service marketing literature by connecting it with cognitive affective behavior (Holbrook, 1986) and theory of consumption values (social value, emotional value and conditional value) (Sheth et al, 1991). Conditional value is considered as perceived utility that is acquired as the outcome of certain situations and physical conditions in which a service or a product is utilized (Sheth et al., 1991). Brand name and servicescape are examined in this study as conditional values. Emotional value is defined as arousal feeling or visually tempting (Sheth et al., 1991). Past studies revealed that western countries ranked chocolate as the top most craved food, personal and environmental cues should be investigated with respect to food craving (Richard et al., 2017) and impulsiveness behavior is considered to reflect emotional values. Social value explains that the consumption of product or service can get affected by external influence (Sheth et al., 1991). Social values include social influence as previous research works highlight that self-image and social servicescape influence consumption pattern, and additional variables like social and snob factors can be used to measure consumption behavior, and this area is suggested to be investigated further (Husic and Cicic, 2009). The theory of consumption values support the framework by linking independent and dependent variables of current study and theory of cognitive affective behavior strongly builds a relation of addition as a mediator between dependent and independent variables.

This study follows CAB hierarchy for few reasons, as the sequence of cognitions, affects and behaviors is usually arranged in this order for consumption decision (Solomon et al., 2012). Second, this arrangement of order is widely studied in consumer behavior (Oliver, 1999).

Contextually, the study investigates social, emotional and conditional values of Pakistani and American fast food consumers. Differentiation in consumers’ moral values, ritualism, norms and sociocultural values has a great impact on the consumption behavior of fast food (Ladhari, 2009), as consumption behavior varies due to disparity in consumer’s perceived values. Therefore, the theory of consumption values is used for a cross-cultural study to identify different social, emotional and conditional values that urge consumers to become addicted to fast food consumption. Hence, the main objective of the current study is to fill the identified gap in two folds: first, by measuring the fast food consumption behavior based on social, emotional, and conditional values in Pakistan in contrast with that of the USA and second, by exploring the possible reasons behind the decreasing trend of fast food consumption in Pakistan. This study will help food marketers to develop effective marketing strategies to target fast food lovers more effectively. The current study highlights different factors that play a key role in the consumption of fast food.
Emotional values and consumption

Food cravings and relative food “addiction” have remained under discussion in famous scientific literature. Consuming high fatty foods leads toward the behavioral aspects of addiction (Brown et al., 2017). In young generation, food addiction is linked up with behavioral (e.g. impulsivity and cravings) (Murphy et al., 2014; Meule et al., 2012) aspects concerned with creating addictive conditions. In the present world with obese, high caloric and sugary foods are consumed in larger amounts that often cross the basic level of homeostatic needs (McKiernan et al., 2008). In addition, one more primary determinant is the food craving experience itself, which is about having a deep desire to eat any fast food item (White et al., 2002) and most probably this desire is best aroused when the individual is not experiencing a starvation (Pelchat and Schaefer, 2000). There are usually high chances that most craved foods will contain sugar-rich content and fats, as like in chocolates and junk food, which are considered as the most craved food in western communities (Rozin et al., 1991). Such concepts can even stimulate the consumption pattern of craved food, specifically in case of strong cravings for respective food items (Field et al., 2016). For example, the ratio of high-quality food cravers showed an implied approach propensity toward the consumption of fatty foods rich in calories, relative to the ratio of low quality food cravers (Brockmeyer et al., 2015) and presented more reward-related activity of brain when they were exposed to the food pictures for viewing (Ulrich et al., 2016). Furthermore, it has also been noted that the high-quality food cravers showed an increased intensity of craving while imagining their favorite edibles, as asked by the researchers (Tiggemann and Kemps, 2005) or when they were provided with the pictures of respective cherishing foods (Meule et al., 2012). Subsequently, it was found that momentary cravings were interlinked with thought patterns about craved edibles in respective individuals and were aroused when the craved foods were imagined. Hence, these cravings sometimes resulted in consumption (Hill and Heaton-Brown, 1994). Based on the above review, following hypotheses are formulated:

H1. There is a significant relationship between fast food consumption and addiction.

H2. There is a significant relationship between craving and fast food addiction in the context of Pakistan and the USA.

H3. There is a significant relationship between craving and fast food consumption in the context of Pakistan and the USA.

H4. Addiction mediates the relationship between craving and fast food consumption in the context of Pakistan and the USA.

Impulsive nature is considered as a personality trait and it has an effective link with human eating behavior and consumers behavioral responses on consumption level (Gearhardt et al., 2009). Researchers have observed that many food lovers have shown impulsive behavior during the consumption of food (Ng and Davis, 2013). Impulsivity has also an effective link with various pathological behaviors of eating, where food addiction is also included (Ng and Davis, 2013; Gearhardt et al., 2009; Meule et al., 2012). Craving for food and overeating habits are linked with intentional impulsivity (Meule et al., 2012). A group of young people was observed by researchers in a field survey and results showed that food addiction is linked up with behavioral actions such as impulsivity and craving of desire food (Meule et al., 2012). Hence, all such various factors discussed potentially point toward the mechanism of impulsivity in the consumption of food. Therefore, the following hypotheses are proposed:

H5. There is a significant relationship between impulsiveness and fast food addiction in the context of Pakistan and the USA.
There is a significant relationship between impulsiveness and fast food consumption in the context of Pakistan and the USA.

Addiction mediates the relationship between impulsiveness and fast food consumption in the context of Pakistan and the USA.

Social values and consumption
According to the study of Warde and Martens (2000), convenience initially stimulated the habit of eating outside the homes of consumers. The concept of social influence also highlights the fact that the consumption pattern of the primary customer can be stimulated greatly through emotional and behavioral responses, triggered by the social environment where the food has been served or offered (Miao and Mattila, 2013). According to Gustafsson et al. (2006), people pay more attention toward food consumption experiences where they can enjoy food and most importantly socialize with their friends and family. Socializing is a process where consumers attract with each other and share their reviews on the food, brand, taste, quality and consumption experience (Lachance et al., 2003). Feunekes et al. (1998) proposed that there is a direct relation of junk food intake and social agents and food consumption increases with respect to the regular amount of meal during socialization with friends. Many researchers claimed that consumers buying and consumption behavior highly depends on social influence (Burnkrant and Cousineau, 1975). In another study, Yayli (2012) found that social influence affects food consumption and decision behavior through suggestions of peers, friends and opinion leaders. The above review shows that a strong relationship exists between social influence and consumption behavior. Based on above review, the hypothesis is developed:

There is a significant relationship between social influence and fast food consumption in the context of Pakistan and the USA.

Conditional values and consumption
Bitner (1992) first introduced the servicescape model and elucidated that physical environment has a great impact on consumption behavior. Service-cape also highlights the fact that the consumption experience of the primary customer can be stimulated greatly through behavioral and psychological responses, triggered by the physical environment where the food has been served or offered (Miao and Mattila, 2013). Various surveys undergone to study the effect of servicescape yielded that unique attributes of the environment and surrounding features cast a direct influence on the level of consumers’ satisfaction and consumption (Lin and Mattila, 2010). For instance, researchers have tested the effects of odor, hue and music played in the background on affective moods of individuals and found that their respective level of food consumption increases with high-quality services (Lin and Mattila, 2010). Few studies have shown that various environmental attributes like the theme, color, food presentation and its smell have a great impact on consumer’s behavior such as consumption of more food or avoidance (Mattila and Wirtz, 2001). According to Feunekes et al. (1998), the primary reason of servicescape not only expands the quantity of food intake while having meals but also the duration of meals. Therefore, consumption pattern varies with the quality of services providers. Hence, on the above literature, the following hypothesis is formulated:

There is a significant relationship between servicescape and fast food consumption in the context of Pakistan and the USA.

The brand name is another factor, which increases the consumption of fast food. Many people prefer high-quality food; therefore, fast food brands play an important role in
the consumption of fast food. Yasin (2009) explained the behavior of brand-conscious consumers, which are more oriented toward paying attention to brand tags and thus are interested in consuming well-established food brands. They found high prices as an assurance for providing high food quality. Consumer behavior associated with advertising skills could better be examined with the help of Becker and Murphy (1993), which represents an effective model demonstrating the interlink between the level of advertising of a fast food brand and its consumption in accordance with the consumer's utility function. “Fast food brands play a significant role in developing trust, a feeling of attachment and identification among individuals” (O’Cass and McEwen, 2004, p. 25). Hence, the above literature shows that brand name builds a strong relationship of trust among consumers, which leads to the consumption of more food as brand names give the sense of satisfaction of consuming high-quality food. Therefore, on the base of above review, the following hypothesis is formulated:

\[ H10. \] There is a significant relationship between brand name and fast food consumption in the context of Pakistan and the USA.

Research methodology

**Study 1: cross-sectional survey of the USA and Pakistan**

*Data collection and sampling.* Western countries developed the concept of fast food but now it is a part of Pakistan and therefore present study gathers data from Kansas City of America and different cities of Pakistan to analyze the consumption behavior of fast food in both countries. In the first phase of the study, hypotheses were developed and tested practically through the field survey. In the USA, data were collected from fast food consumers, who were randomly asked to participate in the field survey. A total of 340 people agreed to take part in the survey; out of which, 300 questionnaires were completed satisfactory and remaining 40 were discarded because of missing data. In Pakistan, data were collected from fast food consumers at the various food courts. Total 350 questionnaires were circulated in different food courts and universities. However, 300 filled questionnaires were returned; therefore, the response rate of the survey in Pakistan was 86 percent and further, it was used for data analysis. Due to little time and geographical restraints, data were just gathered from Lahore, Karachi and Multan regions of Pakistan and the Kansas City of America. As the size of targeted fast food consumers was undefined, for data collection, convenience-sampling technique was used in the current study (Farrokhi and Mahmoudi-Hamidabad, 2012).

*Measurement of variables and instrument design.* A self-administered and structured questionnaire survey was used to gather quantitative data. FCQ-S was used to measure five items of craving, and Barrat Impulsiveness scale was used to measure three items of impulsivity. Four items of utilitarian influence were used to determine social influence (Girard, 2010). For brand name, four items were utilized from two main sources (Donthu and Garcia, 1999; Yasin, 2009). A five-item scale for servicescape was adapted and employed, which was developed by Baker et al. (2002). Addiction and fast food consumption were measured with the help of Yale Food Addiction Scale and Dutch Eating behavior, respectively. Questions were adapted to evaluate the full range of criteria related to the consumption of high-fat fast foods.

*Data analysis.* In the first phase, quantitative data were analyzed, and the proposed hypotheses were tested through partial least square based structural equation modeling (PLS-SEM) technique. It is very helpful to measure the multivariate effect and especially relationship of different variables with a dependent variable. Smart PLS 3.0 software, developed by Ringle et al. (2005), was used for the analysis of quantitative data.
Empirical results

Measurement model

Table I summarizes average variance extracted (AVE), Cronbach’s α (CA), composite reliability (CR) and loading values. As shown in Table I, the AVE values for the constructs are more than 0.50 and factor loading value is more than 0.7, which means that the proposed model demonstrates convergent validity (CV). All the constructs have CA and CR scores well above the recommended threshold of 0.70. The scores of CA for the constructs confirm the internal consistency for all constructs in the proposed model. Urbach and Ahlemann.

<table>
<thead>
<tr>
<th>Concepts</th>
<th>Outer loadings&lt;sub&gt;a&lt;/sub&gt;</th>
<th>Outer loadings&lt;sub&gt;b&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addiction (CR&lt;sub&gt;a&lt;/sub&gt; = 0.850, AVE&lt;sub&gt;a&lt;/sub&gt; = 0.536, α&lt;sub&gt;a&lt;/sub&gt; = 0.780) (CR&lt;sub&gt;b&lt;/sub&gt; = 0.845, AVE&lt;sub&gt;b&lt;/sub&gt; = 0.647, α&lt;sub&gt;b&lt;/sub&gt; = 0.725)</td>
<td></td>
<td></td>
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<tr>
<td>When I start eating fast food, I end up eating much more than I had planned</td>
<td>0.774</td>
<td></td>
</tr>
<tr>
<td>Cutting down on fast food is something I worry about</td>
<td>0.712</td>
<td></td>
</tr>
<tr>
<td>I spend a lot of time feeling sluggish or lethargic from overeating</td>
<td>0.779</td>
<td></td>
</tr>
<tr>
<td>I kept consuming fast food even though I was having emotional/physical problems</td>
<td>0.909 0.851</td>
<td></td>
</tr>
<tr>
<td>My behavior with respect to food and eating causes significant distress</td>
<td>0.730</td>
<td></td>
</tr>
<tr>
<td>I have had withdrawal symptoms when I cut down or stopped eating fast food</td>
<td>0.735</td>
<td></td>
</tr>
<tr>
<td>Craving (CR&lt;sub&gt;a&lt;/sub&gt; = 0.871, AVE&lt;sub&gt;a&lt;/sub&gt; = 0.631, α&lt;sub&gt;a&lt;/sub&gt; = 0.802) (CR&lt;sub&gt;b&lt;/sub&gt; = 0.798, AVE&lt;sub&gt;b&lt;/sub&gt; = 0.570, α&lt;sub&gt;b&lt;/sub&gt; = 0.618)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If I were to eat what I am craving, I am sure my mood would improve</td>
<td>0.844</td>
<td></td>
</tr>
<tr>
<td>Satisfying my craving would make me feel less grouchy and irritable</td>
<td>0.845</td>
<td></td>
</tr>
<tr>
<td>I am craving more fast food</td>
<td>0.711 0.641</td>
<td></td>
</tr>
<tr>
<td>If I had more fast food, I could not stop eating it</td>
<td>0.703 0.835</td>
<td></td>
</tr>
<tr>
<td>I am going to keep on thinking about more fast food until I actually have it</td>
<td>0.837</td>
<td></td>
</tr>
<tr>
<td>Impulsivity (CR&lt;sub&gt;a&lt;/sub&gt; = 0.922, AVE&lt;sub&gt;a&lt;/sub&gt; = 0.797, α&lt;sub&gt;a&lt;/sub&gt; = 0.872) (CR&lt;sub&gt;b&lt;/sub&gt; = 0.861, AVE&lt;sub&gt;b&lt;/sub&gt; = 0.675, α&lt;sub&gt;b&lt;/sub&gt; = 0.757)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I act on impulse</td>
<td>0.810 0.92</td>
<td></td>
</tr>
<tr>
<td>I buy food on impulse</td>
<td>0.884 0.911</td>
<td></td>
</tr>
<tr>
<td>I do things without thinking</td>
<td>0.767 0.875</td>
<td></td>
</tr>
<tr>
<td>Servicescape (CR&lt;sub&gt;a&lt;/sub&gt; = 0.870, AVE&lt;sub&gt;a&lt;/sub&gt; = 0.691, α&lt;sub&gt;a&lt;/sub&gt; = 0.872) (CR&lt;sub&gt;b&lt;/sub&gt; = 0.875, AVE&lt;sub&gt;b&lt;/sub&gt; = 0.700, α&lt;sub&gt;b&lt;/sub&gt; = 0.786)</td>
<td></td>
<td></td>
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<tr>
<td>The music is played at an appropriate volume</td>
<td>0.755</td>
<td></td>
</tr>
<tr>
<td>The restaurant lighting is appropriate</td>
<td>0.844 0.915</td>
<td></td>
</tr>
<tr>
<td>The temperature is comfortable</td>
<td>0.778</td>
<td></td>
</tr>
<tr>
<td>The interior is decorated in an attractive fashion</td>
<td>0.885</td>
<td></td>
</tr>
<tr>
<td>The overall design is interesting</td>
<td>0.817</td>
<td></td>
</tr>
<tr>
<td>Brand name (CR&lt;sub&gt;a&lt;/sub&gt; = 0.894, AVE&lt;sub&gt;a&lt;/sub&gt; = 0.681, α&lt;sub&gt;a&lt;/sub&gt; = 0.854) (CR&lt;sub&gt;b&lt;/sub&gt; = 0.771, AVE&lt;sub&gt;b&lt;/sub&gt; = 0.647, α&lt;sub&gt;b&lt;/sub&gt; = 0.721)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A fast food brand reflects who I am</td>
<td>0.894</td>
<td></td>
</tr>
<tr>
<td>I can identify with fast food brands</td>
<td>0.999 0.863</td>
<td></td>
</tr>
<tr>
<td>I feel a personal connection to fast food brands</td>
<td>0.838</td>
<td></td>
</tr>
<tr>
<td>Fast food brand suits me well</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>Social influence (CR&lt;sub&gt;a&lt;/sub&gt; = 0.884, AVE&lt;sub&gt;a&lt;/sub&gt; = 0.659, α&lt;sub&gt;a&lt;/sub&gt; = 0.829) (CR&lt;sub&gt;b&lt;/sub&gt; = 0.916, AVE&lt;sub&gt;b&lt;/sub&gt; = 0.732, α&lt;sub&gt;b&lt;/sub&gt; = 0.881)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My choice of fast food is influenced by other consumers’ word of mouth</td>
<td>0.881 0.881</td>
<td></td>
</tr>
<tr>
<td>My friends’ preference will influence my choice of fast food</td>
<td>0.880 0.874</td>
<td></td>
</tr>
<tr>
<td>The preferences of family members can influence my choice of fast food</td>
<td>0.740</td>
<td></td>
</tr>
<tr>
<td>Other people’s recommendation may influence my final decision</td>
<td>0.929 0.806</td>
<td></td>
</tr>
<tr>
<td>Consumption (CR&lt;sub&gt;a&lt;/sub&gt; = 0.951, AVE&lt;sub&gt;a&lt;/sub&gt; = 0.830, α&lt;sub&gt;a&lt;/sub&gt; = 0.934) (CR&lt;sub&gt;b&lt;/sub&gt; = 0.884, AVE&lt;sub&gt;b&lt;/sub&gt; = 0.657, α&lt;sub&gt;b&lt;/sub&gt; = 0.825)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If food tastes good to you, do you eat more than usual?</td>
<td>0.733 0.934</td>
<td></td>
</tr>
<tr>
<td>If food smells and looks good, do you eat more than usual?</td>
<td>0.867 0.924</td>
<td></td>
</tr>
<tr>
<td>If you see Fast food delicious, do you have a desire to eat it?</td>
<td>0.884 0.884</td>
<td></td>
</tr>
<tr>
<td>If you have something delicious to eat, do you eat it straight away?</td>
<td>0.747 0.902</td>
<td></td>
</tr>
</tbody>
</table>

Notes: CR, composite reliability; AVE, average variance extracted

Table I. Results of convergent validity and construct reliability
(2010) explained the term CV that it refers to the degree to which indicators that reflect a construct converge in comparison to items measuring other constructs. CV is evaluated with two measures: one is item inter reliability or factor loading values and the second one was introduced by Fornell and Larker (1981) which is known as AVE. The AVE value for a construct must be greater or equal to 0.5 (Bagozzi et al., 1991) and it shows the allowable limit of CV while factor loading values should be greater than 0.7. This study has excluded all those items whose factor loadings were less than 0.60. Internal consistency reliability (ICR) is resolved by CA and through CR analysis. According to Nunnally et al. (1967), CA and CR values higher than 0.7 are suitable for exploratory research and values above 0.8 are appropriate for confirmatory research. Therefore, values below 0.6 depict a lack of ICR (Nunnally et al., 1967).

Tables II and III show the Fornell–Larcker criterion for the confirmation of discriminant validity of the measurement model for both Pakistan and the USA, respectively, in this study. It is used to estimate the degree to which the indicators of the latent variable are also different from each other (Ürback and Ahlemann, 2010). Discriminant validity assesses whether an indicator of the specific construct is evaluating another construct or not. In the PLS-SEM model, discriminant validity can be measured with two certain criteria: one is cross-loadings and other is Fornell–Larcker criterion (Fornell and Larker, 1981). To assess discriminant validity of the measurement model, an indicator’s loading value should be greater against its own measured construct than to any other construct and each construct involved should have higher value against its allocated indicator.

**Testing the path model**

PLS-SME path analysis shows that a change in one variable brings a change in the other variable. For testing the hypothesis, path model was created through Smart PLS 3 to measure $\beta$ coefficient values and to calculate $p$-value. $\beta$ coefficient is derived from the

<table>
<thead>
<tr>
<th>Addiction</th>
<th>Brand name</th>
<th>FF consumption</th>
<th>Impulsiveness</th>
<th>Craving</th>
<th>Servicescape</th>
<th>Social influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addiction</td>
<td>0.732</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand name</td>
<td>0.214</td>
<td>0.825</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumption</td>
<td>0.233</td>
<td>0.169</td>
<td>0.911</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impulsiveness</td>
<td>0.414</td>
<td>0.273</td>
<td>0.148</td>
<td>0.893</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Craving</td>
<td>0.679</td>
<td>0.309</td>
<td>0.218</td>
<td>0.471</td>
<td>0.794</td>
<td></td>
</tr>
<tr>
<td>Servicescape</td>
<td>0.325</td>
<td>0.366</td>
<td>0.085</td>
<td>0.460</td>
<td>0.278</td>
<td>0.832</td>
</tr>
<tr>
<td>Social influence</td>
<td>0.328</td>
<td>0.512</td>
<td>0.128</td>
<td>0.451</td>
<td>0.420</td>
<td>0.452</td>
</tr>
</tbody>
</table>

**Table II.** Results of discriminant validity for Pakistan

<table>
<thead>
<tr>
<th>Addiction</th>
<th>Brand name</th>
<th>FF consumption</th>
<th>Impulsiveness</th>
<th>Craving</th>
<th>Servicescape</th>
<th>Social influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addiction</td>
<td>0.804</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand name</td>
<td>–0.458</td>
<td>0.804</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumption</td>
<td>0.309</td>
<td>0.242</td>
<td>0.755</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impulsiveness</td>
<td>–0.177</td>
<td>0.494</td>
<td>0.609</td>
<td>0.811</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Craving</td>
<td>0.793</td>
<td>–0.506</td>
<td>0.048</td>
<td>–0.409</td>
<td>0.822</td>
<td></td>
</tr>
<tr>
<td>Servicescape</td>
<td>–0.487</td>
<td>0.678</td>
<td>0.261</td>
<td>0.317</td>
<td>–0.472</td>
<td>0.837</td>
</tr>
<tr>
<td>Social influence</td>
<td>0.305</td>
<td>–0.167</td>
<td>0.147</td>
<td>–0.457</td>
<td>0.146</td>
<td>–0.169</td>
</tr>
</tbody>
</table>

**Table III.** Results of discriminant validity for the USA
significance, magnitude, and sign. The suggested value for $\beta$ coefficient is greater than 0.20 to demonstrate a specific impact within the model. As reported by Hildebrand (1986) in his research, ($\beta$) coefficient values should be higher than 0.20. The sign of the $\beta$ coefficient should be parallel to the proposed hypothesis. Moreover, the $\beta$ coefficient should be significant at least at the 0.05 level. Pearson (1966) stated that the $p$-values should be lower than 0.05. For this study, the bootstrap sample size is equal to the original sample size because of the small sample sizes employed in PLS. For US data, as shown in Table IV, most of the hypotheses were accepted except for $H1$ and their ($\beta > 0.2, p < 0.05$) as recommended. For the USA, $H1$ shows ($\beta = 0.121, p = 0.534$), which means addiction has no significant impact on the consumption of fast food. For Pakistan, most of the hypotheses were rejected as their ($\beta < 0.2, p > 0.05$), as not recommended by Pearson (1966). Only just three hypotheses, $H1$, $H2$ and $H4$, were accepted and these hypotheses show that addiction ($\beta = 0.161, p = 0.04$), craving ($\beta = 0.622, p = 0.00$) and impulsiveness ($\beta = 0.120, p = 0.02$) have a significant impact on addiction (Figure 1).

**Framework**

**Indirect effects**

This study has used bootstrapping technique to test the indirect effects of craving and impulsiveness. Table V depicts the findings of indirect effect for Pakistan (IE)$_a$ and the USA (IE)$_b$.

The indirect effect (IE)$_a$ of craving toward fast food consumption through addiction was 0.10, which was insignificant at 0.052 and the (IE)$_a$ of impulsiveness toward consumption through addiction was 0.019, which was insignificant at 0.130. For US findings, the indirect effect (IE)$_b$ of craving on the relationship between fast food consumption and addiction was 0.033, which was insignificant at 0.492 and the (IE)$_a$ of impulsiveness on the relationship between the consumption of fast food and addiction was 0.094, which was insignificant at 0.563.

Therefore, these findings do not support $H4$ and $H7$ for the USA and Pakistan that addiction mediates the relationship between craving, impulsiveness and consumption of fast food. Unfortunately, mediation effect was not tested in this study. Most of the hypotheses were rejected in Pakistan. Therefore, this study explores the rejection of hypotheses in Pakistan, and to dig out the reality of fast food consumption, current study further moves toward the second objective of the study. Qualitative method is used to explore different personal, social, and marketing factors that affect fast food consumption.

Table VI depicts the demographic information of Pakistani and US consumers. It shows that in Pakistan, men eat more fast food than females, and in USA, females consume more fast food than males. According to the survey, middle-income earner and age group of teens and adults consume more fast food than elders. In Pakistan, low-income earners cannot afford and consume fast food as compared to US low-income earners.

<table>
<thead>
<tr>
<th>Relations</th>
<th>Hypothesis</th>
<th>Direct effect (DE)$_a$</th>
<th>Direct effect (DE)$_b$</th>
<th>(A/R)$_a$</th>
<th>(A/R)$_b$</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addiction $\rightarrow$ FF consumption</td>
<td>$H1$</td>
<td>0.161* [1.995]</td>
<td>0.121 [0.622]</td>
<td>Accepted</td>
<td>Rejected</td>
<td></td>
</tr>
<tr>
<td>Craving $\rightarrow$ Addiction</td>
<td>$H2$</td>
<td>0.629*** [13.364]</td>
<td>0.780*** [9.997]</td>
<td>Accepted</td>
<td>Accepted</td>
<td></td>
</tr>
<tr>
<td>Craving $\rightarrow$ FF consumption</td>
<td>$H3$</td>
<td>0.070 [0.761]</td>
<td>-0.467* [2.318]</td>
<td>Accepted</td>
<td>Rejected</td>
<td></td>
</tr>
<tr>
<td>Impulsiveness $\rightarrow$ Addiction</td>
<td>$H5$</td>
<td>0.120* [2.328]</td>
<td>0.271 [2.384]</td>
<td>Accepted</td>
<td>Accepted</td>
<td></td>
</tr>
<tr>
<td>Impulsiveness $\rightarrow$ FF consumption</td>
<td>$H6$</td>
<td>0.043 [0.582]</td>
<td>0.685*** [5.568]</td>
<td>Rejected</td>
<td>Accepted</td>
<td></td>
</tr>
<tr>
<td>Social influence $\rightarrow$ FF consumption</td>
<td>$H8$</td>
<td>-0.017 [0.209]</td>
<td>-0.532*** [5.602]</td>
<td>Rejected</td>
<td>Accepted</td>
<td></td>
</tr>
<tr>
<td>Servicescape $\rightarrow$ FF consumption</td>
<td>$H9$</td>
<td>-0.045 [0.517]</td>
<td>-0.281* [2.075]</td>
<td>Rejected</td>
<td>Accepted</td>
<td></td>
</tr>
<tr>
<td>Brand name $\rightarrow$ FF consumption</td>
<td>$H10$</td>
<td>0.126 [1.475]</td>
<td>0.249*** [2.594]</td>
<td>Rejected</td>
<td>Accepted</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** $t$-statistics are represented in square brackets [ ]. Original Sample (O)$_a$ = Pak; Original Sample (O)$_b$ = USA. *, **, ***Significant at the 0.05, 0.01 and 0.001 levels, respectively (two-tailed).
Study 2: to explore different factors that affect fast food consumption

As discussed earlier, the present study has two key objectives: to measure the consumption behavior of fast food in Pakistan and America. Second, to explore different personal, social, and marketing factors that affect the consumption of fast food. The first objective is accomplished through a quantitative approach, while the second objective is based on qualitative approach. Cresswell and Plano Clark (2011) suggested mixed method is best to use when one type of evidence is not sufficient to demonstrate the whole story. Thus, either quantitative or qualitative approach alone is not suitable for the current study. Based on the quantitative findings, the qualitative research design was followed in the second phase of the study. In the second phase, data were only gathered from Pakistani fast food consumers; 35 face-to-face open-ended and semi-structured audio and video interviews of 20–25 min were recorded to inspect and analyze factors that affect fast food consumption. Different techniques of NVivo 11 were employed in this study and different techniques like TreeMap analysis and coding query were used. In NVivo, collected data were imported, transcribed and coded into different themes.
A TreeMap is a graphic sketch that displays hierarchical data as a set of rectangles with different sizes. Size of rectangle depicts the number of nodes coded and amount of coding references. Child nodes have lighter shades of the parent nodes. TreeMap of hierarchy chart shows the importance and the significance or value of each theme or node extracted from transcribed data of the present study. In Figure 2, TreeMap shows five factors that affect fast food consumption. Personal factors include bad experience, low income, and avoidance of fast food, mood, pocket money, diet conscious, desi food and avoidance of fast food. All these factors were highlighted through personal opinions of consumers that is why they avoid fast food. Health factors include obesity, health issues, low-quality food, unhygienic food and homemade food. All these health-related issues were observed in fast food consumers. Service factors include poor services, sitting area, music, delivery and environment. Customer’s responses were observed in terms of services. Social factors include word of mouth, culture, Punjab Food Authority, children, conservative mindset and hijab culture. Branding factors include price-sensitive market, local brands, trust issues and less brand conscious. Those factors that are falling in a big box as compared to those having small box region have more effect on fast food consumption.

### Discussion

The current study highlights different factors that play a key role in the consumption of fast food in Pakistan and the USA, exploring the possible reasons behind the decreasing trend of fast food consumption in Pakistan. Previous researchers have identified consumer attitude toward fast food (Ghoochani et al., 2018), impact of demographical factors on consumers loyalty.
toward local and global fast food chains (Srivastava, 2015), and effect of demographic and psychographics determinants on consumer fast food choice (Anand, 2011). The main objective of this study was to measure the consumption behavior of fast food in Pakistan and America, we conclude that there is a significant relation between craving and addiction and this relation is accepted in both countries. However, addiction is used as a mediating variable and is rejected in both countries. We conclude that craving, impulsivity, social influence, brand name and servicescape have a relation with the consumption of fast food and this relation is accepted in the USA but rejected in Pakistan. The second main objective of this study was to explore the reason of fast food anti-consumption in Pakistan. Lee et al. (2009) widely explained anti-consumption, brand dislike and brand avoidance as factors for anti-consumption (Sandikci and Ekici, 2009). Brand avoidance is a well-studied area of research with regard to anti-consumption, i.e., experiential avoidance (Lee et al., 2009). However, the present study confirmed the effect of three major streams on the anti-consumption of fast food in Pakistan. These include brand dislike in terms of losing trust values in fast food brands and low quality standards of local fast food chains, brand avoidance in terms experimental avoidance where consumers avoided a brand following a bad experience influenced by the claims of PFA (i.e. government) and risk aversion in terms of health consciousness, risk of obesity and unhygienic food intake. Moreover, the current study also identified age, income, mood and culture as major factors for the anti-consumption of fast food in Pakistan.

There is a relationship between age and food consumption; adults with age bracket of 18–25 consume more fast food as compared to the people above 48. According to Sheely (2008), median age is the major factor that affects fast food consumption, whereas the consumption rate of fast food in adults is higher in American studies and which aligns to our study “A man with low-income salary can’t easily afford three times meal in a day. A man with lower-middle-class background can’t think of eating at McDonald’s. Aloia et al. (2013) reported that income is an important element in the consumption of fast food as people with high income consume more fast food as compared to low-income earners and our study confirms the same.

This study concluded that there is a relationship between trust and brand; due to low-quality standards of local brands, consumers trust more brands that are global. One respondent stated, “Services of international brands are much better than local brands like Pizza Channel, due to poor quality of local brands we trust McDonald’s.” Other respondent stated that, “Since PFA has sealed many café and restaurants, so now the element of trust has been vanished. Therefore, I don’t really trust brands like KFC or BFC.” Our finding contradicts with Malaysian study of Tan et al. (2013) which concludes that both global and Malaysian brands provide same quality food.
Our study concluded that there is a relationship between fast food consumption and health consciousness. As per one respondent, “Fast food is rich in calories and there are more fats, which helps in gaining weight so it’s not a healthy pure diet.” Jun et al. (2014) found that health values affect the consumption of fast food, which is aligning with present study. This study deduced that the majority of respondents during their interviews claimed that PFA has changed the image of fast food chains. According to respondents, “Expired and rotten food were served in many fast food chains, there was raid on […] as it’s a renowned brand with good brand image and it was fined by PFA because its kitchen wasn’t clean enough so I stopped going over there. We can find many cases like […] therefore many customers switch to home diet cause of less trust on such big brands.” Another respondent stated, “Umm I don’t think brands are now trustworthy. Since PFA has shown clearly on TV that many food chains is feeding donkey as a substitute of chicken or meat, now we don’t prefer eating outside.” On the basis of above empirical evidences, this study concluded that Punjab Food Authority has affected the consumption pattern of fast food. This is an interesting finding in our study, which identifies the major cause behind the decreasing trend of fast food consumption. Moreover, media has highlighted bad hygienic condition of food retailers; therefore, people have stopped going out and consuming fast food.

**Future direction and limitations**

The current study has many limitations. First, data were collected from students and from different fast food outlets. In the second phase of the study, qualitative data were not gathered from the USA. Second, this study was constructed on the basis of an explanatory sequential research design, i.e., survey research design with the 300 as the sample size. Third, demographic factors (education, region, occupation, etc.) were not measured in this study. Based on the above-mentioned limitation, some recommendations for future researchers are given below. First, future researchers should completely focus on the fast food chain and conduct a field experiment to observe consumer’s fast food consumption behavior and fast food addicts more in-depth. A researcher could conduct field survey on few fast food outlets (like KFC, McDonald’s, Burger King, etc.) and compare results of different fast food outlets. Second, the future researcher can apply exploratory sequential or triangulation technique and compare consumption behavior of different countries and factors affecting the consumption of fast food in different countries. Third, future researchers can only focus on one factor to measure fast food consumption at one time by adding different other constructs like education, gender, snob appeal, satisfaction, and advertisement.

**References**


Further reading


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Social media analysis of anti-consumption in Turkey

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Abstract
Purpose – The purpose of this paper is to investigate the perceptions of food anti-consumption in fast growing markets within an emerging economy context of Turkey.

Design/methodology/approach – Recently posted customer comments, complaints and suggestions related to the selected fast-food chains were examined from the following domains: Facebook, Instagram, Twitter and Sikayetvar.com. These comments were reviewed, assessed and classified by four trained independent raters. After examining the comments one-by-one the raters arrived at the final (triangulated) decision regarding the comment’s category after an iterative process including cross-examination.

Findings – Reasons for fast-food avoidance were primarily linked to customers’ negative past experiences (experiential avoidance). Identity avoidance, moral avoidance and interactivity avoidance.

Originality/value – The paper adds to the anti-consumption literature by examining the food avoidance framework of Lee et al. (2009) in an emerging market context. New categories were identified for reasons of food avoidance which have not been identified before in the anti-consumption literature such as interactivity avoidance.

Keywords Turkey, Social media, Emerging economy, Food, Avoidance, Anti-consumption

Introduction
Food plays an important role in our lives. An increasing number of people in emerging economies find themselves gradually acculturated to the post-industrial ritual of eating out within well-designed commercial servicescapes (Ahmed et al., 2013; Akarçay and Suğur, 2015). It appears that in some countries, for example, Turkey, a fast-food revolution is in a full swing (Akarçay and Suğur, 2015). Western-style fast-food chains and their local imitations vie for dominance, clatter the market with their promotional activities and employ best marketing practices to attract customers. Although the goal of marketing is to satisfy the customer, it can, in some circumstances, lead to a paradoxical incidence of consumer resistance including brand avoidance (Holt, 2002). In the same vein, there seems to be a growing number of consumers in emerging economies who refuse to jump on the bandwagon of the nationwide fast-food revolution (Kashif et al., 2014). Many of them resolve to avoid specific fast-food choices at any cost.

To gain some insight into the mechanisms of the fast-food avoidance phenomenon, in this investigation we draw on theories of anti-consumption. The anti-consumption literature outlines broad reasons for why people might attempt to avoid certain food choices (Zavestoski, 2002; Cherrier and Murray, 2007; Sandikci and Ekici, 2009; Lee, 2010;
Lee et al., 2011). The types of anti-consumption identified in this literature were brand avoidance including experiential, identity and moral avoidance (Dalli et al., 2006; Lee et al., 2009), political consumerism (Micheleti, 2017), undesired self and image congruency (Sandikci and Ekici, 2009; Lee, 2010), organisational misidentification (Elsbach and Bhattacharya, 2001), innovation resistance (Lee, 2010) and voluntary simplicity (Craig-Lees and Hill, 2002; Walther et al., 2016).

Although the extant literature unveils a growing understanding of anti-consumption in its many forms and motivations, there is dearth of empirical research investigating this phenomenon in fast growing markets within an emerging economy context. Hence, this research aims to fill this gap by focussing on consumer perceptions that are likely to influence anti-consumption practices in dynamic, fast-changing milieus (Iyer and Muncy, 2009). To do this, we focus on Turkey, specifically on the country’s fast-food market.

Turkish economy has seen a rapid growth in recent years outpacing those of China and India (Ant and Hacaoglu, 2018), particularly, due to solid household spending. The fast-food industry benefited from strong growth in spending and household disposable income, while a number of multi-national corporations expanded their business in this country (Özedincik, 2015).

Although the expansion of fast-food providers has been phenomenal (Akarçay and Suğur, 2015), there seems to be a growing discontent about fast-food consumption evidenced in consumers’ social media contributions which warrants attention. Such a complex scenario of fast growing spending coupled with an increasing extent of discontent motivates the current investigation. Why do some consumers decide to avoid fast-food in a fast-growing economy?

**Literature review**

Anti-consumption means “against consumption” and has been described in literature as “a resistance to, distaste of, or even resentment or rejection of, consumption” (Zavestoski, 2002, p. 121). Anti-consumption is broadly categorised into reject, restrict and reclaim practices (Lee et al., 2011). The activities which constitute anti-consumption can range from avoiding a specific product based on ethical and/or ecological considerations, to overall reduced consumption and/or complete boycott of specific product category (Craig-Lees and Hill, 2002). Anti-consumption is not always easy to adopt, since refusing to consume certain items can be challenging financially as well as emotionally (Cherrier and Murray, 2007) which suggests that anti-consumption is mostly carried out because of a certain reason or a motivation.

In the literature, different reasons have been explored which lead to anti-consumption. Lee (2010) divided anti-consumption literature into four streams (innovation resistance, risk aversion, undesired self and voluntary simplicity) in terms of insights it offers on why consumers practice anti-consumption. Similarly, five major streams have been identified for anti-consumption by Sandikci and Ekici (2009). These include political consumerism, undesired self and image congruency, organisational misidentification, brand dislike (Dalli et al., 2006) and brand avoidance (Lee et al., 2009).

Political consumerism represents action by people who make choices among producers and products with the goal of changing objectionable institutional or market practices (Micheleti, 2017). Their choices depend on the personal, ethical or political assessment of favourable and unfavourable practices being carried out by businesses or governments (Sandikci and Ekici, 2009). For example, US consumers were apparently so disappointed by France’s refusal to participate with USA in Iraq war that they decided to boycott French wines (Chavis and Leslie, 2009). Similarly, Canadian public boycotted seafood in protest of government policies on seals. This stream can be relevant to anti-consumption of food items
from certain brands where people may avoid a certain food product or category due to its political origin or affiliation (Kashif et al., 2015).

Undesired self is a common theme identified by both Lee (2010) and Sandikci and Ekici (2009). Hogg and Banister (2001) show that distaste and dislike are important factors in how consumers define their identities. The undesired self can be linked to a series of consumption choices that are represented by taste/distaste. The undesired self is “a representation of the self at its worst, it thus acts as a central avoidance goal” (Phillips et al., 2007, p. 1037). An individual’s undesired self is of particular relevance in anti-consumption context as it involves a strong motivational drive to protect self-esteem. Marketing managers recognise the pursuit or protection of self-esteem as one of the most important motivational drivers of consumer behaviour and decision making (Banister and Hogg, 2004). Undesired self can be an important motivating factor in anti-consumption of food.

Organisational misidentification research shows that people can define and enhance their self-concept not only through brands and products that they consume (or do not consume) but also through the organisations that they identify or misidentify with. Elsbach and Bhattacharya (2001) argue that a sense of separation from the organisation can also help to maintain self-concept. The authors define organisational misidentification “as a self-perception based on a cognitive separation between one’s identity and one’s perception of the identity of an organization, and a negative relational categorization of oneself and the organization” (Elsbach and Bhattacharya, 2001, p. 397).

Innovation resistance is also one of the major reasons for anti-consumption identified by Lee (2010). It is not the technology or product that is resisted but rather, the changes caused by the technology. Technology-based food innovations were found to have many similarities with innovations in other areas, such as computing and internet, with the only difference that food is ingested by the consumer (Ronteltap et al., 2007). Owing to the ingestion of the product, technology-based food innovations create sensitive consumer concerns about innovations (Ronteltap et al., 2007), and this fact can be one of the reasons why genetic modification of food has been met with heavy innovation resistance.

Risk aversion is seen as an individual’s preference for a guaranteed outcome over a probabilistic one in avoidance of uncertainty (Gneezy et al., 2006). Hence, to avoid risks, individuals may practice anti-consumption of options which harbour some uncertainty. Risk perception is an individual’s assessment of the risk inherent in a particular situation (Pennings and Wansink, 2004). Individuals avoid products that they perceive to be risky due to the uncertain outcomes of its usage. Risk aversion can also be a reason for food avoidance as consumers may avoid certain food products due to their associated health risks.

Voluntary simplicity seekers are individuals who aim to minimise their consumption in order to focus on non-materialistic channels for satisfaction and meaning in their lives. Despite the existence of different definitions, mindful living is one common descriptor of the seekers of voluntary simplicity (Lee, 2010). The concept of mindful living refers to consumers’ acceptance and observance of a less materialistic lifestyle as a more personally fulfilling, socially beneficial and environmentally friendly lifestyle (Walther et al., 2016). One important motivation for engaging in anti-consumption practices is the wish to consume more sustainably. This motivation is particularly interesting as consciousness of environmental pollution and climate change has been rising in the populations of most industrialised countries and calls for consumption reduction are often heard (Hoffmann and Lee, 2016). A study by Finn and Louviere (1992) suggests that while consumers often express a concern for food safety, they were actually the least concerned about food safety, when forced to choose between the importance of that construct and other issues such as the environment, medical care, crime, poverty, taxes, etc.
Another reason for anti-consumption is brand dislike, which is explained “as the negative judgment expressed by the consumer and/or implied in the choice not to buy” (Dalli et al., 2006, p. 87). In some cases, consumers love a brand at the micro-level, but due to macro-level anti-consumption of the same environmentally damaging brand, they begin to hate that brand from their own micro perspective (Cova and D’Antone, 2016). Brand avoidance is a well-studied area of research with regard to anti-consumption (Lee et al., 2009). Brand avoidance can theoretically extend beyond individual brands to the entire product category of a food or drinks as explained in case of bottled water (Lee, 2010). Lee et al. (2009) identified three main categories for brand avoidance, i.e. experiential avoidance, identity avoidance and moral avoidance.

The first category is experiential avoidance, where consumers avoid a brand following a bad experience. This category is clearly transferable to the food context. A bad experience such as vomiting, diarrhea could lead to anti-consumption of particular food product, e.g. Burger or product types (e.g. fast foods) associated with the negative experience. A second category, identity avoidance, is also useful in the context of food avoidance. Here consumers avoid food brands because they do not identify with the brand or, in the context of food, a product category. This lack of identification may reflect negative possible selves (Banister and Hogg, 2004; Hogg and Banister, 2001) informed by negative stereotypes (Dalli et al., 2005). A final useful category identified in the literature is moral avoidance, which includes attitudes and behaviours questioning the dominant forces or the prevalent norms of consumption. This category of avoidance overlaps with some of the ideological motivations for voluntary simplicity discussed earlier on and in the food context could relate to a more general negative sentiment towards certain foods and brands, possibly originating from ethical or religious beliefs. Another domain included in our research is the anti-consumption attitude towards national food chains as compared to multi-national food chains. Richardson as well as Nenycz-Thiel and Romanıuık (2009) argue that consumers perceive private labels and national brands differently. Nenycz-Thiel and Romanıuık (2011) emphasise that many consumers perceive private labels from different stores as a homogenous group. Hence, it is more likely that consumers avoid private labels in general if they had a negative experience with a specific private label in the past.

Methodology

Research context
This qualitative investigation focusses on customer experiences and perceptions related to two major fast-food chains in Turkey, one global and one local; thereby providing a comprehensive assessment of uncovering the reasons behind anti-consumption. Furthermore, the choice of this context is motivated by the rapid expansion of modern shopping malls. The first shopping mall launched in İstanbul triggered the extension of fast-food chains allowing global fast-food chains to penetrate the Turkish market (Tek, 1999). Despite the concept of fast food being familiar with Turkish food providers and street vendors since a long time (Ahsıka and Yenal, 2006; Akarçay and Suğur, 2015), the first Western-style fast-food chain introduced in Turkey in 1986, McDonald’s, was a beginning of an era of rapid fast-food expansion (Schlosser, 2004; Akarçay and Suğur, 2015). Currently, local fast-food franchise chains offer döner kebabs (Baydöner, HDİskender), mutton and bread sandwiches (Şampiyon Kokoreç), sweets (Haci Şerif), Turkish pizza (ISOT), steak a la turca (Komagene), ice-cream (MADO) and Turkish Bagels (Simit Saray). However, there seems to be a growing discontent with fast-food chains, specifically, many questioning their authenticity. This led some fast-food restaurants proudly proclaiming that they “do not have any other franchisee branch” in their displays and promotional material.
Data collection and analysis

Two fast-food chains were selected for the current investigation. Chain 1 represents a Turkish subsidiary of a major global fast-food brand. Chain 2 represents a local fast-food chain. The selection of the comments concerning these two chains was based on purposefulness. These two chains were selected on their potential capacity to warrant rich consumer comments which would best inform our research questions. Also, the rationale for selection was the size of the chain: Chain 1 is one of the global fast-food chains with most local branches, while Chain 2 is the largest local provider with a significant number of local branches. These two chains operate at a national level.

The number of downloaded and analysed comments from each domain is given in Table I. We downloaded recently posted customer comments, complaints and suggestions related to the selected fast-food chains from the following domains: Facebook, Instagram, Twitter and Şikayetvar. The comments constituting this study were downloaded during the period February 2017–2018.

Once downloaded, these comments were reviewed, assessed and classified by four trained independent raters. The raters first assessed whether a comment contained any reason for possible future non-consumption. To accomplish this, they were asked to read a comment several times and identify a major reason expressed in the comment as to why a commenting person would not be involved in further consumption of the food item under focus. At the same time, the raters classified the comments/reasons into one of the categories proposed by Lee et al. (2009). The major categories in Lee et al.’s table were experiential, identity and moral avoidance reasons. If the reason did not fit the classification, it was treated as a new (sub)category. The inter-rater reliability for this classification task was 95 per cent.

For example, a typical comment would be:

[…] in the [X] branch of Chain 2, we asked our meal to be replaced due to finding a strand of hair. The replacement meal was served without fried butter and sauce. I think this was their punishment for asking a replacement. They a zero understanding of service.

The rater can identify two potential reasons from such a remark. These are finding a foreign object in the meal and a problem with a service. Relating these two comments to Lee et al.’s framework, these two reasons represent experiential avoidance, specifically, experiences related to unmet expectations about the product/service attributes. To finalise the data collection and classification results, the raters met several times among themselves and the researchers to cross examine and validate their interpretation of the comments. In their final meeting, the raters examined the interpretations and classifications one-by-one, and then attempted to arrive at the final triangulated decision regarding the comment’s category. The interpretation process was iterative, that is, moving back and forth between the general context of categories (as posited by Lee et al., 2009) and the specific meanings of the comments.

The researchers compiled all these evaluations and compared the results. The comments that did not fit any category were further analysed by the researchers, which resulted in new categories and subcategories (Table II).

<table>
<thead>
<tr>
<th>Fast-food chains</th>
<th>Branches in Turkey</th>
<th>Sikayetvar.com</th>
<th>Twitter</th>
<th>Facebook</th>
<th>Instagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast-food chain 1</td>
<td>606</td>
<td>292</td>
<td>50</td>
<td>88</td>
<td>170</td>
</tr>
<tr>
<td>Fast-food chain 2</td>
<td>106</td>
<td>299</td>
<td>43</td>
<td>50</td>
<td>161</td>
</tr>
</tbody>
</table>

Table I. The number of comments analysed
Findings and discussion

Experience-based avoidance: expectations

As previous research anticipates (Lee et al., 2009), most of the reasons for fast-food avoidance were linked to customers’ negative past experiences. The analysis of the comments indicates that experiential avoidance is consolidated not only due to the feelings of dissatisfaction with product/service features, but also due to the dissatisfaction with food providers (e.g. businesses, employees, waiters), ambiance (e.g. store environment, physical evidence, hygiene) and temporal elements (e.g. waiting time, timely response, specific seasons). In other words, we find that the avoidance-linked experience is not unidimensional, rather it is “spherical” which includes not only “what” but also “who”, “where” and “when”.

The bulk of complaints were based on product attributes which failed to meet customers’ expectations. Expectations related to attributes such as taste, smell, portion size, serving temperature, freshness, aesthetic aspects, meal presentation and preparation quality were mentioned. A customer commented:

[…] when I was enjoying my iskender [a Turkish dish of grilled lamb over pieces of bread] I felt something hard under bread pieces that could be barely caught with a fork. It was a piece of fat [with disgusting taste] that I wasn’t even able to chew. Upon my complaint, they told me that it might have fallen into the plate when they were cutting the döner and that it is not a big deal. They acted as though it is normal, while it caused so much disgrace and I lost my appetite due to [repulsive fat taste] spoiling my palate. (Chain 2 customer)

This comment indicates that the rejection of a food item can be caused by unpleasant experiences related to a specific aspect of food which in itself can occur incidentally. Perhaps, in such cases avoidance is not based on the total rejection of the whole category, but the food originating from a problematic source that can potentially cause similar negative experiences. Researchers talked about “taste memory” that is long-term learning that results from a new taste that is stored with associative experiences (Núñez-Jaramillo et al., 2010). When a new taste causes a problem or a negative experience, it becomes aversive familiar. In the comment above, the unpleasant taste of a piece of fat makes the whole meal aversive familiar.
In addition, the problems such as cold ingredients (e.g. meat), undercooked food (e.g. raw potatoes), unexpected objects in food (e.g. plastic, hair, wire, bone/cartilage, glass pieces, insects), dated/spoiled ingredients (e.g. yoghurt drink, food oil) and apparent defects (e.g. a bitten meat patty) prominently featured in the complaints. A customer commented: “the worst iskender I have ever tried. There was no taste in the meat at all [...]”, while another customer noted: “in fact I was forced to search for any taste [in your food]. Since then, I vowed to never eat [brand] iskender from anywhere” (Chain 2 customer). These comments indicate that a local provider faces the challenge of delivering “the expected” that is shaped by localised socio-cultural norms. A customer posted:

[...] we went to the [...] branch for lunch on [the date]. The [dish] was tasteless, potatoes were not done well and the whole meal had a smell of rancid oil. I felt sick and nauseous. Although we told the headwaiter about this, he didn’t care. I would like to “congratulate” him on this [...] I’ll never visit this place again, not with such quality. (Chain 2 customer)

The problem, whether it is a failure to cater to a specific palate or any other problematic food condition, is a holistic experience. Faced with such problems, customers may register what we call “problematic attribute memory” just like in the case of “taste memory”. Here, food avoidance arises as a holistic generalisation of a selective fragment rather than a priori sweeping attitude towards a whole food category.

Another significant cluster of complaints pertains to service expectations. The majority of the complaints in this category were about the behaviour of service personnel. A customer explains:

It was two of us. Instead of politely approaching us and explaining about their rule that customers arriving in groups of two may not sit at the other than two-person tables, we found someone screaming at us from afar saying that we cannot have the table we had selected. In addition to their misconduct, they started arguing with us in a very rude manner. At the end, they showed us to the door. (Chain 1 customer)

The service personal are seen to behave in an unwelcoming manner such as speaking very loudly, yelling at customers, arguing with customers as well as between themselves, rudely responding to questions, staring unnecessarily at customers, physically confronting customers, demanding unfair extra payments or blaming the customer for minor service accidents. Also, customers mention equipment failure (e.g. the failure of electronic payment machines). As the analysis of the comments suggests, the experience of a service turns into an integral part of food experience. We find that, in such contexts, food consumption is more than simply enjoying food. The environment that includes the delivery and service can also become a major factor in avoidance.

Another group of complaints are related to the ambiance of the provider’s space. One of such prominent factors is hygiene and cleanliness. A customer commented: “the toilets are not clean” (Chain 2 customer). People also commented on most of the physical evidence within the service-scape: bathrooms, employee uniform, tables, walls, utensils and kitchen equipment.

Last but not the least, food is related to the time dimension which gives rise to temporal expectations. Our reading of the comments shows that enjoying food at an expected time is qualitatively different to food delivered with “time-related” problems. Customers waiting longer than expected to be served seems to be the most recurring problem. Also, people tend to expect better service during specific seasons such as Ramadan.

Experience-based avoidance: health-related hazards and risks
Not only expectations, but also directly experienced health effects of food can lead to avoidance. Being different from other commercial goods/services, food is directly experienced due to ingestion (Ronteltap et al., 2007), hence past experiences of body-food
congruence tend to prevail over other concerns. Past experiences become a gauge of risks/hazards related to food intake from a particular source. A customer comments: “four of us became sick after eating iskender […] this food poisoning made us spend whole night in the hospital” (Chain 2 customer). In general, similar comments indicate a great level of concern about food poisoning, gastrointestinal disorders, and minor digestion issues which are attributed to the specific food consumed. Food safety and hygiene issues are also mentioned:

[…] we went to [branch] on [date] at […] mall. We ordered 3 iskenders and these were served in 5 to 10 minutes. However, the waiter’s apron was dirty with patches of sauce and oil. While serving the food his fingers got in the dish while his thumb was inside the yogurt. We did not accept this and asked to replace the food […] the sides of the plate were unbelievably dirty […] The employees told us that’s quite normal as if we never been there. I was discredited in front of my guest to whom I have been praising the place. I will never allow either myself or people around me to go a fast-food place. (Chain 2 customer).

In addition, the access to options like allergy-free, gluten-free, GM-free, diet friendly, and sugar-free (e.g. drinks for diabetics) dominate the discussions online for Chain 1.

Identity and moral avoidance
In addition to experiential avoidance, the previous research (Lee et al., 2009) anticipates both identity and moral avoidance as significant patterns of anti-consumption. We find that identity related reasons play rather a limited role in food avoidance. Only few customers referred to symbolic incongruence between the fast food places and their own identities. One of such reasons mentioned was that the place was perceived as “a restaurant to where only a cheap person would go” (Chain 2 customer). In another comment, a customer felt that the fast-food branch they used to patronise is not a suitable place anymore because its treatment of customers is preferential:

[This fast-food restaurant] is the place that I used to enjoy but now I would never go there because you only care to serve those who are fasting [in Ramadan]. (Chain 2 customer)

In contrast, there is significant evidence that consumers avoid fast food places on moral grounds. For example, many consumers felt that the fast-food businesses are driven by self-interest only and that they are not concerned with the customer’s long-term health:

[This fast-food business] is driven by self-interest alone: the salads they offer are not there for your health but for the company’s bottom line. (Chain 1 customer)

In another comment, a customer called to avoid the vendor’s offerings:

[The fast-food business] destroys Amazon forests to promote meat production. (Chain 1 customer)

Such comments attest to customer perceptions that are uniquely based on ideological assumptions. These assumptions can range from sustainability concerns to altruistic motives.

Interactivity avoidance: dysfunctional market behaviour
Food consumption is underscored by dynamic interactivity between involved parties in the context of market exchanges. If market interactions are perceived to be problematic, then customers are more likely to avoid such interactions, which in turn might lead to general avoidance. The analysis suggests that dysfunctional market behaviour of a food provider can become a reason for non-consumption. Some aspects of a company’s marketing activities directly affect customers. For example, customers complained about greater-than-expected prices, hidden prices (extra charges for delivery, toppings, sauces, etc.), non-standardised prices, and inconsistencies between advertised and real prices:

[This fast-food restaurant] asked to pay extra 1 Turkish lira (TL) for transferring yogurt to a side plate. When we told them that we do not want to eat yogurt they told still charged us an extra 1TL. (Chain 2 customer)
Information exchange is an important element of market interactivity. Specifically, in the context of marketing communication, over-promising while under-delivering creates a negative perception of the exchange situation. The negative perception of the exchange may lead to relationship avoidance which spills over to the food consumption context. The complaints mention a divergence of real practices from advertised ones such as unavailability of specific offers (e.g. free coffee, complementary presents, buy one get one free offers). The communication gap, the differences between information, images, promises sent to the market and the actual state of affairs, signals a one-sided, asymmetric attitude that customers might find unfair.

*Interactivity avoidance: cultural insensitivity*

Turkey traditionally had strong hospitality culture centred on coffeehouses (Karababa and Ger, 2010). There are established commonly accepted standards of serving food which partially structure how food should be served and enjoyed in the public spaces (Karababa and Ger, 2010). One of such standards is to serve tea after food. The general expectation is that a cup of tea must be offered free of charge after a meal. Many customers complained about not being able to get their tea:

> [... my bill totalled almost 60 Turkish liras [which is a significant amount in the Turkish context] and I asked the reason why I didn’t get my [traditionally expected] tea. I was told that they don’t serve tea in weekends. This is certainly not an ethical clean business. (Chain 2 customer)

The above quote illustrates dissatisfaction with the business because it fails to follow the etiquette of acceptable interaction with customers. It is perceived to be “not clean” which in this context might mean that the business does not uphold its responsibility, set by customary norms and traditions, within exchange relationships.

Another aspect of cultural insensitivity is given in the following quote:

> We had dinner at [the fast-food restaurant] in the evening of a weekday. I wish we didn’t. Never experienced such a thing. They were so busy with their Arab customers that they ignored us. We asked for bottled water but we didn’t get it. They didn’t bring fork and knife for ten minutes, as a result we had to eat cold food. There is no working ethic. Turks should never go there because they don’t care about Turks, but they only take a strong interest in their Arab customers. (Chain 2 customer)

This quote illustrates the tendency of some customers observing how the business serves other customers. The cultural norm in Turkey dictates that “guests” are treated equally, while only deserving groups (e.g. elderly, community leaders) would be allowed to get preferential treatment. The violation of such etiquettes, in their different forms, leads to negative impressions of the food vendor and consequently leads to food avoidance.

*Limitations and future research directions*

The current research explored a limited number of fast-food chains in Turkey, which provides an interesting platform for future research involving more businesses in the same context. A diverse inclusion of businesses in the analysis is likely to yield specific perceptions of food avoidance in relation to the nature of business. For example, reasons to avoid fast food may differ from food anti-consumption behaviours in other type of eateries.

This paper focusses on understanding a specific context where the majority population belongs to a particular faith (i.e. Muslims) within an emerging economy setting. While it provides a unique canvas to provide an exploratory investigation, it would be insightful to examine additional countries classified as emerging economies with varying degrees of
cultures (and societies). Such an effort can help in developing a validated framework of anti-consumption factors particularly relevant for emerging economies.

Furthermore, as this paper unfolds interesting insights on the extension of Lee et al.’s (2009) model, it is important for future work to embed multiple approaches of testing. This could involve content analysis in combination with social network analysis to investigate the social structures behind anti-consumption and consumption. Such an approach would assist in modelling the density (connections between individuals) and centrality (behaviour of individual within the network) of individuals who exhibit a particular consumption behaviour (particularly, anti-consumption). Examining the relationship of reasons (for anti-consumption) generated via content analysis and the social position of actors within networks could result in generalisable findings for regions across the world.

Finally, this study elucidates perceptions of anti-consumption through qualitative social media analysis keeping in view the inherent challenges associated with the nature of the topic (anti-consumption). However, this research can also be extended through a quantitative approach, for example, the concepts proposed here can be operationalised and subsequently tested for validation. Furthermore, in terms of methodological development, blogs present extensive amounts of archival data that can be effectively utilised as an additional source of triangulation (Gustafsson and Khan, 2017) in future inquiries.

**Conclusion**

This investigation has explored the phenomenon of fast-food avoidance in the Turkish context. The findings indicate that food avoidance is a complex phenomenon that can be based on a multiplicity of reasons. We extend Lee et al.’s (2009) model by observing additional categories and subcategories of food avoidance including the expected ones. As expected, food avoidance tends to be based on past product/service experiences, identity work and moral dispositions. This confirms the Lee et al.’s model. Within the experiential avoidance category, we additionally observe ambiance and temporal expectations within the unmet expectations sub-category (refer to Table I). Also, we conceptualise a new sub-category of hazards/risks within the experiential avoidance category. Moreover, the findings indicate that an additional category of food avoidance exists which we refer to as “interactivity avoidance”. The customer, in general, is found to assess whether the other party, the food provider, would be a suitable exchange partner in their search for satisfactory food sources. Interactivity avoidance includes customers’ judgement about vendors’ marketing practices as well as their cultural sensitivity.

This research shows that specific fast-food avoidance subcategories may uniquely apply to a specific global vs local provider. For example, most experiential avoidance subcategories are found to be prevalent for both global and local providers except ambiance expectations and poisoning (see Table II), which were predominantly observed in relation to the local chain. Perhaps, the local chain practices less stringent service standardisation and maintains lax food safety standards. In contrast, the global chain is distinguished by prevalent issues relating to ideological incompatibility. This is expected since it is a business which operates within a distinct culture underscored by distinct ideologies. Moreover, the study finds that cultural insensitivity, which is a part of the newly proposed interactivity avoidance category, is predominantly a local issue. Customers might be maintaining higher expectations from the local business in terms of knowledge on local traditions, while a global provider is shown greater tolerance.

To conclude, this research investigation provided several in-depth insights into the reasons why people might decide to avoid fast food, specifically in the context of Turkey. We believe that the following principles underscore this tendency. First, food may
not be seen as an indistinguishable commodity. In the research context under focus, we realised that food avoidance does not mean abstaining from an abstracted food category. The avoidance behaviour is not absolutist or totalistic, rather it resembles micro-context manoeuvring in dynamic situations. Second, food seems to depict a spatial-temporal form within the Turkish context. It is perceived to be a unique happening that has distinct spatial and temporal features. This investigation shows that the food’s sphere includes its features, its agents, ambiance, relevant places, third parties, cultural norms and social settings. Hence, the customer experiences “food” as a hallmark of concrete socio-cultural settings. Third, food may well be a part of holistic exchange relationship. The category of “interactivity avoidance” indicates that the food, its unique socio-cultural form, becomes an integral part of exchange relationships. Most often, its physical quality is indistinguishable from, in most cases well integrated into, the quality of market interaction.

References


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Factors influencing Turkish parents’ intentions towards anti-consumption of junk food

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Abstract

Purpose – The purpose of this paper is to analyze parents’ intentions toward the anti-consumption of junk food for their children. The paper incorporated the theory of planned behavior (TPB) using two external factors, which previously have not been investigated together.

Design/methodology/approach – A questionnaire was designed from previous studies consisting of the constructs of the TPB (intention, attitude, subjective norm, perceived behavioral control) and two external factors (anticipated regret and perceived risk). An online survey was conducted among 392 participants. Confirmatory factor analysis and structural equation modeling were used to test the hypotheses.

Findings – All hypotheses were supported. Attitudes, subjective norms and perceived behavioral control affected parental intentions toward the anti-consumption of junk food. The two external factors of the model also affected parental intentions toward the anti-consumption of junk food.

Research limitations/implications – There were four limitations regarding participants, the research model and product type.

Practical implications – Junk food producers, sellers, fast food restaurants and public policies should encourage healthy lifestyles, particularly for children. Junk food producers and fast food restaurants should offer healthier nutritional options. Governmental policies should include legal regulations to restrict marketing strategies for unhealthy products. Parents, as the primary influencers of children, should be educated regarding the anti-consumption of junk food.

Originality/value – The study contributed to the anti-consumption literature by analyzing buying intentions toward junk food within the concept of anti-consumption, analyzing intentions by adding anticipated regret and perceived risk to the TPB model and analyzing the effects of perceived risk on anticipated regret.

Keywords Perceived risk, Theory of planned behaviour, Anti-consumption, Anticipated regret, Junk food

Paper type Research paper

1. Introduction

Changing lifestyles and family structure, increasing numbers of women in work life, and limited time to prepare food have all contributed to significant changes in food consumption habits. As a result, the number of meals, snacks and junk food products eaten away from home has increased dramatically over the decades. Junk food is defined as any high-calorie food or beverage which has low nutritional value due to lack of protein, vitamin or mineral content while being high in salt, sugar and fats (Sequeira et al., 2014). Nowadays, children frequently consume various junk foods such as potato chips, fast food, pizza, candy, fried food, biscuits, cookies and soft drinks (Smith, 2006).

Junk food is often perceived as tasting better than healthy foods, as well as being quick and convenient, inexpensive and easily accessible, which encourages its consumption (Igetit, 2010). Scully et al. (2015) found that food products are the most advertised products during children TV programs, and the advertisements for junk food such as fast food and
sweets were more frequent than those for healthier foods. Ads promoting the consumption of junk foods usually result in an immediate increase in consumption. For example, Harris et al. (2009) confirmed that children’s consumption increased by nearly 50 percent when exposed to junk food ads. Unfortunately, frequent intake of junk food has become associated with several health concerns. According to the WHO (2016), the rate of obesity in most developing countries has more than doubled since 1980. In 2017, nearly one in six children in OECD countries is overweight or obese and, specifically Turkey is among the ten OECD countries with higher levels of obesity, with 32.1 percent of people being obese (OECD, 2017). According to data from the WHO (2016), 32 percent of Turkish 2 and 18 year olds are obese, about 21 percent of children aged up to 5 years old are obese or overweight, while 22 percent of 6–18-year-olds are obese or overweight.

While obesity is a global problem with many health hazards, the majority of overweight children live in the developing world. Junk food is quick to prepare, easy to eat and makes children feel happy, but in the long term it causes several health problems, such as increased depression, heart problems, tooth decay, overweight and obesity, and chronic diseases (Khorasani et al., 2017). It may also be an addictive behavior (Curtis and Davis, 2014) that prevents children from choosing healthier alternatives, such as fruits, vegetables or salads. Given the continuing growth in overweight and obesity, it is essential to direct efforts to improve eating behavior, and it is suggested that more social marketing efforts are needed. In a research conducted in Italy, Puggelli and Bertolotti (2014) also found that ads of unhealthy foods primarily target children, while healthy food ads target adults. These findings showed that social marketing, which is one of behavior change tool with education and legislation, could play a vital role to change behaviors and build public awareness. Hastings and Domegan (2014) emphasized that social marketing should not be limited to individual behavioral change, but must be multifaceted to encourage a much broader social change. While social marketing can be applied to a wide range of social issues, the major of campaigns are related to personal health (Peattie and Peattie, 2009). According to Evans (2006), social marketing is one of the critical approaches that can reduce engagement in risky health behaviors. Social marketing activities aim to change behaviors to ensure the well-being of both individuals and society. Thus, social marketing campaigns were developed to discourage junk food consumption. Petrova and Cialdini (2012) proposed social marketing campaigns to counter media messages promoting junk food consumption. To support social marketing messages, Wymer (2010) recommended enlarging the boundaries of social marketing educates consumers, develops a social movement and governmental regulations to change individual behavior. These social marketing policies could result in a change in food manufacturers’ products and pressure to reduce the frequency of junk food ads (Lorena and Pilar, 2014).

In their review, Carins and Rundle-Thiele (2014) argued that empirical evidence assessed in the literature suggests that social marketing is effective in promoting a variety of healthy eating behaviors. Children are the primary target group of these policies. Under these policies, some legal regulations have been implemented in selling channels in schools, such as vending machines, snack bars and canteens. These regulations enforce point-of-purchase information aimed at reducing junk food consumption. Some countries, such as Canada, are starting to restrict the marketing of unhealthy food and beverages to children, covering all advertising of foods high in sugar, salt and fat. These restrictions apply to advertising on television, online, in magazines and newspapers, in-store promotions (Health Canada, 2017). Parents often oppose junk food, which may, in turn, encourage their children to eat more healthily, due to their strong influence on their children’s food consumption (Logan, 2005). For this reason, social marketing activities should not only target children but also parents, who play an important role in children’s eating habits and physical activity behaviors. The aim of social marketing is
to create awareness for healthy eating and preventing the consumption of junk foods. The outcomes of a social marketing program are to increase parents’ knowledge and influence behavior in order to encourage the provision of healthy food choices such as fruit and vegetable consumption for their children (Thornley et al., 2007).

In this study, parents’ intentions toward the anti-consumption of junk food were examined because of their strong influence on their children’s food consumption. Many researchers revealed that adolescents’ eating habits could be influenced by their parents, peers, government and media within the context of socialization (McNeal and Ji, 1999; Young and Fors, 2001; Raiha et al., 2006; Klime, 2011; Singh and Nayak, 2015). The study aimed to analyze the factors influencing parents’ intentions using the theory of planned behavior (TPB) (Ajzen, 1985) and two external variables – perceived risk and anticipated regret. These variables have not previously been investigated together with this model for the anti-consumption of junk food. The variables used in the study were attitudes, subjective norms, perceived behavioral control, perceived risk and anticipated regret, which were adapted and used to predict and explain parents’ intentions toward the anti-consumption of junk food.

2. Theoretical background and hypothesis development

2.1 Original TPB and its variables

Many theories and models have been developed in the literature to explain consumers’ behavioral intentions (BI), such as the theory of reasoned action (Fishbein and Ajzen, 1975), TPB (Ajzen, 1985), and the technology acceptance model (Davis, 1989). This study focused on the TPB, widely used in previous studies of consumer intentions toward food purchasing (Shah Alam and Mohamed Sayuti, 2011; Arvola et al., 2008; Tarkiainen and Sundqvist, 2005; Hansen et al., 2004; Vermeir and Verbeke, 2006; Bredahl, 2001; Karimi Shahanjarini et al., 2012; Dehdari et al., 2013; Yazdanpanah and Forouzani, 2015; Ajzen, 2015; Mirkarimi et al., 2016; Khorasani et al., 2017). Although a widely used theory in the literature, there have been many criticisms of TPB. Jun et al. (2014) along with Jun and Arendt (2016) criticized its assumptions and conceptualization of its variables. The first criticism is the assumption of TPB that is based on rational utilitarian decision-making models for consumer behavior (Jackson, 2005; Ohtomo and Hirose, 2007; McCleery, 2009; Ajzen, 2011, 2015; Yazdanpanah and Forouzani, 2015; Miller, 2017), and ignoring the role of emotions on behavior (Sheeran et al., 2013; Sniehotta et al., 2014). The second criticism concerns the conceptualization of TPB variables, particularly attitudes and subjective norms (Kraft et al., 2005; Rise et al., 2008; Tuu et al., 2008; Fishbein and Ajzen, 2011; Tátaut and Bábán, 2012; Jun et al., 2014; Jun and Arendt, 2016). TPB focuses only on cognitive attitudes and social norms, ignoring self-identity and anticipated affect variables. Thus, Ajzen (2002), Kim et al. (2013), Jun et al. (2014) and Jun and Arendt (2016) responded to this criticism that affective attitudes are accounted by adding emotion determinants of BI, such as anticipated regret and feelings of guilt. At the same time, Sniehotta et al. (2014) expressed that TPB has a very limited predictive validity. Therefore, it has been suggested that adding new constructs may increase the theory’s predictive power (Ajzen, 1991; Sniehotta et al., 2014; Riebl et al., 2015; Menozzi et al., 2015). The final criticism is that TPB model did not take into account the feelings and emotions that could have an effect on intention and behavior (Aziz et al., 2017; Ogbari et al., 2018) such as food choices (Menozzi et al., 2015). To counter these deficiencies, the addition of effect and emotions as background variables to the original TPB were recommended (Ajzen, 2011). Despite criticisms, the TPB model is commonly used for predicting and analyzing the eating behaviors (Lobb et al., 2007; Mullan et al., 2013; Chen, 2017). Inspired by the criticisms regarding the TPB, the current study has added two external variables: anticipated regret and perceived risk. In this part, following an explanation of the TPB and its original variables, there was a justification for adding two external variables to the model.
The TPB, developed from the TRA, is one of the most widely accepted models, showing the relationships between BI and attitudes, subjective norms and perceived control. According to the TPB (Ajzen, 1991), buying behavior is determined by three types of beliefs: behavioral beliefs, which are the outcomes of the behavior; normative beliefs that reflect the normative expectations of others; and control beliefs, the belief that the behavior is under control. Behavioral beliefs constitute attitudes toward the behavior, normative beliefs generate subjective norms and control beliefs form perceived behavioral control. In the TPB model, the combination of attitudes, subjective norms and perceived behavioral control create a BI, and BI, which in turn leads to actual buying behavior. Wang et al. (2012) stated that a focus on BI is much more relevant than actual behavior since situational factors, as moderators, affect the intention–behavior relationship in the TPB. Hence, in this study, intention toward the anti-consumption of junk food was analyzed within the elements of TPB, and also two external factors, perceived risk and anticipated regret. In contrast, many studies in the literature have measured intentions toward fast food consumption, but without using the TPB. These employ a number of other factors, such as quality and satisfaction (Namkung and Jang, 2007); quality, image, value and satisfaction (Ryu et al., 2012); perceived service quality, service value and satisfaction (Brady et al., 2001); perceived service quality dimensions (food, service and physical environment), price and satisfaction (Ryu and Han, 2010); food quality, brand image, social recognition and perceived competitive advantages (Frank, 2012); and animosity, ethnocentrism, religiosity and perceived quality (Kashif et al., 2015).

**Attitudes.** Attitudes toward a behavior are generally based on consumers’ past experiences and resulting the consumers’ judgments about a specific behavior (Kashif et al., 2018). According to the TPB (Ajzen, 1991), attitudes influence BI. However, some previous studies regarding junk food found that attitudes did not have a significant effect on intentions toward junk food (Seo et al., 2011; Dehdari et al., 2013). As theory predicts, many other studies showed the positive effects of attitudes on intentions (Ajzen, 2015; Chen, 2007, 2017; Riebl et al., 2015; Menozzi et al., 2017). In line with the TPB, consumers’ attitudes toward junk food negatively affect their buying intentions due to their perception of these, as unhealthy and low in nutrition. Therefore, the first hypothesis was developed:

**H1.** Attitude toward junk food negatively affects the intentions toward junk food consumption.

**Subjective norms.** A subjective norm is a type of social influence through perceived social pressure to perform a behavior (Ajzen, 1991; Karimi Shahanjarini et al., 2012). Some previous research shows that subjective norms have a positive effect on intentions (Ajzen, 2015; Chen, 2007; Hewitt and Stephens, 2007; Seo et al., 2011; Mirkarimi et al., 2016), whereas others found no significant effect (Dehdari et al., 2013; Chen, 2017; Menozzi et al., 2017). In the TPB, subjective norms affect BI. Regarding junk food, previous research shows that subjective norms negatively affect the intentions toward buying junk food in the literature. This leads to the following hypothesis:

**H2.** Subjective norm negatively affects the intentions toward junk food consumption.

**Perceived behavioral control.** Perceived behavioral control shows the individual’s personal control level over what to buy (Chen, 2017). In some research, perceived behavioral control was found to have a positive effect on intentions (Verbeke and Vackier, 2005; Kim et al., 2003; Conner et al., 2002; Chen, 2007, 2017; Seo et al., 2011; Dehdari et al., 2013; Menozzi et al., 2017; Khorasani et al., 2017). However, in other research, there was no significant effect on intentions (Ajzen, 2015; Yazdanpanah and Forouzani, 2015; Jun and Arendt, 2016). The TPB predicts that people with higher perceived behavioral control will
show greater intention to buy (Ajzen, 1991). Accordingly, behavioral control will negatively affect the intentions toward buying junk food. The next hypothesis therefore was developed as:

H3. Perceived behavioral control negatively affects the intentions toward junk food consumption.

2.2 External variables of TPB: anticipated regret and perceived risk
In the food literature, several extra factors added to the TPB to better explain the relationships between attitudes, intentions and behaviors. Ghoochani et al. (2018) found that health consciousness and trust are important factors that affect attitudes toward fast-food consumption. Other variables that have been added to the TPB model are perceived parental control to analyze its effects on intentions toward adolescents’ junk food consumption (Karimi Shahanjarini et al., 2012) and self-identity variables to predict health behavior (Pierro et al., 2003) and brand personality variables to analyze purchase intentions toward organic food (Othman and Rahman, 2014). In the present study, perceived risk and anticipated regret were added to the TPB model to analyze their effects on intentions.

Anticipated regret. Zeelenberg (1996) defines regret as “a negative, unpleasant emotion that we experience when realizing or imagining that our present situation would have been better, had we acted differently.” According to regret theorists, it is anticipated that consumers take into account this emotion when making a purchasing decision (Sheeran and Orbell, 1999) and is experienced as a negative emotion pre-behaviorally (Simonson, 1992). The emotion is triggered by a decision to choose the wrong alternative, whether action or inaction (Tsiros and Mittal, 2000; Zeelenberg et al., 2002; Van Dijk and Zeelenberg, 2005; Zeelenberg and Pieters, 2007; Lee and Cotte, 2009; Sandberg et al., 2016).

Several studies showed that anticipated regret is an important variable of the TPB for predicting intentions related to health behaviors (Conner et al., 2015; Sandberg and Conner, 2009), unhealthy behaviors (Van Koningsbruggen et al., 2016), and avoiding junk food (Richard et al., 1996; Sandberg and Conner, 2008; Weijzen et al., 2009; Ajzen and Sheikh, 2013). However, in some studies, although it was found that anticipated regret may not directly influence consumers’ intentions, attitude may be fully mediated between regret and intentions (Lee et al., 2007; Sharifi and Esfidani, 2014). Therefore, in this study, anticipated regret was added as an emotional construct to predict the anti-consumption of junk food intentions in the TPB model. So, the next hypothesis was developed below:

H4. Anticipated regret negatively affects the intentions toward junk food consumption.

Perceived risk. Perceived risk is defined as potential loss expectation and uncertainty due to a purchasing decision (Ulleberg and Rundmo, 2003; Chen, 2017). There are different types of perceived risk in food consumption (Roosen et al., 2005; Siegrist et al., 2005; Angulo and Gil, 2007; Klerck and Sweeney, 2007; McCarthy and Henson, 2005; Tsiros and Heilman, 2005; Siddique, 2012; Choi et al., 2013): socio-psychological risk; hygienic risk; health risk; financial risk; and environmental risk. Children, who regularly eat junk food, are also a perceived risk category that may be subject to health problems, such as food poisoning, unbalanced nutrition and weight gain or obesity (Rosenheck, 2008; Seo et al., 2011; Siddique, 2012; Visscher et al., 2017).

Perceived risk is an additional construct for predicting BI toward food consumption in the TPB model (Prati et al., 2012; Siddique, 2012; Choi et al., 2013; Chen, 2017). However, some studies indicated that perceived risk did not directly affect BI, it affected consumer attitudes toward various types of food including genetically modified food (Cook et al., 2002; Verdurme and Viaene, 2003), nutritional drinks (Ansari et al., 2017), chicken consumption (Lobb et al., 2007),
organic fruits and vegetables (Saba and Messina, 2003), street food (Choi et al., 2013) and food additives (Chen, 2017). Accordingly, the next hypothesis was developed as:

\[ H_5. \text{Perceived risk negatively affects attitudes toward junk food consumption.} \]

As well as affecting attitudes, also perceived risk caused negative emotions such as disappointment and regret. Townsend and Campbell (2004) revealed that risk-related decisions evoked anticipated feelings, such as regret. Both perceived risk and anticipated regret resulted in possible adverse outcomes and losses. Therefore, perceived risk was closely related to anticipated regret (Chen et al., 2011). In this study, parents feel anticipated regret because of the risks associated with the junk foods bought for their children. Thus, the last hypothesis was developed:

\[ H_6. \text{Perceived risk positively affects anticipated regret toward junk food consumption.} \]

Figure 1 shows the conceptual model of this study, based on the six hypotheses proposed above.

3. Methodology
3.1 Data collection method and measures
Data were collected using an online survey via a self-administrated questionnaire to control and minimize the effects of social desirability bias. Social desirability bias, which is an important problem with face-to-face surveys, is defined as a systematic error in self-reported measures that may cause respondents to give a normative or socially acceptable answer, rather than an honest answer (Malhotra, 2010; Neuman, 2011).

The survey used in this study was compiled from previous studies to reveal the relationships among variables. It consists of 28 items on a five-point Likert-type scale, ranging from “strongly disagree” (1) to “strongly agree” (5). Perceived risk was measured with eight items adapted from Choi et al. (2013). Anticipated regret was measured with three items adapted from Bui et al. (2011). The original TPB scale was not suited to junk food consumption, so was not used. Attitude was measured with six items adapted from Seo et al. (2011), frequently used in the junk food literature (Alladin, 2015; Mirkarimi et al., 2016), but other items related to attitudes toward fast food restaurants rather than junk foods were omitted. Subjective norms were measured using four items developed by Gronhoj et al. (2012), and four items to measure perceived behavioral control were drawn from Chen (2017). As for BI, four items were adapted from Chen (2017) and Yazdanpanah and Forouzani (2015). However, two items for attitudes (A4, A5) and one item each from perceived risk (PR8) and BI (BI4) were deleted from the final
survey because of low factor loadings. All other items were used for the analyses below. Table AI presents full-scale items.

The questionnaire also included several some demographic items to determine such as gender, educational status, household income and occupation. Four variables were measured to understand consumers’ junk food purchasing behavior: type of food purchased, purchase frequency, intention to change food consumption and the average amount spend on junk food per month.

3.2 Participants and procedure
The data were collected from 392 participants from Izmir, Turkey. There were two selection criteria: having at least one child between 5 and 12 years old that, depending on their parents to buy junk food, having purchased junk food at least once in the previous month. Parents of these children are likely to be the primary influencers of the anti-consumption of junk food. Prior to administering the main survey, a pilot test was conducted with 30 participants, which demonstrated there were no problems with understanding. The data were gathered between December 17, 2017 and January 6, 2018, using an online self-administered questionnaire on the Google Docs platform to maximize the response rates.

Potential non-response bias was assessed by comparing early (n = 218) and late (n = 174) respondents on all constructs. Independent samples t-tests were performed on the variables. No statistically significant differences were identified between early and late responses in terms of demographic variables – gender (p = 0.99), age (p = 0.14), educational status (p = 0.26), occupation (p = 0.60), junk food purchase frequency (p = 0.79), intention to change junk food consumption (p = 0.42) and monthly average spending on junk food (p = 0.21) – and variables in the research model – perceived risk (p = 0.62), anticipated regret (p = 0.56), attitudes (p = 0.99), subjective norms (p = 0.98), perceived control (p = 0.56) and BI (p = 0.67).

The final sample consisted of 250 (63.8 percent) females and 142 (36.2 percent) males. The age of participants ranged from 20 to 55 years old, with more than half (71.8 percent) being under age 40. A slight majority of respondents (57.5 percent) had at least a college level of education. Almost two-thirds (59.7 percent) had an annual household income of at least 1,600 euros. All respondents were active junk food consumers. In total, 38.3 percent purchased junk foods more than three times in a week, and almost half (47.7 percent) spent more than 20 euros a month on junk foods. Sweet junk foods were the most frequently bought product at 83.7 percent, followed by salty junk foods (53.1 percent) and non-acidic soft drinks (45.7 percent).

4. Analysis and results
The current study incorporated two phases used to define and confirm the factors that affect BI toward the anti-consumption of junk food. First, confirmatory factor analysis (CFA) was conducted to confirm the factor structure of the measurement model, check reliability and validity. Second, the structural model was analyzed, and the path coefficients were estimated using AMOS 21.0. Variance inflation factor (VIF) scores were calculated to evaluate multicollinearity. The highest VIF value was 3.111, indicating no multicollinearity among variables.

4.1 Measurement model assessment
The internal reliability of the variables used in this study was measured with Cronbach’s α coefficients and composite reliability (CR) values. Item means, standard deviations, factor loadings, average variance extracted (AVE), and reliability values are shown in Table I.
The Cronbach’s α and CR values ranged from 0.75 to 0.89, greater than the recommended reliability threshold of 0.70 (Fornell and Larcker, 1981). The results showed that all items were deemed reliable. Item loadings, the CR of each construct and the AVE for each construct were checked to assess convergent validity (Bagozzi and Yi, 1988). All factor loadings were highly significant (minimum t-statistic was 7.29), all CR values were above 0.8 and AVE values exceeded 0.5, demonstrating convergent validity. The discriminant validity of the measures was evaluated based on the square root of the AVE values for each construct with its cross-correlation with other constructs. As shown in Table II, all squared correlations between distinctive-paired constructs did not exceed the AVE for each of the paired construct. Therefore, discriminant validity was confirmed. The CFA also showed that the 22 items loaded on their respective factors and the measurement model provided a good fit ($\chi^2/df = 2.67$, GFI = 0.901, AGFI = 0.863, NFI = 0.903, TLI = 0.920, SRMR = 0.048, CFI = 0.937, RMSEA = 0.065) (Schumacker and Lomax, 2004).

### 4.2 Structural model evaluation and hypothesis tests

Structural equation modeling was used to test the proposed model and hypotheses. The results are presented in Table III.

<table>
<thead>
<tr>
<th>Variable</th>
<th>AVE</th>
<th>CR</th>
<th>α</th>
<th>Item</th>
<th>Item mean</th>
<th>SD</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived risk</td>
<td>0.56</td>
<td>0.84</td>
<td>0.80</td>
<td>PR1</td>
<td>3.62</td>
<td>1.20</td>
<td>0.719</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PR2</td>
<td>4.07</td>
<td>1.15</td>
<td>0.775</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PR3</td>
<td>3.74</td>
<td>1.17</td>
<td>0.740</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>PR4</td>
<td>3.21</td>
<td>1.22</td>
<td>0.769</td>
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<tr>
<td>Anticipated regret</td>
<td>0.73</td>
<td>0.89</td>
<td>0.88</td>
<td>AR1</td>
<td>3.59</td>
<td>1.24</td>
<td>0.897</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>AR2</td>
<td>3.45</td>
<td>1.23</td>
<td>0.911</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AR3</td>
<td>4.02</td>
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<tr>
<td>Subjective norms</td>
<td>0.62</td>
<td>0.87</td>
<td>0.75</td>
<td>SN1</td>
<td>3.15</td>
<td>1.27</td>
<td>0.899</td>
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<td></td>
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<td></td>
<td>SN2</td>
<td>3.07</td>
<td>1.26</td>
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<td></td>
<td>SN3</td>
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<td>1.38</td>
<td>0.702</td>
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<td></td>
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<td>SN4</td>
<td>3.33</td>
<td>1.27</td>
<td>0.706</td>
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<tr>
<td>Perceived control</td>
<td>0.56</td>
<td>0.83</td>
<td>0.80</td>
<td>PC1</td>
<td>4.10</td>
<td>1.16</td>
<td>0.796</td>
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<td></td>
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<td></td>
<td>PC2</td>
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<td></td>
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<td>PC3</td>
<td>3.77</td>
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<td></td>
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<td>PC4</td>
<td>4.01</td>
<td>1.09</td>
<td>0.716</td>
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<tr>
<td>Attitudes</td>
<td>0.51</td>
<td>0.81</td>
<td>0.78</td>
<td>ATT1</td>
<td>4.18</td>
<td>1.13</td>
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<td>ATT4</td>
<td>3.92</td>
<td>1.17</td>
<td>0.708</td>
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### Table I. Results of measurement properties

<table>
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<th>Variable</th>
<th>Mean</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tr>
<td>Behavioral intentions</td>
<td>3.50</td>
<td>0.801</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Anticipated regret</td>
<td>3.68</td>
<td>0.701</td>
<td>0.856</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Perceived risk</td>
<td>3.88</td>
<td>0.609</td>
<td>0.721</td>
<td>0.751</td>
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<td></td>
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<tr>
<td>Attitudes</td>
<td>3.96</td>
<td>0.688</td>
<td>0.635</td>
<td>0.616</td>
<td>0.717</td>
<td></td>
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<tr>
<td>Subjective norms</td>
<td>3.23</td>
<td>0.701</td>
<td>0.498</td>
<td>0.620</td>
<td>0.601</td>
<td>0.791</td>
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<tr>
<td>Perceived control</td>
<td>3.91</td>
<td>0.680</td>
<td>0.655</td>
<td>0.610</td>
<td>0.594</td>
<td>0.631</td>
<td>0.746</td>
</tr>
</tbody>
</table>

**Notes:** Diagonal values in italics are the square roots of the AVE per construct. Off-diagonal values are the correlations of the variables.
All the hypothesized relationships between variables were statistically significant. Table III and Figure 2 present the results of the hypothesis tests, including the estimated path coefficients, t-values and the squared multiple correlations. More specifically, $H1$, which predicted that attitudes would have a negative effect on intention to consume junk food, was supported ($\beta = 0.441, p < 0.01$). $H2$, which predicted that subjective norms would have a negative influence on BI to consume junk food, was supported ($\beta = 0.364, p < 0.01$). $H3$, which predicted that perceived behavioral control would have a negative impact on intention to consume junk food, was supported ($\beta = 0.271, p < 0.01$). $H4$, which predicted that anticipated regret would have a significant negative impact on intention to consume anti-junk food, was supported ($\beta = 0.206, p < 0.05$). $H5$, which predicted that perceived risk would have a strong negative effect on attitudes, was supported ($\beta = 0.714, p > 0.01$). Finally, $H6$, which predicted that perceived risk would significantly affect anticipated regret, was supported ($\beta = 0.786, p < 0.01$).

5. Discussion and conclusion
In this study, the factors influencing the intentions of consumers, particularly, parents with a child or children between 5 and 12 years old, toward the anti-consumption of junk food for their child or children were investigated by combining the original TPB variables with two external variables: perceived risk and anticipated regret. The influences of attitude, subjective norms and perceived control on BI have been studied in the relevant literature; however, this study contributed to this growing literature by extending the TPB model using anticipated regret and perceived risk in the context of junk food consumption.

First, the associations between the factors in the TPB and BI were examined. The results indicated that the TPB factors – attitude, subjective norms and perceived control – have

Table III. Results of hypotheses tests

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Structural path</th>
<th>Std. loadings</th>
<th>SE</th>
<th>$t$</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H1$</td>
<td>Attitudes $\rightarrow$ BI</td>
<td>0.441</td>
<td>0.102</td>
<td>4.498*</td>
<td>Supported</td>
</tr>
<tr>
<td>$H2$</td>
<td>Subjective norms $\rightarrow$ BI</td>
<td>0.364</td>
<td>0.078</td>
<td>3.804*</td>
<td>Supported</td>
</tr>
<tr>
<td>$H3$</td>
<td>Perceived control $\rightarrow$ BI</td>
<td>0.271</td>
<td>0.041</td>
<td>3.533*</td>
<td>Supported</td>
</tr>
<tr>
<td>$H4$</td>
<td>Anticipated regret $\rightarrow$ BI</td>
<td>0.206</td>
<td>0.062</td>
<td>2.410**</td>
<td>Supported</td>
</tr>
<tr>
<td>$H5$</td>
<td>Perceived risk $\rightarrow$ Attitudes</td>
<td>0.714</td>
<td>0.026</td>
<td>10.591*</td>
<td>Supported</td>
</tr>
<tr>
<td>$H6$</td>
<td>Perceived risk $\rightarrow$ Anticipated regret</td>
<td>0.786</td>
<td>0.064</td>
<td>12.285*</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Notes: Model fit: $\chi^2$/df = 2.81, GFI = 0.891, AGFI = 0.854, NFI = 0.895, TLI = 0.914, SRMR = 0.051, CFI = 0.929, RMSEA = 0.068. *$p < 0.01$; **$p < 0.05$
significant impacts on BI toward the anti-consumption of junk food. Attitudes were found the strongest predictor of intentions (Ajzen, 2015; Chen, 2017, 2007; Riebl et al., 2015; Menozzi et al., 2017). Subjective norms had the second strongest effects on intentions (Ajzen, 2015; Seo et al., 2011; Mirkarimi et al., 2016). Hewitt and Stephens (2007) found that attitudes and subjective norms were the strongest predictors of healthy eating intentions. These were also found to be the strongest predictors of Swedish children’s intentions toward consuming different breakfast foods (Berg et al., 2000) and dietary BI (Riebl et al., 2015). Finally, perceived control had effects on intentions consistent with previous findings (Seo et al., 2011; Dehdari et al., 2013; Chen, 2017; Menozzi et al., 2017; Khorasani et al., 2017). Thus, it is clear that the original TPB variables are appropriate for use in a junk food context. Given that these findings demonstrated that attitude was the strongest predictor of intentions in the original TPB, it is important to influence parents’ attitudes in order to change their intentions toward junk food consumption.

Second, the findings show that anticipated regret has impacts on BI, consistent with previous findings (Rivis et al., 2009; Conner et al., 2015; Van Koningsbruggen et al., 2016; Ajzen and Sheikh, 2013), although the effect is weaker than the original TPB variables. Perceived risk also affects both anticipated regret and attitudes, which is consistent with previous studies showing that perceived risk has positive effects on anticipated regret (Townsend and Campbell, 2004; Chen et al., 2011) and negative effects on attitudes (Prati et al., 2012; Siddique, 2012; Choi et al., 2013; Chen, 2017). Since perceived risk strongly affects the attitudes of parents, their perception of risk should be increased to change their attitudes toward the anti-consumption of junk food. This study showed that the extended TPB, with anticipated regret and perceived risk variables, can be used in a junk food context since these variables were the strongest predictors of the original TPB variables. More specifically, the strongest effects of perceived risk on attitudes and anticipated regret should be considered in a junk food context. Other studies also show the importance of developing the antecedent effects of perceived risk on the extended TPB variables, namely, attitudes, subjective norms, perceived control and anticipated regret.

6. Theoretical contributions and managerial implications

The main theoretical contribution of this study was to extend the original TPB by including two additional constructs – anticipated regret and perceived risk – in order to predict parents’ intentions toward junk food consumption. The study showed that the extended TPB was successful in analyzing relations among variables in a junk food context. The second contribution was that this study analyzed the non-buying intentions within the concept of anti-consumption, whereas previous studies focused on the intentions of buying unhealthier foods such as junk foods, fast foods, street foods, foods with additives and genetically modified foods were analyzed (Richard et al., 1996; Cook et al., 2002; Verdurme and Viaene, 2003; Seo et al., 2011; Karimi Shahanjarini et al., 2012; Choi et al., 2013; Mirkarimi et al., 2016; Chen, 2017; Khorasani et al., 2017). Finally, in the literature, very few studies have examined the relations between perceived risk and anticipated regret (Townsend and Campbell, 2004; Chen et al., 2011). The current study also contributed to the literature by providing further evidence of the strong relations between them. The study also showed that perceived risk strongly influenced attitudes, which in turn had the greatest effect on intentions in the original TPB model. This gives support for adding perceived risk to the original TPB as one of the antecedents of attitudes.

This study has several managerial implications for fast food restaurants, junk food sellers and junk food producers regarding how perceived risk affects parents’ attitudes and consequently, BI to buy junk food for their children. Fast food restaurants should implement prevention strategies, such as decreasing calories, sodium, saturated fat, and sugar, and provide healthier meals showing calculated calories for children. Companies need risk
reduction strategies to protect on parents and their children by providing them with healthier products. To reduce perceived risks, such as health, hygiene or the environment, junk food producers and fast food restaurants should aim to provide high-quality, safe products in cooperation with well-known producers. Companies should increase more information about food ingredients by standardizing nutrition health labels, calorie information children’s menus and food packaging. Junk food product labels should give to parent’s information about the ingredients, including additives levels, nutrition values and standards, preparation processes and cooking instructions. Finally, food producers and restaurants should be encouraged to provide healthier food and beverage options for children.

This study provided insights into parental behaviors concerning purchasing junk food for their children. Parents have significant effects on their children’s eating behavior and food preferences (Birch et al., 2001; Karimi Shahanjarini et al., 2012). Several studies have indicated that parents’ eating behaviors strongly influences their child’s (Scaglioni et al., 2008). Therefore, parents should first make an effort to control their own habits of buying and eating junk food, before applying this control to their children. Primarily, parents need to be better informed about junk food risks and be more aware of the health risks, such as obesity and other consequences. If parents perceive higher behavioral control in purchasing junk food for their children, then their intention to purchase junk food decreases. Several studies have demonstrated that attitudes toward food choice begin to develop in childhood, which has a significant effect on their adult eating habits, and therefore, their health (Keane and Willetts, 1994; Seaman et al., 1997; Kelly et al., 2006). Therefore, parents should be educated to provide their children with nutritious fruits and vegetables, instead of unhealthy junk food. Parents should also be educated in preparing or cooking healthy snacks at home, and how to buy fresh, healthy ingredients.

Other implication concerns sales channels in schools, such as vending machines, snack bars, and canteens since schools are the only sales channel for children aged between 5 and 12 years that are not under parental supervision. Legal regulations must reduce or prohibit the sale and availability of junk food in schools, especially in elementary and middle schools. In schools, nutrition education plays a significant role in preventing over-consumption of junk food and improving knowledge and practices about healthy snack food consumption. Moreover, social marketing campaigns should be developed to increase awareness about the importance of raising a healthy generation and reducing junk food consumption. Within the social marketing concept, stronger public policies are needed to promote healthy lifestyles, especially for children. Government policies should include legal regulations on restricting marketing strategies on junk food for children. These regulations should involve the exposure of nutritional values through food labeling strategies, whether by compulsory or voluntary approaches.

7. Limitations and further research
This study has four main limitations. First, it focused exclusively on parents’ buying intentions, although children were the end users. Children’s intentions toward consuming junk food should be investigated in future studies. Second, the study did not consider buying behavior because the literature indicates that a focus on intentions is more important than actual behavior in the TPB (Wang et al., 2012). Nevertheless, future studies should add actual behavior to research on the TPB. Third, only two external variables were added to the model – perceived risk and anticipated regret. It was recommended that to extend TPB some negative emotional variables, such as guilt, self-blame, disappointment and anxiety should be added to the model. Finally, the study included all types of junk foods; future studies could apply the model in this study to one specific product or brand for a more specific understanding of consumers’ intentions.
References


BFJ
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### Variable | Item
--- | ---
**Perceived risk** | Adapted from Choi et al. (2013)
PR1 | Junk food ingredient is not fresh
PR2 | Junk food storage is not appropriate
PR3 | Junk food nutrition is unbalanced
PR4 | Junk food production conditions are unsanitary
PR5 | Junk food makes my children obese
PR6 | Junk food causes food poisoning
PR7 | When I buy junk food for my children, it damages my dignity
PR8 | When I buy junk food for my children, my peers do not approve of me
**Attitude** | Adapted from Seo et al. (2011)
ATT1 | I think that junk food is not good for health
ATT2 | I think that junk food is not tasty
ATT3 | I think that junk food has a lot of additives, such as salt and fat
ATT4 | I think that junk food is not hygienic
ATT5 | I think that eating junk food makes my children fat
ATT6 | I think that junk food cannot provide all necessary nutrients
**Subjective norm** | Adapted from Gronhøj et al. (2012)
SN1 | My family members do not approve of me when I buy junk food for my children
SN2 | My friends do not approve of me when I buy junk food for my children
SN3 | Government publicity, TV programs, newspapers, and magazines reduce junk food consumption
SN4 | My children junk food consumption is reduced by school rules, teachers and classmates
**Perceived control** | Adapted from Chen (2017)
PC1 | I can avoid my children consuming junk food when I can prepare food at home
PC2 | I can reduce my likelihood of consuming junk food if I can spend more time at home
PC3 | I can take action to reduce the consumption of junk food when I see negative news related to junk food on the media, such as TV, social media and publicity
PC4 | I will be on alert to control my children's junk food consumption
**Anticipated regret** | Adapted from Bui et al. (2011)
AR1 | I regret it when I buy junk food for my children
AR2 | I feel sorry when I buy junk food for my children
AR3 | I should have chosen alternative healthier foods instead of junk food for my children
**Behavioral intention** | Adapted from Chen (2017), Yazdanpanah and Forouzani (2015)
BI1 | I will suggest that my relatives do not buy junk food for their children
BI2 | I am not willing to buy junk food for my children
BI3 | I intend not to buy junk food in near future
BI4 | I will try to consume healthier food myself in order not to buy junk food for my children

Table AI. Measures and items

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Eating habits of Polish university students depending on the direction of studies and gender

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Uniwersytet Ekonomiczny we Wroclawiu, Wroclaw, Poland

Abstract

Purpose – The purpose of this paper is to evaluate the eating habits of students in the field of management and engineering of food products compared to students from faculties not related to food science. Furthermore, another aim is to conduct gender-wise assessment to determine the type of eating habit, i.e., careful or binge eating.

Design/methodology/approach – The research involved 400 students from all years of study. The survey was conducted in 2017–2018 and the selection of the sample was intentional. The research used a questionnaire form. Additionally, \( \chi^2 \) test was performed to assess the statistical independence of characteristics.

Findings – It is found that most students who pledge proper nutrition are women. The majority of respondents ate 3–4 meals in day and regular consumption of breakfast was declared among 42 percent of respondents. The consumption of sweet snacks between meals is reaffirmed by the half of the respondents. Students of the food sciences more often than others believed that they eat healthier and more regularly, although students of non-food directions most often declared intake of five or more meals a day.

Research limitations/implications – An important limitation of the conducted study is a relatively small research sample. It consisted of university students from one of the largest academic centers in Poland. The results cannot be generalized to all students in this country. In the future, a similar survey should be conducted on a larger scale and cover all similar fields of management and engineering of food products in Poland. In addition, it would be worth expanding the research and examine graduates who found employment in the food industry.

Practical implications – The results of the conducted research are a good source of information on the differences in the way of feeding studying women and men. While such studies are not very revealing, the comparison between students in food and non-food fields can be considered a novelty. The described results can be used by the students themselves, but above all, by the authorities of universities conducting food science programs.

Social implications – The students do not eat properly which can lead to nutritional deficiencies and can deteriorate mental and physical endurance damaging overall health.

Originality/value – The described research is important due to the observed deteriorating eating habits and growing overweight of young adults in developed countries like Poland. They show that education of food technologists, even at the academic level, does not always allow to avoid mistakes in their own nutrition.

Keywords Meals, Food consumption, Consumer choice, Young people, Nutrition

Paper type Research paper

Introduction

The main goal of nutrition is to provide the body with the necessary nutrients. Regularity and proportions of meals aligned to age, sex, manner of work, amount of physical effort and time of the year are important. Nutritionists point out that one should eat smaller quantities of meals, and the basis of nutrition should be wholesome breakfasts (Spence, 2017). Principles of healthy nutrition published in Poland recommend eating at least three meals per day and eating various kinds of fruits (Falkowska, 2000). However, according to nutritional standards, people should eat daily including five meals with 3-hour pauses.

In the light of current knowledge, rational nutrition is one of the basic conditions for the proper functioning of the human body (Wardle, 1993). Rational (healthy, correct) nutrition consists of regular meals. They should include products that provide the body with optimal amounts of energy and recommended nutrients. Rational nutrition is especially important during the period of study that requires a huge amount of physical and mental energy.
divided between lectures, exams and social life. Proper nutrition should ensure coverage of all nutritional needs of the organism, its normal functioning and maintenance of proper body weight (Turlejska et al., 2004). Weight management is important for students overall physical and mental health. The university experience is a time to make new friendships and partnerships and to look good is therefore important for students. New surroundings and new responsibilities during the first year of study can increase the risk of weight gain (Sprake et al., 2017). Moreover, improper nutrition is a common cause of decreased learning ability, lack of concentration and reflexes. Learning intake is affected by breakfast intake (Currie et al., 2000).

Academic youth population is particularly exposed to many factors that are not conducive to the implementation of healthy behavior. These include the use of stimulants, poor diet and irregular lifestyle (Kowalska, 2010; Kolarzyk and Skop-Lewandowska, 2007). It is widely believed that students eat very irregularly (Gazibara et al., 2013) and not in accordance with the recommendations (Deliens et al., 2018). They are tempted by fast-food restaurants, where dishes are very calorific, prepared in deep fat. Deprivation, eating ready meals in a hurry, very monotonous diets quickly lead to a shortage of vitamins and minerals. This type of situation may result in nutritional deficiencies and deterioration in mental and physical efficiency and in overall health (Mueller et al., 2018; El Ansari et al., 2015; Rudawska, 2001).

There are many studies in literature on the nutrition of students from various universities. With the help of a large research sample of 2,402 students, a cross-sectional study conducted in four European countries (Germany, Denmark, Poland and Bulgaria) deserves attention. However, it examined quite general issues, i.e., food frequency and living arrangements (El Ansari et al., 2012). Part of the research, apart from eating habits, focuses more on lifestyle and the use of stimulants, i.e., alcohol, cigarettes (Çekiç et al., 2014; Moreno-Gomez et al., 2012). Research on nutritional habits of students recently conducted in Poland mainly relate to their links to diseases and have been carried out on small samples of about 100 people among medical students (Góralka et al., 2015; Chrzan, 2011).

This study contributes to literature in two ways. First, the eating habits of students in Poland were studied. Poland is one of the countries in which, thanks to systemic transformation and the introduction of a market economy, the availability of ready meals, highly processed food and fast-food restaurants has increased. Easy access to highly processed food poses a risk of increased overweight and obesity especially among young people. Second, attention was paid to the role of nutritional education and its impact on the diet of students. Nutritional habits of students from faculties related and not related to nutrition sciences were compared.

Poland has a rich agricultural tradition, well-developed and open market of food products. In the period 2009–2013 compared to the period 1999–2003, Poland among the new EU member states has achieved the highest gross value added in agriculture and the highest positive balance of trade in agri-food products (Somai and Hegedüs, 2015). Their growing quality and health safety are emphasized (Kowalski and Wigier, 2014). Polish consumers have good access to a large selection of fresh vegetables, fruits, dairy products and meat. Food prices are affordable. Unfortunately, the dietary habits of most adult poles are far from the recommendations important for cardiovascular disease prevention. This was demonstrated by research conducted in 2013–2014 on a sample of 5,690 adult poles. They found overweight and obesity in 69 percent of men and 59 percent of women and elevated cholesterol in more than 55 percent of respondents. (Waskiewicz et al., 2016). Eurostat data show that in 2008–2014 the share of obese people, based on their body mass index (BMI), increased in Poland from 54.0 to 54.7 percent and was higher than the average in the EU-28 by 3 percent.

Poland is the largest state in central Europe. Research (Da Silva et al., 2009) related to two periods 1961–1965 and 2000–2003 prove that all countries of Central Europe are moving
away from the so-called Mediterranean diet. The value of the Mediterranean adequacy index (MAI), whose methodology was described, e.g. Bach-Faig et al. (2011), for Poland decreased in the given period from 1.84 to 1.12 (a higher MAI value indicates greater compliance with the Mediterranean nutritional scheme). It is estimated that the availability of components of the Mediterranean diet has increased or has been maintained. However, the availability of other food products has increased to a greater extent (Vareiro et al., 2009).

There are three sources of data, which can be used in order to analyze the patterns of food supply and consumption and their changes in the world. (Hawkesworth et al., 2010; Serra-Majem et al., 2003). The first source is food balance sheets providing data on the supply and use of agricultural raw materials. The second source is household budget surveys, from which data, inter alia, on food consumption are derived. In most developed countries these two types of food data are collected regularly. However, there is a lack of database integrating quantitative data from these surveys for more countries. Eurostat provides information only on consumption expenditure and the percentage share of people consuming fruits and vegetables successively 0, 1–4, 5 times a day. The third source of data on consumption is the national dietary surveys based on samples of population representative of a given country. The results of these studies for Europe are collected in the European Food Safety Authority database. However, they are held in individual countries in different years and different intervals. The latest published aggregate results come from nutritional studies that have been conducted in EU countries since 1997 (Swedish National Dietary Survey – RIKSMATEN 1997-1998) until 2012 (National FINDIET 2012 Survey). These studies often concern special groups of the population, e.g., nursing women, school children or the elderly. If a group of adults is being studied, then they are people aged 16–64. There is a lack of national research on the nutrition of students. According to the authors of this study, this group of people should be monitored for many reasons. Students are often for the first time forced to live away from the family home, to shop independently and cook/prepare food for themselves (Sprake et al., 2017). In addition, these are the people who, when entering adult life, will be responsible for feeding their children and pass on their nutritional patterns to them (Al-Khamees, 2009).

Research methods

The aim of this research was to determine the nutritional habits of students from all years of study and to determine whether they adhered to a healthy diet, considering their education in the field of engineering and management of food production. Students of nutrition related fields have knowledge about food production and composition. They should therefore be more aware of the dangers of consuming highly processed foods. The study used a questionnaire form consisting of 17 closed and semi open questions relating to:

- the assessment of one’s diet;
- the number and regularity of meals;
- the habits of eating breakfast, a second breakfast, lunches and dinners, type of products being eaten and time of meals;
- the frequency of snacking and products eaten as snacks; and
- consumption of caffeinated beverages.

Due to the subjective nature of the research, when scaling the answers, the nominal scales (sex, field of study) and ordinal scales (daily, often, sometimes, never) were used. The tools used to verify hypotheses related to those scales are non-parametric statistical tests (Kaczmarczyk, 2011). The study used independence Pearson’s $\chi^2$ test to show the relationship between the frequency of responses to individual questions and the gender as
well as direction of studies. The significance was adopted at the level \( p = 0.05 \). In case of finding dependencies between variables, the compound’s power was calculated using \( V \) Cramer test (\( V_C \)) or \( \phi \) for bipartite tables and the compound’s direction – using Somers’D test (\( d_{BA} \)). The study of the regularity of consumption of individual meals was extended by calculating the arithmetic mean, standard deviation and coefficient of variation (\( V \)). Results of the study were analyzed by means of MS Excel and Statistica 12.

The research covered 400 students (200 women and 200 men) from all years of study. Among the respondents, 202 studied in the field of nutrition sciences, while 198 – in non-food fields. The study was conducted in 2017 and 2018. The selection of the sample was intentional.

**Results**

*Diet assessment and the regularity of meals*

The research was an opportunity to learn about the eating habits of students who differed in terms of sex and fields of study. Based on achieved data, it can be concluded that most of the students try to nourish properly (46.6 percent), nearly 30 percent said that they are eating healthily and 23.6 percent admitted that their diet is incorrect (Figure 1).

A healthy nutrition intake was adopted by a greater extent of women than men. More than half of female students try to eat properly with a third saying that her diet is correct. Over 80 percent of the respondents studying food science and almost 70 percent of those studying non-food science declared that they eat healthy or try to eat healthily. The \( \chi^2 \) test showed the relationship between the frequency of the above declaration and the field of study (\( p = 0.02 \)) as well as the gender of students (\( p = 0.00 \)). A negative value of Somers’D coefficient (\( d_{BA} = -0.19 \)) in the case of sex indicates that women declared more often healthy eating than men. On the other hand, the positive direction of dependence in the case of the field of study (\( d_{BA} = 0.14 \)) indicates that food students more often confirmed healthy eating than students of non-food majors. The strength of the relationship, calculated by the factor \( \phi \), was weak in both cases. For sex, it was 0.18, and for the field of study 0.14.

The results of the research indicated that over half of all surveyed students try to eat meals on a regular basis, and almost every fifth of them declared that they actually do this (Figure 2). Analysis of data in terms of sex revealed that significantly more men (26.5 percent) than women (11.3 percent) definitely judge well the regularity of meals. Women show greater hesitation in this respect. Almost 60 percent of them declared that their meals are “rather regular.” Every third non-food student and almost 30 percent of food students do not eat regularly.

**Figure 1.**

Healthy diet – self-esteem (%)
The $\chi^2$ test showed a relationship between the indicated regularity of food intake and the gender of respondents ($p = 0.00$). Women more often declared regular meal intake than men, which confirms the negative direction of the relationship ($d_{BA} = -0.07$). The strength of the relationship was the average ($V = 0.23$).

The results of the study show that only one in five students eat five meals per day. The same amount of people declared only two meals intake. The majority of respondents (more than 60 percent) pledged consuming 3–4 meals (Figure 3). Those who consumed five or more meals were mostly students studying non-food sciences.

The $\chi^2$ test showed a relationship between the field of study and declarations of consumption of 3–4 meals a day ($p = 0.00$) and five meals and more ($p = 0.00$). The negative direction of the relationship in the latter case ($d_{BA} = -0.31$) means that students of non-food specializations eat meals more often. The strength of the discussed dependence was moderate ($\phi = 0.36$). Students of food faculty usually consumed 3–4 meals a day. This relationship was statistically significant and had a positive direction ($d_{BA} = 0.28$) and $\phi = 0.29$. There are no significant differences in the number of meals eaten per day depending on gender, which is confirmed in the $\chi^2$ test.

The following issues, that were raised in the questionnaire, concerned the consumption of the basic meals. Collected data confirm that more than half of students usually eat breakfast and the next 18 percent do this every day before leaving the house (Figure 4). Almost 17 percent of students admitted that they do not eat breakfast at all and every 15th student consumes breakfasts only at weekends or at days off.

Among those who do not eat breakfasts significantly include students of non-food faculties. In this group every 5th student declared no intake of breakfasts at all and almost...
every fourth consumed them only at weekends. The majority (almost 80 percent) of respondents studying in the food-related faculty try to eat breakfasts every day, but only 15 percent of them is doing so. The $\chi^2$ test confirmed dependence between the distribution of these answers and the field of study ($p = 0.00$).

When asking about the consumption of second breakfasts it was noticed that only 17.6 percent of students consume this meal regularly, half of the respondents eat second breakfasts irregularly and every third student eats it very rarely or not at all (Figure 5). There is a visible relationship between gender as well as the field of studies and consumption of second breakfast, which confirms the $\chi^2$ test. Women more often declared eating this meal than men ($p = 0.00$, $d_{BA} = -0.22$, $\varphi = 0.28$) and students from food faculties – more often than non-food faculty students ($p = 0.00$, $d_{BA} = 0.27$, $\varphi = 0.27$). Over 41 percent of men and more than 44 percent of those studying at non-food faculties admitted that they eat a second breakfast rarely or not at all.

Dinner intake confirmed more than 93 percent of the respondents with nearly 57 percent taking this meal every day (Figure 6). Only 1.4 percent of respondents do not eat dinner at all, and 5.4 percent of students occasionally consume this meal. Analysis of the distribution of responses by gender and field of study did not show statistically significant relationships.

The highest number of respondents usually eat supper (Figure 7). It was noted that women more often than men forgo this meal. This relationship was confirmed by the $\chi^2$ test and the positive direction of the compound ($d_{BA} = 0.13$). The strength of this compound was, however, weak ($V_C = 0.14$). In the case of field of studies, no such relationship was found.

When assessing the frequency of eating basic meals, a four-point scale was used, where 4 meant the correct frequency, and 1 – no meal. This procedure allowed to calculate the
average frequency of meals broken down by gender and field of study (Table I). The dinners were most regularly consumed by students, as evidenced by the highest average value ($\bar{x} = 3.49$) and the lowest in the analyzed meals the coefficient of variation ($V = 18.9$ percent). Statistical analysis did not show a significant difference in the consumption of dinners, neither between men and women ($\bar{x} = 3.49$ vs $\bar{x} = 3.48$) nor between students of food and non-food majors ($\bar{x} = 3.51$ vs $\bar{x} = 3.47$).

The consumption of breakfast before leaving home was more often declared by women ($\bar{x} = 3.16$) and students of food science ($\bar{x} = 3.32$). The statistical significance of these declarations was confirmed in both cases by Pearson’s $\chi^2$ test ($p < 0.05$). Among the analyzed meals, the students paid the least attention to eating a second breakfast ($\bar{x} = 2.69$). In the case of this meal, the highest volatility index ($V = 35.3$ percent) occurred, which means a significant variation in the frequency of its consumption among the surveyed students. A very large variation in the responses was evident in the case of men, because the value of the volatility index exceeded 38.7 percent. Significant differences in the consumption of second breakfasts, both in the case of sex and the field of study, were confirmed by statistical analysis. More often, the second breakfasts were consumed by women ($\bar{x} = 2.94$) and students of food studies ($\bar{x} = 2.79$). Gender also determined the frequency of supper consumption by students. Men consumed this meal more often than women ($\bar{x} = 3.10$ vs $\bar{x} = 2.93$).

**Selection of products during individual meals**

In the next section of the questionnaire students were asked to indicate products/dishes used in concrete meals and to specify the time of the day when they eat these meals.
### Table I.

Average frequency of eating individual meals by students

<table>
<thead>
<tr>
<th>Meal</th>
<th>Total $(n = 400)$</th>
<th>Women $(n = 200)$</th>
<th>Men $(n = 200)$</th>
<th>Non-food $(n = 198)$</th>
<th>Food $(n = 202)$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\bar{x} \pm SD$</td>
<td>V(%)</td>
<td>$\bar{x} \pm SD$</td>
<td>V(%)</td>
<td>$\bar{x} \pm SD$</td>
</tr>
<tr>
<td>Breakfast</td>
<td>3.03 ± 0.98</td>
<td>32.3</td>
<td>3.16 ± 0.90</td>
<td>28.5</td>
<td>2.87 ± 1.04</td>
</tr>
<tr>
<td></td>
<td>$\chi^2 = 10.3$</td>
<td>df = 3</td>
<td>$p = 0.02$</td>
<td></td>
<td>$\chi^2 = 43.7$</td>
</tr>
<tr>
<td>Second Breakfast</td>
<td>2.69 ± 0.95</td>
<td>35.3</td>
<td>2.94 ± 0.90</td>
<td>30.6</td>
<td>2.40 ± 0.93</td>
</tr>
<tr>
<td>Dinner</td>
<td>3.49 ± 0.66</td>
<td>18.9</td>
<td>3.49 ± 0.67</td>
<td>19.2</td>
<td>3.48 ± 0.65</td>
</tr>
<tr>
<td></td>
<td>$\chi^2 = 7.6$</td>
<td>df = 3</td>
<td>$p = 0.06$</td>
<td></td>
<td>$\chi^2 = 3.4$</td>
</tr>
<tr>
<td>Supper</td>
<td>3.01 ± 0.87</td>
<td>28.9</td>
<td>2.93 ± 0.85</td>
<td>29.0</td>
<td>3.10 ± 0.88</td>
</tr>
<tr>
<td></td>
<td>$\chi^2 = 8.4$</td>
<td>df = 3</td>
<td>$p = 0.04$</td>
<td></td>
<td>$\chi^2 = 5.0$</td>
</tr>
</tbody>
</table>

Notes: $\chi^2$, Pearson test; df, degrees of freedom. $p$, significance level below 0.05

Source: Own study based on surveys
For second breakfasts 36.5 percent of students eat self-made sandwiches, one in five of them buy sweet rolls and buns. Almost 13 percent of students declared a consumption of milk products, inter alia, yoghurt or cheese, and about 11 percent – fruits and vegetables (Figure 8). Women more often than men preferred sweet rolls, as well as for fruit, vegetables and milk drinks. Students of the nutritional field of study preferred their own sandwiches and students of non-food studies – yoghurt, fruit and vegetables as well as sweet rolls.

Statistically significant relationships were demonstrated between the field of study and the consumption of their own sandwiches for a second breakfast were more often declared by students of the food faculty ($p = 0.00$, $d_{BA} = 0.19$, $\phi = 0.20$). Answers from students of non-food faculties preferring cookies and bars for a second breakfast were also significant ($p = 0.03$, $d_{BA} = -0.04$, $\phi = 0.01$). Pearson’s $\chi^2$ test showed a dependence also in the case of men who did not eat the second breakfast ($p = 0.00$, $d_{BA} = 0.15$, $\phi = 0.2$).

Most of the students prepared dinner by themselves (48 percent). Only a quarter of the tested group eat dinner in a restaurant or in a milk bar. Every 8th respondent choose frozen meals and almost every 15th visited “fast-food” restaurants. When analyzing the consumption of different types of foods based on gender, women are more likely than men to choose a dinner in a restaurant or a milk bar. This relationship was confirmed statistically. Men, on the other hand, visited fast-food restaurants more often than women and prepared dinner using purchased frozen foods (Figure 9).

**Figure 8.** Products eaten as the second breakfast (%)
Statistically significant were the answers of men declaring:
- eating dinner in a “fast-food” restaurant ($p = 0.006$);
- buying frozen foods ($p = 0.02$); and
- eating self-made sandwiches ($p = 0.04$), although they were not strong dependencies (value $\varphi$ did not exceed 0.13).

Studying in the food sciences was significantly and relatively strongly related to the declarations of preparing meals on their own ($p = 0.00, \varphi = 0.39$). In turn, among students of non-food specializations, it was statistically significant to eat dinners:
- in restaurants and bars ($p = 0.00, \varphi = 0.24$);
- in fast-food outlets ($p = 0.00, \varphi = 0.2$); and
- prepared from frozen foods ($p = 0.04, \varphi = 0.1$).

Time of dinner intake frequently declared by the students is 14–16, only a third of respondents admitted that the dinner hour is after 17. None of the respondents pointed out dinner between 12 o’clock and 14 o’clock, which is the most advantageous time for this meal (Figure 10). Pearson’s $\chi^2$ test analysis showed no statistically significant relationship between the answers concerning hours of eating lunch and gender or field of study.

**Snacking between meals and consumption of beverages containing caffeine**

Students like snacks. Over 93 percent of respondents ate between meals and more than 53 percent did it even 2–4 times a day (Figure 11). At least twice a day, snacks were used by over 63 percent of non-food study participants and over 60 percent of men. Less than every 10 women and almost every 10 students of non-food field declared refraining from snacks. In the latter case, the $\chi^2$ test showed a significant, though weak, relationship ($\varphi = 0.1$). It was noted that students of nutrition sciences were less likely to take snacks than students of other departments (41.2 percent did it only once a day). The significance of these declarations was confirmed by the $\chi^2$ test, although the demonstrated relationship was weak ($\varphi = 0.15$).

Sweets are the most popular among snacks. Over half of the surveyed students snacked between meals just for themselves. In addition, 16 percent of respondents chose salty snacks. Every third student declared that they consumed yogurt or fruit and vegetables between meals (Figure 12). Analysis of the data with the Pearson’s $\chi^2$ test showed a relationship between the field of study and consumption of:
- salty snacks ($p = 0.00, d_{BA} = -0.10, \varphi = 0.14$);
- sweet snacks ($p = 0.00, d_{BA} = 0.19, \varphi = 0.2$); and
- yoghurts ($p = 0.00, d_{BA} = -0.09, \varphi = 0.14$).

![Source: Own study based on surveys](image-url)
Students of non-food specialties more often reached for salty snacks and yoghurts. In the group of students from food-related faculties the consumption of sweet snacks was more frequent, which was confirmed by the positive value of the Somers’ D index.

Based on the conducted study, it was found that women prefer fruits and vegetables, men – salty snacks. This second dependence was confirmed statistically ($p = 0.000$). This is evidenced by the positive direction ($d_{BA} = 0.13$) of the moderately strong relationship ($\phi = 0.19$).

Three quarters of student’s drink coffee every day, most of which declared consuming 1–2 cups of coffee, and almost 22 percent – 3–4 cups (Figure 13). The $\chi^2$ test showed significant relationships between the field of study and the number of cups of coffee drank on a daily-basis. Students of non-food disciplines consumed larger amounts of coffee, as evidenced by test results:

- for consumption of 3–4 cups: $p = 0.02$ and $d_{BA} = -0.09$; and
- for consumption: 5 cups and more: $p = 0.01$ and $d_{BA} = -0.06$.

The strength of the relationship was weak in both cases (the index $\phi$ adopted values at around 0.11).

Women more often than men admitted that they do not drink coffee and this relationship turned out to be statistically significant ($p = 0.00$, $d_{BA} = -0.19$, $\phi = 0.21$). In the case of men, more than half declared drinking 1–2 cups a day and these responses were also
significantly gender dependent, as evidenced by the positive direction ($d_{BA} = 0.16$) of a weak relationship ($\varphi = 0.16$).

Another type of mixture that contains caffeine are energy drinks. Almost half of the respondents used such drinks (Figure 14). Most of them did it occasionally (17 percent) or rarely (20 percent). Every 11 students consumed energy drinks during exams. Daily consumption of these types of products was declared by 4 percent of respondents, the majority of whom were students of non-food disciplines (8 percent) and women (5 percent). According to declarations, 60 percent of women and almost 40 percent of men do not drink this type of drink at all.

The Pearson’s $X^2$ test showed two important relationships:

1. men more often than women declared occasional consumption of energy drinks ($p = 0.00$, $d_{BA} = 0.13$, $\varphi = 0.15$); and
2. women, more often than men, admitted that they do not drink this type of beverage at all ($p = 0.00$, $d_{BA} = -0.20$, $\varphi = 0.16$).

Based on the statistical analysis made according to the field of study, it was found that students of non-food specializations more often than others used energy drinks every day ($p = 0.00$, $d_{BA} = -0.07$, $\varphi = 0.17$). In turn, food students more often than their colleagues declared that they do not consume energy drinks ($p = 0.00$, $d_{BA} = 0.19$, $\varphi = 0.19$).

Among respondent groups, consumption of soft drinks like Coca-Cola is rather low (Figure 15). One in five students said that they do not drink these beverages at all and more
than half drink them occasionally. Only one-quarter of the respondents declared that they drink soft drinks frequently, out of which 5.4 percent reported that they drink them every day.

Among the respondents, the daily consumption of cola drinks was declared primarily by men (9 percent) and students of non-food disciplines (6 percent). Statistical analysis showed that men more often than women declared drinking cola drinks daily ($p = 0.00$, $d_{BA} = 0.06$, $\phi = 0.14$).

The $\chi^2$ test also confirmed the following relationships:

- students of the food sciences more often than others declared occasional consumption of the group of drinks discussed ($d_{BA} = 0.12$, $\phi = 0.11$); and
- students of non-food specialties more often claimed that they do not consume such drinks ($d_{BA} = -0.08$, $\phi = 0.10$).

Discussion

In the conducted research, it was proved that women who study at University have a healthier food intake than their male colleagues. More women than men eat a second breakfast and more often they give up supper. Women are less likely than men to have regular meals, but in fact nourish on a more regular basis than men. A study on healthy eating carried out earlier by Fijewski (1989) among medical students produced similar results: men do not try to follow the rules of healthy nutrition. The social role of women is linked to their caring for relatives and ensuring that they receive healthy nutrition. This makes them feel more responsible for implementing healthy eating habits in their own diet as well.

Regular meals are the basis of healthy eating, which is especially important for young people. It may seem surprising that those who eat five or more meals a day were mainly students not related to nutrition sciences. Perhaps they were unconsciously eating at the recommended frequency. On the contrary, the knowledge of the benefits of more frequent consumption of smaller portions of food is so common and universal that it does not require studying this specific field of study. The issue of the timetable of students in the food and non-food fields is also debatable. The former spends many hours working in laboratories that often prevent them from eating regular and frequent meals.

Over 30 percent of students of non-food science declared the highest frequency of meals, and over 40 percent of the group did not eat or rarely eat a second breakfast. These are quite surprising results. They may indicate a wide variety of eating habits among these students or not fully reliable answers. On the other hand, the large number of meals eliminating the
need for a second breakfast leads to the conclusion that they are eating other meals, such as desserts or late suppers.

Students of nutrition sciences eat the second breakfast more often than others. In many cases, these were self-prepared sandwiches. Those who study in other fields, if they ate their second breakfast at all were most often consuming quite randomly, ready-made products. For more dietary aware people studying food science also speaks of the fact of the self-cooked dinner. Students of other disciplines go to bars more often and eat fast-food. These students more often declared a willingness to eat salty snacks (of which the most popular is crisps), drinking more than three cups of coffee per day and a daily consumption of energy drinks.

The results of the conducted research are a good source of information outlining the differences in the way male and female university students consume food. While such studies are not very revealing, the comparison between students in food and non-food fields can be considered a novelty. The outlined results can be used by the students themselves, but above all, by the authorities of universities conducting food science programs. It turns out that they fulfill their role – they educate and make young people aware of the importance of proper nutrition. Graduates of such faculties will, after all, work in the food industry and can translate good experience into business practice. They will be responsible for food production in the future and the quality of processed food will depend on their knowledge and determination.

Managerial implications
The results of the above research suggest the need for action in the short and long term. In the longer term, systemic changes in health education for both students and their parents would be suggested. Currently, there are a number of individual programs promoting healthy eating in Poland. In the short-term perspective, congruent to the present study, it would be reasonable to create a catering offer at university canteens that is competitive to fast-food bars more popular among students. It seems a good idea to establish direct cooperation between the university authorities and local suppliers of healthy food products. A good meal price and promotion could distract students from cheap and quick meals in fast-food outlets.

Limitations and future research directions
An important limitation of the conducted study is the relatively small research sample. It consisted of university students from one of the largest academic centers in Poland. The results cannot be generalized among all students in this country. In future, a similar survey should be conducted on a larger scale and cover students from all similar fields of management and engineering of food products in Poland and post-communist countries. Retrospective research would also be interesting, in which the students’ eating habits taken out of the family home and their impact on the current diet will be examined.

The above studies focused primarily on quantitative research, in which only subjective statements of respondents were known. Future research should be combined with the health survey of respondents and qualitative research, for example, in the form of focus tests and individual in-depth interviews. Such research will allow on the one hand to know the state of health of students, on the other – the reasons for a particular diet.

Conclusions
The primary purpose of nutrition is to provide the human body with indispensable nutrients in suitable proportions, which are converted into energy necessary for the proper
functioning of the body. The period of intense study demands a lot of physical and mental
strength from students.

Most students declared healthy eating in the survey or tried to keep a healthy diet. However, further study results do not confirm this. The most common abnormalities are related to irregular eating or not eating food, especially a second breakfast. Surveyed students declared eating poorly differentiated meals, often highly processed. Very popular in students’ diet was instant powder soups, sandwiches, frozen food for dinner as well as sourcing a dinner meal away from the house in bars, restaurants and points of fast food. Students like snacking between meals, especially the sweet and salty snacks. Worrying is consumption of large amounts of coffee, energy drinks and (to a smaller extent) soft drinks like Coca-Cola, especially during the examination session.

From the above analysis, it can be concluded that the field of study and gender influence the diet of students. The best attitudes in terms of regularity of individual meals consumption are characterized by women and those studying in the field of food. Observed differences in the consumption of healthy food products between students in the food and non-food specialization were in most cases statistically significant. It was noted that male students and respondents studying non-food subjects more often did not consume second breakfasts, more often declared eating dinners in fast-food restaurants, as well as eating sandwiches for lunch. The people who cooked dinners themselves were more often respondents studying food science. Among women who studied at university, declarations of not using coffee or energy drinks were more frequent.

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The impact of self-congruity (symbolic and functional) on the brand hate

A study based on self-congruity theory

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Abstract
Purpose – The purpose of this paper is to test the impact of symbolic and functional incongruity on brand hate. According to self-congruity theory, symbolic and functional congruence are a critical phenomenon in consumer buying decisions. Therefore, the present study develops a theoretical framework based on self-congruity theory to examine the key determinants of brand hate.

Design/methodology/approach – Data were collected only in fast-food chain franchises in the capital city territory of Pakistan. Therefore, it is hard to generalize the findings of this research for customers from different cultural backgrounds.

Findings – The results of the study reveal that symbolic and functional incongruence are the primary factors responsible for brand hate among Pakistani fast-food customers. Customers carefully consider both self-image and product attributes when purchasing products.

Research limitations/implications – The research uses the cross-sectional method, which limits the findings’ usefulness in other sectors.

Practical implications – The current research helps policymakers understand the key determinants of brand hate, showing that symbolic incongruence is the primary antecedent. Therefore, policymakers and corporate leaders should consider that Pakistan is an Islamic country where consumer choices of food are not only derived from food quality, food hygiene and service quality, but also the symbolic image (i.e. halal food) is a vital determinant of consumption.

Originality/value – This study contributes to the literature by discussing the above issue and presenting quantitative data. This research extends the literature by testing and validating a conceptual model that includes two types of congruence (symbolic and functional) to study brand hate. The proposed conceptual model provides a novel, theoretical, self-congruity point of view on brand hate.

Keywords Self-congruity theory, Brand hate, Functional incongruity, Symbolic incongruity

Paper type Research paper
Introduction

In today's world, self-congruence plays an essential role in the characteristics of customer behavior, affecting brand satisfaction (Çifci et al., 2016), product attributes (Astakhova et al., 2017), marketing effectiveness (Islam et al., 2017, Van Quaquebeke et al., 2017), brand choice (Wallace et al., 2017), brand evaluation (Japutra et al., 2018) and brand loyalty (Kaap-Deeder et al., 2016). In the literature about marketing, psychology and consumer behavior, scholars agree that consumers purchase only the brands that align with their self-concept (Vikas and Nayak, 2014).

According to self-congruity theory (Sirgy, 1986), individual behavior is dependent on the product's image (e.g., what type of person uses it) and the consumer's self-concept. Sirgy et al. (1991) defined self-image congruence as the "notion of the cognitive matching between value expressive attributes of a given product (brand or store) and consumer self-concept."

To complement past research on reasons to purchase, interest in anti-consumption research has increased and scholars are keen to find answers about why customers reject certain brands (Astakhova et al., 2017; Japutra et al., 2018). Research indicates that anti-consumption behavior originates from both socio-environmental factors and self-concept (Claiborne and Sirgy, 2015; Islam et al., 2018; Kressmann et al., 2006; Lee et al., 2009).

Scholars have classified product images as symbolic or functional (O'Cass and Muller, 2015; Sirgy, 1982; Sung and Huddleston, 2017). Moreover, Jobar and Sirgy (1991) classified advertising appeals into value expressive (symbolic image) and utilitarian (functional image), where significant value is linked with the product image and the utilitarian category relates to product features. According to Sirgy (1982), the symbolic image of the product is associated with the stereotypic personality of an individual. Some studies found that brands, corporations and suppliers are also considered to have a self-image (Chung et al., 2015; Claiborne and Sirgy, 2015; Sirgy, 2015). He and Mukherjee (2007) found that the symbolic image of the consumption of substances and its congruence with their self-concept is considered to be a key antecedent of individual behavior. Sirgy (1982) classified the self into multi-dimensional prospects: ideal self, actual self and social self. Also, Hosany and Martin (2012) concluded that major research, conducted in marketing and tourism, operationalizes the self-concept construct in two dimensions: actual and ideal. Sirgy (1986) stated that the ideal self "refers to how a person would like to perceive himself." Similarly, Sirgy et al. (1991) said the term actual self "refers to how a person perceives her/himself." Also, Beerli et al. (2007) describe self-image, self-congruence, self-congruity and image congruence as similar concepts. According to self-congruity theory, the symbolic image should be handled to match the self-concept of the consumer.

As globalization increases, high cultural conjunction is emerging, and individuals face various cultures simultaneously (Conti, 2017). Existing in such a diverse environment, the individual faces a symbolic and functional risk (Sung and Huddleston, 2017). As a result, incongruence lies between brand identities and brand perceptions. Lee et al. (2009) explained that identity avoidance happens when the product is symbolically incongruent with one's self-identity.

In contrast, individuals highly value brands which are symbolically and functionally congruent with their identity (Wallace et al., 2017). Similarly, symbolic congruence in food plays a significant role in all religious practices and traditions. Some religions like Islam (Riaz and Chaudry, 2003), Orthodox Judaism (Kraemer, 2010), Hinduism (Khare, 1976) and Seventh Day Adventism (Butler et al., 2008) have a complex food culture. According to Durkheim (1915), food codes oblige adherents to conform across space and time. Islam, as a religion, mandates the consumption of only halal food under Islamic law (Shah Alam and Mohamed Sayuti, 2011). Therefore, halal conformance is a vital product attribute for Muslims, which means assurance of halal standards can be covered in uncertainty. Awan et al. (2015) conducted a study and found that halal image congruence has a significant effect on individual purchase intentions. Kamarulzaman et al. (2016) explained that halal food has congruence with hygiene, safety and wholesomeness of food. Thus, the symbolic
congruence “halal food” is considered as a key determinant of the purchase intention. Flanagan et al. (2014) researched electronic commerce and confirmed that consumers have a negative attitude toward low-quality products. Consumer behavior scholars believe that the functional congruence of the product is related to utilitarian factors (Knittel et al., 2016). Sirgy (2015) explained functional congruence as “the match between consumers’ ideal expectations of utilitarian brand features and their perceptions of how the product is perceived along the same features.” According to functional congruence, functional congruity is classified by product and store environment (Chen et al., 2016).

Sirgy (1986) explained that functional congruity concerns the comparison between the ideal characteristics of the product and its actual performance. Scholars have found that high product quality and good store environment are significantly and positively linked with customer loyalty and high brand loyalty (Claiborne and Sirgy, 2015; Pappu and Quester, 2016). Sirgy conducted many studies (Sirgy, 1982, 2015; Sirgy et al., 1991) to explain the concept of functional congruence, particularly in relation to tourist behavior. The functional congruence of the product is directly linked to purchase retention (Zarantonello et al., 2016). In contrast, poor food quality and poor store environment lead to functional incongruence, which further leads to brand hate. As a result, consumers avoid all the products inconsistent with their self-concept (ideal and actual) (Sirgy, 2015). Research conducted in the tourist sector by Vikas and Nayak (2014) found that people preferred only products consistent with their self-image. Negative self-congruity and one’s self-esteem may be motives to buy a product despite a conflict with self-consistency (Astakhova et al., 2017). Symbolic incongruity is a stage in which a low congruity exists between ideal self and actual self-image (Claiborne and Sirgy, 2015). Matzler et al. (2016) found that individuals avoid brands if there is symbolic incongruence with their personality. Symbolic incongruity can lead to brand hate (Hegner et al., 2017; Zarantonello et al., 2016). Thus, the symbolic incongruity of the brand could lead to brand hate.

Why is research on brand hate useful? Today, the positive aspects of consumer–brand relationships have been intensively researched (Kandampully et al., 2015; Lien and Cao, 2014; Pappu and Quester, 2016; Zhang et al., 2014), whereas its negative counterpart has received far less attention (Cherrier et al., 2011; Lee et al., 2009). Hegner et al. (2017) found some key antecedents and outcomes of brand hate. Earlier research by Lee et al. (2009) identified the antecedents of anti-consumption and brand avoidance, and Kucuk (2016b) explained the possible consequences of brand hate. Sirgy and Su (2000) proposed an integrative approach examining the relationship between self-congruence and tourist behaviors. Similarly, Chon (1992) examined self-image in the tourism sector based on congruence theory. This research further validates the self-congruity theory, explaining how symbolic and functional incongruence leads to brand hate in the fast-food industry in Pakistan.

Our research goal is to explain the personal, social and marketing stimuli that lead to brand hate. This research study critically examines the impact of self-concept based on symbolic and functional expressions to study consumer behavior.

In addition, the proposed conceptual framework, based on self-congruity theory, helps to explain the key antecedents of brand hate in the food sector. Muslims are concerned about their food consumption not only in Islamic countries but also in foreign countries. According to an estimate, 24 percent of the world population comprises of Muslims. Published research on halal food found that image congruence is mandatory for Muslims because Islam strictly insists that its followers consume only halal food (Ahmad, 2015). Burgmann (2007) described how Muslim populations are very conscious of food consumption and push companies to produce food congruent with their self-concept. Foreign fast-food chains are careful to reassure Muslims about the symbolic and functional congruence of their products which comply with local community beliefs (Shah Alam and Mohamed Sayuti, 2011). The current study reconsiders this question by surveying Pakistani fast-food consumers about their self-concept (symbolic and functional) concerns.
Hypotheses development

Self-congruity framework

Self-congruity theory helps to explain and forecast facets of consumer behavior, delivering a more thorough understanding of self-concept. Self-concept is defined by Rosenberg (1979, p. 7) as the “totality of the individual’s thoughts and feelings having reference to him as an object.” According to Usakli and Baloglu (2011), self-congruity is the natural extension of self. Scholars simplified the term by considering the consumption context, where individuals can support their self-concept by purchasing brands that are highly congruent with their concepts of themselves. As a result, the self-congruity theory is a key theory for marketers and researchers to identify and understand the main problems in brand failure. In the current framework, the self-congruity theory is considered in the food sector. In this sector, Ryu et al. (2012) found that the quality of the physical environment and restaurant image of Chinese restaurants has a positive relationship with behavioral intention and individual satisfaction. Similar research conducted by Han and Hyun (2015) revealed that the overall image of a quick-casual restaurant has a significant relationship with customer satisfaction. Al-Hyari et al. (2012) conducted a study in Islamic countries and found that the halal image of a product is one of the driving forces that lead to Muslims patronizing a brand.

Research on the food industry has seen an abrupt increase of attention on restaurant image, quality of services and the customer loyalty (Jin et al., 2012; Kukanja et al., 2017). The current research adopts the self-congruity model, paying attention to the symbolic and functional incongruence. The framework used in the current paper is adapted from the Sirgy and Su (2000) study, in which self-congruity theory is used in an integrative model of the destination image, and travel behavior is explained. In self-congruity, self-concept refers to the ideal self and actual self, symbolic congruence and functional congruence. The application of self-congruity theory is suitable for two reasons. First, the self-congruity theory has been widely used in other consumption research. For example, using the self-congruity theory, Japutra et al. (2017) explored the impact of ideal and actual self-congruence on brand attachment. Kang et al. (2015) applied self-congruity to show that image congruity (self and functional congruity) is positively associated with brand loyalty. Such results support the use of the self-congruity framework to measure behavioral outcomes. Second, the self-congruity framework provides a systematic way to observe how symbolic and functional congruence impact brand hate.

Scholars define brand hate as a basic emotion opposite to love (Bushman and Baumeister, 1998; Eibl-Eibesfeldt, 2017). Zarantonello et al. (2016) understood the concept of hate as a compounded and difficult emotion (Sternberg, 2003). Psychologists describe hate as fear, disgust and anger (Fishwick, 2004; Freeman, 2014). To social scientists, hate is an outcome of certain activities as well as behavioral reactions (Hegner et al., 2017; Vásquez-Levy, 2017). Similarly, neurobiological researchers acknowledge that the hate emotion is not a pure emotion (Pardy, 2011) and Ben-Ze’ev (2000) stated that hate is a long-term attitude. Rempel and Burris (2005) described hate as a motive related to the weakening of the individual’s well-being. According to Lee et al. (2009), people often have the desired self-image which they want to project to the outside world, and they associate brands with specific images. If an image does not fit a consumer’s identity, he/she will not purchase the brand and may develop a hatred of it. For example, many consumers will avoid clothing brands that are associated with followers of extremist groups. Dalli et al. (2006) explained that many people hate the Nike brand because the organization has a reputation of neither valuing their customers nor respecting basic human rights. In simple words, people consume in ways that fit their self-concepts while they avoid the products associated with images that do not fit their desired self-concept. The self-congruity theory is a suitable approach to explain why people hate brands. First, the congruence models are extensively used to examine individual aspects to measure individual preferences (Claiborne and Sirgy, 2015; Hegner et al., 2017; Kucuk, 2016a; Sheikh et al., 2017). For example,
Kressmann et al. (2006) found that self-congruence is a key determinant of brand personality. Second, the self-congruity theory provides strong theoretical support to verify the key determinants of brand hate.

Self-congruence is extensively used in consumer, psychology and personality research to examine and predict individual attitudes; brand attitude models are based on the self-congruity theory (Claiborne and Sirgy, 2015; Sirgy, 1982, 2015; Sirgy et al., 1991). According to self-congruity theory, the self-construct (self-image and functional congruence) is measured through a multi-dimensional perspective (actual, ideal and social self) (Sirgy, 1986). Scholars confirmed that self-image congruence models are entirely dependent on the cognitive matching between the self-concept and functional congruence (Ahn et al., 2013; Chen et al., 2016). Self-congruity theory applied in consumer behavior studies reveals that individuals configure their personalities with self-concepts and brand images (Kandampully et al., 2015). Van Quaquebeke et al. (2017) explained multi-model congruence using a personality framework. Scholars and marketing researchers have classified functional congruity and symbolic congruity through the multi-attitude models (Pappu and Quester, 2017; Sirgy, 2015).

Symbolic incongruence
Consumers prefer brands associated with a set of personality traits congruent with their own personality (Chon, 1992; Sung and Huddleston, 2017). Hosany and Martin (2012) found that individuals not only buy to fulfill their basic needs but they also buy what a product means or represents. Consumption of specific brands associated with individual personalities drives social patterns (Kressmann et al., 2006). Elliott (1997) explained symbolic congruence as the idea that “consumers no longer consume products for their material utilities, but to consume the symbolic meaning of those products as portrayed in their images; products. In fact, the brands become commodity signs.” Similarly, Sirgy and Su (2000) defined self-congruity theory as the match between an individual’s self-concept and a brand image. Therefore, self-concept is the “totality of the individual’s thoughts and feelings having reference to himself as an object” (Rosenberg et al., 1995).

Marketing scholars have found that brand hate is the negative feelings toward certain brands due to factors like symbolic incongruence and functional incongruence with the consumer’s personality (Hegner et al., 2017). According to Hosany and Martin (2012), image congruence, self-congruity, self-congruence and self-image congruence are interchangeable concepts. Research, especially in the tourist sector, verifies that customers match self-image congruence (actual and ideal) with brands (Sirgy, 1986; Sirgy et al., 1991). Zarantonello et al. (2016) researched post-product evaluation and self-image congruence. Consumers tend to buy those brands with which they have image congruencies. Discrepancies between the symbolic meanings of a brand and the consumer’s sense of self could lead to negative emotions leading toward brand hate. For example, Lee et al. (2009b) argued that “dis-identification theory suggests that people may develop their self-concept by dis-identifying with brands that are perceived to be inconsistent with their own image” (p. 174). Our current paper proposes the following hypotheses based on self-congruity theory (Hegner et al., 2017; Hosany and Martin, 2012; Khan et al., 2018 Kressmann et al., 2006; Sirgy, 1982, 2015; Sirgy et al., 1991; Sirgy and Su, 2000; Zarantonello et al., 2016):

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H1. \text{ Actual self-image is negatively related to symbolic incongruity.}
\]

\[
H2. \text{ Ideal self-image is negatively related to symbolic incongruity.}
\]

\[
H3. \text{ Symbolic incongruity has a positive relationship with brand hate.}
\]

Functional incongruence
Sirgy et al. (1991) explained that the functional congruity is “the match between the beliefs of the product’s utilitarian attributes (performance-related) and the audience’s referent
attributes” (p. 26). Therefore, functional congruence represents the ideal attributes a consumer seeks in a product. Product quality is a combination of factors that matter to the consumer (Flanagin et al., 2014; Griffith and Lee, 2016). Bjerke and Polegato (2006) and He and Mukherjee (2007) explored the crucial role of functional congruence in predicting different consumer behaviors expressed as product preference, attitude toward the product and brand choice. Sirgy and Su (2000) described functional congruence based on the product’s attributes associated with individual expected performance. Sirgy et al. (1991) and Sirgy and Su (2000) explored utilitarian congruence in the context of destination services (e.g. food quality, service quality and food price). Sirgy et al. (1991) proved that functional congruence better explained the customer behavior than self-congruence. Previous studies have found many reasons for product failure (poor quality, poor packaging, high prices, poor store environment), which can lead to hatred against that brand (Hegner et al., 2017; Kucuk, 2016a; Zarantonello et al., 2016). Research has also shown that experiential avoidance is the stronger motivator for brand hate compared to identity avoidance (Delzen, 2014). Functional incongruence leads to consumer dissatisfaction related to the product or the services provided in terms of product quality and store environment. Hegner et al. (2017) and Das (2014) found that functional incongruity is positively linked with brand hate. Therefore, in the Pakistani fast-food context, we hypothesize the following:

H4. Low product quality is positively related to functional incongruity.

Scholars agree that fast-food chain characteristics (ambient, design and social) are key determinants of sales and customer loyalty (Frank et al., 2014; Han and Hyun, 2015). Sachdeva and Goel (2015) found that the food franchise characteristics help to determine the success of a food court. Zhang (2015) explained that fast-food chain managers and customers both rely very much on environmental characteristics. Marketers and researchers are on the same page that better environment characteristics lead to higher satisfaction level and brand loyalty. Sirgy et al. (1991) explained that utilitarian congruence with the product plays a significant role in persuading the consumer to purchase. Product quality and related attributes (store environment, parking space, store cleanliness and product design) positively impact the customer purchase intention (Flanagin et al., 2014; Wu et al., 2015). According to self-congruity theory, the functional congruence of the product is positively linked with perceived quality, customer satisfaction, customer loyalty and brand loyalty (Claiborne and Sirgy, 2015). Regarding functional congruity, consumers want products not for the physical products themselves but for the benefits they receive from using the products (Sirgy, 2015). Functional incongruity is the determining factor in the success of utilitarian brands (Kaap-Deede et al., 2016). Therefore, we hypothesize the following:

H5a. Ambient environment is positively related to store environment characteristics.
H5b. Design factors are positively related to store environment characteristics.
H5c. Social factors are positively related to store environment characteristics.

H5. SEC is positively related to functional incongruity.

H6. Functional incongruity has a positive relationship with brand hate (Figure 1).

Research methods
Sampling and procedure
A self-administered survey was used to obtain the data from the consumers of foreign-based fast-food restaurants (i.e. KFC, McDonald’s, Subway, Pizza Hut and Domino’s Pizza)
in Pakistan. The survey tool is appropriate because it is used to assess behavior and analyze the relationships among variables and constructs (Newsted et al., 1998). Moreover, the survey design has been widely used in assessing behaviors in social science (Nielsen et al., 2011). Using paper-and-pencil survey, the data were collected from consumers through visiting fast-food restaurants located in major cities of Pakistan (i.e. Islamabad, Lahore and Karachi), where people from all across the country reside to pursue employment and work opportunities. Ethical approval was sought from the branch managers of these fast-food chains before formal data collection. To ensure content validity and refine the instrument, a focus group analysis was conducted using two customers and five senior PhD management research scholars (with specialization in marketing). The survey was pilot tested to ensure the validity and reliability of the questionnaire before it was finalized. The pilot study used 40 fast-food customers, who were then excluded from the final analysis. The findings of the pilot study revealed that most of the measurement scales for the constructs were valid. The undesirable scales were changed.

Purposive sampling was used to administer the questionnaires among the consumers at fast-food restaurants. The researchers assured the privacy of the respondents. To ensure anonymity and confidentiality, we stressed that there are no right and wrong answers to further reduce social desirability bias (Randall and Gibson, 1990). The participants sealed their completed surveys and gave them to researchers while exiting the restaurants. The survey used the English language for several reasons. First, based on the anecdotal experience of the researchers, it is observed that a large proportion of the target market of foreign-based restaurants in Pakistan is composed of urban residents who are well-educated and working in a context of multinational enterprises requiring knowledge of English. Therefore, understanding of English is not a major concern for these consumers. Second, the fact that English is widely spoken in Pakistan is acknowledged and capitalized upon in much previous research (Kashif et al., 2015; Kashif and Khattak, 2017). We administered 600 surveys and obtained 374 responses. After excluding missing values, the final sample comprised 358 responses, yielding a final response rate of 59.6 percent. The demographic information of the participants is reported in Table I.

Figure 1. Hypothesized model
Measures

The proposed constructs mostly come from past literature. We took items of self-concept (ideal and actual) from Sirgy (1982) and Sirgy et al. (1991). This survey construct has been verified and applied in recent research, and it shows good internal reliability: 0.80 and 0.78 in the research by Abel et al. (2013). Symbolic and functional incongruence were measured by using the items from Sirgy et al. (1991). This instrument has been empirically used in previous research by Kumar and Nayak (2014) and has Cronbach α values of 0.82 and 0.80. The brand hate was measured by using the items from Lee et al. (2009), which have been used in recent research and have yielded a Cronbach α of 0.83 in the study of Hegner et al. (2017). Store environment characteristics were measured by using the items from Park et al. (1989) and Summers and Hebert (2001). This instrument has also been empirically used in past research and has had a combined Cronbach value of 0.82 in the study of Yoo et al. (1998).

Findings

Data analysis

To evaluate the structural model, we used structural regression modeling through partial least squares (PLS) estimation. According to Hair et al. (1998), PLS is a powerful technique which is used to perform confirmatory factor analysis (CFA) and regression, while simultaneously testing the measurement and structural model. Smart-PLS is modern software that was used to estimate the measurement and structural model (González et al., 2008). In the current research, we employed the Smart-PLS 3.0 to perform the PLS calculations.

Common method bias

According to Podsakoff et al. (2003), common method bias might exist in data which were collected from a single source, and this bias could negatively affect the validity of the research findings. Common method bias was checked using Harman’s single-factor test (Podsakoff et al., 2003) and all items in the conceptual model were divided into five factors, among which the first factor explained 25.6 percent of the variance. Thus, the results show that common method bias was not an issue in our study.
**Measurement model**

In this study, we assess the measurement model by using common factor analysis, and while measuring the conceptual model, we focus on convergence and discriminant reliability. CFA was conducted to measure the validity of the constructs and to measure the psychometric properties (convergent and discriminant), the average variance extracted (AVE) and composite reliability (CR) of all constructs (Fornell and Larcker, 1981). The minimum thresholds for all values were met, as values for CR and Cronbach $\alpha$ were greater than 0.70 for all constructs (Fornell and Larcker, 1981) and the AVE for all variables was more than 0.50 (Tabachnick and Fidell, 2007) (see Table II). Thus, the results indicate acceptable convergent validity.

The discriminant validity was measured at the construct level. Following the previous research by Gefen and Straub (2005), discriminant validity was assessed using two approaches. First, we assessed discriminant validity by comparing the relationship between the correlations among constructs and the square root of AVE of each construct (Hair et al., 2012; Tabachnick and Fidell, 2007). As shown in Table III, the square roots of the AVE are above the correlations among variables, thus, indicating acceptable discriminant validity. Second, the current research analyzed the cross-loadings in the proposed framework to examine the item loading correlations. The results demonstrate that all the item loadings of the corresponding variables are above the cross-loading values of other latent variables. Therefore, the results of the cross-loadings show significant discriminant validity.

To check that multicollinearity was not an issue, we tested the variance inflation factors (VIFs) and tolerance values of the predictor values. According to Mason and Perreault

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach’s $\alpha$</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual self</td>
<td>0.724</td>
<td>0.826</td>
<td>0.543</td>
</tr>
<tr>
<td>Ideal self</td>
<td>0.723</td>
<td>0.829</td>
<td>0.547</td>
</tr>
<tr>
<td>Symbolic incongruity</td>
<td>0.745</td>
<td>0.880</td>
<td>0.534</td>
</tr>
<tr>
<td>Food/product quality</td>
<td>0.780</td>
<td>0.850</td>
<td>0.534</td>
</tr>
<tr>
<td>Ambient factors</td>
<td>0.741</td>
<td>0.822</td>
<td>0.608</td>
</tr>
<tr>
<td>Design factors</td>
<td>0.736</td>
<td>0.809</td>
<td>0.520</td>
</tr>
<tr>
<td>Social factors</td>
<td>0.745</td>
<td>0.833</td>
<td>0.555</td>
</tr>
<tr>
<td>Store environmental characteristics</td>
<td>0.782</td>
<td>0.841</td>
<td>0.570</td>
</tr>
<tr>
<td>Functional incongruity</td>
<td>0.722</td>
<td>0.810</td>
<td>0.521</td>
</tr>
<tr>
<td>Brand hate</td>
<td>0.713</td>
<td>0.809</td>
<td>0.517</td>
</tr>
</tbody>
</table>

**Table II.** Validity and reliability of latent constructs

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Actual self</td>
<td>0.737</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Brand hate</td>
<td>0.165</td>
<td>0.719</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Design factors</td>
<td>0.192</td>
<td>0.330</td>
<td>0.777</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Store environmental characteristics</td>
<td>0.249</td>
<td>0.359</td>
<td>0.612</td>
<td>0.751</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Ideal self</td>
<td>0.173</td>
<td>0.554</td>
<td>0.533</td>
<td>0.574</td>
<td>0.734</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Ambient factors</td>
<td>0.168</td>
<td>0.245</td>
<td>0.521</td>
<td>0.706</td>
<td>0.413</td>
<td>0.780</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Functional incongruity</td>
<td>0.148</td>
<td>0.522</td>
<td>0.483</td>
<td>0.486</td>
<td>0.880</td>
<td>0.297</td>
<td>0.719</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Social factors</td>
<td>0.136</td>
<td>0.705</td>
<td>0.241</td>
<td>0.343</td>
<td>0.384</td>
<td>0.190</td>
<td>0.324</td>
<td>0.745</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Food/product quality</td>
<td>0.277</td>
<td>0.358</td>
<td>0.586</td>
<td>0.609</td>
<td>0.648</td>
<td>0.537</td>
<td>0.561</td>
<td>0.266</td>
<td>0.731</td>
<td></td>
</tr>
<tr>
<td>10. Symbolic incongruity</td>
<td>0.201</td>
<td>0.251</td>
<td>0.588</td>
<td>0.499</td>
<td>0.423</td>
<td>0.573</td>
<td>0.230</td>
<td>0.234</td>
<td>0.529</td>
<td>0.804</td>
</tr>
</tbody>
</table>

**Table III.** Correlations among constructs

Notes: $n = 453$. Diagonal elements are the square root of the average variance extracted of each construct.

* $p < 0.05$; ** $p < 0.01$
(1991), when VIF values are below 10 or tolerance values are above 0.1, multicollinearity should not affect the results. Our analysis demonstrates that the VIF scores range from 1.57 to 2.34. Thus, multicollinearity is not a significant issue in this research.

**Structural model**

Our results show that actual self and ideal self are positively related to symbolic incongruity, and symbolic incongruity also has a significant effect on brand hate, confirming $H1–H3$. Food/product quality is positively related to functional incongruity. Moreover, the coefficient values clearly indicate that ambient factors, design factors and social factors are significant determinants of SEC, thus, $H4$ and $H5a–H5c$ are supported. The results demonstrated that SEC is significantly related to functional incongruity, and functional incongruity has a positive impact on brand hate, so $H5$ and $H6$ are confirmed. The results in Figure 2 show that 63.1 percent of the variation exists in SEC, 19.6 percent in symbolic incongruity, 31.9 percent in functional incongruity and 29.1 percent in the brand hate (Table IV).

**Figure 2.**
The research model, showing standardized regression weights obtained through structural equation modeling

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Path coefficient</th>
<th>SE</th>
<th>$t$-value</th>
<th>$p$-value</th>
<th>Study results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1. Actual self→symbolic incongruity</td>
<td>0.132</td>
<td>0.047</td>
<td>2.786</td>
<td>&lt; 0.001***</td>
<td>Supported</td>
</tr>
<tr>
<td>H2. Ideal self→symbolic incongruity</td>
<td>0.400</td>
<td>0.044</td>
<td>9.178</td>
<td>&lt; 0.001***</td>
<td>Supported</td>
</tr>
<tr>
<td>H3. Symbolic incongruity→brand hate</td>
<td>0.138</td>
<td>0.048</td>
<td>2.908</td>
<td>&lt; 0.01**</td>
<td>Supported</td>
</tr>
<tr>
<td>H4. Food/product quality→functional incongruity</td>
<td>0.498</td>
<td>0.053</td>
<td>9.361</td>
<td>&lt; 0.001***</td>
<td>Supported</td>
</tr>
<tr>
<td>H5a. Ambient factors→SEC</td>
<td>0.566</td>
<td>0.049</td>
<td>11.612</td>
<td>&lt; 0.001***</td>
<td>Supported</td>
</tr>
<tr>
<td>H5b. Design factors→SEC</td>
<td>0.311</td>
<td>0.048</td>
<td>6.435</td>
<td>&lt; 0.001***</td>
<td>Supported</td>
</tr>
<tr>
<td>H5c. Social factors→SEC</td>
<td>0.101</td>
<td>0.036</td>
<td>2.202</td>
<td>&lt; 0.05*</td>
<td>Supported</td>
</tr>
<tr>
<td>H5. SEC→functional incongruity</td>
<td>0.102</td>
<td>0.059</td>
<td>2.216</td>
<td>&lt; 0.05*</td>
<td>Supported</td>
</tr>
<tr>
<td>H6. Functional incongruity→brand hate</td>
<td>0.431</td>
<td>0.041</td>
<td>10.047</td>
<td>&lt; 0.001***</td>
<td>Supported</td>
</tr>
</tbody>
</table>

**Notes:** $n$ = 453. *$p < 0.05$; **$p < 0.01$; ***$p < 0.01$
Discussion
The current study has proposed a conceptual model based on self-congruity theory to understand the key determinants responsible for brand hate. The findings of the research indicate that ideal self and actual self are negatively related to symbolic incongruence. In addition, the store environment characteristics are also negatively related to functional incongruence. Moreover, the results reveal that symbolic and functional incongruence both lead to brand hate. The findings are consistent with past literature (Hegner et al., 2017; Kasiri et al., 2017; Kucuk, 2016a). All hypotheses in the conceptual framework were accepted except $H_3$. Brand hate is currently considered a new phenomenon in the marketing literature since only limited research has been conducted on negative relationships (brand hate) in the past (Hegner et al., 2017; Lee et al., 2009). This study proposes a model based on self-congruity theory, which was used to measure brand hate determinants and test how these antecedents change the behavior of consumers toward the brands. The findings of this research conclude that symbolic incongruence and functional incongruence are the main causes of brand hate.

This research uncovers various aspects of brand hate, including self-concept (ideal self and actual self), symbolic incongruity and functional incongruity. The customer avoids the product and services if they are not congruent with his/her symbolic image or identity. O’Cass and Muller (2015) explained that customers carefully protect their image by avoiding specific brands. Kucuk (2016a) confirmed that brand hate results from the brand not being aligned with the customer’s self-ideology. Normally, the customers hate those brands which, particularly, create a negative image of a person in their reference groups (Vikas and Nayak, 2014). In Pakistan, most fast-food chains have issues of serving non-halal food and providing poor product quality, so customers do not want to visit them because of this bad ideology (Shahzad, 2016). A customer’s religious identity as a Muslim is perhaps the most significant determinant that influences the buying behavior.

The symbolic incongruence of a corporate brand will damage all products of that brand. As a result, people are reluctant to buy the brands with an uncertain image in the target market. In Pakistan, halal food is becoming a universal sign of quality assurance and standard of living. Also, Muslims consumers immediately stop buying if any uncertainty is raised regarding the symbolic image of the food items (Kamarulzaman et al., 2016). The findings of the study show that customers are more concerned about the symbolic image than the functional image. Ahmad (2015) conducted a study on the antecedents of halal products and found that the products and brands carry symbolic meaning if they are defined and realized about the personality characteristics of the people, by the name of the brand personality. Consumers prefer brands associated with a set of personality traits congruent with their own personality (Sung and Huddleston, 2017). Thus, the results are consistent with Lee and Cude (2012), agreeing that consumers tend to buy those brands with which they have image congruencies. Experience shows that, in Pakistan, people immediately hate brands that are thought to be incongruent with their self. For example, a local religious newspaper published a couple of reports on a non-halal property of a particular multinational brand of potato chips and people immediately stopped buying that brand, hating that brand but no other international potato chip brands. The research of Al-Makrami and Yen (2017) confirmed that in the Muslim community, symbolic image (halal) is the key antecedent of brand hate.

The results of the current study indicate that functional incongruence also leads to brand hate. If the quality of the product is not up to the mark, the results will be dissatisfaction (Çifci et al., 2016), high anger (Zarantonello et al., 2016), no repeat purchases (Vanpoucke et al., 2014), high brand avoidance and brand hate (Vikas and Nayak, 2014). Kaap-Deeder et al. (2016) confirmed that product attributes are significantly related to customer satisfaction, loyalty and brand equity. Sirgy (2015) explained that product functional
congruence is related to utilitarian benefits. Sirgy conducted much research (Claiborne and Sirgy, 2015; Sirgy, 1982; Sirgy and Su, 2000) to determine that functional congruence has only positive outcomes in the context of tourism. The current paper’s research confirms this in the context of fast food by studying the relationship of functional incongruence and brand hate: if the food quality, design, price, service quality or store environment are not up to the mark, brand hate ensues. In the food sector, approval of products is not limited to the taste of the food, although taste is a key determinant of satisfaction; scholars have identified many factors (food presentation, restaurant environment, employees’ attitude, play area for kids and the tangible quality of the services) that lead to brand equity. Ignoring the functional attributes of the food product is positively linked with brand hate.

Our research makes several significant contributions to the existing literature. First, this research extends the literature (Claiborne and Sirgy, 2015; Hegner et al., 2017; Sirgy, 2015) by testing and validating a conceptual model that includes multiple types of congruence (symbolic and functional) in relation to brand hate. Our study’s proposed framework proved that symbolic congruence and functional congruence are both key determinants of brand hate, confirming the result of Hegner et al. (2017). This research, to the best of our knowledge, is the first to empirically examine the combined impact of these two kinds of congruence on brand hate. Second, according to self-congruity theory, self-concept (ideal and actual) plays a significant role in symbolic congruence. The limited literature discussing the key determinants of brand hate is based on self-congruity theory, postulating that consumers reject a particular brand to avoid adding undesired meaning to their life. The current research extends the results of Hegner et al. (2017) by indicating that self-congruity impacts brand hate. Third, our proposed conceptual model provides a novel and theoretical self-congruity point of view regarding brand hate. Therefore, our paper supplements the literature about the emerging construct brand hate.

This study’s results provide recommendations to policymakers. Food consumption is related to the concept of well-being. For instance, lean meat, seafood, fruits and vegetables are considered positive for well-being while fried food and junk food are perceived as harmful (Ares et al., 2015). Such perception of poor food quality evokes ideas to avoid fast food and results in a dislike of certain brands. There is a need to establish positive perceptions of fast food as healthy food that helps to ensure the well-being of customers and society. Research recommends that the visual appeal of healthy and novel food is suitable to tackle these issues (Zellner et al., 2014). Hegner et al. (2017) found that ideological and symbolic incongruence lead to brand hate. The symbolic incongruence of a corporate brand will damage all products associated with that brand. Thus, our first recommendation is that corporate-level management must consider the possibility of discontinuing an existing brand and adopting new strategies to relaunch with a new design and name. Second, the corporation’s research and development department should identify the self-concept (self-image) of the target customers in order to launch a brand aligned with the target customer personality. Previous study revealed that customers prefer only those brands which align with their personality (Kasiri et al., 2017; Kressmann et al., 2006; Sirgy, 2015), and our results confirm that it is especially true in an Islamic country where consumers are bound to consume only halal food. The current study, conducted in Pakistan, showed that consumer food choices are derived from food quality, food hygiene and service quality, but the most important determinant of consumption is the symbolic image (i.e. being halal food). Third, in developing countries, multinational companies need to have more concern for consumer welfare from the consumer’s point of view, which may emphasize facets like halal food that are less important to marketing success in developed countries because of the limited number of Muslims residing there. Currently, consumers are very concerned about animal welfare (Miranda-de la Lama et al., 2108), environmental concerns (Tait et al., 2016) and social concerns (Bolton and Mattila, 2015), and such concerns shape the individual
consumer’s food purchase patterns. Thus, the government should take steps to inform foreign companies (through workshops, training programs and talk show social media) about individual belief systems so the companies can develop standard operating procedures that align with the target consumer’s individual belief systems.

Limitations and future research
The current study, like all research, has limitations. First, data were collected only in fast-food chain franchises in the capital city territory of Pakistan. Therefore, it is hard to generalize the findings of this research for customers from different cultural backgrounds. For example, future scholars should collect data for different food brands from other countries to determine if different contexts will affect the proposed relationships in dissimilar ways (Suh and Kwon, 2002). A comparison between high-context and low-context cultures could be valuable for future research. Second, the current study examined the impact of symbolic and functional incongruence on brand hate. Further studies should also account for other variables that could influence brand hate. For instance, scholars have found that bad experience is also a key determinant of brand hate so it would also be worthwhile to examine the effect of unmet expectation (bad experience) on symbolic and functional incongruence, and that of bad experience on brand hate in the other sectors. Third, this study used a direct scoring method to measure the brand hate for fast food. Future scholars should use alternative methods to measure functional and symbolic congruence and use an experimental design that gives a better understanding of the predictive power of the congruence measures and the relationship between self-incongruence and brand hate. Finally, it would also be of interest to find out which component of symbolic incongruence (actual self or ideal self) has the greater influence on brand hate. Therefore, future scholars could explore the results considering other consumer values (e.g. hedonic vs utilitarian) and personalities (e.g. neuroticism).

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Farmer behavior and perception regarding food waste and unsold food

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Abstract

Purpose – The purpose of this paper is to analyze farmer behavior, considering their attitude toward food waste with particular focus on their involvement in the last phase of the process, the retail phase. It assesses the different approaches applied to food waste management and its future.

Design/methodology/approach – A sample of 35 farmers in the Porta Palazzo market, the biggest food market in the Turin Area (north-west Italy), was identified and a survey was carried out to determine the behavior and perception of farmers regarding food waste and the management of unsold food.

Findings – Results show that there is a high level of interest on the ethical and charitable aspects of food waste and unsold food. However, awareness and knowledge of the initiatives organized by institutions are not sufficient.

Practical implications – If policy makers and institutions have an understanding of farmer behavior, they can implement ad hoc initiatives to reduce food waste and build on the work already done by farmers. Additionally, farmers can help customers to better understand the products.

Originality/value – This study analyzes the perception of the food waste phenomenon for one type of traditional operator in the food supply chain, the farmer. The originality of the paper lies in the fact that it has not only considered the perception of food waste but also the management of unsold food in a market area.

Keywords Farmers, Food waste, Marketplace, Unsold food

Paper type Research paper

Introduction

Food waste is a phenomenon that increasingly affects both developed and developing economies and, its relevance is linked to the negative externalities (Kummu et al., 2012) it causes, such as economic, environmental and social consequences. Economic agreements are not always in line with the true market and consumers needs and this is one of the main causes of food waste (Stuart, 2009), together with inappropriate behavior of players involved in food production as well as customers (Block et al., 2016; Parfitt et al., 2010). Although food waste is a well-known phenomenon, it is still difficult to define it in a uniform way and clearly identify all the processes and players involved (Garrone et al., 2014).

The European Union defines food waste as foodstuffs that, although still edible, are discarded by some players of the supply chain for aesthetic reasons (EU, 2012). In line with the EU definition, Hudson and Messa (2014) focused attention on the role played by the retail and final consumption stages, indicated as the one in which food is most often discarded. Food waste takes place in all phases of the supply chain and the different characteristics of various countries affect it, for example economic and climatic conditions, productive systems, infrastructures, market, and consumption. The EU (2012) and Hudson and Messa (2014) are just some of the studies that emphasize the role of the supply chain in the analysis of food waste.
Numerous studies have analyzed the relationship between supply chain and food waste, the costs generated and the negative spin-offs. For example, food losses in the distribution phase in Austria (Lebersorger and Schneider, 2014) and in Sweden (Eriksson et al., 2012), along the whole supply chain in Switzerland (Beretta et al., 2013), in food service management (Engstrom and Carlsson-Kanyama, 2004), the generation of food waste caused by packaging and labeling information (Williams et al., 2012) and different types of food products (Buzby and Hyman, 2012), the costs incurred to manage household food waste in South Africa (Nahman et al., 2012) and the use of resources to generate food waste (Kummu et al., 2012).

Other studies have divided the supply chain into different phases in order to have a better focus on the processes therein. Cicatiello et al. (2016) report four phases: production and processing, retail, food service and household consumption. According to Gustavsson et al. (2011) and Verghese et al. (2013) there are five phases: agricultural production, post-harvest handling and storage, processing, distribution and consumption.

In order to have a positive impact on the food waste phenomenon, Parfitt et al. (2010) argued that it is fundamental to address the problem starting from farmers by making them more aware of the issue. Changes in both legislation and business behavior are necessary to reduce food waste in developed countries.

Previous studies focus on the whole supply chain (Beretta et al., 2013; Mena et al., 2011), individuals' behavior (Lundqvist, 2009) and legislation (Aparicio Arroyo, 2015; Lissel, 2015). Therefore, the authors decided to structure a preliminary analysis of farmers, since they are an important part of the supply chain (Peira et al., 2018), their role is indicated as fundamental to influence customers (Parfitt et al., 2010), which emphasizes the necessity to understand and change their behavior (Parfitt et al., 2010; Peira et al., 2018).

The authors identified a large Italian market area, based in Turin, where a large number of farmers sell products every day. The chosen marketplace is a daily farmers market where it is possible to meet a number of farmers that are involved both at the beginning and at the end of the supply chain. This allowed the authors to gather information about two different phases of the food supply chain process: primary production and retail. A three-part questionnaire was developed to assess farmers' attitudes toward and perception of food waste management and it was personally submitted to 35 farmers.

Results show that there is a high level of interest in the ethical and charitable aspects of food waste and unsold food. However, awareness and knowledge of the initiatives organized by institutions are insufficient.

The contribution of the paper is twofold, it opens a new debate on farmers' behavior following the guidelines of some researchers and it also provides policy makers with important indications of the actual situation and farmers' current behaviors. Greater awareness of the present situation provides institutions and organizations the opportunity to identify proper initiatives to reduce food waste and correct wrong behaviors, starting from the supply chain.

The role of the supply chain in the food waste phenomenon

The FAO data (Gustavsson et al., 2011) indicate that 33 percent of annual world food production, which accounts for about 1.3bn tons, is lost or wasted along the food supply chain. In 2013, the Institution of Mechanical Engineers (IME, 2013) estimated the total amount of food waste to be 1.2–2bn tons, about 30–50 percent of the world food production.

In 2014, the European Commission estimated that food waste in agricultural production was around 1.6bn tons (EU, 2014). Supply chain efficiency and consumer behavior have been reported as being the main causes of this phenomenon (Lundqvist, 2009).

In 2011, EU food waste amounted to 89m tons, about 179 kg per capita. This data did not take losses in the agricultural production phases or fishing losses into consideration. Of the
total waste 42 percent is household waste, 60 percent of which is inevitable; 39 percent production waste, 14 percent foodservice waste and 5 percent wholesaler/retailer waste (EU, 2012). Food waste generated in the final phases of the supply chain is very common in industrialized countries and accounts for 31-39 percent of the total. In developing countries, this percentage is only 4–16 percent of total food waste.

It has been reported that the current linear production system and related consumption seem unsustainable due to the exploitation of natural resources and continuous wastage throughout the various phases of the supply chain (Borrello et al., 2017).

In this context, some studies focused their attention on food waste in the food supply chain because it has been demonstrated that each stage of the food value chain generates costs and negative externalities that are constantly increasing, that is, the use of resources such as freshwater, cropland and fertilizers (Kummu et al., 2012). In fact, between 25 and 58 percent of food waste is derived from the supply chain process (Green and Johnston, 2004; Nellemann, 2009; Beretta et al., 2013).

Beretta et al. (2013) analyzed the different phases of the entire supply chain, agricultural production, postharvest handling and trade, processing, foodservice industry, retail and households, and showed that the most avoidable food losses occurred in the household, processing and agricultural production stages. Household food consumption, which can amount to almost 10 percent of the average amount spent on food per consumer (Buzby and Hyman, 2012), can be considered the major contributor to the generation of food losses (Beretta et al., 2013) and can generate elevated management costs (Nahman et al., 2012). Moreover, food waste generated in this stage can be caused by packaging and labeling information (Williams et al., 2012; Newsome et al., 2014) and by consumers’ general behavior (Aschemann-Witzel et al., 2015; De Hooge et al., 2017).

Each stage of the supply chain has been studied from different points of view. Elevated levels of food losses were generated in the agricultural production and postharvest handling stages. A proportion of agricultural products are discarded because they cannot be used for human consumption but can be safely used, for example, as animal feed (Thieme and Makkar, 2017) or to produce marketable foodstuffs (Barba and Díaz-Ruiz, 2015). However, food losses can be reduced if farmers pay greater attention to the harvesting process (Peira et al., 2018).

The processing stage generates food waste and food losses. In fact, the food industry is tackling such challenges in order to improve productivity by using fewer resources, increasing the resilience of the food supply chain and relationships with providers and clients (Otles et al., 2015; Rahimifard et al., 2017; Eriksson et al., 2017). Some processing activities are dedicated to the recycling of discarded food at different stages, for example agricultural production and retail, for diverse reasons such as aesthetic standards and to transforming it into marketable foodstuffs (Barba and Díaz-Ruiz, 2015) or industrial production that collects the processing scrap, such as discarded fruit and vegetables, and uses it to produce biogas (Dietrich et al., 2015).

The retail stage was analyzed by Lebersorger and Schneider (2014), who quantified and identified reasons for food loss rates for selected food products and investigated the correlation between food loss rate and peculiarities of retail outlets. Eriksson et al. (2012) analyzed the fruits and vegetables delivered to retail stores and demonstrated that pre-store waste, that is goods rejected at delivery, is three times greater than in-store waste. Barco Cobaleza (2015) promoted the application of digital tools in order to improve the management and distribution of foodstuffs. The study conducted by Aparicio Arroyo (2015) is interesting in that it underlined the limitations of legislation on food donation and proposed changing EU Legislation to reduce the responsibilities of users, for example non-profit organizations, regarding the state of preservation, transportation, storage and use of foods.

Moreover, another cause of food waste in retail stores is customer behavior regarding store operations management and different product requirements (Teller et al., 2018; Filimonau and Gherbin, 2018).
To offer a complete overview of some of the studies on food waste and the different stages of the supply chain, some authors analyzed the foodservice sector and discovered that the largest amount of food waste is often recorded in restaurants and schools (Engstrom and Carlsson-Kanyama, 2004; Von Massow and McAdams, 2015) or in hospital foodservice (Dias-Ferreira et al., 2015; Zulkiply and Chik, 2015) and universities (Marais et al., 2017), mainly due to serving losses, that is food remaining on the buffet and in serving bowls on the counter, and that it is most important to reduce these (Betz et al., 2015). Moreover, different kinds of foodservice can provide diverse externalities in terms of environmental performance (Calderón et al., 2018). However, legislation can limit the opportunity for food donation in the restaurant industry (Aparicio Arroyo, 2015; Ofei et al., 2015) and therefore unsold food becomes food waste destined for landfill (Sakaguchi et al., 2018).

Finally, a specific trading area where food waste can be reduced is the marketplace. Peira et al. (2018) emphasized that farmers pay more attention to reusing unsold food the fruit and vegetable sellers in markets, while González-Torre and Coque (2016) showed that market operators could donate more food if European regulation permitted it.

The entire supply chain plays an important role in the food waste phenomenon and each stage produces both food waste and negative externalities, but there are opportunities to reduce it by working on the behavior of the main players involved. As suggest by Parfitt et al. (2010), farmers can be considered a good starting point to influence customer behavior.

Inside the supply chain: farmers from different perspectives
There are numerous studies dedicated to farmers and their activities and they have recently covered various questions including food safety (Yu et al., 2017; Bovay, 2017; Zhang et al., 2017; Ayedun et al., 2017), food security (Corsi et al., 2017; Hubrock et al., 2017), the public’s willingness to pay for local food (Berg and Preston, 2017), crops (Ayedun et al., 2017), genetic improvements (Tindano et al., 2017) or commercialization of waste-based organic fertilizers (Danso et al., 2017). Moreover, some studies analyzed farmers’ perception of the effect of climate change (Lee, 2017; Otieno et al., 2017; Boansi et al., 2017), policy implementation at a local level (Pradhan et al., 2017) and rice production (Islam et al., 2017; Nonvide et al., 2017).

Beausang et al. (2017) report that most farmers are not interested in the food waste phenomenon and do not consider food waste an issue of primary concern. Indeed, they are of the opinion that food waste “is a necessary evil and do not even note how much they waste.” Therefore, data on estimates for food waste and losses is lacking. Other farmers have expressed an interest putting waste to use on their farms to produce energy through anaerobic digestion, even if they did highlight several barriers to this.

Other studies have concentrated on the comparison between farmers markets and food waste. Some of these referred to food recovery programs and their efficacy in reducing food insecurity by taking advantage of the food left-over in markets (Sisson, 2016). Others report on the farmers’ perception of food waste (Beausang et al., 2017; Peira et al., 2018).

Peira et al. (2018) analyzing the role of farmers, market traders and the so called “hybrid,” underlined an important point that individuals have different behaviors according to their understanding of food waste and it is important to increase the level of awareness in order to reduce the phenomenon at each stage of the supply chain. This is in line with Parfitt et al. (2010) who reported the necessity to start to work on farmers in order to obtain positive results from all individuals.

Based on this point of view, some authors analyzed feasible solutions to the problem such as reducing food options and plate size, removing food trays and providing information and education on food waste (Mirosa et al., 2016; Gonzalez-Torre and Coque, 2016; Qi and Roe, 2017; Marais et al., 2017). In particular, the work of Gonzalez-Torre and Coque (2016) analyzed marketplaces in Spain and the findings demonstrated that it is possible to better manage unsold food, for example via donations to food banks.
Finally, since the phenomenon of food waste is constantly increasing and there are a lot of players involved in each stage of the supply chain, it is important to understand the awareness and behavior of those involved (Peira et al., 2018), starting from the farmers (Parfitt et al., 2010). Few studies analyzed a group of farmers in order to understand their level of awareness and attitude toward food waste.

For this reason, the research was orientated toward the analysis of farmer behavior, considering their attitude toward food waste with focus on their involvement in the last phase of the process, the retail phase. In particular, the objectives of the paper are to investigate the relevance of the food waste concept for farmers and understand how they manage the unsold food.

**Study area and methods**

This study aimed at obtaining more information on farmers’ perception of food waste management in a specific market area, Porta Palazzo market in Turin, Italy (Gilli and Ferrari, 2018; Alfiero et al., 2017). The city hosts two famous slow food events, the Salone del Gusto and Terra Madre (Parkins and Craig, 2009; Black, 2012; Myers, 2013; Hendrikx et al., 2017) and Eataly (Massa and Testa, 2012; Sebastiani et al., 2013; Bertoldi et al., 2015; D’Ippolito and Timpano, 2016; Di Gregorio, 2017), the only Italian distribution chain of national high quality foodstuffs with supermarkets all over the world.

The Torino market network has a total of 42 markets in the urban area of the Comune di Torino. The biggest of these markets is Porta Palazzo, which is the largest market in Europe covering an area of about 50,000 square meters with over 1,000 commercial operators. The Porta Palazzo market is open from 7.00 am to 2.00 pm Monday to Friday and from 7.00 am to 7.00 pm on Saturdays. This market dates back to 1835 when it was transferred from the sites of the original medieval market, the Piazza delle Erbe and Corpus Domini. Porta Palazzo is an alternative system compared to the conventional distribution system due to the numerous commodities offered, that is food and other commodities, such as fabric, threads, wool, clothing, shoes, household goods as well as flowers and plants. About 100,000 customers visit it per week and most of them go on Saturdays (25,000); it is also a tourist attraction (Gilli and Ferrari, 2018).

Food is sold at the Porta Palazzo market in various sections: the “Fruit and Vegetable Market” in an open space, with 278 market traders, the covered “IV Food Market”, also named “the Clock Market,” with 78 market traders, which sells a mixture of food products, including meat, the covered “V Food Market,” with 40 market traders that sells more or less the same products as the IV market, the covered “Fish Market” with 15 market traders and the Farmers’ Market, also known as the “Farmers’ Canopy,” with 69 farmers, who sell their locally produced fruit, vegetables, eggs and cheeses. According to the zero-kilometer philosophy, most of the farms are located no more than 30 km away (77 percent) and all of them are either in the province of Torino itself (81 percent) or in close proximity (19 percent).

In line with the objectives set by this research, the largest farmers’ market in Turin was chosen as it has the highest concentration of farmers in one place. A three-part questionnaire was developed to assess the farmers’ attitudes toward and perception of food waste management. The first part collected the interviewees’ demographic, social, educational and personal information, that is gender, age, residence, nationality, qualification, education and their market activities: license and number of market days per year. The second part collected information about the farmers’ attitude toward food waste, going into detail as to how concerned they are, or not, about it, the positive implications food waste reduction may have in terms of the environment, society and the economy, the feasible activities to reduce and manage unsold food and how much they know about the initiatives aimed at food waste reduction already operating in Turin.

**Perception regarding food waste**
The third part of the questionnaire asked the farmers to evaluate the way in which unsold food products are managed. It collected detailed information about the quantity of the unsold food per day, the kind of products that remain unsold, the influence the season has on them, the management of products in the pre-sale phases, that is, the harvest and the post-sale phases, that is, the management of unsold food. The last part of the questionnaire collected information about the farmers' attitude toward donating their unsold food, or a part of it for social reuse, such as food for the homeless.

A preliminary version of the questionnaire was tested on 10 farmers in a *Campagna Amica Market*, a Sunday farmers' markets organized by *Coldiretti* (a direct farmers' organization), to detect any mistakes and to assess any structural weaknesses (Vecchio and Annunziata, 2013; Clonan et al., 2009). After making some adjustments, the final version was determined.

Semi-structured interviews (Alvesson, 2003) were conducted during the Autumn of 2016 with 35 farmers registered at the market (Leiper and Clarke-Sather, 2017) over a two-hour period; 34/69 declined to participate in the survey. The order of the individual questions in the interview was changed in line with other authors (Pitrone, 1984; Fideli and Marradi, 1996). Each interview lasted around 25 min and the interviewer asked the questions according to the interview guide, recorded the answers and noted the main topics. The authors then analyzed the interview results individually so as not to influence one another (Atkinson and Shaffir, 1998). Lastly, the results of each author's analysis were compared, and the fundamental elements identified.

**Sample and results**

The study group was comprised of 35 farmers, with an average age of 48; the youngest farmer was 21, the oldest 69. A total of 34 farmers were Italian and 1 was Romanian; 24 farmers were male and 11 female. Education levels varied: 17 farmers had an Italian High School diploma and 18 had finished compulsory education schemes (the older ones only up to the age of 11) without diplomas. In order to be able to sell on markets in Italy, market traders must have one of two types of license, either a permanent place on the market, which 28 farmers had, or one allocated on a daily basis, which the other 7 farmers had. The number of market days per year was distributed as follows: 8 farmers over 200 days per year, 11 over 160 days per year, 8 over 120 days per year, 5 over 80 days per year, 2 over 40 days per year and 1 under 40 days per year. Most of the farms are located in the Province of Torino (25), Cuneo (5), Vercelli (3), Asti (1) and Verbano Cusio Ossola (1). A total of 27/35 farms were located less than 30 km from the *Porta Palazzo Market* and only 3 farms were located over 50 km away (Table I).

**Perception of food waste**

The second part of questionnaire, which follows the sample characteristics, investigates the farmers' perception of food waste. The first question defined how concerned they were about food waste using a ten-point Likert scale with 1 being the lowest score and 10 the highest. Results showed that the farmers are quite concerned about this issue (median value of 6, even if the evaluations differed greatly). Indeed, the level of concern seems have an inverse correlation with age, that is the younger farmers were more sensitive to the question than the older ones (Table II).

All respondents agreed that each initiative implemented to reduce food waste is useful. In fact, they even suggested further initiatives, such as the collection of unsold produce at the end of day (23 out of 35), the improvement of market logistics (12 out of 35), generic waste prevention (11 out of 35), waste prevention with control systems in different phases of the supply chain (4 out of 35), or through awareness campaigns (3 out of 35).

The farmers were asked to score some prospective feasible positive implications of food waste reduction, assuming that better management of unsold produce had been applied.
They took into consideration how food waste reduction might lead to several advantages: economic, that is general reduction of costs, environmental, that is an overall reduction in the quantity of waste, and ethical, that is improvements in the distribution/use of unsold foodstuffs. The same Likert scale was used for each type of advantage, where 1 was no positive implication, up to a maximum of 10 for positive implications and the respondents assigned higher scores to ethical implications. Farmers over 59 years old are more interested in the environmental advantages (median value 10) and ethical implications (median value 10) (Table III).

However, the resulting data showed that the farmers did not know very much about food waste management initiatives. In fact, 19 out of 35 had no knowledge of farmers’ initiatives dedicated to reducing food waste; of the remaining 16, 11 knew about the set-up of a food stall for redistribution amongst the poor, three knew about the last minute market, where some perishable products are sold for less, and two knew about swapping activities, where one farmer exchanged goods with another.

**Unsold food management.** The farmers were asked to comment on how often (in days) they had unsold produce that could not be sold the day after. A total of five out of 35 reported having unsold produce every day, 14 out of 35, 50 percent of the time, 16 out of 35 only occasionally; none of the farmers reported having no waste at all. In total, 13 of the farmers estimated their unsold produce and seven reported waste of < 7 kg, three reported waste between 10 and 20 kg and another three > 20 kg per waste day.
A high percentage of the farmers were not worried about their unsold produce and did not pay attention to the pre-sale phase (22 out of 35). The remaining 13 calculated how much food to take to the market every day on the basis of their personal experience on that particular day (Monday or Saturday), the season and affluence of potential customers also on the basis of nearby events. The management of the post-sale phase differed, and some farmers also applied more than one solution. The unsold food was donated directly on site to the needy at the end of the market day by 24 farmers and 19 reported sharing their unsold produce with members of their family. A price reduction was made at the end of the market day by 23 of the farmers before they tried other solutions, so as to reduce the unsold risk as a whole.

The farmers were then asked if they would be willing to donate all their unsold produce, or if they would do so for a small incentive, such as a reduction in the cost of the market space, waste collection, electricity and so on. Vague replies were given by 11 farmers, four said they would be willing to donate their waste produce, four preferred to sell for a lower price or use it themselves. Almost 50 percent stated they would be willing to apply waste management improvement strategies if the incentives and/or subsidies were to be implemented. The respondents scored the incentives on a ten-point Likert scale with 1 being not interested and 10 very interested. A reduction in the market space fee and lower waste collection costs were considered the most important incentives in the Porta Palazzo area, whilst the electricity bill scored less (median value 9) (Table IV).

Moreover, 27 out of 35 farmers pointed out that their willingness to donate would depend on such donations being managed by accredited public institutions.

### Discussion and conclusions

The sample varies in terms of age, gender, and education. Most of the farmers lived in the Turin area and highlighted the importance of farmers’ markets in urban areas, both in terms

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**Table III.**
Better food waste management and its potential advantages

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<td>Market place fee</td>
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<td>Waste collection fee</td>
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<td>Electricity bill</td>
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of social sustainability through maintaining agricultural activities and environmental sustainability through local agricultural production.

The survey demonstrated that not only is the food waste phenomenon present in this market area, but also the phenomenon of unsold food. All of which does cause some concern, especially among younger farmers (those under 40). There is a strong awareness of the ethical aspects connected to the redistribution and use of unsold food. This generates a positive result in the form of donations or the consumption of food amongst family members/friends. However, it also revealed a lack of knowledge as to initiatives dedicated to waste food reduction in Turin. Less than half of the farmers included in the study knew anything about the most widely implemented food waste reduction initiative, the Banco Alimentare project. Some farmers place importance on the implementation of early control activities related to the management of food waste during the harvest phase. However, they were exceptions and most of the farmers considered the management of unsold food a priority only at the end of market day and all of them have some kind of personal strategy to reduce the amount of unsold produce, even if this is mainly for economic reasons. Moreover, the farmers did not consider waste collection to be a means of reducing the amount of unsold produce. This behavior shows that the farmers have an in situ behavior to manage the “fruits of the land.”

It was also noted that the farmers would appreciate incentives if they were to donate their unsold food. In fact, they were interested in obtaining a reduction in the cost of market space and/or waste collection. However, this question was answered by only two-thirds of the farmers participating in the study. Therefore, the results are only partial, mainly due to the fact that they were not sure that these donation activities would be carried out by trustworthy bodies and they do not really believe that these initiatives are feasible.

In conclusion, following the suggestion of Parfitt et al. (2010), the aim of the paper was to understand whether the farmers are aware of the concept of food waste and how they usually manage it and their unsold food. In line with what was observed in Beausang et al.’s (2017) study, most farmers are not worried about food waste/unsold food and have difficulty in providing estimates. Moreover, they have little or no knowledge of initiatives dedicated to fighting these phenomena. Nevertheless, these data showed that the farmers implemented different tailor-made unsold food management systems, that even managed to reach a zero-waste goal. This behavior demonstrated that farmers have a sensitive attitude to the question and pay unconscious attention to food products in order to limit waste to a minimum.

Implications, limitations and future research

Current literature on food waste and farmers’ activities remains scant, with various aspects still to be assessed. Indeed, this study showed that the farmers themselves implemented personal unsold food management systems aimed at reducing food waste.

From an academic point of view, this study contributes to a more in-depth understanding of one of the most important players the food supply chain, farmers. Following the suggestion of Parfitt et al. (2010) and the study of Peira et al. (2018) the research gives some insight into the behavior and attitude of farmers and the food waste phenomenon with particular reference to marketplace, which is still an under investigated perspective.

From a managerial point of view there are two main contributions: the first one is in terms of policy makers and institutions, while the second one involves the customers. Policy makers and institutions that understand the behavior of farmers can implement ad hoc initiatives to reduce food waste and assist the work already done by farmers. On the other hand, customers can be helped by farmers in understanding products better and using them in a more efficient way, thereby also reducing food waste.

However, the study does have some limitations such as the fact that the sample was limited to the farmers operating in the Porta Palazzo market. The information analyzed is
limited to only certain aspects of foodstuff waste management and selling processes, for example the uncertainty of daily unsold produce or the fact that no comparison was made between farmers and market traders in the selling phase, making it impossible to identify whether or not their attitude toward the management of unsold food differed.

Although this is a preliminary study, it was based on lengthy research and reported on one of the largest European open markets. Further studies are ongoing to clarify whether or not farmers and market traders have a different attitude to this phenomenon. Such studies will focus on the analysis of market traders and farmers in numerous markets involving a larger geographical area. Moreover, the second part of the research will investigate the point of view of customers in the same market areas according to the perception of food waste and service quality since some studies go into depth in understanding the point of view of customers as well as the relationships between their emotions and the perception of service quality (Kashif et al., 2015).

References


Perception regarding food waste


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Consumers’ anti-consumption behavior toward organic food purchase: an analysis using SEM

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Abstract
Purpose – The purpose of this paper is to investigate the factors affecting anti-consumption behavior of the consumers toward organic food purchase: in particular, how do individual beliefs about trustworthiness of organic foods, normative structure of social pressure and self-efficacy affect individual intentions to make organic food purchases and actual purchasing behavior? To answer this question, a theoretical framework of the theory of planned behavior (TPB) as its foundation has been established. Using measurement scales in order to measure different aspects of trustworthiness, normative structure, self-efficacy, attitude, perceived behavioral control (PBC) and subjective norms, a survey instrument has been developed to examine the several associations implied by the model of TPB.

Design/methodology/approach – In doing so, data on a structured questionnaire were collected from various parts of a city based on convenience random sampling procedure. The respondents were interviewed face-to-face to collect information on a structured questionnaire. Data (n = 337) were analyzed using a research framework formulated based on the TPB through the structural equation modeling procedure.

Findings – The findings of the study indicate that among the seven independent variables of trustworthiness, normative structure, self-efficacy, attitude, subjective norm and PBC, only subjective norm has not been statistically significant to influence organic food purchase behavior.

Research limitations/implications – The result implies that various sociopolitical forces and skewed monthly incomes are inhibiting the consumers (anti-consumption) to increasingly buy the organic food products.

Practical implications – In this regard, government, policy planners, academia as well as media have profound roles to play to encourage people to buy more organic food for their health safety and overall consumer well-being.

Originality/value – This research is based on primary data collected from the respondents of a sub-urban areas of a metropolitan city. The findings will help formulate a sound food policy for ensuring social well-being of the consumers.

Keywords Consumer attitudes, Organic food, Anti-consumption behaviour, Consumer well-being

Paper type Research paper

Introduction
Nowadays, most environmental challenges that humanity is facing related to unsustainable consumption patterns and lifestyles (Ham et al., 2018; Giampietri et al., 2016; Forssell and Lankoski, 2015; Reisch et al., 2013). Sustainability is seen in this context as a consumption pattern that meets the needs of present generations without compromising the needs of future generations (Brundtland, 1987). As to the fact of the efforts staged by the global communities, sustainable agricultural practice or organic farming has been focused to safeguard the ultimate fate of “Our Common Future” through nurturing the ideas of “sustainable” or “sustainability” in the development discourse (Brundtland, 1987). As of recommended practices by these global initiatives, organic food production and consumption has been considered to be one of the important alternative measures of
increasing consumer well-being and of reducing the environmental malaise and degradation for making our world safe and sustainable (McCarthy and Liu, 2017).

Du Pisani (2006) studied the historical roots of sustainability and reported that as early as the ancient Egyptian, Mesopotamian and Greco-Roman civilizations environmental problems such as deforestation and salinity and loss of fertility of soil occurred, which are referred today as sustainability problems. Plato in the fifth century BC, Strabo and Columella in the first century BC and Pliny the Elder in the first century AD discussed about environmental degradation resulting from human activities such as farming, logging and mining (Cato and Varro, 1954).

Organic foods refer, in brief, to as foods grown by farmers who use only renewable resources for producing these foods maintaining the conservation of soil and water to preserve health and environmental quality for future generations (Sobhanifard, 2018; Rahman and Noor, 2016). Chemical pesticides and herbicides, synthetic fertilizers or sewage sludge, bioengineering or ionizing radiation cannot be used in producing foods; meat, eggs and dairy items must come from animals that are not given antibiotics or growth hormones in the process as well (Sobhanifard, 2018; USDA, 1995). The current global scenario of rising awareness of consumers for green marketing and overall market trends for organic foods exhibit a global rise of eco-consumerism focusing on organic foods for ensuring ultimate consumer well-being (Ham et al., 2018; Krishnakumare and Niranjan, 2017; Rahman and Noor, 2016; Goetzko et al., 2014).

Caveats notwithstanding, this growing trend of the market of foods including organic foods has been facing myriads of challenges (Mottalib et al., 2018; Yue et al., 2017). It is reported that conventional or inorganic foods still constitute the biggest portion of the global food consumption basket (Gupta and Ogden, 2009; Kim, 2013). In the USA, where the organic food sector has been growing fast, the United States Department of Agriculture reported that in 2012, organic foods constituted about 3.5 percent of total foods sales (Osteen et al., 2012; Pandal, 2014). While many Asian countries have been producers and exporters of organic foods, their internal consumption has been very low as compared to the global trend (Hasimu et al., 2017; Kim, 2013). For example, it was estimated that the percentage of organic foods in Asia would not be over 1 percent of total food consumption (Kim, 2013). No statistics could be traced regarding organic food to total food consumption ratio in Bangladesh; however, it is commonly thought to be even lower than the Asian average (Rahman and Noor, 2016).

The history of organic food production in Bangladesh is not very old. Earliest initiatives of organic food production in Bangladesh have just been taken place in the late 1970s with the organizational supports of some NGOs such as PROSHIKA and UBINIG (Iqbal, 2015). However, organic food consumption has not yet been very much popular among the consumers in Bangladesh due to lack of trustworthiness of such foods as truly organic. It is very difficult to find a sector of food industry which is free of food chemicals or adulteration. From raw vegetables and fruits to milk and milk products to fish, meat and processed food, every food item is contaminated (Rahman et al., 2015).

Almost every day in the newspapers (Dhaka Tribune, 2016; Daily Sun, 2017; The Independent, 2017), newer methods of adulterating newer types of foods are reported. Carbide, formalin, heavy metal, chemical, textile colors, artificial sweeteners, DDT, urea, etc., are used rampantly for this purpose. Contamination of foods with toxic chemicals poses threat to public health, especially in a country like Bangladesh. In the long run, these chemicals in food adversely affect vital organs such as the liver and kidney resulting in organ failure and/or cancer and, thus, ultimately loss of life (Rahman et al., 2015). These are, therefore, interesting issues to examine their association between the consumers’ attitudes, norms and control with their anti-consumption behavior which has a consequential link with overall societal or consumer welfare (Goetzko et al., 2014).
Another perspective is that such anti-consumption is a reality in third world countries (e.g. Bangladesh) where a large majority of population has limited access to (quality) food or to organic food while a fair amount of food is branded (Kashif et al., 2015) – a common man cannot afford to buy it. This point has been addressed in the study by incorporating an item of “I have the resources and the knowledge and the ability to purchase organic food” in the construct of perceived behavioral control (PBC) in the research model. In fact, consumer welfare in food is an interesting phenomenon while consumption is a barrier harnessing societal well-being and welfare, yet scarcely investigated (Cherrier et al., 2011; Block et al., 2016). The present research is as such an initiative to fill up that gap which can lead to identify the actual factors inhibiting consumers to buy and consume organic foods and affecting social welfare.

The purpose of this paper is to examine the relationship between anti-consumer behavioral aspects and organic food purchase in Bangladesh. In particular, how do individual beliefs about trustworthiness of organic foods, normative structure of social pressure and self-efficacy affects individual intentions to make organic food purchases and actual purchasing behavior? To answer this question, a theoretical framework of the theory of planned behavior (TPB) as its foundation has been established. Using measurement scales in order to measure different aspects of trustworthiness, normative structure, self-efficacy, attitude, PBC and subjective norms, a survey instrument has been developed to examine the several associations implied by the model of TPB.

The paper is composed, besides this introduction, of five more sections. The second section discusses the concept of TPB aiming at elaborating it and at pointing some of its important features. The third section presents the research model and hypotheses, followed by the fourth section which discusses the research method and findings from the data analysis. A discussion of the meaning of the results and their implications ends the paper.

Theory and past research TPB

In this study, TPB (see Figure 1) is employed as a theoretical background because it has a wide range of implications and diversified perspectives of human behavior. TPB is a popular theoretical model that extended the theory of reasoned action (Fishbein and Ajzen, 1975) by adding a concept of PBC because the latter has limiting ability in explaining intended behaviors in which a person does not have volitional control over it (Ajzen, 2008). TPB describes how people’s behavior can be determined by their intention to perform a certain behavior (Ajzen, 1985, 1988, 2001, 2002, 2008).

TPB puts forward that immediate antecedent of actual behavior is intention of someone to involve in that behavior. Intention encompasses behavioral motivations to perform the behavior (Ajzen, 1991). Attitude and subjective norm affect actual behavior through the variable of intention. According to Ajzen (1991), attitudes are, in general, individual judgment to engage in a specific behavior, but subjective norms are the social enforcement on an individual to engage or not to engage in that behavior. In addition to attitudes and

![Figure 1. Theory of planned behavior](source: Ajzen (1991))
subjective norms, the TPB intends to predict some behaviors which are not fully volitional by employing PBC over engagement in the behavior as an extra domination of intention and behavior PBC is the perceived idea of easiness or complexity in engaging in the behavior and has been idealized to apprehend the apparent behavioral skills or abilities, resources and opportunities (Ajzen, 1991).

Several previous studies selected the TPB model to explain purchase behavior within a variety of inorganic food contexts (e.g. Nocella et al., 2012; Siddique, 2012; Ren et al., 2011; Arvola et al., 2008; Hansen, 2008), thereby extending the body of knowledge related to drivers of food choice (Vabø and Hansen, 2016). However, the present study employed the TPB model for examining nonconventional (i.e. organic) food purchase behavior.

One of the underlying premises of the current study is that beliefs about trustworthiness of the organic food update attitudes toward its purchasing. Based on the model of TPB, beliefs about how important other persons related to consumers feel about organic food should also influence intent to make organic purchases. Finally, beliefs about having the necessary opportunities and resources to engage in organic food purchasing might influence intent to purchase as well as directly influence purchasing behavior itself.

Trustworthiness
Trustworthiness is the key construct of trust that operates in various levels of services relationships (Sekhon et al., 2014; Corritore et al., 2003). According to Nassar et al. (2014), trustworthiness is an important attributes of attitude that can influence on human behavior particularly related to buyer-seller nexus. According to Berry and Parasuraman (1991), customers generally buy products undergoing through the intense psychological process of trustworthiness. On the basis of the above conceptualizations, trust can be considered as a factor of consumer’s attitude to depend on the integrity of producers and sellers for deciding on taking an action in an uncertain situation whereby the consumer may become vulnerable to the organic food seller in the hope of a positive outcome. Jarvenpaa et al. (2000) refer trust as the willingness of the consumer to rely on the seller and to interact in situations where action makes the consumer exposed to the seller’s machinations.

Much of an individual’s attitude toward making organic food purchases to which individuals categorize themselves as organic consumers can be thought of in terms of trustworthiness (Du et al., 2017; George, 2002). Many consumers do not trust the organic food providers enough to engage in relationship of food exchanges with them (Hoffman Novak and Peralta, 1999). In view of consumer concerns over the trustworthiness of organic food, it should not be surprising that a few past studies found that people perceived organic food shopping as risky concern (Green et al., 2005; Zanoli, 2004; McKnight et al., 2002). Thus, consumer views of the trustworthiness of organic food should be expected to affect their attitude toward purchase.

Various studies looked at trust and its role in purchasing behavior. Bhattacherjee (2002) developed and validated a seven-item scale for measuring trust in online firms. George (2002) measured trustworthiness with three items taken from the survey instruments and found that positive beliefs about the trustworthiness were related to positive attitudes toward online purchase. Pavlou (2002) used a TPB model in his study and found that trust in an online retailer was statistically significantly correlated with attitudes toward online transactions and with PBC. Suh and Han (2003) and Mukherjee and Nath (2003) found trust was statistically significantly related to both attitudes and intention toward internet purchase. They measured trust with five items. This study follows George (2002), Suh and Han (2003) and Mukherjee and Nath (2003) conceptually in seeking to measure global trust for personal, as opposed to employer-related business. However, there is no such study on anti-consumption behavior of the consumers toward organic food purchase.
**Research model and hypotheses**

The research model used in the study, shown in Figure 2, is based on the TPB. The behavior in question is purchasing organic food stuffs. As mentioned earlier, the typical TPB model would incorporate the intention to make organic food purchases as a construct antecedent to purchasing behavior. However, intention was not included in the present research framework. The logic for this step taken in building the framework stem from George (2002). This study argues that as the data were all collected at one point in time, it is not possible to include both intention to perform a behavior and the behavior itself in the model. Intentions reflect future behavior, while reports of actual behavior reflect what happened in the past. Past behavior is at best a surrogate for future behavior and not always a good one (Jones and Vijayasarathy, 1998; Hoffman et al., 1999). Therefore, intention does not appear in the model, and instead there is a direct path from attitudes toward organic food purchase behavior.

The six hypotheses incorporated in the model are listed below. The directionality stated in each hypothesis has been derived from the previous reviews of different beliefs about trustworthiness and from the basic structure of TPB. Beliefs in the trustworthiness of organic food should be embodied in the model as a precursor willingness to buy (Fotopoulos and Krystallis, 2002). If an individual believes that organic food is a trustworthy task for consumption generally, then those beliefs should positively impact the individual’s attitudes toward organic food purchase. Therefore:

*H1.* Beliefs that organic food is trustworthy should positively influence attitudes toward its purchase.

*H2.* Beliefs that organic food is trustworthy should positively influence organic food purchase.

The remaining seven hypotheses and the expectations they contain are derived directly from TPB. Positive attitudes toward the behavior in question should result in the conduct of that behavior:

*H3.* Positive attitudes toward organic food should positively influence organic food purchase.

An individual’s normative structure (Bicchieri, 2006; Rivis and Sheeran, 2003), i.e. her or his beliefs about what important others think about the behavior in question, should directly influence her or his subjective norms, or perceptions of the social pressure to comply with expectations about engaging in the behavior. Subjective norms should, in turn, influence the individual’s inclination to engage in the behavior (Thøgersen et al., 2016; Basha et al., 2015;
Paul and Rana, 2012). In this case, if purchasing organic food is seen as socially desirable behavior, based on what important others think about it, the individual is more likely to make such purchases:

\textit{H4.} Beliefs about what important others think about organic food should influence an individual’s subjective norms about organic food purchase.

\textit{H5.} Subjective norms about organic food should positively influence organic food purchase.

\textit{H6.} Beliefs about what important others think about organic food should influence an individual’s organic food purchase.

According to the TPB, an individual’s beliefs about self-efficacy to perform the behavior in question also influence whether or not s/he actually engages in the behavior (Bandura and Adams, 1977; Bandura, 2006; Ling, 2013). In terms of organic food purchase, if an individual is self-confident in terms of self-efficacy about engaging in activities related to purchase organic food, s/he should feel positively about her or his behavioral control over making organic food purchase (Wang et al., 2014; Ma et al., 2012; Arvola et al., 2008; Bandura, 1986). The more in control an individual feels about making organic food purchases, the more likely s/he will be to do so. Therefore:

\textit{H7.} Positive beliefs about self-efficacy of making organic food purchases should positively influence PBC over making such purchases.

\textit{H8.} Positive beliefs about PBC should positively influence organic food purchase.

\textit{H9.} Positive beliefs about self-efficacy of making organic food purchases should positively influence on making such purchases.

Based on the research framework, some mediating hypotheses can also be drawn and those are formulated as follows:

\textit{H10.} Attitude has a mediating role in the link between trustworthiness and organic food purchase behavior.

\textit{H11.} Subjective norm has a mediating role in the link between normative structure and organic food purchase behavior.

\textit{H12.} PBC has a mediating role in the link between self-efficacy and organic food purchase behavior.

\textbf{Study design}

Data collection took place in November and December 2017. The method used for the data collection was a face-to-face interview, using a structured questionnaire, with closed-ended questions. A total of 380 individuals pulling one respondent from each of the families located in different areas of the metropolitan city were interviewed to complete a questionnaire that contained measures of the constructs of concern. Convenience sampling procedure was followed in the survey. However, some of the questionnaire were erroneous and incomplete and excluded from the analysis. Finally, 337 data were selected to analyze. The questionnaire was pilot tested with a small number of data. Table I lists demographic statistics of the respondents of the sample.

The approach to testing the TPB model was based on that used by Taylor and Todd (1995a) to test a TPB model with decomposed belief structures. Each variable is measured using previously developed instrument and a seven-point Likert scale was used to measure all the variables. Measures of attitude (four items), subjective norms (two), PBC (three), normative structure (six) and self-efficacy (five) were all based on an instrument developed by Taylor.
and Todd (1995a). Consumers’ awareness about organic food products were assessed by questioning the respondents whether purchasing organic food is a good or bad idea. The referent others used in the normative structure questions were friends, relatives and parents. Items measuring trustworthiness of organic food (six) were based on Jarvenpaa et al. (1998), who measured the trustworthiness of virtual teams, and who adapted the organization trustworthiness scale developed by Pearce et al. (1994). Actual purchasing behavior was measured with two items, “How many times would you say to purchase organic food per month?” and “How long have you been purchasing organic food, if any?” Descriptive statistics for the scales and statistics of skewness and kurtosis are included in Table II.

Normality is the most fundamental assumption in multivariate analysis (Hair et al., 2010). To check for normality, four measures were used in this study to measure and assess the spread of data distribution: standard deviation, mean, skewness and kurtosis. In the present study, all variables were tested for normality where the values of skewness and kurtosis were particularly examined to test the scores of normality. Table II shows that overall, the values of skewness and kurtosis were within the critical values. Hence, the possibility of issues surrounding non-normal distribution appeared to be insignificant.

The data were analyzed using structural equation modeling (SEM) by AMOS 20 software. First, the model in Figure 2 was run for exploratory factor analysis (EFA) and confirmatory

<table>
<thead>
<tr>
<th>Profiles</th>
<th>Valid percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>58</td>
</tr>
<tr>
<td>Male</td>
<td>42</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
</tr>
<tr>
<td>15–25</td>
<td>20</td>
</tr>
<tr>
<td>26–30</td>
<td>27</td>
</tr>
<tr>
<td>31–35</td>
<td>26</td>
</tr>
<tr>
<td>36–45</td>
<td>22</td>
</tr>
<tr>
<td>Above 45</td>
<td>5</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>36</td>
</tr>
<tr>
<td>Married</td>
<td>60</td>
</tr>
<tr>
<td>Divorced</td>
<td>4</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
</tr>
<tr>
<td>Islam</td>
<td>85</td>
</tr>
<tr>
<td>Hindu</td>
<td>11</td>
</tr>
<tr>
<td>Christian</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>14</td>
</tr>
<tr>
<td>Higher Secondary</td>
<td>26</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>55</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>5</td>
</tr>
<tr>
<td><strong>Monthly income (Bangladeshi Taka)</strong></td>
<td></td>
</tr>
<tr>
<td>0–15,000</td>
<td>17</td>
</tr>
<tr>
<td>15,001–25,000</td>
<td>22</td>
</tr>
<tr>
<td>25,001–40,000</td>
<td>37</td>
</tr>
<tr>
<td>40,001–60,000</td>
<td>14</td>
</tr>
<tr>
<td>Above 60,000</td>
<td>10</td>
</tr>
</tbody>
</table>

**Table I.** Demographic profiles of the respondents

*Source: Study survey*
factor analyses (CFA). EFA for all latent variables are reported in Table III. Next, item loadings for all exogenous constructs were checked to make sure they were all above 0.6 as the threshold level referred by Hair et al. (2006) and all were in confirmatory factor analysis. Internal consistency reliabilities (ICRs) were then computed for each construct that had more than two indicators. The measurement model with item loadings appears in Figures 3 (EFA) and 4 (CFA). The average variance explained for each construct was above the 0.5

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase</td>
<td>Q1→I like to purchase organic food</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>Q2→Purchasing organic food is a bad/good idea</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>Q3→Purchasing organic food is a foolish/wise idea</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>Q4→Purchasing organic food would be pleasant for me</td>
<td>0.86</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>Q5→Purchasing organic food a reliable way for my family</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Q6→Taking care of the health of family is a bad/good idea</td>
<td>0.78</td>
</tr>
<tr>
<td></td>
<td>Q7→Organic food is trustworthy</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td>Q8→Putting trust in organic is a bad/good idea</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>Q9→I believe in the honesty of organic food</td>
<td>0.80</td>
</tr>
<tr>
<td></td>
<td>Q10→Believing in honesty of organic food is a bad/good idea</td>
<td>0.86</td>
</tr>
<tr>
<td>Subjective norm</td>
<td>Q11→People who influence my behavior would think that I should purchase organic food</td>
<td>0.92</td>
</tr>
<tr>
<td>(SN)</td>
<td>Q12→People who are important to me would think that I should purchase organic food</td>
<td>0.91</td>
</tr>
<tr>
<td>Normative</td>
<td>Q13→My friends would think that should purchase organic food</td>
<td>0.83</td>
</tr>
<tr>
<td>structure (NS)</td>
<td>Q14→Generally speaking, I want to do what my friends think I should do</td>
<td>0.58</td>
</tr>
<tr>
<td></td>
<td>Q15→My relatives would think that I should purchase organic food</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>Q16→Generally speaking, I want to do what my relatives think I should do</td>
<td>0.61</td>
</tr>
<tr>
<td></td>
<td>Q17→My parents would think that I should purchase organic food</td>
<td>0.85</td>
</tr>
<tr>
<td>Behavioral control</td>
<td>Q18→Generally speaking, I want to do what my parents think I should do</td>
<td>0.70</td>
</tr>
<tr>
<td>(PBC)</td>
<td>Q19→I am capable of purchasing organic food</td>
<td>0.77</td>
</tr>
<tr>
<td></td>
<td>Q20→Purchasing organic food is entirely within my control</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>Q21→I have the resources and the knowledge and the ability to purchase organic food</td>
<td>0.75</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>Q22→I would feel comfortable purchasing organic food on my own</td>
<td>0.79</td>
</tr>
<tr>
<td>(SE)</td>
<td>Q23→For me, feeling comfortable purchasing organic food on my own is unimportant/important</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>Q24→If I wanted, I could easily purchasing organic food on my own</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>Q25→For me, being able to purchase organic food on my own is</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td>unimportant/important</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q26→I would be able to purchase organic food even if there was no one around to help me how to</td>
<td>0.56</td>
</tr>
<tr>
<td>Organic food</td>
<td>Q27→How many times would you say you could purchase organic food per month</td>
<td>0.37</td>
</tr>
<tr>
<td>purchase</td>
<td>Q28→How long have you been purchasing organic food, if any?</td>
<td>0.40</td>
</tr>
</tbody>
</table>

Table II. Descriptive statistics

Table III. First order CFA for all latent variables
cutoff level as referred by Hair et al. (2006) (see Table IV). All constructs made up of three items had ICRs of 0.8 or higher, and all constructs made up of four items had ICRs of 0.9 or higher. For scales with only two items for organic food purchase and subjective norms, Cronbach’s $\alpha$s were calculated. Measures of reliability for all scales are included in Table IV.

The statistical significance of the paths in the model was tested using jackknifing procedure, with a sample size of 1, for 337 samples. Using one-tailed tests, five of nine direct paths were statistically significant at $p < 0.001$, providing support for $H1$, $H3$, $H4$, $H7$ and $H8$. Direct and mediating effects are demonstrated in Tables V and VI considering the final model of CFA with the statistics of standard estimate, standard error, critical ratio, $p$-values and square multiple correlations. The analysis supports full mediations for $H10$ and $H12$ and partial mediation for $H11$.

**Results and discussion**
Several past surveys have reported that many consumers have claimed that trust concerns have prevented them from making organic food purchases in the Bangladeshi context, but
Table IV. Correlations and average variance extracted (on the diagonal in italic)

<table>
<thead>
<tr>
<th></th>
<th>Reliability</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase (1)(^a)</td>
<td>0.74</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude (2)</td>
<td>0.92</td>
<td>0.468**</td>
<td>0.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trustworthiness (3)</td>
<td>0.93</td>
<td>0.455**</td>
<td>0.894**</td>
<td>0.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective Norm (4)(^a)</td>
<td>0.91</td>
<td>0.434**</td>
<td>0.787**</td>
<td>0.825**</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normative structure (5)</td>
<td>0.89</td>
<td>0.419**</td>
<td>0.750**</td>
<td>0.754**</td>
<td>0.786**</td>
<td>0.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavioral control (6)</td>
<td>0.80</td>
<td>0.519**</td>
<td>0.425**</td>
<td>0.447**</td>
<td>0.412**</td>
<td>0.483**</td>
<td>0.60</td>
<td></td>
</tr>
<tr>
<td>Self-efficacy (7)</td>
<td>0.81</td>
<td>0.503**</td>
<td>0.737**</td>
<td>0.752**</td>
<td>0.690**</td>
<td>0.676**</td>
<td>0.653**</td>
<td>0.70</td>
</tr>
</tbody>
</table>

Notes: \(^a\)The Cronbach’s \(\alpha\) values are calculated for purchase and subjective norm which possess two items in the questionnaire and the rests have ICRs. **Correlation is significant at the 0.01 level (two-tailed)
none of these studies have investigated the empirical associations between beliefs about trustworthiness and either intended or actual purchasing behavior (e.g. Ali et al., 2017; Rahman, 2017; Rahman and Noor, 2016; Rahman et al., 2015; Mukul et al., 2013). This study has demonstrated, at least for this sample, that the trustworthiness of the organic food purchase is much important for shaping attitudes toward purchasing. Trustworthiness beliefs about organic foods had a significant impact on attitudes (H1). Attitudes toward organic food purchase, in turn, affected actual purchasing behavior (H2).

The CFE fit model (see Figure 3) demonstrates that several item loadings of some of the constructs are below the threshold level of 0.70, which is identified as excellent by Hair et al. (2010), and those items are excluded from the model. For example, the constructs of trustworthiness, normative structure and self-efficacy have been reduced to include in the CFA model. Then the revised model has been run and much better results are observed in the measurement values of the CFA fit model (see Figure 4).

The composite reliability is another measure of convergent validity. It indicates that the level to which a number of items unvaryingly indicate the hidden construct. The suggested value is 0.70 or bigger (Hair et al., 2010). The current study achieved the composite reliability because the value is ranging from 0.74 to 0.89 (see Table IV). The convergent validity can also be assessed through average variance extracted (AVE). Hair et al. (2010) recommend that a threshold level of AVE for obtaining convergent validity is least 0.50. Thus, the study achieved the convergent validity as suggested by Hair et al. (2010).

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Exogenous</th>
<th>Mediating</th>
<th>Endogenous</th>
<th>Indirect effect</th>
<th>Direct effect</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>H10</td>
<td>Trustworthiness (T) → Attitude (A) → Purchase (P)</td>
<td>T→A, β = 0.90, Sig***&lt;br&gt;A→P, β = 0.78, Sig***&lt;br&gt;T→P, β = −0.26, Not sig.</td>
<td>Attitude is fully mediating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H11</td>
<td>Normative structure (NS) → Subjective norm (SN) → Purchase (P)</td>
<td>NS→SN, β = 0.91, Sig***&lt;br&gt;SN→P, β = 0.41 Not sig.</td>
<td>Subjective norm is partially mediating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H12</td>
<td>Self-efficacy (SE) → PBC → Purchase (P)</td>
<td>SE→PBC, β = 0.56, Sig***&lt;br&gt;PBC→P, β = 0.95, Sig***&lt;br&gt;SE→P, β = 0.03, not sig.</td>
<td>PBC is fully mediating</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ***Significant at p < 0.001 level
As all the measures of the study came from the same questionnaire, the study has employed common method bias tests following Herman’s single factor variance using SPSS and common latent factors bias tests using AMOS. Herman’s single factor variance score has been observed to be 27 percent which is much less than 50 percent. The common latent factor score is found to be 9 percent, which is also in an acceptable level that there has been no measurement errors involved in the study (Podsakoff et al., 2012).

The CFA fit model shows that the measurement model has a good fit with the data based on assessment criteria such as goodness-of-fit index (GFI), CFI, TLI, root mean square error approximation (RMSEA) (Hair et al., 2010). All CFAs of constructs produced a relatively good fit as indicated by the GFIs, as of the reference values cited by Hair et al. (2010) are CMIN/df ratio (< 2), p-value (> 0.05), GFI > 0.90 and root mean square error of approximation (RMSEA) (< 0.08). Observed values of GFI, CFI, TLI, parsimonious fit ratio and RMSEA of revised fit model are 0.913, 0.901, 0.907, 0.957 and 0.043 respectively which demonstrate good fit indices of the final fit model. Thus, goodness of fit is ensured in this study.

In this study, a total of 12 hypotheses were formulated. Among these 12 hypotheses, 9 hypotheses (from H1 to H9) were to test direct effects between the constructs employed in the model and the rests (from H10 to H12) were to test mediating effects. In the analysis of direct effects, a total of five hypotheses (H1, H3, H4, H7 and H8) were observed to be strongly statistically significant providing full support for these hypotheses, and other four were observed to not be statistically significant and provides no support for H2, H5, H6 and H9. As would be expected from TPB, beliefs about self-efficacy for consumer purchases of organic foods directly affected PBC (H7), and PBC, in turn, directly affected purchasing behavior (H8) providing full supports for H7 and H8. However, self-efficacy has no relationship with organic food purchase showing no support for H9.

This outcome may be due to the income structure which is highly skewed in its distribution where 76 percent of the respondents remained in middle and lower monthly income groups. Owing to this reason, the majority of these consumers cannot afford to buy the relatively costlier organic food implying anti-consumption behavior of organic food consumers in Bangladesh where general well-being of the consumer has been negatively affected.

There were no relationships between subjective norms and organic food purchase and normative structure and organic food purchase (i.e. no support for H5 and H6), although there was a strong relationship between normative structure and subjective norms, as expected (H4). Beliefs about trustworthiness in consumer purchases of organic foods directly affected consumer attitude (H1), and attitude, in turn, directly affected purchasing behavior (H3) providing full supports for H1 and H3, while there was no relation between trustworthiness and organic food purchase providing no support for H2. In short, respondents who believed in the trustworthiness of organic foods and in their own abilities to successfully engage in buying behavior actually engaged in organic food purchase.

In the analysis of indirect or mediating effects, a total of three hypotheses were formulated (H10–H12). Among these three hypotheses, two were observed to be strongly statistically significant providing full support for H10 and H12, and one was observed to be statistically weakly mediated and provided partial support for H11. These results indicate that attitude and PBC have robust mediating roles in the links between trustworthiness and purchase, and normative structure and purchase respectively. Yet, subjective norm has a weak mediating role in the link between self-efficacy and purchase of organic food.

As there is a scant research in the field of organic food consumption as well as anti-consumption behavior, the present study depends on comparing the findings which use TPB and are similar to those reported in other field of studies such as fast-food consumption.
(Ghoochani et al., 2018; Kashif et al., 2015), e-commerce (George, 2002; Pavlou, 2002; Suh and Han, 2003) or online purchase or internet purchase (George, 2002) or online banking. Those studies used similar hypotheses derived from similar research framework like the present study in their experiments. Similar practice is also observed in other study such as George (2002).

Like Ghoochani et al. (2018), Kashif et al. (2015), George (2002), Pavlou (2002) and Suh and Han (2003), there was a strong association between trust and attitudes. Like Saleki et al. (2012), the attitude of the consumer is significantly associated with organic food purchase. Similar to Vabø and Hansen (2016), Battacherjee (2000) and Song and Zahedi (2001), there was a strong association between normative structure and subjective norms. As to the findings of Vabø and Hansen (2016), Limayem et al. (2000) and Khalifa and Limayem (2003), there was a strong relationship between PBC and actual purchasing. Similar to Battacherjee (2000), but unlike Song and Zahedi (2001), there was a strong association between self-efficacy and PBC.

Typically in TPB models, the impacts of subjective norms on behavior would also be mediated by intention instead of the direct association posited here. That hypothesized direct association was not supported (H5), even though the expected association between normative structure and subjective norms was. In this particular case, it may be that parents, friends and relatives are not the important others that the respondents listen to for determining their organic food purchase behavior. Another possible reason may be that the food adulteration is a widespread phenomenon in the food market including organic foods in Bangladesh for which the referents are not emphasizing to buy any type of foods here. This anti-consumption behavior of the consumers may due to the fact of predominance of food adulteration in the food market of Bangladesh.

Thus, it is fairly evident here that trustworthiness toward purchasing organic food is an important construct which is dominant among the general people in Bangladesh, and for this reason, the referees are reluctant to prescribe or encourage their fellow citizens to buy it. As consuming organic food is a good practice for maintaining good health which is not being practiced actually because of cost-concern of brand food items and dearth of pure food (Kashif et al., 2015), the general consumers are getting deprived to enjoy good food and their general social well-being is seriously affected. Scholars refer to this type of anti-consumption behavior as a social exclusion (Risthaus, 2015), for which the government’s actions are seemed to be perfunctory, yet critically minimal. Nevertheless, it is highly unlikely that that in this situation an individual feels rejected by the entire society. As stated in the introduction, organic food consumption can be framed as a pro-social act since it promotes sustainability and thus aims to protect the environment, which is crucial for social well-being for each individual living in it (Risthaus, 2015).

Implications for research and practice

As specific research involving TPB and organic food purchase in Bangladesh market has not been found through an extensive search, the future research could initiate further projects incorporating these issues. Some other studies outside Bangladesh have also successfully used the TPB as a theoretical framework from which to explain intention toward online purchasing or other e-commerce activity (Davis et al., 1989; Jarvenpaa and Todd, 1997a, b; Battacherjee, 2000; Tan and Teo, 2000; Song and Zahedi, 2001; Pavlou, 2002) or to explain actual purchasing behavior (Limayem et al., 2000; George, 2002; Khalifa and Limayem, 2003; Suh and Han, 2003).

From a practical perspective, as a cumulative body of work on organic food purchase emerges, it would facilitate more to advice suppliers on the elements they need to address in order to increase their organic food customers. In this study, the one area of findings that may help the organic food business is that the most concerns trust. The consumption of adulterated food items severely affects the human health by
producing many acute and chronic diseases. It is very essential to stop food adulteration. Checking at the retail level only will not bring enough positive impacts. The whole supply chain from the producers and importers through wholesalers to retailers will have to be checked and cleaned. More importantly, government authorities ought to formulate immediate plan through making laws and to implement strict regulations against any malpractice associated with food market, particularly food adulteration which is critically destroying our sustained eco-system and also curbing social well-being for each individuals in the society.

Simultaneously, consumer awareness is also an essential object in this respect (Rahman et al., 2015). Thus, government authorities, practitioners as well as academia ought to increase wider publicity regarding positive health benefits of the organic foods across the country in the news and social media including TV, the internet, newspapers, magazines and research journals. The vendors or producers should also be included in the government measurement to make more awareness among them in order to increase sustained social well-being through producing and distributing safe and unadulterated food items for the general consumers of the society.

Directions for future research
This study considered only one antecedent to attitudes toward organic food purchase. There may well be others that should be considered in future research, such as other aspects of trusts, such as chemical free foods and Byford’s (1998) social relationship and other views of trust. Beliefs about security and safety mainly in terms contamination, distinguished from beliefs about trust, could also be included, given the current media focus on food adulteration and security. Also, this study asked respondents about the importance of friends, parents and relatives in determining their views about purchasing organic food. Future studies could test the importance of a normative structure based on other influences than the ones tested here.

Future research could include measures of both intention to buy and actual purchasing behavior in organic food purchase. As intention measures future behavior and actual purchasing measures past behavior, there should be a time lag between when intention is measured and when behavior is measured. Having measures of both intention and behavior strengthen the results of almost any TPB-based study, even though past studies have typically showed a strong association between these two constructs (Vabø and Hansen, 2016; Ajzen, 1991). However, fears are an important barrier to purchase organic food. Despite the fact, this purchasing behavior continues to grow in volume and more and more people seem to be taking the plunge (Green, 2002; Horrigan et al., 2002; Ahuja et al., 2003).

Limitations
As with any study, there are limitations to the study delineated here. The study is limited to metropolitan urban areas of a city only. To be fair to say, if the sub-urban areas or rural areas could be included in the study, the findings would be better to represent the vast population of the country. Nevertheless, the usual cautions about overgeneralizing findings from this sample, to populations for which it is not strictly representative, apply. Another concern is that the questionnaire did not include any questions about the availability of organic food in the local market. Indeed, this issue could be an important issue for which the people located in the study areas may be impeded to buy organic food. Last but not least, the sample was not randomly drawn to represent a population to which findings could be generalized. Instead, it was followed a convenience sampling procedure, and as such, the ability to generalize the findings very far beyond the sample is limited.
References


Further reading

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Is anti-consumption driving meat consumption changes in Australia?

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Centre for Global Food and Resources, University of Adelaide, Adelaide, Australia, and
Ellen Goddard
Department of Resource Economics and Environmental Sociology, University of Alberta, Edmonton, Canada

Abstract

Purpose – The purpose of this paper is to evaluate recent changes made by Australian consumers in their consumption of beef, chicken, pork and lamb, as well as the factors motivating both decreased and increased consumption of each type of meat. Reasons for meat-avoidance are also examined.

Design/methodology/approach – An online questionnaire was completed in July 2016 by two Australian samples comprising: adults from the general population; and vegetarians. Data were analysed for 287 meat consumers and 82 meat avoiders. Descriptive statistics and results of multinomial logistic regression models are presented.

Findings – Meat consumers most commonly reported reducing consumption of beef in the last 12 months (30 per cent); followed by lamb (22 per cent), pork (14 per cent) and chicken (8 per cent). The following factors were associated with reductions in meat consumption: concerns regarding price and personal health; age and household income; and food choice motivations related to personal benefits, social factors and food production and origin. Main reasons motivating meat-avoidance were concerns regarding animal welfare, health and environmental protection.

Originality/value – This is the first Australian study providing national-level insight on how and why meat consumption patterns are changing. Reasons for changes are examined through an anti-consumption lens, investigating rationale for avoiding, reducing and increasing consumption. This provides a more comprehensive understanding of meat consumption and anti-consumption decisions, which are becoming increasingly complex. Insights on the psychologically distinct motivations underpinning avoidance, reductions and increases in meat consumption can inform the development of strategies aimed at promoting a societal-shift towards consumption of more sustainable dietary protein sources.

Keywords Animal welfare, Anti-consumption, Reduction, Vegetarians, Meat consumption, Food choice motivations

Paper type Research paper

Introduction

Protein is an essential macronutrient needed to sustain human life. Meat products are the dominant source of protein in Western diets and are often consumed in amounts that are in excess of nutritional requirements (Australian Bureau of Statistics, 2016). Global health and environmental authorities recognise that current levels of meat production and consumption are socially and environmentally unsustainable. Further, a growing body of evidence suggests that a shift towards more plant-based protein sources can provide benefits at both an individual and societal level (Steinfeld et al., 2006; McEvoy et al., 2012; Gerber et al., 2013; Orlich et al., 2013; Tantamango-Bartley et al., 2013; Bouvard et al., 2015; World Health Organization, 2015; Springmann et al., 2016; Food and Agriculture Organisation of the United Nations, 2017).

This study was funded by the Centre for Global Food and Resources (CGFAR) at the University of Adelaide, Australia. CGFAR was involved in the entire research process, from study design to submission. The authors have no potential conflicts of interest to declare.
Australia presents an interesting case study for the examination of changing meat consumption patterns. Per capita meat consumption in Australia is consistently amongst the highest in the OECD (95 kg in 2016) (OECD, 2018). Yet, the prevalence of vegetarianism is increasing. In 2016, 11 per cent of Australians were consuming a vegetarian or mostly vegetarian diet, which was a 15 per cent increase from 2012 (Roy Morgan Research, 2016). Individuals’ food choice decisions are known to be influenced by a complex set of physiological (e.g. hunger, appetite, taste/sensory characteristics), psychological (e.g. values, perceptions/beliefs, personality, mood, stress, guilt), physical (e.g. skills, access, time), cognitive (e.g. nutrition knowledge, food labelling), economic, religious and sociocultural (e.g. traditions, meal-patterns, peer-pressure, social norms, social image, marketing) factors (Steptoe et al., 1995; Lindeman and Väänänen, 2000; Sobal and Bisogni, 2009; Renner et al., 2012; Font-i-Furnols and Guerrero, 2014). However, the specific factors motivating increasing vegetarianism in Australia are not well understood.

Previous studies from other Western countries generally find that consumers’ decisions to become vegetarian or consume a mostly vegetarian diet are commonly motivated by concerns about personal health and animal welfare; environmental concerns, disgust with the sensory characteristics of meat, food quality and safety issues, influence of peers, and religion also playing a role (Jabs et al., 1998; Janda and Trocchia, 2001; Hoek et al., 2004; Ruby, 2012; de Boer et al., 2017; Mullee et al., 2017). Relevant Australian studies have explored consumers’ perceived benefits and barriers to vegetarian diets (Lea and Worsley, 2003; Lea et al., 2006) and motivations for teenage vegetarianism (Worsley and Skrzypiec, 1998) but these data were collected over a decade ago. A more recent Australian study by Bogueva et al. (2017) found that consumers primarily avoid red meat because of animal welfare and health concerns. However, the Bogueva et al. (2017) study was a relatively small exploratory study limited to red meat. Thus, current nation-wide data investigating reasons for changes in meat consumption patterns in Australia is lacking.

Further, there is scarce discussion about meat consumption, vegetarianism and/or food in general in the growing anti-consumption literature. Depending on the underlying motivational forces, a reduction in or complete avoidance of meat consumption can be considered an act of “anti-consumption”. Anti-consumption behaviour comprises conscious and voluntary (e.g. not externally restricted by financial or legal factors) acts of reduction, rejection and reclamation (Lee et al., 2009; Cherrier et al., 2011). Moreover, these acts are a means of self-expression, allowing individuals to consciously communicate personal beliefs and values (Cherrier et al., 2011). The key premise underlying anti-consumption research is that reasons against consumption are not merely the logical opposites of the reasons for consumption (Chatzidakis and Lee, 2013). Rather, reasons for and against consumption are psychologically distinct, but potentially overlapping (Chatzidakis and Lee, 2013; García-de-Frutos et al., 2016). Thus, in the present study, by investigating the reasons for avoiding, reducing, and also increasing meat consumption, a more comprehensive understanding of factors motivating recent changes to meat consumption patterns can be obtained (Lee et al., 2009).

Chatzidakis and Lee (2013) suggest that specific reasons for and against consumption can have more explanatory power than attitudinal/belief measures when seeking to understand behavioural drivers. Westaby (2005) explains that eliciting context-specific reasons allows individuals to consider both their pre-behavioural motivations and post-behavioural rationalisations, and express the specific subjective factors that they believe explain their behaviour. Unfortunately, much of the existing literature on drivers of vegetarianism and reduced meat consumption (cited above) primarily focusses on attitudes, perceptions and beliefs motivating change, rather than investigating specific reasons underlying changes in meat consumption. This makes it difficult to determine whether
changes in meat consumption are acts of anti-consumption. Essentially, reductions in meat consumption can be signs of anti-consumption behaviour and may suggest a conscious and voluntary behavioural shift towards vegetarianism, but meat reduction can also be driven by factors that impose food choice restrictions on the individual, in which case the behaviour would not be classified as anti-consumption.

By investigating the reasons underpinning Australian consumers’ decisions to increase and decrease meat consumption, and to avoid meat consumption altogether, our research not only adds to the growing literature related to meat consumption and human and environmental health and sustainability, but also contributes to the anti-consumption literature. Specifically, this study: investigates changes made to meat (beef, chicken, pork and lamb) consumption frequency within the previous 12 months; provides insight on consumers’ reasons for recent changes (reductions and increases) in consumption, and for complete meat-avoidance; and examines associations between changes in meat consumption and consumer characteristics (including food choice motives and socio-demographic variables). Insights generated by this research can be used to help inform strategies aimed at encouraging more socially and environmentally sustainable food choices in Australia. Overall, changes in dietary patterns, specifically reducing red meat consumption, have the potential to improve population health outcomes, and in the long term, could also lead to positive environmental outcomes.

Materials and methods

Study design and recruitment
An online questionnaire was completed in July 2016 by a sample of consumers aged 18 years and over that represented the general Australian population, and a sample of targeted vegetarians. A reputable market research company (Pureprofile) provided the online panel and hosted the survey. The study was approved by The University of Adelaide Human Research Ethics Committee (approval number: H-2016-156).

Measured variables
The questionnaire included a mix of multiple-choice, matrix, ranking, Likert-scale and open-ended questions. Questions assessed dietary preferences, including meat avoidance and frequency of consumption of various meat products; recent changes made to meat purchase and consumption behaviour; food choice motivations (FCMs); perceptions regarding ease, convenience and adequacy of meat-free diets; willingness to reduce meat consumption, and socio-demographic characteristics. Questions were also asked to ascertain consumers’ views regarding environmental issues and their perceptions regarding human contributions to climate change. Additionally, to explore possible reasons for a shift to anti-consumption behaviour vs consumption behaviour (increases in consumption), if consumers indicated they avoid meat or reported a recent change (reduction or increase) to their meat consumption frequency, they were asked to provide additional information on the reasons for changes in consumption. While several questions were generated by the authors, most were drawn or adapted from the relevant literature (Fox and Ward, 2008; Graça et al., 2016; Grunert, 2006; Janda and Trocchia, 2001; Lindeman and Väänänen, 2000; Renner et al., 2012; Ruby, 2012; Steptoe et al., 1995). Only variables relevant to the present paper are described below.

Dietary behaviour
To establish whether participants were “meat consumers” or “meat avoiders”, personal dietary preferences were assessed using multiple-choice questions with seven response options. For meat consumers, consumption frequencies of beef, chicken, pork and lamb
were measured using a matrix-style question with the following response options: “never”, “less than once per month”, “one to three times per month” and seven options ranging from “1 day per week” to “everyday”.

Recent changes to meat consumption
To determine whether meat consumers made recent changes to their meat consumption frequency, the following question was asked separately for each meat type: “Have you made any of the following changes to your beef/chicken/pork/lamb consumption within the last year?” Six options were provided: “no change”, “just started eating”, “stopped eating altogether”, “eating more often”, “eating less often”. An “other type of change (if yes, please specify)” option was also provided. For analysis, two new variables were created: “reduced consumption” (collapsed “just started eating” and “eating more often” categories); and “increased consumption” (collapsed “stopped eating altogether” and “eating less often” categories).

Reasons for meat avoidance and recent reductions and increases in meat consumption
The main reasons for meat avoidance and reported reductions and increases in beef, chicken, pork and lamb consumption were elicited using a multiple-choice question with 15 response options, including an “other (please specify)” option. The response options included in this question reflect the factors assessed in the extended Steptoe et al. (1995) Food Choice Questionnaire (FCQ) (Lindeman and Väänänen, 2000) and the Renner et al. (2012) Eating Motivations Survey (TEMS), with additional reasons included based on a review of the relevant vegetarian and meat consumption literature (Fox and Ward, 2008; Grunert, 2006; Janda and Trocchia, 2001; Ruby, 2012). Respondents could select multiple reasons for each behaviour (i.e. meat avoidance and each reported change to meat consumption).

Food choice motivations
A diverse set of FCMs was assessed using an extended version of Steptoe et al.’s (1995) original FCQ, which included scales for measuring ethical FCMs: ecological welfare, including sub-scales for animal welfare and environmental protection; political values; and religion (Lindeman and Väänänen, 2000). The questionnaire also included selected scales from TEMS (Renner, 2012), which were not addressed in the FCQ: need and hunger; sociability; social norms; and social image. In total, 16 FCMs were assessed. FCQ items were preceded by the phrase: “It is important to me that the food I eat on a typical day (e.g. can be cooked very simply)”, and TEMS items were prefixed with: “In terms of food, I eat what I eat (e.g. because it is trendy)”.

Socio-demographic characteristics
Respondents’ gender, age, educational attainment, annual pre-tax household income and area of residence (metropolitan area vs other) were assessed.

Statistical analyses
Descriptive statistics were calculated for the measured variables. For beef, chicken, pork and lamb, self-reported behaviour regarding recent changes to consumption frequency was categorised as “no change”, “reduced consumption” or “increased consumption”. \( \chi^2 \) tests were performed to examine associations between reasons for meat-avoidance and duration of meat-avoidance. To characterise, and thus, better understand Australian consumers who have made recent changes to their meat consumption patterns, multinomial logistic regression (MNL) models were estimated to examine associations between changes in meat
consumption frequency (no change, reduction, increase) and consumer characteristics including socio-demographics and FCMs.

Prior to running the MNL models, exploratory factor analysis (EFA) was performed to reduce the 16 FCM variables into a smaller number of “factors”. The KMO Measure of Sampling Adequacy (0.87) and Bartlett’s Test of Sphericity ($X^2 = 3,023.75, p < 0.001$) confirmed the suitability of factor analysis. The factor correlation matrix showed the highest correlation between factors was 0.70, which was sufficient to warrant oblique rotation (Tabachnick et al., 2001). After performing EFA using principal axis factoring extraction and promax rotation, communalities were examined. Three variables (religion, pleasure, need and hunger) were removed with communalities $< 0.40$ (Osborne and Costello, 2009). Variables with cross-loadings (where more than one factor loads on variable $\geq 0.32$) and/or low loadings ($< 0.50$) were removed step-wise. Removed variables were: health, mood, weight-control and familiarity.

The final EFA was performed on the remaining nine FCM variables (KMO 0.801; Bartlett’s Test of Sphericity $< 0.001$) and the number of factors retained was based on eigenvalues $> 1$ and a minimum of three variables per factor. The internal consistency of items included in the final factors was measured using Cronbach’s $\alpha$. Regression factor scores were calculated and used as independent variables (factor scores in top tertile $= 1$, all other scores $= 0$) in the MNL models, along with the socio-demographic variables. Data analysis was performed in STATA (version 14.2) and level of statistical significance was $p < 0.05$.

Results

Participants
A total of 328 adults from the general Australian population and 51 targeted vegetarians completed the survey. In total, 31 respondents from the general population sample identified as meat avoiders and were combined with the targeted vegetarian sample for analysis (herein termed “meat avoiders”). Respondents who provided invalid responses to questions regarding dietary changes ($n = 10$) were excluded, leaving a final sample of 287 meat consumers and 82 meat avoiders for analysis. Characteristics of the meat avoiders and meat consumers are shown in Table I. Compared to the meat consumers, a larger share of meat avoiders were female, aged $< 35$ years and university-educated.

Meat avoiders

Reasons for meat-avoidance. Of the meat avoiders, 17 per cent reported avoiding meat for one-year or less; 16 per cent for one to five years; 46 per cent for more than five years, but not their entire life; and 21 per cent for their entire life. Table II shows the reasons reported for meat-avoidance, and associations with duration of meat-avoidance. Overall, the top-three reasons were concerns related to: animal welfare (57 per cent), health (38 per cent) and environmental protection (35 per cent). Significant associations with duration of meat-avoidance were found for these reasons as well as for mood, convenience, weight-control and religion.

Meat consumers

Changes to meat consumption. Figure 1 shows the proportion of consumers who reported reducing, increasing or making no change to their consumption frequency for each type of meat. Reduced consumption frequency was most commonly reported for beef (30 per cent), followed by lamb (22 per cent), pork (14 per cent) and chicken (8 per cent). Only two respondents reported that they stopped consuming a specific type of meat altogether (one respondent each for pork and lamb).
Reasons for reduced meat consumption. For all four meat types, price concern was the most common reason for reducing consumption, especially for beef (60 per cent) and lamb (78 per cent). Concerns regarding personal health were the second-most common reason (15–29 per cent) (Figure 2). For beef and pork, weight-control was the third-most common

<table>
<thead>
<tr>
<th>Table I. Characteristics of meat avoiders and consumers</th>
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<tbody>
<tr>
<td>Gender (Female)</td>
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<tr>
<td>Meat avoiders (n = 82) (%)</td>
</tr>
<tr>
<td>Gender (Female)</td>
</tr>
<tr>
<td>Age, median (IQR)</td>
</tr>
<tr>
<td>18–34</td>
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<tr>
<td>35–54</td>
</tr>
<tr>
<td>&gt;55</td>
</tr>
<tr>
<td>Area of residence (metropolitan)</td>
</tr>
<tr>
<td>Educational attainment</td>
</tr>
<tr>
<td>Secondary only</td>
</tr>
<tr>
<td>Post-secondary but no tertiary</td>
</tr>
<tr>
<td>Tertiary</td>
</tr>
<tr>
<td>Household income (before tax)</td>
</tr>
<tr>
<td>≤$45,000</td>
</tr>
<tr>
<td>$45,001–$105,000</td>
</tr>
<tr>
<td>Over $105,000</td>
</tr>
</tbody>
</table>

Notes: a Data from (Australian Bureau of Statistics, 2017); b lowest age category defined as: 20–34 years; c based on data for Australians aged 20–64 years; d lowest tertile cut-off = $52,000 and highest tertile ≥ $104,000. *p < 0.05; **p < 0.01; ***p < 0.001 for comparison of meat avoiders vs consumers

<table>
<thead>
<tr>
<th>Table II. χ² tests of the associations between duration of meat avoidance and reasons for meat avoidance</th>
</tr>
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<tbody>
<tr>
<td>Entire life (%)</td>
</tr>
<tr>
<td>Health</td>
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<tr>
<td>Mood (stress, relaxation, feeling good)</td>
</tr>
<tr>
<td>Convenience</td>
</tr>
<tr>
<td>Taste/smell/appearance/texture of food</td>
</tr>
<tr>
<td>Price</td>
</tr>
<tr>
<td>Weight control</td>
</tr>
<tr>
<td>Animal Welfare</td>
</tr>
<tr>
<td>Environmental protection</td>
</tr>
<tr>
<td>Food safety</td>
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<td>Antibiotic use</td>
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<td>Hormone use</td>
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<td>Country of origin</td>
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<tr>
<td>Religion</td>
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<tr>
<td>Political values</td>
</tr>
<tr>
<td>Not wanting to be like everyone else</td>
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</table>

Notes: n = 82, a,b In each row, values followed by the same letter are not statistically significantly different (using Bonferroni adjusted p-values); Cramer’s V coefficient indicates strength of association
reason for reduction. For chicken, concerns regarding animal welfare, environmental protection and social image (24 per cent) were in equal second-place (together with health concerns), and in equal third-place were reasons related to convenience, weight-control and religion (14 per cent). For lamb, concerns regarding health and weight-control were in equal second-place (15 per cent) and in equal third-place were concerns regarding sensory characteristics, animal welfare and hormone use (11 per cent).

Reasons for increased meat consumption. Price was the most common reason for increasing consumption of chicken (54 per cent), pork (53 per cent) and lamb (41 per cent), while health concerns were the most common reason for increasing beef consumption (38 per cent) (Figure 3). The second- and third-most common reasons for increasing beef consumption were taste/smell/appearance/texture of food (30 per cent) and health (20 per cent), respectively.
consumption related to convenience (29 per cent) and price (25 per cent). After price, health (36 per cent) and convenience (21 per cent) were the second- and third-most common reasons for increasing chicken consumption. For pork, concerns regarding health and sensory characteristics were in equal second-place (29 per cent), and in equal third-place were concerns regarding weight-control and country of origin (12 per cent). For lamb, health and convenience were in equal second place (24 per cent), followed by food safety, country of origin and religion in equal third-place (18 per cent).

**Factor analysis of FCM variables.** Table III shows the pattern and structure matrices, the communalities, per cent explained variance, and Cronbach’s $\alpha$ for each extracted factor. All three factors could be meaningfully interpreted and were named based on the highest loading items. Higher scores in factor one, named “Socially-oriented”, indicated that food choices were more strongly motivated by social factors. Factor two, named “Production
and origin focused”, described FCMs which aim to reduce negative environmental impacts and respect both animal and human rights. Factor three, named “Personal benefits”, described FCMs associated with tangible personal benefits such as greater convenience, lower price and better sensory experience.

**Consumer characteristics and FCMs associated with changes in meat consumption frequency.** Results of MNL models examining associations between recent meat consumption frequency changes, socio-demographic characteristics and FCM factor scores are shown in Table IV. Recent consumption changes were significantly associated with age, household income, education level, and all three FCM factors, however, results varied across meat types.

**Reduced meat consumption relative to no change.** The probability of reducing meat consumption relative to making no change in consumption, was not significantly influenced by socio-demographic characteristics when accounting for the effects of FCM. Consumers in the highest tertile of “Production and origin focused” and “Personal benefits” factor regression scores were about two times more likely to report a recent reduction in beef consumption vs no change. Chicken reduction was significantly more likely among consumers whose food choices are more strongly motivated by social factors, and pork reduction was significantly more likely among consumers whose food choices are more strongly motivated by personal benefits.

**Reduced meat consumption relative to increased consumption.** Compared to consumers ≤34 years of age, those 55 years and over were seven to eight times more likely to reduce beef and pork consumption. Consumers with household incomes in the top tertile were five times more likely to reduce chicken consumption compared to consumers with lower household incomes. Consumers whose food choices are more strongly motivated by social factors were significantly more likely to report a recent reduction in chicken consumption and less likely to report reduction in lamb.

**Increased meat consumption relative to no change.** Consumers ≥55 years of age were significantly less likely than those ≤34 years, to increase their consumption of beef (85 per cent less likely) and pork (71 per cent less likely). Consumers in the top household income tertile were 63 and 57 per cent less likely to increase their consumption of beef and chicken, respectively. An increase in pork consumption was almost three-times more likely among university-educated consumers. Consumers with stronger “Production and origin focused” food choice motives were significantly more likely to report an increase in beef consumption, and those with stronger “socially-oriented” food choice motives were more likely to report an increase in lamb consumption.

**Discussion**
This timely nationwide study provides new and valuable insight into how and why meat consumption patterns are changing in Australia. An anti-consumption approach is used, whereby we investigate reasons for avoiding meat consumption (vegetarianism), in addition to reasons for recent reductions and increases to consumption of four different meat types- beef, chicken, pork and lamb.

**Reasons for meat avoidance (vegetarianism) and meat reduction – are these behaviours acts of anti-consumption?**
Consistent with previous studies investigating motivators of vegetarianism, we found concerns regarding health and animal welfare were the most common motivators of meat-avoidance (Westaby, 2005; Lea et al., 2006; De Backer and Hudders, 2014; Graça et al., 2016; Roy Morgan Research, 2016; Bogueva et al., 2017; de Boer et al., 2017). In addition, we show that animal welfare concerns motivated the majority of meat-avoidance decisions among those who are not lifelong vegetarians. In contrast, price concerns explained the majority of reductions in beef,
Table IV. Results of multinomial logistic regressions to predict recent reductions in meat consumption.

<table>
<thead>
<tr>
<th></th>
<th>Beef (n = 280)</th>
<th>Chicken (n = 281)</th>
<th>Pork (n = 251)</th>
<th>Lamb (n = 255)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RRR Lower Upper</td>
<td>RRR Lower Upper</td>
<td>RRR Lower Upper</td>
<td>RRR Lower Upper</td>
</tr>
<tr>
<td>Reduced consumption vs No change (base)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1.11 0.62 1.99</td>
<td>1.80 0.70 4.63</td>
<td>0.70 0.32 1.55</td>
<td>1.37 0.70 2.69</td>
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<td>Age (reference: &lt; 35 y)</td>
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<td></td>
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<tr>
<td>35-54 y</td>
<td>0.75 0.34 1.64</td>
<td>0.65 0.15 2.80</td>
<td>1.31 0.39 4.47</td>
<td>1.77 0.69 4.58</td>
</tr>
<tr>
<td>≥55 y</td>
<td>1.03 0.45 2.35</td>
<td>1.53 0.29 8.04</td>
<td>2.06 0.59 7.27</td>
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<tr>
<td>University degree</td>
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<td>1.30 0.63 2.67</td>
</tr>
<tr>
<td>Top income tertile</td>
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<td>1.25 0.49 3.18</td>
<td>0.73 0.33 1.63</td>
</tr>
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<td>Metropolitan area</td>
<td>0.84 0.45 1.58</td>
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<tr>
<td>“Socially-oriented”</td>
<td>0.46** 0.26 0.82</td>
<td>0.18** 0.06 0.53</td>
<td>0.16* 0.03 0.82</td>
<td>0.23* 0.07 0.70</td>
</tr>
<tr>
<td>“Production and origin focused”</td>
<td>2.13* 1.12 4.06</td>
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<td>1.41 0.68 2.95</td>
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<td>“Personal benefits”</td>
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<td>3.84** 1.67 8.85</td>
<td>1.98 0.96 4.06</td>
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<tr>
<td>Constant</td>
<td>0.54 0.19 1.56</td>
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<td>0.07** 0.01 0.35</td>
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Reduced consumption vs Increased consumption (base) |

<table>
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<tr>
<th></th>
<th>Beef (n = 280)</th>
<th>Chicken (n = 281)</th>
<th>Pork (n = 251)</th>
<th>Lamb (n = 255)</th>
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<tr>
<td></td>
<td>RRR Lower Upper</td>
<td>RRR Lower Upper</td>
<td>RRR Lower Upper</td>
<td>RRR Lower Upper</td>
</tr>
<tr>
<td>Female</td>
<td>1.08 0.44 2.66</td>
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</tr>
<tr>
<td>35-54 y</td>
<td>1.70 0.57 5.13</td>
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<td>2.77 0.56 13.84</td>
<td>1.13 0.26 4.94</td>
</tr>
<tr>
<td>≥55 y</td>
<td>6.60*** 1.77 24.58</td>
<td>1.72 0.28 10.32</td>
<td>7.26* 1.41 37.54</td>
<td>1.04 0.21 5.23</td>
</tr>
<tr>
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<td>0.80 0.31 2.07</td>
<td>0.56 0.15 2.09</td>
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<td>0.91 0.25 3.35</td>
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<td>3.32 0.82 13.41</td>
<td>1.68 0.43 6.57</td>
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<td>0.45 0.17 1.20</td>
<td>0.05*** 0.01 0.17</td>
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<td>0.12** 0.03 0.49</td>
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<td>3.05 0.71 13.06</td>
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<td>2.61 0.95 8.32</td>
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<td>0.76 0.18 3.18</td>
<td>2.34 0.53 10.29</td>
<td>2.21 0.78 6.24</td>
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<tr>
<td>Constant</td>
<td>4.72 0.85 26.23</td>
<td>0.20 0.02 2.66</td>
<td>0.60 0.07 5.42</td>
<td>4.14 0.63 27.15</td>
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Increased consumption vs No change (base) |

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</tr>
<tr>
<td>Female</td>
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<td>1.24 0.66 2.34</td>
<td>1.01 0.34 3.00</td>
<td>1.28 0.54 3.03</td>
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<td>Age (reference: &lt; 35 y)</td>
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<td>RRR</td>
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<tr>
<td>35-54 y</td>
<td>0.44</td>
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<tr>
<td>Consumption frequency (≥2 days/wk)</td>
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<td>0.40</td>
<td>2.61</td>
<td>2.94**</td>
</tr>
<tr>
<td>“Socially-oriented”</td>
<td>0.92</td>
<td>0.39</td>
<td>2.21</td>
<td>0.59</td>
</tr>
<tr>
<td>“Production and origin focused”</td>
<td>2.78*</td>
<td>1.06</td>
<td>7.32</td>
<td>1.03</td>
</tr>
<tr>
<td>“Personal benefits”</td>
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<td>0.88</td>
<td>5.62</td>
<td>1.57</td>
</tr>
<tr>
<td>Constant</td>
<td>0.11**</td>
<td>0.02</td>
<td>0.57</td>
<td>0.11***</td>
</tr>
</tbody>
</table>

Notes: aBeef Pseudo $R^2 = 0.1040$; Model Wald $\chi^2 (20) = 47.83$, $p < 0.001$; bChicken: Pseudo $R^2 = 0.1342$; Model $\chi^2 (20) = 58.84$, $p < 0.001$; cPork Pseudo $R^2 = 0.1355$; Model $\chi^2 (20) = 45.34$, $p = 0.001$; dPseudo $R^2 = 0.0869$; Model $\chi^2 (20) = 39.89$, $p = 0$.* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
pork and lamb consumption in our study, consistent with a recent US study (Neff et al., 2018). These distinct findings suggest that different to complete meat-avoidance (especially when meat-avoidance was not lifelong), reductions in the consumption of specific meat types were in most cases, not likely to be acts of anti-consumption. Rather, financial restraints impacted consumption decisions.

Overall, this finding may reflect the sensitivity of meat consumption behaviour to price increases and, thus, may be indicative of temporary behaviour change. Price concerns were particularly important among those who reduced beef (60 per cent) and lamb (78 per cent) consumption. While the retail price of chicken meat in Australia has historically been relatively lower than that of beef and lamb, there was a relatively steep (21 per cent) increase in the retail price of beef and 12 per cent increase in the price of lamb during the period spanning July 2014 to July 2016 (Meat and Livestock Australia, 2017). This price increase may, therefore, explain both the high concern by beef and lamb consumers who reduced consumption, and the finding that beef reduction was more likely among consumers with higher “personal benefit” factor scores.

The investigation of changes in chicken consumption revealed several important distinctions from the other meat types. Most notably, reductions in chicken consumption were less commonly motivated by price concerns, and, overall, were driven by a broader range of reasons including concerns regarding animal welfare and environmental protection. Thus, despite the relatively low frequency of chicken meat reductions, these findings suggest that anti-consumption was a more likely factor behind changes in chicken consumption vs the other meat types. Interestingly, social factors were found to be particularly important in motivating chicken meat reductions. Specifically, almost one-quarter of chicken meat reductions were motivated by a desire to exhibit different social preferences and behaviour, and reductions were also more likely among consumers whose food choice motives are more strongly influenced by social factors. This further supports the suggestion that some of the reported reductions in chicken consumption may be acts of anti-consumption, which allow self-expression of personal beliefs and values, especially those related to animal welfare and environmental protection.

Further, consistent with previous studies we find different motivations for meat reduction vs avoidance/vegetarianism (Jabs et al., 1998; De Backer and Hudders, 2014; de Boer et al., 2017). Animal welfare concerns motivated most (59 per cent) cases of meat-avoidance (vegetarianism) in our study but less than one-quarter of meat reductions. Likewise, concerns regarding environmental protection were more frequent motivators of avoidance. Previous research shows that gradual dietary changes are more likely among health-motivated vegetarians whereas more sudden dietary changes are more likely among ethically-motivated vegetarians (Jabs et al., 1998); and the greater the concern about animal welfare, the greater the meat reduction (De Backer and Hudders, 2014, 2015). Thus, our finding that health concerns more commonly motivated meat reduction than animal welfare concerns, while the opposite was found for meat-avoidance, may explain why considerably more respondents reported reducing their meat consumption rather than stopping meat consumption altogether. Further, relatively few cases of meat-avoidance were motivated by price concerns, suggesting that meat-avoidance was more likely to be an act of anti-consumption than meat reduction (except in the case of chicken).

Reasons for reducing vs increasing meat consumption
While we found some overlap in the reasons for reducing and increasing consumption, the frequency with which the same reason was reported for both changes differed considerably for all meats, except pork. Additionally, several reasons were commonly reported for reducing consumption but not for increasing, and vice-versa. For example, for beef and lamb, convenience was a “top-three” reason for increasing but not reducing consumption;
and, for chicken, the following concerns were common reasons for reducing but not increasing consumption: animal welfare, environmental protection and social image. Thus, investigating both reasons for reducing and increasing meat consumption showed the psychologically distinct motivations driving recent changes in meat consumption behaviour in Australia. Apart from a small exploratory study that examined both reasons for consuming and not consuming red meat (Bogueva et al., 2017), no known studies have reported similar investigations for meat in general or for different meat types.

**Potential strategies for encouraging more socially and environmentally sustainable protein sources**

Despite the growing body of evidence suggesting that shifting towards more plant-based dietary patterns can benefit both individuals and society, our results suggest that health and environmental concerns played a relatively minor role in motivating recent reductions in meat consumption. Less than one-third of consumers reduced their meat consumption for health reasons (15–29 per cent) (including weight-control, 14–20 per cent), and even fewer did so for environmental reasons (4–24 per cent). This supports de Boer and Aiking’s (2017) frame-based approach to transitioning to a low meat diet. Specifically, rather than guiding consumer food choices using frames that emphasise evidence-based health and/or environmental benefits, de Boer and Aiking (2017) argue that framing (e.g. used in recipes and point of sale information) should relate to more easily perceived, immediately relevant and familiar food choice factors such as variety, balance and moderation.

In addition, our finding that environmental concerns were not a common motivator of recent reductions in meat consumption is consistent with recent research showing that Australian meat consumers generally do not have strong environmental concerns (Malek et al., 2017). However, an important exception in our study relates to chicken consumption changes, with environmental concerns more frequently reported as a reason for reducing consumption of chicken, than either beef or lamb. Yet, in Australia, the impact of chicken production on the environment is relatively low compared to that of red meat (i.e. beef and lamb) (Bradbear and Friel, 2011; Wiedemann et al., 2017). Future studies might consider assessing consumers’ awareness and perceptions of the relative environmental impact of different meat types. This would provide useful insight on consumer misperceptions, which could be addressed through education and/or marketing campaigns promoting more sustainable food choices.

A key strength of this research is the general population study sample, which is representative of the Australian population with respect to gender, education level, area of residence (metropolitan areas vs other) and prevalence of vegetarianism. Additionally, this is the first nationwide study to investigate both the types of changes Australian consumers are making to their meat consumption patterns and reasons for these changes, providing insight on whether anti-consumption is a factor behind changes. Study limitations include the self-reporting of meat consumption behaviour, which may over- or under-estimate actual behaviour. Moreover, measurement of meat consumption was limited to frequency and did not consider portion sizes. While the meat avoider sample was relatively small, analysis still provides useful insights that are consistent with the literature. Lastly, as with all survey research, there exists the possibility of selection bias; thus, consumers with greater interest in meat/food choices may have been more likely to participate.

**Conclusions**

This study shows that the majority of recent reductions in beef, lamb and pork consumption in Australia were driven by price/financial restraints, and were, therefore, not true acts of anti-consumption. In contrast, chicken meat reductions were motivated by a wider range of
reasons and less frequently by price concerns, and thus are more consistent with anti-consumption behaviour. Likewise, most cases of vegetarianism/complete meat-avoidance were likely cases of anti-consumption, with ethical concerns behind almost two-thirds of meat-avoidance decisions. Interventions aimed at encouraging a societal shift towards more sustainable protein sources might, therefore, consider information-based framing strategies emphasising food choice factors that are more easily perceived, immediately relevant and familiar to consumers. Finally, our data suggest that we could continue to see an increasing trend of meat anti-consumption (specifically chicken reduction and/or meat-avoidance) in Australia if consumers continue to associate health and ethical (animal welfare and environmental protection) concerns with consumption of chicken and meat in general.

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The Slow But Steady Rise of Vegetarianism in Australia, Roy Morgan Research, Melbourne.


**About the authors**

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Ellen Goddard is at University of Alberta, Department of Resource Economics and Environmental Sociology, Edmonton, Alberta T6G 2P5, Canada.

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Or contact us for further details: permissions@emeraldinsight.com
Organic shoppers’ involvement in organic foods: self and identity

Yun-Hee Kim
School of Business, McKendree University, Lebanon, Illinois, USA

Abstract

Purpose – The purpose of this paper is to understand how identities drive customer values, attitudes toward organic foods and satisfaction, all of which influence word of mouth (WOM).

Design/methodology/approach – Questionnaire surveys were administered to the purchasers of organic foods. In total, 512 completed responses were obtained for data analysis.

Findings – Strongly defined social identity and role identity are significant antecedents of consumers’ health consciousness and socially responsible consumer behavior (SRCB). This finding explains why organic shoppers value their health and the environment (i.e. self- and others-oriented values). Additionally, health consciousness and SRCB significantly influence attitudes toward organic foods. The study reveals that attitudes toward organic foods positively influence organic shoppers’ satisfaction, and their satisfaction increases positive WOM. Finally, the moderating effects of involvement and mass media are examined. When organic shoppers are strongly involved with organic foods, their health consciousness has a more positive effect on their attitudes toward organic foods. However, organic shoppers’ involvement did not moderate the effect of SRCB on attitudes toward organic foods. Likewise, the mass media did not moderate the effect of health consciousness and SRCB on attitudes toward organic foods.

Originality/value – This study incorporates critical factors such as the antecedents of the customer values to develop a comprehensive model for understanding of organic shoppers’ consumption of organic foods.

Keywords Satisfaction, Social identity, Involvement, Role identity, Mass media, Organic shopper

1. Introduction

Organic foods constitute the fastest-growing sector of the American food marketplace (Organic Trade Association (OTA), 2017). The growth of the organic food market is closely associated with the growth of the green/sustainable market because organic food is produced by using “the conservation of soil and water to enhance environmental quality for future generations” (USDA National Organic Program, 2017). The growing number of organic shoppers shows positive attitudes toward organic foods (Kim and Kim, 2018). More organic and natural food supermarket chains (e.g. Whole Foods Market) have emerged, and the largest US grocers such as Wal-Mart Stores and Kroger have offered more organic products due to rising demand (Peterson, 2017; Walsh, 2014). Amazon now owns Whole Foods Market and used the media to change the perception of organic food prices there (Simon, 2017). The high price of organic foods has been the main obstacle to consumers (Doorn and Verhoef, 2015). However, studies have shown that consumers are willing to pay more for organic foods (Vecchio et al., 2016). It is possible that consumers’ involvement in organic food accounts for the different findings. Some consumers may have different attitudes and purchase intentions toward organic foods (Tarkiainen and Sundqvist, 2009; Thogersen et al., 2012). Since organic shoppers have unique demographic profiles (Curl et al., 2013) and values (Grebitus and Dumortier, 2016), their involvement in organic food will play an important role in their shopping behaviors. This assumes that they seek knowledge and information about organic foods from the mass media. Although mass media has been widely discussed in consumer behavior, its role has not been studied in the organic food context, even though organic foods are a popular topic. The growth of organic food market has boosted the media to influence on consumer perception and consequently consumer demand for organic foods. Thus, when we predict attitudes toward organic foods, consumers’ involvement and mass media should be considered.
Accordingly, this study presents organic shoppers’ values associated with the consumption of organic food. Many studies have found that consumers who buy organic foods have different beliefs and values from conventional food buyers (Kim and Kim, 2018). Organic shoppers more highly value their quality of life than conventional shoppers, which includes both self- and others-oriented values (i.e. egoistic, altruistic and biospheric) (Doorn and Verhoef, 2015; Kim and Kim, 2018). These values represent personal health (i.e. physical and mental) and socially responsible consumer behavior (SRCB), which reflects saving the environment and protecting animal welfare (i.e. the sense of inner harmony). The problem is that the previous studies do not explain why organic shoppers are concerned with the health, environmental and animal benefits that are relevant to consumer well-being. Organic shoppers fall into a different social group from non-organic shoppers (Aertsens et al., 2009); however, researchers have not investigated organic shoppers based on identities that find self or identity in social relationships and social roles (Chatzisarantis et al., 2007).

In the context of organic food, consumers’ identity-based views are needed. In addition, most research considers consumers’ purchase intentions as driven by beliefs, motivations and attitudes. Despite the high demand and the strong interest from organic shoppers, researchers have not studied post-purchase behaviors to determine whether these organic shoppers are satisfied with organic foods and willing to talk positively about it to others. Thus, this study examines the antecedents of health- and social responsibility-related values by accessing identities as organic shoppers and incorporates involvement and mass media. Identity theory is discussed to develop a base model that will explain how organic shoppers identify themselves (i.e. social and role identity). Since this study examines organic shoppers’ satisfactions and world or mouth (WOM), specific determinants based on values such as health consciousness, SRCB and attitudes toward organic foods were the main variables in the conceptual model. This study also focuses on the moderating effect of the involvement and mass media between values and attitudes. This wider view of organic shoppers’ decision making will contribute to effective strategies for retailers and marketing specialists in the organic food market.

2. Literature review

Self and identity

The term “self” refers to how individuals identify themselves (Brown and Capozza, 2006). James (1890) initiated the idea of the self in psychology and viewed the self as multidimensional. Sociologists focused on what James called the “social self” that is influenced by society (James, 1890; Mead, 1934). Sociologists have approached this dimension of self in a social context, and perceived the self as engaged in reciprocal relationship between the person and the society (Stryker, 1980). James (1890) has constructed two concepts of the social self: “I” (the knower) and “me” (known). The former represents the subjective meaning of the self that influences the society. The latter signifies the objective meaning of the self as structured by society. Mead (1934) elaborated upon this concept (I/me), especially the subjective meaning of human behavior. Blumer (1969) later coined the term “symbolic interactionism.”

Symbols can be found in language and culture through social interactions that have meaning. Humans are actors who adjust their behaviors to the actions of other actors because they can interpret these behaviors and even react to their own, all of which are symbolic objects (Blumer, 1969; Cooley, 1902; Mead, 1934). Actors build groups, networks and finally social worlds. As a result, people’s roles are situational; sociologists call this “role identity.” Since each self plays many roles, the self, in a sense, contains many different selves (Stryker, 1980). Individuals derive the meanings of their selves as the members of particular groups.
Identity theory

Identity theory has developed as an aspect of symbolic interactionism. The research on social interactionism has several perspectives on identity theory (Stets and Burke, 2012). Two dimensions from identity theory—social identity and role identity—are applied for the current research. Social identity is concerned with the effect of societies on identity and behavior (Serpe and Stryker, 1987). Role identity centers on the roles that people play in different social groups (McCall and Simmons, 1978).

People want to evaluate themselves and be evaluated by others positively (Brown and Capozza, 2006). This desire for esteem motivates both the personal and the social selves. The value of self and the value of the in-group are compared: “the ingroup is positively evaluated if it is perceived as being superior to relevant outgroups on salient compassion dimensions” (Brown and Capozza, 2006, p. 3). Positive in-group attributes enhance social identity and satisfy the need for esteem (Brown and Capozza, 2006). Social identity theory is defined as “the individual’s knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership” (Tajfel, 1981, p. 292). According to Turner (2006), social identities are more likely to influence behaviors than personal identities. Because an individual tends to favor his/her own group and to underestimate out-groups, social identity lessens uncertainty and provides security (Hogg and Deborah, 2000; Taylor, 2010).

The self is also expressed in the role context (Evans, 1989). Role identity adapts both the I and the me aspects and possesses multiple identities (McCall and Simmons, 1978). Multiple identities give meaning to humans’ lives and guide behavior (Thoits, 1991). “Role-identity” is defined as “the character and the role that an individual devise for himself as an occupant of a particular social position” (McCall and Simmons, 1978, p. 65). Individuals want to be viewed in certain ways to conform to the social structure. The content of self encompasses this set of role identities. McCall (1987) viewed interlinked aspects of self in structure and dynamics. Structures of the self reflect the role structures of society. Although there are basic roles such as gender and age, there is a hierarchy of prominence (hierarchical valuation) which is determined by the degree of support from others, commitment to the identity, extrinsic and intrinsic reward from the role identity (McCall and Simmons, 1978; Stets and Burke, 2012). The hierarchy focuses on “what an individual values” (Stets and Burke, 2012, p. 134). The more prominent the role identity, the stronger the activities and performances related to that role (Stets and Burke, 2012). Thus, this study assesses perceived self-identity in terms of social identity and role identity.

Social identification is the insight of oneness belonging to some human aggregate (Ashforth and Mael, 1989). Social context is therefore important in forming what some social psychologists call “self” and others call “identity.” The social self fits the demand of the situation (Stets and Burke, 2012) and each self plays roles according to certain domains. According to Chatzisarantis et al. (2007), social identity theory is useful for understanding health-related behaviors. When an in-group offers an individual stability, meaning and direction, it can encourage positive health and well-being (Haslam et al., 2009). On the other hand, if the group does not value health promotion, this group can encourage a negative outcome (Oyserman et al., 2007). Previous studies have characterized the consumption of organic foods in terms of consumers’ values and lifestyles (Kim and Kim, 2018). These characteristics suggest that organic shoppers belong to a social group that shares beliefs,
values and socioeconomic status (Curl et al., 2013; Goetzke et al., 2014). Organic shoppers are more aware that food intake does affect their health; they appreciate healthy and natural foods and are more willing to choose healthier foods to improve their health than are non-organic shoppers (Zanoli and Naspetti, 2002). Past research shows that perceived identity is closely associated with consumers’ values (Tarkiainen and Sundqvist, 2009). Chatzisarantis et al.’s (2007) study found that strong social identity positively influences attitudes and health behavior. Young people are especially likely to support the beliefs of in-group members (Chatzisarantis et al., 2007). Both social identity and role identity are related to health behavior. For example, Wickman et al.’s (1995) study found that high satisfaction in a salient role promotes perceived physical health. Chen and Yao (2010) also examined identity firmness and found that self-identity is associated with adolescents’ health-related quality of life. Drawing on these ideas and on identity theory, the following hypothesis is proposed:

H1. Consumers with strongly defined (a) social identity and (b) role identity will demonstrate higher levels of health consciousness.

Like health consciousness, identities are associated with social behaviors and the purchase of fair trade products (Connolly and Shaw, 2006). Brooker (1976) defined socially conscious consumers as “the group whose actions lead the way to an improving quality of life in society” (p. 107). Pinto et al. (2016) supported this definition by describing the green consumer as one who avoids products and services that harm the environment and animals during production. Socially responsible behaviors such as improving the environment and animal welfare by reducing environmental damage are based in environmental and ethical claims. Previous studies have found a relationship between ethical self-identity and ethical consumer choice of organic food (Shaw and Shiu, 2002). According to Pinto et al. (2016), social identity has a positive relationship to green consumption. When consumers are aware of others, they are more likely to respond to green lifestyles. Similarly, their role identities are associated with well-being (Kessler et al., 1985; Thoits, 1991). For example, the more salient an individual’s role identity, the more the role identity will influence well-being which is itself associated with an enhanced standard of living. When consumers have strong social and role identities, they are more likely to have an enhanced self-concept and well-being (McGown et al., 2017). Thus, the following hypothesis is proposed:

H2. Consumers with strongly defined (a) social identity and (b) role identity will demonstrate higher levels of SRCB.

Customer values
How researchers define value conceptualizations and meanings varies depending on the context of study. Rokeach (1973) defined a value as “an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence” (p. 5). Two kinds of terminal values exist: personal (self-oriented) and social (society-oriented). In the current study, these two terminal values are described as personal and altruistic values, which indicate desired goals for organic food consumption, which include achieving good health and SRCB.

Health consciousness is “the degree to which health concerns are integrated into a person’s daily activities” (Jayanti and Burns, 1998, p. 8). Health-conscious consumers are aware of and concerned with their well-being and are motivated to improve and/or maintain their health and quality of life. They also want to prevent ill health by engaging in healthy behaviors and being conscious of their health (Michaelidou and Hassan, 2008). Health-conscious consumers have positive attitudes toward benefits of health and are aware of the importance of nutrition (Kim and Kim, 2018). Consumers who are health conscious and adopt a “wellness-oriented”
lifestyle are much more likely to undertake preventive health care than those who are not (Jayanti and Burns, 1998). Magnusson et al. (2003) found that consumers’ health consciousness influences positive attitudes toward organic products and their intentions and purchases of organic foods. Some researchers have found that consumers’ most important reason for purchasing organic foods is to protect or improve their health (Padel and Foster, 2005; Zanoli and Naspetti, 2002). Thus, consumers’ health consciousness will stimulate an interest in organic foods. This leads to the following hypothesis:

**H3.** Health consciousness positively influences attitudes toward organic foods.

In the 1990s, researchers started to use the term “green consumers.” Many researchers and marketers still use the term “green consumer” to refer to buyers of sustainable goods. However, the terms “green consumer” and “socially responsible consumer” have been used interchangeably. Brooker (1976) used the term “socially conscious consumer” to describe consumers who are aware of the importance of environment and behave to save it. Many studies have found that organic agriculture production benefits the environment (Magistris and Gracia, 2008; OTA). The ecological motives including animal welfare and environmental concern reflect SRCB. There is plenty of evidence showing that environmentalism and ecological motives have a significant influence on attitudes toward organic foods (e.g. Kim and Kim, 2018; Magistris and Gracia, 2008). This leads to the following hypothesis:

**H4.** SRCB positively influences attitudes toward organic foods.

**Attitudes toward organic foods, satisfaction and WOM**

The theory of reasoned action illustrates how attitudes translate into behavior intentions and then into actual behavior. Fishbein and Ajzen (1975) stated the importance of attitudes in influencing behavior. Researchers have found a significant relationship between attitudes toward organic foods and intentions to purchase (e.g. Thogersen et al., 2015). The awareness of organic food as healthy and environmentally friendly leads consumers to show a positive attitude toward organic food, which influences their intention to purchase. It is not known whether those consumers are satisfied with organic foods and willing to talk favorably about it to others.

Satisfaction is closely associated with consumer loyalty and behavior (Olsen, 2007). When consumers are satisfied with their products, they are more likely to recommend them to others by WOM. WOM is the “oral, person-to-person communication between a receiver and a communicator whom the receiver perceives as non-commercial, concerning a brand, a product or a service” (Arndt, 1967, p. 3). WOM encompasses “any information about a target object (e.g. company, brand) transferred from one individual to another either in person or via some communication medium” (Brown et al., 2005, p. 125). WOM naturally occurs among friends and family (i.e. people who can influence someone’s decision making) (Baker et al., 2016). In goods and services, interpersonal relationships can be a more powerful than mass media. Thus, WOM is described as a powerful force in the marketplace (Chawdhary and Riley, 2015). Many researchers have claimed that consumer satisfaction leads to positive WOM (Tang, 2017). When consumers purchase new products or services for the first time, WOM serves as a significant mechanism that influences behavior. Although marketers and researchers often emphasize the importance of WOM to recruit new customers, WOM can be especially strong among consumers who have a homogeneous profile as the purchasers of similar products (Baker et al., 2016). Organic shoppers often act as a group, which may explain why previous research in the organic market has focused on them (Kim and Kim, 2018). Since organic shoppers come from a similar socioeconomic background and have similar reasons to buy organic foods, many of them are likely to have
family and friends who are also organic shoppers (Curl et al., 2013). In addition, 99 percent of these shoppers tend to shop at specialty shops (Cicia et al., 2002), which means they have more chances to interact with other organic shoppers and thus are exposed to WOM. Thus, the following hypotheses are proposed:

**H5.** The more positive is the attitudes toward organic foods, the higher is customer satisfaction.

**H6.** The more positive is customer satisfaction, the more positive is WOM.

*Moderators between customer values and attitudes*

*Involvement in organic foods.* Felt involvement is a “consumer’s overall subjective feeling of personal relevance” (Celsi and Olson, 1988, p. 211). Although consumers have low involvement in the purchase of everyday products, some consumers have high involvement in purchasing organic foods (Thogersen et al., 2012). Kim and Kim (2018) investigated organic shoppers and found that on average, organic shoppers are well-educated and have professional status. Moreover, most organic shoppers are willing to pay a premium for organic foods. It is not surprising that 80 percent of these shoppers have been buying organic products more than a year. Because of their involvement in organic foods, it is often assumed that regular and occasional buyers of organic products are different. For example, Zanoli and Naspetti’s (2002) examination of Italian consumers’ experiences with organic products showed that regular consumers value centers on health and well-being, which is further developed to ecology and harmony with the universe while occasional consumers’ value centers only on taste and appearance of products. In India, Chakrabarti and Baisya (2007) found a difference between regular and occasional buyers. Regular buyers place more importance on taste; occasional buyers place more importance on curiosity. Thus, there is a difference between regular and occasional buyers. Extending these findings to involvement, this research suggests that involvement in organic foods moderates the relationship between customer values and attitudes. In other words, higher levels of involvement in organic foods will reinforce the relationship between health consciousness and attitudes toward organic foods. At the same time, higher levels of organic food involvement will reinforce the relationship between SRCB and attitudes toward organic foods. Therefore:

**H7.** With a higher level of organic foods involvement (a) consumers’ health consciousness and (b) SRCB will have a stronger positive effect on attitudes toward organic foods.

*Mass media*

Organic shoppers seek information, and they want to be knowledgeable about how organic production is different from the conventional production (e.g. use of fertilizer and pesticides) (Cicia et al., 2002; Zanoli and Naspetti, 2002). Thus, organic shoppers are more likely to accept information about health and organic products. Mass media communicate with consumers through advertising on radio networks, in newspapers, magazines and online. In this way, media that may shape consumers’ perception of products. One purpose of mass media is advocacy, “the strategic use of new media by those seeking to advance a social or public policy initiative” (Holder and Treno, 1997, p. 190). Media advocacy is designed to draw attention to public health problems via local news (Holder and Treno, 1997). Although media advocacy is not used to change consumer behavior directly, consumers may change their behaviors after receiving new information from media.

Researchers have claimed that mass media can be used to promote health (Farley et al., 2017). Since concerning the health aspects of foods has been rising among consumers, information
about certain products related to consumer health in media can change their behaviors. For example, Farley et al. (2017) used a mass media campaign through television, radio and social media to reduce the consumption of sugar-sweetened beverages (SSB). After the campaign, people were more aware of the negative impact of SSB and its cause of heart disease. Similarly, Dodd and Morse (1994) used a segment on the television show 60 Minutes on the benefits of red wine based on scientific studies and after consumers watched the program, red wine sales have increase. This aspect of mass media applies in business, and marketers use advertising to reinforce growing demand or to impede decreasing demand. Since television as the mass medium affects consumer decision making, previous researchers have examined the effect of television coverage on fresh meat consumption (Verbeke et al., 2000). They found that television messages about negative meat safety (e.g. hormone abuse and the incidence of BSE) decrease meat consumption because this media coverage lessens the relationship between consumer health and meat consumption. In this role, the mass media may also influence organic shoppers' values and attitudes by increasing organic shoppers' attention to the benefits of organic foods consumption. Therefore:

H8. With greater exposure to mass media on organic foods (a) consumers' health consciousness and (b) SRCB will have a stronger positive effect on attitudes toward organic foods (Figure 1).

3. Method

Data collection

This study targeted customers who had experienced buying organic foods (18 or older) in the USA. The sample for this study was obtained from consumer panels managed by C&T Marketing Group, a market research company specializing in consumer online surveys. In the beginning of the survey, the definition of organic foods was provided. As a screening question, participants were asked whether they had purchased organic foods in the past month to ensure participants were qualified to answer the survey questions. A total of 154 participants were screened out and 82 participants quit during the survey. Ultimately, 512 completed responses were obtained, for the response rate of 76.9 percent.

Figure 1. The conceptual framework and the hypotheses
Regarding the sample demographics, females comprised 68.9 percent and Caucasian 78.3 percent. Approximately, 77.6 percent of respondents had attended some college or earned a bachelor’s or higher education degree. Over 31 percent of the respondents were aged 31–40 years old, and the next largest age categories were 41–50 years old (24.2 percent). Most respondents were married (59 percent), did not live with children (51.8 percent) and had full-time job (57.8 percent). In terms of purchasing frequency of organic foods during the past month, 34.2 percent of the respondents purchased 6–10 times; 32.4 percent, 1–5 times; 17.4 percent, 11–15 times; 6.6 percent, 16–20 times; and 9.4 percent, 20+ times. This study thus targeted organic shoppers.

Measures
This study addressed two identities of consuming organic foods: social identity and role identity. A three-item scale of social identity was adopted from Escalas and Bettman’s (2005) study (e.g. belonging to an organic shopper group). Another three-item scale of role identity was adapted from Kohler et al.’s (2011) study and Rizzo et al.’s (1970) study (e.g. my role as an organic shopper). For health consciousness, a five-item scale was adapted from Jayanti and Burns (1998). The SRCB measure consisted of four items adapted from Web et al.’s (2008) study of socially responsible consumption. In this original study, seven scale items were developed to measure SRCB. However, because many of these items were not suitable for the context of organic food, four items were selected to represent SRCB.

A four-item scale of attitudes toward organic foods was adapted from Smith et al. (2008). The original scale measurement contained seven items; however, three items were deleted due to overlapping and irrelevance (e.g. wise–foolish, bad–good, unenjoyable–enjoyable and satisfying–unsatisfying). A three-item scale of satisfaction was adopted from Maxham and Netemeyer (2002) (e.g. satisfaction with organic foods). For WOM, a three-item scale was adapted from Brown et al. (2005). However, because the original items were developed in the context of automobile dealerships, the statements were tailored to organic foods. For involvement, a seven-item scale was adopted from Mano and Olive (1993). The measure for mass media was adapted from Beaudreault (2009). All items were assessed using a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree) (Table I).

Data analysis
This study used structural equation modeling (SEM) to examine the proposed model. The data analysis began with confirmatory factor analysis (CFA) to determine whether the measurement items reliably reflected the hypothesized latent constructs. Next, path analysis was used to test the predicted causal relationships among the latent constructs. The path analysis identified the indices that could determine if the model provides acceptable fit to the data. Using AMOS 24 with the maximum likelihood method, the model fits of the estimated models were assessed by the $\chi^2$ tests, comparative fit index (CFI), the Trucker–Lewis index (TLI) and root-mean-square error of approximation (RMSEA) (Hair et al., 1998).

4. Results
Measurement model
The quality of the measurement model was assessed using CFA to validate the nine model constructs. The fit indices indicate good model fit: $\chi^2 = 1,155.553$, df = 518, CFI = 0.96, TLI = 0.95 and RMSEA = 0.05. The CFA results listed in Table I show that the t-values (from 9.35 to 47.35) for factor loadings are all statistically significant ($p < 0.001$), revealing that the indicators accurately reflect each underlying construct (Anderson and Gerbing, 1988). The composite reliability for each construct exceeding the recommended level of 0.70 (ranging from 0.82 to 0.98) (Fornell and Larcker, 1981).
<table>
<thead>
<tr>
<th>Construct</th>
<th>Scale items</th>
<th>Factor loading</th>
<th>t-value</th>
<th>Composite reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social identity</td>
<td>The following questions are about your involvement with organic foods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I consider myself to be an organic shopper</td>
<td>0.740</td>
<td>–</td>
<td>0.820</td>
</tr>
<tr>
<td></td>
<td>I belong to an organic shopper group</td>
<td>0.690</td>
<td>14.699***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I fit in with an organic shopper group</td>
<td>0.880</td>
<td>17.017***</td>
<td></td>
</tr>
<tr>
<td>Role identity</td>
<td>I know what I need to do as a customer for using organic foods</td>
<td>0.876</td>
<td>–</td>
<td>0.928</td>
</tr>
<tr>
<td></td>
<td>I know what my responsibilities are when I use organic foods</td>
<td>0.901</td>
<td>28.984***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I buy organic foods for my family</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>I know what my role is as an organic shopper when I use organic foods</td>
<td>0.923</td>
<td>30.286***</td>
<td></td>
</tr>
<tr>
<td>Health consciousness</td>
<td>The following questions are about your involvement with health</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>I worry that there are harmful chemical in my food</td>
<td>0.656</td>
<td>–</td>
<td>0.893</td>
</tr>
<tr>
<td></td>
<td>I usually read the ingredients on food labels</td>
<td>0.705</td>
<td>13.451***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I read more health-related articles than I did 3 years ago</td>
<td>0.739</td>
<td>14.159***</td>
<td></td>
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<tr>
<td></td>
<td>I am interested in information about my health</td>
<td>0.816</td>
<td>15.256***</td>
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<tr>
<td></td>
<td>I am concerned about my health all the time</td>
<td>0.652</td>
<td>12.581***</td>
<td></td>
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<tr>
<td>SRCB</td>
<td>The following questions are about your involvement with the environment</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>I avoid buying from companies that harm endangered plants or animals</td>
<td>0.840</td>
<td>–</td>
<td>0.876</td>
</tr>
<tr>
<td></td>
<td>Whenever possible, I walk, ride a bike, car pool, or use public transportation to help reduce air pollution</td>
<td>0.574</td>
<td>13.275***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I make an effort to avoid products or services that cause environmental damage</td>
<td>0.873</td>
<td>23.551***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I avoid buying products that are made from endangered animals</td>
<td>0.791</td>
<td>20.301***</td>
<td></td>
</tr>
<tr>
<td>Attitudes toward organic foods</td>
<td>My attitudes toward organic foods are…</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Positive</td>
<td>0.682</td>
<td>–</td>
<td>0.831</td>
</tr>
<tr>
<td></td>
<td>Agreeable</td>
<td>0.741</td>
<td>15.409***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>0.598</td>
<td>9.352***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Favorable</td>
<td>0.812</td>
<td>11.304***</td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>The following questions are about your satisfactions of organic foods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I am satisfied with my overall experience with organic foods</td>
<td>0.890</td>
<td>32.903***</td>
<td>0.957</td>
</tr>
<tr>
<td></td>
<td>As a whole, I am satisfied with organic foods</td>
<td>0.936</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overall, I am satisfied with the quality of organic foods</td>
<td>0.905</td>
<td>34.453***</td>
<td></td>
</tr>
<tr>
<td>WOM</td>
<td>The following questions are about your recommendation of organic foods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I want to make sure that others know the benefits of buying organic food</td>
<td>0.824</td>
<td>29.564***</td>
<td>0.889</td>
</tr>
<tr>
<td></td>
<td>I would recommend eating organic foods to family members</td>
<td>0.948</td>
<td>47.345***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I would recommend eating organic foods to close personal friends</td>
<td>0.966</td>
<td>–</td>
<td></td>
</tr>
</tbody>
</table>

(continued)
The construct validities of the latent constructs were evaluated by both convergent validity and discriminant validity. Convergent validity is determined by the average variances extracted (AVE) greater than 0.50; discriminant validity was confirmed by discovering that the AVE was larger than the shared variance (i.e. squared correlation coefficients) between all possible pairs of latent variables. As shown in Table II, the AVE for each construct is higher than the suggested value 0.50 and is higher than the squared correlations among constructs (Fornell and Larcker, 1981).

### Hypothesis testing

This study used path analysis to perform hypothesis testing to determine the model validity. The measurement model provided an acceptable fit to the data ($\chi^2 = 984.065$, $df = 261$, $CFI = 0.92$, $TLI = 0.91$ and $RMSEA = 0.07$). Table III shows the results of standardized path coefficients of the model. The path analysis demonstrates that both the strongly defined social identity ($\beta = 0.157$, $p < 0.01$) and role identity ($\beta = 0.355$, $p < 0.001$) had a significant effect on health consciousness. Thus, both $H1a$ and $H1b$ were supported. Similar to $H1$, this result is consistent with $H2$ and the path weights of all sub-

### Table I.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Scale items</th>
<th>Factor loading</th>
<th>t-value</th>
<th>Composite reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement in organic foods</td>
<td><em>To me, organic foods are/do...</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Important</td>
<td>Important</td>
<td>0.842</td>
<td>–</td>
<td>0.984</td>
</tr>
<tr>
<td>Of concern to me</td>
<td>Of concern to me</td>
<td>0.729</td>
<td>19.516***</td>
<td></td>
</tr>
<tr>
<td>Mean a lot to me</td>
<td>Mean a lot to me</td>
<td>0.909</td>
<td>28.043***</td>
<td></td>
</tr>
<tr>
<td>Valuable</td>
<td>Valuable</td>
<td>0.888</td>
<td>26.826***</td>
<td></td>
</tr>
<tr>
<td>Matter to me</td>
<td>Matter to me</td>
<td>0.928</td>
<td>32.630***</td>
<td></td>
</tr>
<tr>
<td>Significant</td>
<td>Significant</td>
<td>0.911</td>
<td>28.190***</td>
<td></td>
</tr>
<tr>
<td>Meaningful</td>
<td>Meaningful</td>
<td>0.930</td>
<td>29.339***</td>
<td></td>
</tr>
<tr>
<td>Mass media</td>
<td><em>The following questions are about your involvement with organic foods</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I read a newspaper article on organic foods</td>
<td>I read a newspaper article on organic foods</td>
<td>0.840</td>
<td>–</td>
<td>0.882</td>
</tr>
<tr>
<td>I read magazines or books about organic foods</td>
<td>I read magazines or books about organic foods</td>
<td>0.894</td>
<td>23.530***</td>
<td></td>
</tr>
<tr>
<td>I would watch TV program on organic foods</td>
<td>I would watch TV program on organic foods</td>
<td>0.797</td>
<td>20.664***</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** ***$p < 0.001$**

### Table II.

<table>
<thead>
<tr>
<th>Construct</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Social identity</td>
<td>0.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Role identity</td>
<td>0.25 0.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Health consciousness</td>
<td>0.16 0.31 0.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. SRCB</td>
<td>0.22 0.28 0.35 0.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Attitudes toward organic foods</td>
<td>0.02 0.28 0.28 0.17 0.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Satisfaction</td>
<td>0.17 0.44 0.27 0.27 0.26 0.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. WOM</td>
<td>0.18 0.41 0.30 0.31 0.24 0.45 0.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Organic food involvement</td>
<td>0.22 0.47 0.38 0.36 0.29 0.48 0.64 0.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Mass media</td>
<td>0.26 0.32 0.31 0.24 0.08 0.20 0.27 0.31 0.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** Diagonal entries show the average variance extracted by the construct. Off-diagonal entries represent the variance shared (squared correlation) between constructs.

The construct validities of the latent constructs were evaluated by both convergent validity and discriminant validity. Convergent validity is determined by the average variances extracted (AVE) greater than 0.50; discriminant validity was confirmed by discovering that the AVE was larger than the shared variance (i.e. squared correlation coefficients) between all possible pairs of latent variables. As shown in Table II, the AVE for each construct is higher than the suggested value 0.50 and is higher than the squared correlations among constructs (Fornell and Larcker, 1981).
hypotheses of $H2$ were significant at $p < 0.001$. Both the strongly defined social identity ($\beta = 0.467, p < 0.001$) and role identity ($\beta = 0.500, p < 0.001$) had significant effect on SRCB, supporting $H2a$ and $H2b$. Furthermore, both health consciousness ($\beta = 0.452, p < 0.001$) and SRCB ($\beta = 0.187, p < 0.001$) had significant effect on attitudes toward organic foods, supporting $H3$ and $H4$. The relationship between attitudes toward organic foods and satisfaction was significant ($\beta = 0.765, p < 0.001$), supporting $H5$. Satisfaction also had a significant effect on WOM ($\beta = 0.819, p < 0.001$), supporting $H6$. Therefore, the first six hypotheses were supported.

The moderating effect of involvement was tested through multi-group analysis: splitting the sample into sub-groups according to whether respondents scored high or low on the measurement items of involvement. The means score for respondents’ involvement was 5.93. Thus, respondents who scored higher than 5.93 on involvement ($N = 307$) were placed into the “high” group, and respondents who rated lower than 5.93 on involvement ($N = 205$) were placed into the “low” group. Next, comparative analysis of each path between the two groups was conducted. The difference in $\chi^2$ values between the unconstrained model (i.e. all paths were constrained to be equal except for the link between health consciousness and attitudes toward organic foods) and the constrained model (i.e. all paths were constrained to be equal across high- and low-involvement groups) determines whether involvement acts as a moderating variable. In this way, $H7a$ and $H7b$ could be tested. The $\chi^2$ difference tests a significant difference between the two groups in the path from health consciousness to attitudes toward organic foods ($\Delta \chi^2 = 4.452, p = 0.035$). However, the $\chi^2$ difference test revealed no significant difference between the two groups in the paths from SRCB to attitudes toward organic foods ($\Delta \chi^2 = 0.340, p = 0.560$) (see Table IV). Thus, $H7a$

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Standardized estimate</th>
<th>t-value</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H1a$: social identity $\rightarrow$ health consciousness</td>
<td>0.157</td>
<td>2.925</td>
<td>Supported</td>
</tr>
<tr>
<td>$H1b$: role identity $\rightarrow$ health consciousness</td>
<td>0.467</td>
<td>8.967</td>
<td>Supported</td>
</tr>
<tr>
<td>$H2a$: social identity $\rightarrow$ SRCB</td>
<td>0.355</td>
<td>4.975</td>
<td>Supported</td>
</tr>
<tr>
<td>$H2b$: role identity $\rightarrow$ SRCB</td>
<td>0.500</td>
<td>8.188</td>
<td>Supported</td>
</tr>
<tr>
<td>$H3$: health consciousness $\rightarrow$ attitudes</td>
<td>0.452</td>
<td>7.848</td>
<td>Supported</td>
</tr>
<tr>
<td>$H4$: SRCB $\rightarrow$ attitudes</td>
<td>0.187</td>
<td>5.253</td>
<td>Supported</td>
</tr>
<tr>
<td>$H5$: attitudes toward organic foods $\rightarrow$ satisfaction</td>
<td>0.765</td>
<td>10.064</td>
<td>Supported</td>
</tr>
<tr>
<td>$H6$: satisfaction $\rightarrow$ WOM</td>
<td>0.819</td>
<td>17.880</td>
<td>Supported</td>
</tr>
</tbody>
</table>

**Note:** $n = 512$

Table III. Results of hypotheses testing

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Structural path</th>
<th>Standardized regression weight</th>
<th>$\chi^2$ difference (df = 1)</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H7$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$H7a$</td>
<td>Health consciousness $\rightarrow$ attitudes</td>
<td>0.506</td>
<td>0.262</td>
<td>4.452</td>
</tr>
<tr>
<td>$H7b$</td>
<td>SRCB $\rightarrow$ attitudes</td>
<td>0.138</td>
<td>0.238</td>
<td>0.340</td>
</tr>
<tr>
<td>$H8$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$H8a$</td>
<td>Health consciousness $\rightarrow$ attitudes</td>
<td>0.466</td>
<td>0.375</td>
<td>2.385</td>
</tr>
<tr>
<td>$H8b$</td>
<td>SRCB $\rightarrow$ attitudes</td>
<td>0.137</td>
<td>0.260</td>
<td>0.432</td>
</tr>
</tbody>
</table>

Table IV. Moderating effects of involvement ($H7$) and mass media ($H8$)
hypothesizing the moderating effect of involvement on the relationships between health consciousness and attitudes toward organic foods was supported, while $H7b$ was not. The moderating effect of mass media was also tested through multi-group analysis. The means score for respondents' SR was 5.68. Thus, respondents who rated higher than 5.68 on media ($N = 213$) were placed into the “high” group and respondents who rated lower than 5.68 on media ($N = 299$) were placed into the “low” group. Next, comparative analysis of each path between the two groups was conducted. The $\chi^2$ difference test revealed no significant difference between the two groups in the paths from health consciousness to attitudes ($\Delta \chi^2 = 2.385, p = 0.123$); from SRCB to attitudes ($\Delta \chi^2 = 0.432, p = 0.511$). Thus, $H8a$ and $H8b$ hypothesizing the moderating effect of mass media were not supported.

5. Discussion
This study proposes and examines a conceptual model to understand organic shoppers’ perceived self-identity via social identity and role identity. The results support that their strongly defined social identity and role identity are significant antecedents of their health consciousness and SRCB. This finding explains why organic shoppers highly value their health and the environment (i.e. self- and others-oriented values). Organic shoppers see themselves in a different social group and their social roles are important to them. They see themselves as different from others who are not organic shoppers in terms of their beliefs and values. They are not only concerned with their personal health, but also with others by SRCB. They like to think of themselves as organic shoppers. These findings may be theoretically explained by the relationship between identities and social structures. Burke (1980) claimed that an individual constructs the meanings of his or her own role identity and these meanings intervene in the relationship between the socially constructed role and the behavior. In this sense, social identity represents natural societal processes that create group and intergroup phenomena in daily life (Brown and Capozza, 2006; Haslam et al., 2009). This study demonstrates that social identity influences an individual’s goals and values. Thus, an individual’s self-identity should be viewed as a social self and a role self.

This study also confirms the previous findings that consumers associate health benefits and environmental benefits with the consumption of organic foods (Magistris and Gracia, 2008). The positive relationship was found between organic shoppers’ main values (i.e. health consciousness and SRCB) and attitudes toward organic foods. Apparently, organic shoppers are health conscious and socially responsible. In the consumption of organic foods, they expect to receive the most benefits of well-being for themselves and for others.

An individual’s self-identity is a predictor of a behavior (Conner and Armitage, 1998); however, one cannot predict behavior based only on that identity. Moreover, most of the previous research on organic foods focused on whether or not consumers are willing to purchase organic foods even though they are expensive (Hauser et al., 2013). This study examines a specific group – organic shoppers – and focuses on if they are satisfied with organic foods and willing to recommend them to others. The study reveals that attitudes toward organic foods increase organic shoppers’ satisfaction and that their satisfaction increases WOM. These findings are in line with studies that identified loyalty as an important antecedent of WOM (De Matos and Rossi, 2008).

Finally, this study has addressed the moderators: involvement in organic foods and exposure to the mass media. Although organic shoppers are involved with organic foods, the role of involvement and the mass media have not been studied in relation to organic foods consumption. This study has provided evidence that organic shoppers’ involvement has separate effects on customer values and attitudes. That is, when organic shoppers are highly involved with organic foods, their health consciousness has a more positive influence on their attitudes toward organic foods. However, organic shoppers’ involvement did not moderate the effect of SRCB on attitudes toward organic foods.
The moderating effect of involvement may support the views of previous studies of the difference between regular and occasional consumers of organic foods (Cicia et al., 2002). Moreover, organic shoppers are more involved with health values than with socially responsible values. Likewise, the mass media did not moderate the effect of both health consciousness and SRCB on attitudes toward organic foods. For organic shoppers, greater exposure to mass media was not influential on their values and attitudes toward organic foods, which is persuasive. Because organic shoppers are already motivated by beliefs and values about the benefits of organic foods, the information from the mass media was not effective. This finding may be explained by Dutta-Bergman (2004) who showed that information on health information presented on television and radio is good for the non-health-oriented segment while interpersonal and internet communications are suitable for the health-active segment. Since organic shoppers are in the health-conscious segment, they might not be affected by mass media.

The findings of this study have the following implications for the development of strategies for the organic food market. First, the research contributes to the literature by studying social identity and role identity in organic foods as important predictors of health consciousness and SRCB. At the same time, these findings are important in advancing our understanding of the role of attitudes, satisfaction and WOM for organic foods. Based on the finding that organic shoppers’ satisfaction positively affected WOM, evangelizing marketing may be an appropriate strategy. The “customer evangelist” is not only loyal to a product, brand or store but also feels compelled to tell others about it. The customer evangelist will discuss the importance of consuming organic foods for the betterment of society and the environment and enthusiastically recruit new buyers (Matzler et al., 2007). Most organic shoppers have the characteristics of customer evangelists. According to Kim and Kim (2018), they convince their family and friends to try organic foods; many of their family and friends eventually became organic shoppers as well. Since organic shoppers are interested in both health and environmental benefits, they are most likely to spread the word about those benefits. Matzler et al. (2007) found that consumers who are highly involved with organic food can become consumer evangelists through positive WOM, and convince non-organic shoppers to purchase organic products. Therefore, appealing to these organic product evangelists is another strategy for marketers to convert non-organic to organic shoppers.

Another interesting finding is the moderating effect of involvement in organic foods and mass media. The study reveals that as involvement with organic foods increases, consumers’ health consciousness has a stronger positive effect on their attitudes toward organic foods. This confirms that the health benefit is the most important component in explaining why organic shoppers are particularly sensitive to ingredients (avoiding those that are genetically modified) and the production method (Kim and Kim, 2018). This implies that transparent labeling is critical for the purchasers of organic foods. Organic shoppers may want to know how long a product has been sitting on the shelf. Consumers who are sensitive to preservatives need accurate product information such as an indication of the date of production or the use of preservatives. Hence, transparent labeling with production or expiration dates could make shoppers more comfortable purchasing organic food.

Finally, although organic shoppers seek more information about organic production, they may not be receptive to information coming from the media. Thus, marketers may need to find other ways to reach organic shoppers. For instance, using societal marketing to emphasize environmental responsibility could be useful. Societal marketing is concerned with the production of goods and services that will be both profitable and satisfy consumers’ needs and wants (Prothero, 1990). When marketers make societal marketing decisions, they consider both the short- and long-term effects by not only meeting customers’ needs and wants but also benefiting the society (Bresciani et al., 2016;
Prothero, 1990). Environmentally friendly or green consumerism is a driver of ethical consumerism, which includes Organic shoppers (Michaelidou and Hassan, 2008). Societal marketing strategies can appeal to Organic shoppers.

6. Limitations and future research directions
This study has some limitations. This study used a cross-sectional design, which involved data collection at one specific point in time. Perhaps, the use of longitudinal or experimental data would be desirable, especially for SEM for performing advanced analysis of causal relationships among variables. Since the research data were tailored to organic shoppers, future research drawing on samples from the general population could be valuable. Since 78.3 percent of the respondents were Caucasian, these findings may not be representative of all ethnic groups. Future researchers should examine more diverse demographic and geographical groups. The marketing literature on organic products and empirical work are limited. Based on the model created for this study, the next step would be to extend its application and to test these findings across different contexts using more diverse consumer types. In terms of the effect of involvement and mass media in organic foods, non-organic shoppers may be interesting. Additionally, future research may study the effect of social media on organic food purchase. Because of the rapid proliferation and growing popularity of social media today, future research may consider the impact of social media on organic foods.

References


Further reading

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Preaching to the middle of the road

Strategic differences in persuasive appeals for meat anti-consumption

Catherine Anne Armstrong Soule and Tejvir Sekhon
Western Washington University, Bellingham, Washington, USA

Abstract

Purpose – The purpose of this paper is to explore strategic differences in marketing communication tactics for vegan and humane meat brands.

Design/methodology/approach – Content analysis was used to categorize the types of persuasive appeals used on the packaging of vegan and humane meat brands.

Findings – Humane meat brands use animal welfare and environmental appeals more often whereas vegan brands use taste appeals more frequently.

Social implications – Marketers’ communication strategies for alternatives to traditional meat consumption are different from those of activists and non-profit organizations. By targeting middle of the road consumers, both vegan and humane brands can support widespread efficient and curtailment behaviors and in the process benefit consumers, the brands and society.

Originality/value – Anti-consumption and/or reduction of meat and animal by-products are arguably the most impactful ways in which consumers can alter their diets to positively impact individual and societal well-being. Consumers seeking alternatives to traditional meat consumption may either choose more sustainable meat products (efficient behaviors) or reduce/eliminate meat consumption (curtailment behaviors). Existing research suggests that such consumers can be divided into two segments – those driven by personal motives (health and/or taste) and those motivated by prosocial concern (environmental sustainability and/or animal welfare) and brands should match persuasive appeals to consumer motives, i.e. curtailment-focused vegan brands should use environmental or animal justice appeals and efficiency-focused humane meat brands should use taste or health appeals. However, the present research assumes marketers’ perspective and demonstrates that both vegan and humane brands target middle of the road consumers striving to balance multiple personal and prosocial goals, being socially responsible without compromising taste.

Keywords Consumer behaviour, Motivation, Packaging, Food, Anti-consumption, Vegan

Paper type Research paper

Introduction

Imagine eating a burger that is “Juicy, Meaty and Delicious” – one that also contains 20 grams of protein per serving and no soy, gluten or GMOs. This is the Beyond Burger, created by Beyond Meat, a company founded to tackle climate change by creating vegan products free from meat and animal by-products. One might consider buttering that burger’s bun with Alfresco Butter made by Vital Farms – a certified humane dairy brand with cows referred to as “Lucky Ladies with Freedom to Graze” who are “raised with respect” under “open skies” with “fresh air & sunshine.” These brands are both appealing to consumers who are increasingly thinking about health, sustainability and animal welfare implications of their food consumption choices (Fox, 2017). Meat anti-consumption activities are becoming much more common in the marketplace and brands are responding to consumer demand with varying persuasive appeals.

Adopting a vegan diet or other diet alternatives focused on meat anti-consumption or reduction (labeled as vegetarian, pescatarian, flexitarian/reducetarian, etc.) are examples of intentional food anti-consumption. Anti-consumption is an under-researched but burgeoning area in the marketing and consumer behavior disciplines (Chatzidakis and Lee, 2012), with food anti-consumption being particularly neglected. This category oversight in the marketing domain is concerning due to the massive scale of food consumption and its inherent impact on consumer and societal well-being, as well as the potential impact that marketing activities could have in changing behavior.
Voluntary reduction and cessation of meat and animal by-products is an important area to understand due to the potential for improved well-being of individual consumers as well as the society.

This paper addresses consumers’ motivations to engage in alternatives to conventional meat consumption and align these with an existing sustainable consumption framework. Brands’ role in this space is explored, with different types of products allowing consumers to engage in either efficient/sustainable behaviors (also called green consumption) or curtailment behaviors (also called anti-consumption) (De Nardo et al., 2017). Herein, vegan brands are categorized as facilitating curtailment/anti-consumption behaviors. Brands referred to as “humane meat brands” may facilitate relatively more sustainable meat and animal by-product consumption as compared to conventional meat consumption. For example, grass-fed beef has environmental benefits, such as carbon sequestration (Derner and Schuman, 2007) and reduced eutrophication (Smith et al., 2013), despite being somewhat resource intensive as compared with grain fed or conventional beef (Clark and Tilman, 2017). Next, these brand categories are connected to persuasive appeal types. Potential appeal types are matched with consumer motivations for meat efficiency and curtailment behaviors and a content analysis of brand packaging is done to identify strategic differences between the persuasive appeals used by vegan vs humane meat brands.

Specifically, the appeals used in food packaging are tested to explore whether consumer motivations are reflected in the marketing claims made on vegan and humane meat packages. The findings seem counterintuitive, but in fact, brands seem to strategically utilize a mismatch between the type of behavior (curtailment or efficient) and consumer motivations to avoid preaching to the choir, and instead, appeal to consumers who are only moderately interested in meat anti-consumption, or those consumers in the “middle of the road.”

To demonstrate the strategic use of persuasive appeals on vegan and humane packaging, first, the literature on anti-consumption, particularly meat anti-consumption, is reviewed. Next, the paper connects alternative behaviors to traditional meat consumption to an existing sustainable consumption framework. The paper then outlines the three basic motivations that consumers have for engaging in alternatives to traditional meat consumption and connects these with consumer and societal well-being. Next, a summary of packaging as persuasive marketing is presented. Through the use of content analysis of packaging for vegan and humane meat and animal by-product brands, the researchers support four hypotheses regarding the use of four appeal options (environmental, health, animal welfare and taste) for traditional meat consumption alternatives. Theoretical and practical implications of these findings are discussed and areas for future research are suggested.

Anti-consumption and demarketing

Although marketing literature has historically focused on demand creation, as well as product/brand choice and consumption, recent research has begun to explore the antithesis, or the reasons against consumption (Lee, Fernandez and Hyman, 2009). In marketing literature, the most general definition of anti-consumption refers to a distaste or resentment of all forms of consumption and materialism (Zavestoski, 2002). From this perspective comes voluntary simplicity, or the practice of reducing consumption in general, which can be motivated by various factors (Etzioni, 1999). One such motivation for “downshifting” stems from ethical considerations (Shaw and Newholm, 2002), in which consumers seek to avoid brands that are not aligned with their personal values. However, the current paper is more focused on category level anti-consumption.

Several reasons for anti-consumption have been identified from a consumer perspective. Cherrier et al. (2010) classify these motivations into three types: incidental (brand is not the preferred option), ineligible (a consumer cannot select the brand/category due a constraint)
and intentional (an active decision against consumption). This paper and other research in anti-consumption from a well-being perspective mainly explore intentional anti-consumption, wherein a consumer seeks to reduce or cease consuming for personal and/or societal well-being. These consumers can be considered market activists as they reduce consumption in a specific category for societal concerns (Iyer and Muncy, 2009). Although Lee, Motion and Conroy (2009) work explores brand-specific avoidance behaviors, veganism can parallel as a moral avoidance behavior, indicating that the avoidance of the category is often motivated by an ideological incongruence between the consumer and the product category.

Taking marketers’ perspective, traditionally, the role of marketing activities is one of demand creation and consumption facilitation. However, there has been some research in the area of demarketing, which refers to a brand’s strategic attempt at demand suppression (Kotler and Levy, 1971). Kotler and Levy’s (1971) demarketing framework described only three motivations for a brand to purposefully suppress demand, which were to address a supply shortage, for segmentation purposes and as a signal of scarcity. More recently, researchers have explored demarketing in order to suppress “unwholesome demand” in categories that are harmful to consumers such as foods related to obesity (Wansink and Huckabee, 2005). Perhaps most closely tied to this paper are green demarketing activities, used by a brand to suppress category demand through purchase of the focal brand, using a sustainability appeal (Armstrong Soule and Reich, 2015). Brands that encourage meat anti-consumption are in fact, engaging in demarketing activities very similar to a green demarketing appeal in the manner that eating a vegan or a “humane” meat or animal by-product allows a consumer to cease eating a traditional meat or animal by-product.

By removing conventional meat and/or animal by-products from the diet, a consumer must replace that food with an alternative. Food is one of the very few, perhaps only, product categories where true anti-consumption is not possible, as humans would not be able to survive without food. Therefore, when a large category of food products is excluded from purchase and consumption, it must be replaced. Whereas humane meat products serve a similar function to green or environmentally friendly products, vegan brands allow consumers to truly engage in anti-consumption via meat and animal by-product free options, therefore serving a similar function to green demarketing brands.

Efficient and curtailment behaviors as alternatives to traditional meat consumption
Food consumption changes have an enormous potential to affect global sustainability (Reisch et al., 2013). There is a consensus that sustainability of world’s food supply can be achieved using two broad strategies: by choosing more sustainably produced meat (e.g. moving from industrially produced grainfed meat to free-range meat, and by curtailing meat consumption and moving to more plant-based sources of protein (de Boer and Aiking, 2017; Verain et al., 2015). These two categories of behavioral strategies have also been differentiated in other sustainable consumption domains such as energy usage, transportation and housing (De Nardo et al., 2017; Jansson et al., 2009) and are variously labeled as efficient behaviors or green consumption vs curtailment behaviors or anti-consumption (De Nardo et al., 2017; Armstrong Soule and Sekhon, 2017). Efficient or green consumption focuses on using a more sustainably made product/service to get the same functional benefit with a lower environmental impact. The way to do this is to buy a more “green” (and generally more expensive) product without compromising on the functional benefit or needing any behavioral change (Brooks and Wilson, 2015; De Nardo et al., 2017; Jansson et al., 2010). Curtailment behaviors or anti-consumption focuses on consuming less/none or compromising on the functional benefits by consuming a significantly different product/service with lower environmental impact. This is achieved via behavioral/lifestyle
changes that entail significant non-monetary costs but without purchasing additional expensive products (Brooks and Wilson, 2015; De Nardo et al., 2017; Jansson et al., 2010). For example, buying a Prius is an efficient behavior while riding a bike is curtailment behavior. Curtailment behaviors are likely to have lower environmental footprint as compared to efficient behaviors (Jansson et al., 2010).

Efficient behaviors in the meat domain typically entail consuming local, free-range, grass-fed meat whereas curtailment behaviors can take many forms—reducing portion size, reducing frequency of meat consumption (e.g. Meatless Mondays), occasionally substituting meat with plant-based proteins (Flexitarianism/Reducetarian) or going completely vegetarian/vegan (strictly plant-based diet). Verain et al. (2015) empirically distinguished between these two types of behavioral strategies in the meat domain. They operationalized efficient behaviors as consuming free-range/sustainability labeled meats vs curtailment behaviors as reducing meat consumption and showed that consumer segments vary both in terms of type (quality) of behavioral strategy used and level/degree (quantity) of commitment to each strategy. As these two types of behavioral strategies can have different motivators and hindrances, it is important to use different persuasive appeals to encourage these different types of behaviors. The next section reviews the varying consumer motivations for engaging efficient or curtailment behaviors in the meat domain.

Motivations for alternative meat consumption behaviors
Recently, there has been an increasing amount of research interest in traditional meat reduction and cessation behaviors. Ruby (2012) noted that there was a serious lack of academic research in the motivations for vegetarianism, but that call is beginning to be answered as this burgeoning area for consumer research develops. There are three main consumer motivations for traditional meat alternatives and anti-consumption: concern for health, environment and animal welfare. Each of these motivations will be addressed in this section. Further, each of these motivations can encourage consumers to engage in anti-consumption from once (trying a humane meat or vegan product), to occasional (Meatless Mondays), to complete cessation (veganism). See Figure 1 for a spectrum of alternatives to traditional meat consumption diets/behaviors.

The omnivorous diet (eating both plants and animals) is the societal norm in most areas of the world. It can be unhealthy, particularly when heavy in meat, dairy, processed products and refined sugar and at the same time, very low in fruits, vegetables, fish, legumes and whole grains. However, there are a small, but sizable and growing, number of consumer segments around the world seeking to change their diets for various reasons. The first segment is comprised of consumers who attempt to eat “better” or more sustainably produced meat and dairy/egg products, an intention that could stem from any of the motivations, and herein referred to as humane meat eaters. Next, there are consumers that seek to reduce meat consumption, often referred to as Flexitarians or Reducetarians. These consumers actively engage in things like Meatless Mondays, or select meat-free options when convenient. It is important to note that the intentions and behaviors in this category can be driven by any of the motivations (Kateman, 2017).

The next group is comprised of consumers who seek some sort of complete category anti-consumption in the meat domain. For example, pescatarians only eat fish, eschewing...
other types of meat. Vegetarians refrain from all meat products, yet still consume animal by-products such as dairy and eggs. The most restrictive diet in regards to meat anti-consumption behavior is veganism, a plant-based diet that attempts to avoid all possible meat and animal by-product consumption. Even within veganism, there are levels of extremity as well as divisions of motivations, referred to as health vegans (only dietary) and ethical (animal welfare) vegans who also refrain from consumption of non-food related animal by-products such as leather and wool (Greenebaum, 2012). Though true meat anti-consumers like vegetarians and vegans account for a small segment of the worldwide population, many sources indicate that it is rapidly growing. Going “meat-free” was identified as the biggest trend for 2018, with “ethical eating” also making the list, according to GlobalData’s report on Top Trends in Prepared Foods (Konishi, 2017). Reports indicate that globally many consumers are interested in reducing or eliminating processed meats (60 percent of those polled), red meat (35 percent), eggs (17 percent), poultry (16 percent) and dairy (17 percent) from their diets (Konishi, 2017). Mainstream companies like Wal-Mart (Fox, 2017), Kraft (Peterson, 2018) and Nestlé (Smith, 2017) are stocking and innovating around plant-based products to meet consumer demand.

Motivations for consumers who deviate from the standard omnivorous diet, regardless of the type of alternative consumption, can be categorized into three basic categories – environmental, health and/or animal welfare motivations. Most consumers will indicate that they are motivated by each of these concerns, albeit to different extents (Greenebaum, 2012). Each of these motivations is detailed next.

Environmental concern is one of the best-documented motivations for anti-consumption in general. Therefore, it is not surprising that it is also a major motivator in the food and, specifically, meat category. For example, Black and Cherrier (2010) report that consumers whose anti-consumption actions are motivated by environmental sustainability use rejection, reduction and reuse. Likewise, reducing or eliminating conventional meat consumption for environmental motives means that consumers reject conventional meat products and replace them with humane or vegan meat alternatives, which are less impactful on the planet (Thøgersen, 2010). The potential positive impact on the environment of meat curtailment behavior is huge, because food consumption is one of, if not the largest, contributors to environmental degradation and climate change (Carlsson-Kanyama and Gonzalez, 2009). However, this knowledge does not seem to be well disseminated. Clonan et al. (2015) find that less than a fifth of respondents sampled believed that reducing meat and animal by-products in their diets would have a positive impact on climate change. Environmental sustainability is the least commonly documented primary motivation for meat reduction/cessation behaviors; however, it is listed as a significant motivator in combination with other motivations (Janssen et al., 2016).

The harmful effect that a meat and dairy heavy diet has on physical health in the form of various serious illnesses such as heart disease, cancer, obesity and others has been extensively documented (Zur and Klöckner, 2014). Therefore, consumers motivated to better their health (Biesbroek et al., 2014; Daley et al., 2010) could do so by limiting or ceasing meat and animal by-product consumption. Although in the past, the nutritional merit of a meat-free diet was questioned, Sabaté (2003) argues that these old biases have been disproven and the health benefits are clear. In research that compares health-focused vs ethical meat anti-consumers, it was found that far fewer (less than 20 percent) of consumers cited health as the primary original motivator for adopting a vegetarian lifestyle (Hoffman et al., 2013).

Finally, there are moral motivations to consider. Consumers motivated by animal welfare concerns are uncomfortably aware of the suffering and killing of billions of animals a year that is necessitated by a conventional meat diet (Singer and Mason, 2006;
Williams, 2008). In fact, Williams (2008) argues that the lack of concern for animal welfare by the majority of the world population is a form of affected ignorance, in which acknowledgment of unethical actions is willingly avoided so that one can abide by accepted social conventions. Hoffman et al. (2013) find that almost 80 percent meat anti-consumers who are motivated primarily by ethical or animal welfare concerns (originally or currently) report greater dietary restriction and have engaged in the behaviors for longer suggesting that ethical motivations result in stronger conviction to these behaviors. Even more recent research reports that of German vegans surveyed, almost 90 percent cite an animal-related motivation for reducing/ceasing meat consumption (Janssen et al., 2016). The term vegan is sometimes perceived to be synonymous with animal welfare, often laden and equated with a moral motivation. Brands and researchers alike are shifting to the less value-driven label “plant-based” (Beverland, 2014).

Clearly, these motivations are often combined within a consumer, wherein one develops a negative attitude toward meat consumption due to any or all of the three aforementioned motivations. Janssen et al. (2016) reports that close to 30 percent of meat anti-consumers report motivations in each of the three domains. Zur and Klöckner (2014) find that habit is a very strong predictor of meat consumption behavior; however, attitudes and health and moral beliefs do play a significant role as well. Researchers suggested that moral beliefs should be activated in accordance with norm activation theory (Schwartz, 1977) and that marketers, media sources and policymakers can play an important role by providing animal welfare, health and environmental information to consumers (Janssen et al., 2016; Zur and Klöckner, 2014). Beverland (2014) also recommends a multi-faceted approach to shifting societal consumption away from meat in order to improve well-being.

Given the various positive social and individual level benefits of a reduced meat diet, it is imperative to explore the motivations and barriers to such a lifestyle change and consumption choices/patterns. Because all meat anti-consumption, regardless of the extent (Meatless Monday to veganism), has the potential to positively impact on personal, societal and global levels, marketers need to understand which types of appeals are motivating to which groups of consumers. Marketing activities can utilize a multitude of channels to inform and influence consumers, intended to persuade them to purchase vegan and humane meat brands and as a result, reduce conventional meat consumption. The next section reviews one important dimension of marketing communications, packaging.

Packaging and persuasive appeals

Packaging is a very important source of visual and factual information in a retail setting and can be an influential source of persuasive appeals, especially in retail marketplace for consumer packaged food items (Silayoi and Speece, 2004). Although a critical element of packaging is to protect the product (Prendergast and Pitt, 1996; Rundh, 2005), it is also a strong communication and branding tool (Rettie and Brewer, 2000; Silayoi and Speece, 2004). Commonly referred to as the silent salesman or the “salesman on the shelf,” packaging is also deemed to be the last 10s of marketing. Because of its importance and centrality to consumer decision making in the category, this research utilized content analysis of packaging for vegan and humane meat brands. For the content analysis in this paper, researchers considered informational elements as well as visuals (animal imagery) in comparing vegan and humane brands.

There are four main appeal types open to brands with products related to meat anti-consumption, three addressing the motivations outlined above (health, environmental and animal welfare) and one major hindrance, namely taste. It follows then that marketing communications should use appeals focused on these motivators and hindrances.
From an objective standpoint, vegan brands have more legitimacy in utilizing any claims related to each of the three main motivations for meat anti-consumption as vegan brands make products that are objectively healthier, better for the environment and animal welfare as compared to both conventional meat/animal by-products and humane meat brands. Therefore, one might assume that vegan brands, should utilize all three types of appeals more than humane brands.

However, most of the research focusing on encouraging efficient and curtailment behaviors in the meat consumption domain suggests segmenting consumers according to their motives for engaging in sustainable food consumption and then matching the persuasive appeals to these motive-based segments (Verain et al., 2015, 2017). Two major motive-based segments identified by this research are consumers for whom personal motives such as health, taste or price are instrumental in their food consumption decisions vs those for whom prosocial motives such as environment or animal welfare are more important. Considering self-focused vs prosocial motivational differences, efficient behaviors should be more appealing to consumers driven by personal motives as such behaviors do not entail non-monetary costs such as lifestyle/behavioral changes. On the other hand, curtailment behaviors should be more appealing to consumers driven by prosocial motives as these consumers may be more willing to incur non-monetary costs such as reduced functionality or major lifestyle changes for the greater good. This logic suggests that vegan brands should be more likely to use environmental and animal welfare based appeals as compared to humane brands that should in turn use more taste or health based appeals.

However, matching motives with appeals could be a mistake. Consumer research has repeatedly shown that people often simultaneously consider several underlying motives/goals while making a product/brand choice. For example, trying to have food that is both tasty and healthy, or buying a car that is both safe and trendy (Higgins, 1997). Even when consumers are explicitly considering one focal goal, other background goals influence the final choice outside of conscious awareness (Fishbach and Dhar, 2007). As discussed before, most meat anti-consumers indicate multiple motives behind choosing meat alternatives, but to different extents (Greenebaum, 2012). It is possible that both vegan and humane brands implicitly understand that motive-matching appeals in the case of meat anti-consumption would lead to preaching to the choir and would do little to expand their respective market shares. Instead, using appeals targeting personal motives such as taste and health would make vegan brands more attractive and using prosocial appeals such as animal welfare and environment would make humane brands more attractive to a larger segment of “middle of the road” consumers who are trying to balance these multiple goals at the same time. Literature on multiple goal pursuit also suggests that having multiple goals/motives leads to choice of alternatives that maximize attainment of several active goals and could also lead to decision difficulty and choice deferral in the absence of such choice options (Fishbach and Dhar, 2007). Therefore, in the absence of vegan brands that make taste and health appeals, and humane brands that make animal welfare and environmental appeals, such middle of the road consumers are likely to resort to traditional meat consumption.

Meat anti-consumers focused on curtailment behaviors already seek out vegan products in the marketplace out of necessity and therefore, do not need to be persuaded using animal welfare appeals. Also, they are a very small part of the market as only 0.5 percent of US consumers are vegan according to a national survey conducted by Harris Poll (Herzog, 2015). Therefore, it makes more business sense for vegan brands to target a larger segment of middle of the road, sympathetic consumers who are not already committed to a vegan lifestyle by utilizing efficiency-type appeals, those claims which do not necessitate behavioral change. In fact, these consumers may be dissuaded by the label “vegan” as well as the novelty and...
strangeness of the products. Pohjolainen et al. (2015) find that the meat enjoyment (along with food routines, perceived nutritional concerns and difficulties in food preparation) is a significant barrier to consumers considering a reduced meat diet. Curtailment behaviors deviate from the norm of a meat eating culture and can have social repercussions, effect identities and have other ramifications that can inflict large non-monetary costs on consumers (Jabs et al., 1999). A final study suggests that the discourse in society around veganism has led to the perception that this lifestyle is difficult and abnormal (Cole, 2008).

This suggests that vegan brands would be best served by downplaying their vegan, prosocial nature by using taste appeals – convincing consumers that the products are the same as the meat they love on the most important dimension – taste. Moreover, appeals targeting the personal motive of leading a healthy lifestyle should also be more motivating to the middle of the road consumers as compared to ones targeting prosocial motives such as animal welfare or environment. Therefore, the following hypotheses have been proposed:

H1. Vegan brands are more likely to use taste appeals on packaging as compared to humane brands.

H2. Vegan brands are more likely to use health appeals on packaging as compared to humane brands.

On the other hand, humane meat brands are also likely to appeal to more middle of the road consumers who might want to adopt the cultural symbolism associated with efficient and sustainable green behaviors without the costly curtailing of the actual consumption of meat. A substantial customer segment for efficient (or green) consumption across domains is consumers who want to be “seen as being green” without incurring the non-monetary costs in terms of lifestyle changes (Griskevicius et al., 2010). In the meat domain, such consumers are likely to embrace the narrative around animal welfare and environmental implications of industrial meat production but in an attenuated and symbolic manner. Rather than adopting a meat curtailment-based lifestyle, they are likely to shift consumption to more humanely produced meat and benefit from the idealized animal welfare/environmental myth propagated by humane meat brands (Holt, 2013).

Humane brands appeal to efficiency behaviors, as switching from conventional meat to humane versions requires very little behavioral change, perhaps only an increased monetary cost for the more expensive sustainable and “certified humane” products. It seems counterintuitive that humane brands make more claims about animal welfare as compared to vegan brands, but it may be that appeals of this nature are more persuasive for their target segment. These appeals are well matched to “middle of the road” consumers – those that care about animal welfare, but not enough to engage in curtailment behavior that is inherent in veganism and vegan products. Moreover, as the goal of these brands is to provide consumers with a neatly packaged myth around “doing the right thing” as opposed to participating in the mass-produced industrial food ecosystem (Holt, 2013), they are also likely to use other cultural codes associated with artisanal meat subculture such as images of happy animals and small family-run farms. Therefore, it is expected that:

H3a. Humane brands are more likely to use animal welfare claims on packaging as compared to vegan brands.

H3b. Humane brands are more likely to use images of happy animals and wide open spaces on packaging.

H4a. Humane brands are more likely to use environmental claims on packaging as compared to vegan brands.

H4b. Humane brands are more likely to use claims that make the brand appear small in scale as compared to vegan brands.
Although it is suspected that both vegan and humane meat brands are attempting to appeal to and persuade the middle of the road consumers by promising, the best of both worlds, type of solution, each may use different persuasive appeals to achieve that goal. Whereas humane brands claim that one can care (or appear to care) about animal welfare and environment without giving up meat, vegan brands promise providing the same delicious taste in a healthier manner by using meat alternatives. In order to test these hypotheses, researchers performed a content analysis on product packaging to discover whether these brands do both appeal to the middle of the road, moderately motivated consumers using different appeal types.

**Method**

Content analysis was used to categorize the types of appeals used on the packages of two types of brands – vegan and humane meat brands. A local community food co-op as well as a local supermarket and a national supermarket chain store (both specializing in organic food products) were selected as sites for data collection. These retailers were chosen because they are the three biggest retailers in the area (in terms of revenue and products carried) that sell vegan and humane products.

Packaging for vegan and humane food products was photographed from all sides (front, back and sides) during four trips made to the retailers in 2017 and 2018. Packaging photographs were stored and subsequently coded. Selections of “vegan” and “humane” products were made according to very specific criteria. Food packaging had to specifically have a “vegan,” “grass-fed,” “cage-free” or “free-range” text or symbol.

The sample consisted of photographs of packaging of 294 individual food products. Each case was identified in terms of brand name, product name, food type (meat/meat substitute) or animal by-product/by-product substitute (i.e. dairy/dairy substitute, and eggs/egg substitute) and brand type (vegan or humane). Tables I and II show the results of the univariate analysis in terms of frequencies and percentages describing the food and brand type.

Ten variables pertaining to the package semiotics were coded, which focused on the appeals used and helped test the hypotheses. Two trained graduate students independently coded the elements of each package and intercoder agreement was 84.8 percent. Any differences were reconciled before the analyses.

**Results**

Bivariate analyses were conducted to test the hypotheses. Tables show the cross-tabulations with appropriate measures of association ($\chi^2$, and $\phi$ or Cramer’s V). Statistically significant relationships are flagged with asterisks.

<table>
<thead>
<tr>
<th>Food Type</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat/substitute</td>
<td>187</td>
<td>63.6</td>
</tr>
<tr>
<td>Dairy/substitute</td>
<td>101</td>
<td>34.4</td>
</tr>
<tr>
<td>Eggs/substitute</td>
<td>6</td>
<td>2.0</td>
</tr>
<tr>
<td>Total</td>
<td>294</td>
<td>100</td>
</tr>
</tbody>
</table>

Table I. Frequency of food types in data

<table>
<thead>
<tr>
<th>Brand Type</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humane</td>
<td>199</td>
<td>67.7</td>
</tr>
<tr>
<td>Vegan</td>
<td>95</td>
<td>32.3</td>
</tr>
<tr>
<td>Total</td>
<td>294</td>
<td>100</td>
</tr>
</tbody>
</table>

Table II. Frequency of brand types in data
Data demonstrated that vegan brands were more likely to use taste appeals in packaging (76.8 percent) as compared to humane brands (21.1 percent, Table III), supporting $H1$. Vegan brands were also more likely to use health appeals (67.4 percent) as compared to humane brands (47.2 percent, Table IV), supporting $H2$.

On the other hand, humane food product brands were more likely to use animal welfare appeals (96.0 percent) as compared to vegan brands (7.4 percent, Table V), supporting $H3a$.

Humane brands were also more likely to use environmental appeals (30.7 percent) as compared to vegan brands (18.9 percent, Table VI), supporting $H4a$.

Primary appeal types for both product categories are presented in Table VII. The primary appeal for humane food products was animal welfare (80.9 percent) followed by environmental appeals (8.5 percent). However, the primary appeal for vegan food products was health (45.3 percent) followed by taste appeals (43.2 percent).

Humane brands were also more likely to use small firm size cues (36.2 percent vs 9.5 percent; $\chi^2 = 22.98$ (p < 0.001); $\phi = 0.28$ (p < 0.001) supporting $H4b$, images of open pastures (40.9 percent vs 6.3 percent; $\chi^2 = 36.80$ (p < 0.001); $\phi = -0.35$ (p < 0.001)

<table>
<thead>
<tr>
<th>Brand type (Frequency) Percent</th>
<th>Humane</th>
<th>Vegan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taste appeal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>(157) 78.9</td>
<td>(22) 23.2</td>
</tr>
<tr>
<td>Yes</td>
<td>(42) 21.1</td>
<td>(73) 76.8</td>
</tr>
<tr>
<td>Notes: $\chi^2 = 83.88$ (p &lt; 0.001); $\phi = 0.53$ (p &lt; 0.001)</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Brand type (Frequency) Percent</th>
<th>Humane</th>
<th>Vegan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health appeal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>(105) 52.8</td>
<td>(31) 32.6</td>
</tr>
<tr>
<td>Yes</td>
<td>(94) 47.2</td>
<td>(64) 67.4</td>
</tr>
<tr>
<td>Notes: $\chi^2 = 10.48$ (p &lt; 0.05); $\phi = 0.19$ (p &lt; 0.05)</td>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Brand type (Frequency) Percent</th>
<th>Humane</th>
<th>Vegan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal welfare appeal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>(8) 4.0</td>
<td>(88) 92.6</td>
</tr>
<tr>
<td>Yes</td>
<td>(191) 96.0</td>
<td>(7) 7.4</td>
</tr>
<tr>
<td>Notes: $\chi^2 = 229.60$ (p &lt; 0.001); $\phi = -0.88$ (p &lt; 0.001)</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Brand type (Frequency) Percent</th>
<th>Humane</th>
<th>Vegan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental appeal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>(138) 69.3</td>
<td>(77) 81.1</td>
</tr>
<tr>
<td>Yes</td>
<td>(61) 30.7</td>
<td>(18) 18.9</td>
</tr>
<tr>
<td>Notes: $\chi^2 = 4.48$ (p &lt; 0.05); $\phi = -0.12$ (p &lt; 0.05)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
as well as images of animals (45.2 percent vs 5.3 percent; \( \chi^2 = 46.40 \) \( p < 0.001 \); \( \phi = -0.40 \) \( p < 0.001 \)) as compared to vegan brands, supporting \( H3b \). Moreover, “natural” claims were higher for humane brands (21.6 percent) as compared to vegan brands (5.3 percent; \( \chi^2 = 12.58 \) \( p < 0.001 \); \( \phi = -0.21 \) \( p < 0.001 \)). There was no difference in organic claims across the two food types.

**General discussion**

Reports indicate that 40 percent of global consumers actively look to packaging for ethical and sustainability logos (Konishi, 2017), making this research into packaging claims critically important. The findings from the packaging content analysis are very telling related to vegan brands’ strategic use of persuasive appeals. Consider this quote from vegan product company Beyond Meat founder and CEO Ethan Brown: “We are not telling people not to eat meat—I think that would be a massive mistake [...] We’re not going to win that debate. People love meat, and we’ve been consuming meat since before we were human. So I think the fix here is technological” (Bronner, 2018). This insight reveals that vegan brands may be more successful emulating the taste of meat and in the process, taking away the barrier to meat anti-consumption and communicating that tastiness to consumers. In this way, vegan brands almost promote the products as efficient rather than curtailment, and hence as less costly in the sense of behavioral change.

Discouraging meat consumption, an important part of western diets and deeply rooted in societal customs and beliefs, is a challenging endeavor (Ruby and Heine, 2011) despite its multiple benefits. Emerging research has started to identify communication strategies suitable for encouraging both efficient as well as curtailment behaviors regarding meat consumption. Most of this research suggests that matching the persuasive appeals for meat anti-consumption to the motive-based consumer segments (Verain et al., 2015, 2017). However, the current research is the first to focus on the marketers’ perspective and demonstrates that both vegan brands as well as humane brands are attempting to persuade the consumers who are in the middle of the road and do not have strictly personal or prosocial motivations. These consumers may be more persuaded by messages framing meat anti-consumption as an efficient rather than curtailment behavior.

Meat anti-consumption brands are attempting to scale customer bases and increase the rate of diffusion for vegan products across the population. These brands are appealing to consumers who are trying to balance multiple personal as well as prosocial goals, that of being socially responsible and healthy without compromising the enjoyment of eating tasty foods. This is where communication strategies of marketers such as Ethan Brown differ markedly than those of meat anti-consumption activists and non-profit organizations such as PETA. Most vegan activists focus on animal rights and to a lesser extent environmental impacts of meat consumption and moralize the issue, which can lead to meat-eaters disengaging altogether. However, many vegan brands seem to avoid focusing on more

<table>
<thead>
<tr>
<th>Brand type (Frequency) Percent</th>
<th>Humane</th>
<th>Vegan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary appeal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal justice</td>
<td>(161) 80.9</td>
<td>(0) 0</td>
</tr>
<tr>
<td>Environmental</td>
<td>(17) 8.5</td>
<td>(3) 3.2</td>
</tr>
<tr>
<td>Health</td>
<td>(9) 4.5</td>
<td>(43) 45.3</td>
</tr>
<tr>
<td>Taste</td>
<td>(2) 1.0</td>
<td>(41) 43.2</td>
</tr>
<tr>
<td>Other</td>
<td>(10) 5.0</td>
<td>(8) 8.4</td>
</tr>
</tbody>
</table>

**Table VII.**

Primary appeals across brand types

**Notes:** \( \chi^2 = 219.27 \) \( p < 0.001 \); Cramer’s \( V = 0.86 \) \( p < 0.001 \)
polarizing issues (namely, animal welfare) in favor of taste and health. Humane brands, on the other hand, do not ask consumers to compromise on their normal eating routine including meat consumption. These brands simply focus on how this meat is better for the environment and animals without any compromises in terms of lifestyle changes. The good news here is that these “middle of the road” consumers make up a large and growing segment of the global population, meaning that sustainable meat consumption practices may be able to scale effectively and in the process benefit consumers, the brands as well as the society.

Limitations and areas for future research
An important limitation of this research is that it only considered one form of company communication, i.e. persuasive appeals on brand packaging. Future research should generalize these findings by analyzing other components of the promotional mix, such as print/TV ads, websites and social media marketing content. Future research could also explore how consumers holding more polarized attitudes toward meat consumption respond to these appeals as compared to moderate consumers of vegan/humane brands. For example, Field Roast Grain Meat Company, a vegan brand, recently was acquired by a conventional brand, Maple Leaf Foods. This event sparked a backlash among loyal vegan consumers who were angered perceiving that the brand compromised on animal welfare standards. However, a move like this will open for the brand a larger distribution channel and more “middle of the road” consumers. Is there a way that curtailment brands can scale without alienating vegans? Research could also explore differences in the usage of “plant-based” vs vegan in marketing appeals. It is possible that the label “vegan” has become tainted with negative associations that efficient consumers as well as brands might want to avoid. Although the meaning is the same, the new label plant-based might avoid these negative associations.

In conclusion, this research is the first to focus on meat anti-consumption brands and connect appeal types to consumer motivations. The findings suggest that curtailment products can benefit by utilizing efficiency-based appeals. This research is important because of the potential enormous positive impact on consumer and societal welfare of meat anti-consumption.

References


Further reading

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Brand hate: the case of Starbucks in France

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Abstract

Purpose – The purpose of this paper is to use the concept of brand hate as part of an exploratory study in order to investigate the antecedents and consequences of extreme negative affect within the food category.

Design/methodology/approach – The authors employed a mixed research design. A short survey of 324 French business school students identified Starbucks as the most hated food brand (measured in terms of frequency of mentions). In total, 14 semi-structured interviews were conducted with participants who had identified Starbucks as a hated brand.

Findings – The research study found that not all consumers feel brand hate at the same level and so-called haters expressed differing severity of hate towards Starbucks, i.e. cold, warm and hot brand hate. Findings revealed that the antecedents of extreme negative affect are to a certain extent dependent on the intensity of brand hate. Consumer reactions were discussed in terms of attachment–aversion relationships which were categorised according to soft and hard brand hate.

Research limitations/implications – Future research is required to broaden the conceptual scope of brand hate as a construct and apply it in other domains of research, as well as further clarify antecedents and potential outcomes. The authors accept that the study is limited and specific to Starbucks in France. Further research should therefore broaden the scope of context in which brand hate occurs, for example, expanding the geographical scope of the work to other countries and to other food- and drink-related brands. The authors also accept that the study reflects a relatively homogeneous sample and is thus not representative of the general population.

Practical implications – Brand managers need to recognise the risk that brand hate will not only distance former customers, but also spread to existing and future customers. Food brand executives need to therefore consider approaches to address the causes and effects of brand hate.

Originality/value – Brand hate within the literature is a very recent phenomenon and studies remain rare. The rise of the so-called activist consumer is an emerging phenomenon within the food sector. The discussion of brand hate within a food context represents a new avenue of research.

Keywords Consumer behaviour, Brand hate, Anti-consumption

Paper type Research paper

Introduction

Circumstantial, if still somewhat anecdotal, evidence suggests that anti-consumption behaviour defined as “the purposeful and deliberate intention to avoid or reject a brand, or even to act out behaviours that demonstrate this rejection, such as voicing negative emotions or attitudes, blogging, protesting in public, boycotting, or even sabotage of company property” (Bryson et al., 2013, p. 385) is prominent within the food and beverage sector.

There have been numerous examples of consumer boycotts which exemplify an extreme example of dissatisfied consumer’s revenge seeking behaviour. Nestlé has been the on-going target of a boycott because of allegations that the company aggressively markets breastmilk substitutes. PepsiCo, Nestlé and other multinationals have been subject to consumer boycotts over palm oil’s perceived links to deforestation and human rights abuses. Consumers have also targeted Nestlé, PepsiCo and Danone who are seen as having economic ties that are too strong with Israel.

Research on anti-consumption is a growing field within the contemporary marketing and management literature. However, the existing literature with a food subject focus is generally limited to specific boycott campaigns (e.g. Abosag, 2010), the influence of religiously motivated
consumer boycotts (e.g. Abosag and Farah, 2014; Ahmed et al., 2013) and the effect of ethnocentric beliefs and country-of-origin (COO) (e.g. Ahmed et al., 2013; Chryssochoidis et al., 2007). This denotes a gap within the literature.

The objective of this research is therefore to consider the antecedents and consequences of extreme negative affect within the food category. We use the concept of brand hate as recently defined in the anti-consumption literature as “the extreme negative affective component of attitude towards a brand” (Bryson et al., 2013, p. 395). There are important practical implications of considering brand hate as more than just a short-lived emotion as a portion of the literature suggests. Brand hate, as our definition suggests, remains a durable phenomenon, an extreme negative affective attitudinal consumer responses can be quite significant and damaging for food-related companies.

The study was based in France which provided an interesting, if somewhat contradictory context in relation to evolving food consumption behaviour. France is McDonald’s second most profitable market (Chazan, 2018) and according to media reports, French people bought more US-style hamburgers than their traditional “jambon-beurre” sandwich with at least one style of hamburger on the menu at 85 per cent of French restaurants (BBC, 2018). The country, on the other hand, bestows a very refined and distinctive culinary culture given that there are 600 restaurants with at least one Michelin star in France, compared to 163 in the UK and 148 in the USA (Smith, 2016).

Method
We employed a mixed research design based on the rationale that a short questionnaire would lead us to a valid direction in identifying a “most hated” brand, then we could focus on the potential advantages of a single case study such as “the detailed description and analysis to gain a better understanding of the ‘how’ and ‘why’ things happen” (Ridder, 2017, p. 282).

The first stage of our exploratory study consisted of a very short survey of 324 French business school students who all belonged to the “post-millennial” demographic cohort as defined as those born between 1980 and 2000. The students were asked to list all food brands, if any, which they hated (the French verb for hate “détester” resonates well with the English translation when discussing products or services) and to rate the scale of “hate” towards the brand from 1 to 10 seemed simple and appropriate. We shortlisted brands with an average hate score of > 5 and were coded as belonging to the corresponding consumer food product category. The most hated food brand (according to frequency of mentions) was Starbucks, followed by McDonald’s, Coca-Cola and Nestlé.

Starbucks was therefore identified as the brand to be investigated for the follow-on interview research. It should be noted that this went against the initial expectations of the researchers, as the brand McDonald’s often is the subject of virulent verbal abuse as remarked by the researchers over a combined period of over 45 years in contact with regular French citizens. As well, Starbucks has only been in France since 2004. Based on the principle of purposeful sampling (Corbin and Strauss, 2008), we identified and conducted 14 semi-structured interviews (8 participants were male and 6 participants were female) who had identified Starbucks as a hated brand with an overall stated average of over eight across respondents.

Respondents who belonged to a protest organisation were disregarded in order to avoid exceptional activists. The interviews ran no longer than 30 min and remained focussed on: how Starbucks was perceived, sources of hate towards the brand and actions taken to “punish” the brand.

Starbucks
Starbucks was founded in 1971 in Seattle (USA) and has since expanded rapidly with more than 26,700 coffee houses worldwide. The Starbucks mission statement, “To inspire and
nurture the human spirit – one person, one cup and one neighbourhood at a time” has radically transformed coffee, leisure and consumption experiences in global markets.

The coffee chain opened its first store in France at Paris Opera in January 2004, and has since opened over 120 stores which include openings in provincial cities such as Dijon, Strasbourg, Nantes and Bordeaux. The French market development of Starbucks is still very much in its growth phase as compared to other markets. For instance, there are over 880 Starbucks stores in the UK. Media reports suggest that Starbucks France has plans to double the number of stores by 2020 in which 25 per cent of stores will be directly owned (Toute la Franchise, 2016).

The positioning of Starbucks is to a certain extent consistent with the notion of “new luxury” defined by Silverstein and Fiske (2003, p. 1) as “products and services that possess higher levels of quality, taste, and aspiration than other goods in the category but are not so expensive as to be out of reach”. Its market success can be attributed to the ability to provide an emotional customer experience which Atwal and Williams (2007, p. 24) argue “is about taking the essence of a brand and amplifying it into a set of in-depth, meaningful and tangible experiences in order to provide consumers with sufficient information to make a purchase decision”.

**Brand hate**

Brand hate within the literature is a very recent phenomenon and studies remain rare. Previous conceptualizations were considered within the realms of brand avoidance defined as the “phenomenon whereby consumers deliberately choose to keep away from or reject a brand” (Lee, Conroy and Motion, 2009, p. 422). Lee, Motion and Conroy (2009) identified that brand avoidance can be attributed to experiential, identity, moral and deficit-value avoidance. These findings were supported by Knittel et al. (2016). Brand hate might be seen as a further escalation of this brand avoidance. This provides a relevant discourse given that there are synergies between the two concepts.

However, some scholars consider that brand hate is a psychological state whereby a consumer suffers “intense negative emotions and detachment toward brands that perform and give consumers bad and painful experiences on both individual and social levels” (Kucuk, 2016, p. 20). Some scholars broadly conceptualise this as the opposite of brand love, “a primarily affective, extremely positive attitude toward a specific brand that leads to emotional attachment and influences relevant behavioural factors” (Bauer et al., 2007, p. 2190). We note here that love and hate are not necessarily opposites, and the inclusion of attitudes and emotions provide potentially confounded definitions.

Bryson et al. (2013) conceptualised brand hate as an extreme negative affect; thus a component of attitude, rather than an underlying physical reaction in the subcortical brain to immediate environmental conditions. This is closer to the subjective self being influenced by personal experience, memories and beliefs; thus the neocortical area of the brain is involved in developing and reacting to brand hate.

Interestingly, Zarantonello et al. (2016) suggest that the construct brand hate is wide and includes two main dimensions, including: “active brand hate”, which includes emotions related to anger and contempt; and “passive brand hate”, related to emotions such as fear, disappointment and dehumanisation. In a further explanation, Padeliento (2018) identifies the factorial composition of brand hate according to contempt and disgust, fear, disappointment, anger, shame and dehumanisation. In a German study, Hegner et al. (2017) found that that brand hate is triggered by the following three determinants: negative past experience, symbolic incongruity and ideological incompatibility.

It is evident that brand hate needs more conceptual and empirical evidence in order to progress towards one definition. The following discussion suggests several ideas gleaned from interviews with Starbucks “haters”.
**Discussion**  
"Hate Perceptions" of Starbucks

The research study found that not all consumers feel brand hate at the same level and so-called haters expressed differing severity of hate towards Starbucks, ranging from what interviewers rated as relatively mild to moderate to severe cases of brand hate. This was reflected in the varying scores of hate as recorded by participants. This is broadly consistent with Kucuk (2016, p. 23) who identified two types of brand hate: attitudinal brand hate which indicates a negative emotional attachment and behavioural brand hate which reflects “negative emotions, antipathy and hate towards a brand in public”.

It is within these conversations that we were able to categorise “hate perceptions of Starbucks” as consisting of hate based on the three levels of a hate hierarchy as suggested by Kucuk (2016): cold, cool and hot brand hate. However, we argue that cold and cool hate are in fact quite similar in nature. We have therefore combined cold and cool hate as one category (cold hate). For example, cold brand hate towards Starbucks could be characterised “as seeing the targeted brand as worthless” and was typical of this construct (Kucuk, 2016, p. 21).

However, importantly, the original gap between cool and hot brand hate fails to consider an intermediate level of hate – warmer than cool – which we saw as quite necessary. As a result, we added an intermediate level of hate (warm hate) which is a more precise empirical description compared to cool brand hate as originally suggested by Kucuk’s (2016, p. 21), “refers to consumer negative emotions such as repulsion, resentment, revolt and finally disgust towards a disliked brand”. Although we argue that the emotions of repulsion and revolt are somewhat far apart, we were able to identify a sense of detachment or at least a break down in the brand relationship. According to Hedrick *et al.* (2007), strong emotional reactions and revenge seeking actions may also be triggered when consumers feel that their trust in a brand has been brusquely broken. We therefore defined warm brand hate as being coherent with cool brand hate yet it is more immediate, personal and thereby more emotional than attitudinal.

Hot brand hate is characterised by feelings of “extreme anger and anxiety towards a brand” (Kucuk, 2016, p. 22) which is consistent with the definition of brand hate proposed by Bryson *et al.* (2013). In these cases, brand hate is a long-term negative affective attitude that is rapidly triggering strong negative emotional responses. The attitude will remain while the emotions subside.

We believe that this modified categorisation of the brand hate hierarchy provides a more realistic range of negative consumer emotions, feelings and attitudinal affect. It should, however, be noted that the boundaries between the different levels of hate are clearly fluid are bound to be overlap between the different levels.

**Antecedents of brand hate**

Findings stemming from the interview study revealed that the antecedents of extreme negative affect are to a certain extent dependent on the intensity (temperature) of brand hate as depicted in Figure 1.

![Antecedents of brand hate: Starbucks France](image-url)
Cold brand hate. Market stature. Starbucks was generally regarded as a powerful US brand as expressed by one participant as the “Coca-Cola of coffee” (Participant 3, male). This was underlined in our research study in reference to the brand’s perceived market stature. However, in the case of Starbucks, its US origin was not seen as a source of negative emotions. Not one single participant reiterated an anti-US sentiment, “Look, not liking Trump is not the same as not liking the US. There is a difference” (Participant 11, male).

This is significant because research on person–object relations shows that consumers can anthropomorphise brands, thinking about them as if they were human characters (Belk, 1988; Plummer, 2000; Puzakova et al., 2009) and consumers may avoid a brand because they feel animosity towards the country from which the brand originates (Klein et al., 1998; Shimp and Sharma, 1987). Indeed, while examining negative COO effects, Amine (2008) and Lee, Motion and Conroy (2009) suggest that COO effects can result in brand avoidance. However, research findings are not necessarily transferable in this case. Similarly, Kashif et al. (2015) found that religiosity and ethnocentrism among Pakistani fast food consumers are low and do not influence the decision to purchase fast food brands.

Participants, however, expressed concern about the global prominence of a corporation as exemplified by Starbucks which we have referred to as brand dominance: “It seems, you know like Amazon, that they are taking over […]” (Participant 2, male) and how this was impacting the local economy, “It doesn’t seem fair that they are killing off the independent cafés […] what chance do they have?” (Participant 8, female). This is similar to anti-hegemony in which a consumer avoids dominant brands because they are associated with corporate irresponsibility (Kozinets and Handelman, 1998).

Cultural dominance. Within a wider context, participants mentioned the importance of not losing the traditions and values of French culture which could be interpreted as a potential source of animosity: “The French café is something to be cherished. It is part of our identity […] Like many things in France, we are losing our history, our heritage” (Participant 8, female). This draw parallels to the anti-globalisation protest movements of the 1980s and 1990s in France which had targeted McDonalds as an iconic symbol of global capitalism. As noted by one participant, Starbucks was described as the “ugly face of capitalism” (Participant 2, male). This is an interesting observation as among the developed western economies, French people are among the most critical of capitalism and free markets (Guyot, 2014).

Warm brand hate. Negative stereotypes. Our findings suggest in the case of Starbucks, warm brand hate was seen primarily as a result of negative stereotypes of the people that use the brand. The assumption that stereotypes are not factually based is widely accepted within the literature (Lawrence et al., 1992). The stereotyping of brand consumption refers to consumers’ notion that they, through using a certain brand hold self-concepts similar to those of other consumers of the same brand (Grubb and Hupp, 1968). When negative stereotyping occurs, by contrast, individuals refrain from using products and services that they associate with negative product-user stereotypes (Hogg and Banister, 2001). In the case of Starbucks, there was evidence to suggest that predominantly male participants were willing to reject the coffee chain category: “It’s a place for Bobos (slang for ‘bohemian bourgeoisie’) who are just so superficial. They just want to be seen as being cool but they are in fact so uncool” (Participant 1, male); “Have you seen what kind of people sit in a Starbucks in Paris? American, Chinese tourists and a few French who I wouldn’t want to hang out with, if you get my drift” (Participant 9, female). This was found to be consistent with Bryson et al. (2013) who found that an identified source of luxury brand hate was negative stereotypes of brand users.

Symbolic identity. Participants found Starbucks to be incompatible with their social role and unable to fulfil the individual’s symbolic identity requirements: “These people walking around with these massive Starbuck cups […] its looks so ridiculous as if they are trying so hard to look, I don’t know, what’s the word? Pretentious?” (Participant 1, male). This is
coherent with Lee, Motion and Conroy (2009, p. 174) which introduces dis-identification theory which “suggests that people may develop their self-concept by dis-identifying with brands that are perceived to be inconsistent with their own image”.

This can be partially attributed to Starbucks being broadly considered to be an experiential brand which evokes emotional associations, defined as a “subjective episode in the construction/ transformation of the individual with, however, an emphasis on the emotions and senses lived during the immersion at the expense of the cognitive dimension” (Carù and Cova, 2003, p. 273).

Hot brand hate. Irresponsible behaviour. Our research identified a relationship between hot brand hate and brand reputation as defined by perceived corporate irresponsible behaviour. This is in contrast to Bryson et al. (2013) who reported that consumers’ perceptions of corporate social performance did not seem to be a strong source of brand hate. It is possible that luxury brand consumers might have alternative triggers to activate brand hate attitudes.

In our study, participants, however, identified the failure of tax compliance as a moral shortcoming which supports concerns in regard to abuse of power as highlighted as brand dominance (cold brand hate). This supports Romani et al. (2015) who discuss how brand moral shortcomings can lead to anti-brand activism and is consistent with the notion of “ideological incompatibility” defined as “ideology refers to a set of beliefs which are incompatible with the consumer” (Hegner et al., 2017, p. 15): “It is really disgusting that Starbucks who make millions get away from paying taxes” (Participant 11, male); “They (Starbucks) are getting away with murder. It is not just the right thing to do. They should pay taxes just like anyone else” (Participant 7, female); “A real arrogance. Imagine what they are like with other legal matters? It’s just about profit” (Participant 5, male).

An interesting observation is that when present, and in concordance with attitude theory (Eagly and Chaiken, 1993), extreme negative affect may trigger the corresponding emotion which might exist simultaneously, yet more transiently and intensely – a period of which we describe as “flash hate”. This is of particular relevance because this is when patrons with a cultivated negative attitude towards the brand make an immediate decision to turn against the brand, and focus on anti-brand action.

Brand hate consumer reactions
Consumer reactions can be discussed in terms of attachment–aversion relationships (Park et al., 2013), which we have categorised according to an aversion spectrum, soft and hard brand hate.

Soft brand hate reactions
We interpret cold and warm brand hate as a form of “soft brand hate” and is primarily coherent with the concept of brand avoidance (Lee, Motion and Conroy, 2009).

Cold brand hate reactions were “reactive”; for example: “When I see the logo or someone walking with a Starbucks cup, I cringe every time” (Participant 3, male); “I don’t have time for Starbucks” (Participant 9, female). These participants were more likely to “forgive” the brand if they were to consider that the brands were addressing issues of interest. Brand hate reactions can be expressed as “avoidance-like” (Zarantonello et al., 2016). This resonates with Kucuk (2016, p. 20) who describes the cold brand hater as an individual who “tries to distance himself/herself from the hated brand, its associations and followers” and is consistent with the notion of brand disengagement (Parmentier and Fischer, 2015).

Warm brand hate evoked stronger feelings as discussed, but within the context of cool brand hate, “entail a total dislike, unhappiness and a strong dissatisfaction created by the
brand” (Kucuk, 2016, p. 21). This was expressed by one participant: “If someone says let’s go to Starbucks, I just say ‘Fxxx off. Fxxx Starbucks!’” (Participant 14, male).

In a study of fashion brands among young consumers, Ismail and Spinelli (2012) found that brand love has a positive impact on word-of-mouth (WOM). We can therefore deduce that negative WOM can be expressed as “attack-like” (Zaranonello et al., 2016) as noted by one participant: “I think most of my friends with some exceptions think Starbucks is just trashy […] fake […]” (Participant 10, female).

**Hard brand hate reactions**

Hot brand hate focus on a more immediate and intense consumer reaction, i.e., extreme negative affect – a developed affective attitude that can trigger an intense emotion which can trigger “extreme anger and aggressive responses” (Kucuk, 2016, p. 22). We refer to this as a “hard brand hate reaction” and is an expressive escalation towards brand divorce (Sussan et al., 2012).

Reactions identified were “proactive”: “I had actually signed an online petition to boycott Starbucks which I posted on Facebook. It just seems the right thing to do. Take a stance and get things changed” (Participant 7, female); “I get really angry when I see a Starbucks. Believe it or not but I had an argument with a class mate who came to class with a Starbucks with his name written on the cup, spelt wrong. I told him what I thought of him and Starbucks and that they couldn’t even spell his name right. OK, it’s not probably the most sensible thing to have done but it did get my message across” (Participant 5, male) and implies a deliberate attempt to punish the brand as “approach-like” (consumer complaining and protest behaviours) as identified by Zaranonello et al. (2016).

**Conclusions and implications**

These research findings have important theoretical implications. The study provides an important contribution in order to disentangle the wide conceptualizations and potentially different levels of brand hate and its antecedents. Findings suggest that reactions stemming from brand hate can be considered according to varying intensity, i.e. “hard” and “soft” brand hate with potentially different outcomes.

Although the findings are broadly consistent with previous research (e.g. Hegner et al., 2017; Knittel et al., 2016; Kucuk, 2016; Lee, Motion and Conroy, 2009; Zarantonello et al., 2016), the study was able to identify antecedents such as cultural dominance which may be specific to Starbucks and/or France. Further, the case of Starbucks demonstrated that dissatisfaction of the actual product and service offering although perceived as being expensive was not identified as a relevant antecedent of brand hate: “Sure, the coffee sucks and it is really expensive but it’s not the reason why I have something against Starbucks” (Participant 11, male). This implies that in the case of Starbucks, factors that are not directly related to product and service performance can lead to both feelings of brand hate (cold and warm brand hate) and extreme negative affective attitude brand hate (hot brand hate). This is of relevance as inferior product and/or service quality, which can arise from experienced critical incidents, may result in customer dissatisfaction and might develop into very strong negative attitudes about the brand (Folkes, 1984; Johnson et al., 2011).

Implications for food brand executives are also manifest, both from the results of the research study and from further reflection. Global brands such as Starbucks need to be aware of the market implications of anti-consumption. As Kucuk (2008) notes, the most valuable brands attract more anti-brand hate website attention than less valuable brands. As a starting point, they will need to accept that a brand is likely to polarise consumer opinion and evoke both extreme positive and extreme negative temporal emotional or enduring negative affective reactions. This is more likely to be the case for aspirational brands and evident by consumers who “love” or “hate” the Starbucks brand.
Brand managers need to recognise the risk that brand hate will not only distance former customers, but also spread to existing and future customers. "Hashtag activism" is a clear illustration of consumers using social media such as Twitter, Facebook, etc., not only to raise awareness of underlying issues, but to exert pressure on corporations to change business practices. The emergence of the so-called activist consumer which uses social media in order to “highlight injustice and call brands to account” (Euromonitor, 2018) has become an increasingly common phenomenon. Brands such as Starbucks need to therefore be aware of the potential escalation of reactions, in particular given social media attitudes and behaviour amongst millennials and following generations. Klein and Dawar (2004) suggest that a negative corporate image will be a powerful liability to a firm’s brand.

Food brand executives need to therefore consider approaches to address the causes and effects of brand hate. An obvious starting place is the development and implementation of a coherent strategy which can help address potential ethical shortcomings, real or perceived. In a study of 1,500 UK consumers, 74 per cent reported that meat coming from animals which are well looked after is among the top issues that make a food company “ethical” (Mintel, 2015).

Our findings underlined that consumer protests are not limited to narrowly defined environmental or social issues. A 2017 Edelman Earned Brand survey of 14,000 people in 14 countries found that 57 per cent of consumers are likely to boycott a brand solely because of its position on a social or political issue. These so-called belief-driven buyers were dominant amongst the millennial generational segment (Edelman, 2017). Social attitudes can help to formulate company policy such as the support for a living wage for burger chain employees in the UK and USA.

However, it is important to monitor the breadth (number of brand haters) and depth (intensity/temperature of brand hate, as measured on a scale) in relation to the cause of brand hate in order to gauge an appropriate degree of action. For example, McDonalds in France succeeded to integrate its US identity with French culture which has enabled the brand to neutralise potential anti-US sentiment (Wile, 2014).

Limitations and future research
We suggest future research is required to broaden the conceptual scope of brand hate as a construct and apply it in other domains of research, as well as further clarify antecedents and potential outcomes. For example, anecdotal evidence suggests that the phenomenon of “fake news” can be related to anti-consumption. In one case, Nestle has been accused of violating ethical marketing codes with misleading nutritional claims about its baby milk formulas.

In a similar vein, we need to understand the intensity of brand hate in terms of outcomes which may exceed the level of hot brand hate which may be applicable to catastrophic cases which also includes a broader range of stakeholders including investors. The example of the collapse of The Weinstein Company is a recent illustration.

We accept that the study is limited and specific to Starbucks in France. Further research should therefore broaden the scope of context in which brand hate occurs, for example, expanding the geographical scope of the work to other countries and to other food and drink related brands.

We also accept that the study reflects a relatively homogeneous sample and is thus not representative of the general population. As Gatrell et al. (2018) observe, “As consumers, millennials are attracted to products that reflect their values, lifestyle, and personality. They tend to be adventurous consumers that appreciate diversity, authenticity, creativity, and individualism”. Sweeping generalisations may have dubious value as the global economy evolves at an increasing rate.
We suggest that both qualitative and quantitative studies are welcome in order to fully investigate brand hate outcomes in detail. For example, the need to assess how gender and personality attributes are related to brand hate, e.g., do consumers with a liberal or conservative value mind-set have a stronger brand hate disposition? Despite these stated limitations, we nevertheless believe that this study will set an important research agenda within the anti-consumption food literature.

References


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Nutritional traffic light and self-regulatory consumption: the role of emotions

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Abstract

Purpose – The purpose of this paper is to analyse how the nutritional traffic light can reduce consumers’ intention to purchase unhealthy food by eliciting negative emotions (i.e. fear and guilt). The work also examines the moderating role of income in the above-mentioned relationships.

Design/methodology/approach – The empirical study was conducted in Ecuador. In an initial phase, exploratory research was carried out with two focus groups. Then a quasi-experiment was conducted with 330 participants following a 3×2 design, in which the nutritional traffic light for a dairy product (green, yellow, red) and the variable income (high and low income) were manipulated.

Findings – Traffic light colours (red, yellow and green) significantly influence consumers’ levels of fear and guilt as well as their intention to purchase. Income has also been found to have a moderating effect on the above relationships.

Practical implications – Further understanding of how nutritional labels influence consumer behaviour may have beneficial effects for public authorities attempting to improve citizens’ health and for society as a whole. It may also help firms that produce and market packaged foods to be aware of what type of foods new consumers want and adapt their offering in consequence.

Originality/value – The main contribution of this work is the analysis of the influence of the nutritional traffic light on emotions, namely, fear and guilt and how these emotions lead consumers to control their consumption of unhealthy foods. In addition, the present work proposes the moderating effect of income on the influence of colour on emotions and purchase intention.

Keywords Purchase intention, Income, Fear, Guilt, Nutritional traffic light

Paper type Research paper

1. Introduction

According to the latest data from the World Health Organization, in 2016 there were more than 1.9bn overweight adults, of whom 650m were obese, representing 39 and 13 per cent of the population over the age of 18, respectively. There has also been an alarming increase in overweight minors, with more than 380m overweight children and adolescents (World Health Organization, 2017). Overweight can lead to a variety of illnesses that may become very serious, such as cardiovascular disease and diabetes. As a result, governments throughout the world are taking measures to reduce overweight in the population. These measures include nutritional information on the labels of food products. The nutritional labelling system has the potential to help reduce obesity levels because evidence suggests that labels influence consumer behaviour, facilitating healthier food consumption (Drichoutis et al., 2006; Sun et al., 2015).

In addition to government action, citizens are also beginning to care about eating healthily. Thus, consumers attempt to follow diets that reduce the volume of certain foods in order to ingest the appropriate amount of nutrients, as scientific studies have linked balanced diets with good health (Van Camp et al., 2010). Consequently, in recent years consumers have shown great interest in nutritional information on labels for food products.
In general terms, these labels attempt to inform and warn of the nutritional content, as well as facilitating the choice of foods and improving daily consumption (Draper et al., 2013). The academic community has also echoed this concern in recent years with a growing interest in understanding how nutritional information influences consumers (Salnikova et al., 2014). Despite the increase in studies on the topic, scholars have identified numerous research gaps. For instance, as regards the antecedents of nutritional label use, there is often no consensus and results are contradictory (Hieke and Taylor, 2012). In addition, scanty attention has been paid to the impact of emotional factors on label use and studies have focused on analysing the effect of more objective variables like label format and consumer socio-demographic characteristics (Cheah et al., 2015). Finally, most studies have been carried out in North America (Balcombe et al., 2010; Baltas, 2001) and to a lesser extent, in Europe and Australia (Aschemann-Witzel et al., 2013), ignoring developing countries which are likely to show significant differences in relation to developed countries regarding knowledge and awareness of nutritional and health matters.

In order to shed light on some of these research gaps, the present study examines the effect of a specific type of nutritional label, the nutritional traffic light, on consumer behaviour in a developing country, Ecuador, focusing on the role of the emotions elicited by the different colours. The nutritional traffic light has been obligatory in Ecuador since September 2014 and is largely the equivalent of the multiple traffic light of other countries like the UK, but focuses on indicating the level (high, medium or low) of three nutrients: fat, sugar and salt.

As noted above, when identifying the variables that influence consumers’ use of nutritional label information, most studies focus on label format and on socio-demographic or personal variables. However, despite the solid theoretical basis for the role of emotions in consumer behaviour and knowing that different colours imply different emotions and behaviour (Babolhavaeji et al., 2015), the influence of the nutritional traffic light on emotions has barely received attention in the literature. This work, therefore, seeks to determine what emotions are aroused by the different nutritional traffic light colours (focusing on fear and guilt) and how they influence purchase intention. Furthermore, given the great controversy in the literature about the role of income in nutritional traffic light use (Watson et al., 2014), the present work studies the existence of a moderating effect of income on the impact of the colours on emotions and purchase intention.

This research is structured as follows. First of all, the literature review and the hypotheses of the study are presented. Then there is a description of the empirical study, detailing the methodology and the main results. The work ends with the presentation of the main conclusions, implications, limitations and future research lines.

2. Conceptual framework and hypotheses
2.1 Emotions, colours and purchase intention
According to Bagozzi et al. (1999), an emotion is understood as “a mental state of readiness that arises from cognitive appraisals of events or thoughts; has a phenomenological tone; is accompanied by physiological processes; is often expressed physically (e.g. in gestures, posture, facial features); and may result in specific actions to affirm or cope with the emotion, depending on its nature and meaning for the person having it” (p. 184).

Emotions have been studied mainly from one of the following two approaches (Bagozzi et al., 1999, 2000; Brengman and Geuens, 2004):

1. Dimensional approach: this approach argues that different types of emotions can be combined with each other forming more general underlying dimensions that vary depending on the authors, but two or three dimensions are usually proposed. In the case of two dimensions, the first dimension would be formed by a continuum with
two extremes, disagreeable or negative emotions and agreeable or positive emotions, whereas the second dimension reflects the degree of activation of the emotion (Brengman and Geuens, 2004; Richins, 1997).

(2) Discrete emotions approach: this perspective considers that emotions are different, specific feelings, with a particular phenomenology. They should, therefore, be treated as discrete emotions rather than combining them in dimensions (Frijda et al., 1989; Zeelenberg and Pieters, 1999, 2004).

This present paper adopts the discrete emotions approach, because it is the only way of studying the different behavioural consequences of those emotions and their antecedents (Bagozzi et al., 2000; Lazarus, 1991). Furthermore, some authors recognise that some emotions have distinctive properties that advise treating them as discrete emotions (Frijda et al., 1989; Roseman et al., 1994).

In particular, this study examines the fear and guilt generated by the colours in the nutritional traffic light. These emotions are frequent in purchase contexts. For example, Richins (1997) conducted a study to identify the most common emotions in consumption situations (in the purchase decision, purchase and post-purchase stages) and fear and guilt were included in the final set of emotions. Furthermore, Han et al. (2014) point out that consumers often feel guilty about consuming unhealthy food and as a result, marketing managers and public policy experts use guilt in their communication actions to be more persuasive.

Fear is a basic emotion that is generally associated with a threat or danger confronting the individual or anticipated to happen and is originated by other people or by the situation itself (Dunn and Hoegg, 2014; Latour and Rotfeld, 1997; Passyn and Sujan, 2006). In the case of nutritional labels and, specifically, the nutritional traffic light, the purchase situation can be expected to cause fear or the absence of fear depending on the nutritional information.

Guilt is also a negative emotion, but in this case the events causing it are attributed to the individual. Therefore, guilt occurs when individuals obtain negative results stemming from their own actions (Blum, 2008; Han et al., 2014; Passyn and Sujan, 2006; Tracy and Robins, 2004).

It is commonly accepted that individuals respond first on an affective or emotional level, and these emotions influence subsequent behaviour (Brengman and Geuens, 2004; Gaur et al., 2014). The above finding also applies to consumption contexts, and so the store environment is expected to generate emotions which, in turn, affect purchase behaviour (Brengman and Geuens, 2004). Equally, product packaging will also generate an affective response in the first instance followed by a behavioural response (Hieke and Wilczynski, 2012). Following this line of argument, in the case of the traffic light, the different colours are expected to arouse different emotions which, in turn, will influence behaviour intentions.

Colour is the main factor determining the appeal of packaging and its ability to attract consumer attention (Babolhavaeji et al., 2015; Liao et al., 2015). In fact, 65 per cent of purchase decisions are based on packaging colours (Babolhavaeji et al., 2015). In this line, focusing on the field of nutritional information, recent studies claim that consumers find it is easier to interpret and choose products from labels which, in addition to text, include coloured symbols to indicate nutrient levels instead of labels that focus on numbers or percentages (Hersey et al., 2013; Montandon and Colli, 2016; Oliveira et al., 2018). These results are in line with other studies that show that colours on nutritional labels capture consumers’ attention and reduce the time required to locate the sign (Bialkova and Van Trijp, 2010). It has also been found that colours, especially red, influence purchase behaviour in food products (Genschow et al., 2012).

The effects of colours on emotions and behaviour have also been shown in a variety of contexts. In the case of consumers, it has been corroborated that certain colours influence purchase decisions positively or negatively (Koenigstorfer et al., 2014). In a more general context, the influence of colours on consumer perception has been widely studied,
for instance, in the case of differentiating brands or websites (Bagchi and Cheema, 2013). Furthermore, studies analysing the impact of colours at point of sale conclude that purchase intentions are mediated by the cognitive and affective reactions the colours create (Babin et al., 2003).

In the case of the nutritional traffic light, there is a need of research on the effect of the colours on consumers. Thus, whereas green is usually associated with positive attributes like calm, peace, gentleness (Hieke and Wilczynski, 2012) and safety (Caivano, 1998), red has been associated in some studies with unfavourable and negative aspects like danger or the need to be alert (Hieke and Wilczynski, 2012; Koenigstorfer et al., 2014; Moller et al., 2009; Pravossoudovitch et al., 2014). Fear is a basic emotion associated with a threat or danger (Dunn and Hoegg, 2014; Passyn and Sujan, 2006), so red in the nutritional traffic light can be expected to make consumers afraid to purchase the product, whereas green will lessen that fear. Therefore, we posit:

H1. Nutritional traffic light colours (red, yellow and green) have a significant influence on consumer fear.

Red on the nutritional traffic light indicates that the product is high in fat and/or sugar and/or salt (Drichoutis et al., 2011), thereby increasing consumer perception that the product is unhealthy (Vasiljevic, 2015) and consumers often feel guilty if they consume unhealthy products (Han et al., 2014). Therefore, red is expected to cause a feeling of guilt which would be absent in the case of green which is associated with healthy foods (Vasiljevic, 2015), as posited in the following hypothesis:

H2. Nutritional traffic light colours (red, yellow and green) have a significant influence on consumer guilt.

Recent studies conclude that the use of green labels denotes healthy foods whereas red labels indicate the complete opposite and so people choose products with green labels in preference to products with red ones (Vasiljevic, 2015). With the nutritional traffic light, there is sufficient evidence of the positive influence of green on food purchase intention and red on low purchase intention (Hieke and Wilczynski, 2012; Koenigstorfer et al., 2014). Furthermore, Hieke and Wilczynski (2012) found that this effect is asymmetrical, so the dissuasive impact of red is stronger than the encouragement of green. Consequently:

H3. Nutritional traffic light colours (red, yellow and green) have a significant impact on consumer purchase intention. This effect will be asymmetrical, so that going from yellow to red will have a greater impact on reducing purchase intention than going from green to yellow.

2.2 Moderating effect of income

Previous research suggests that income has a strong influence on consumers in nutritional matters. For instance, it has been found that high-income consumers are more likely to seek nutritional information than low-income consumers (Kim et al., 2000; Lin et al., 2004). The rationale behind this fact is that high-income consumers have more understanding of nutrition (Hieke and Wilczynski, 2012) because they usually have higher education levels. Also, for high-income consumers price is not a barrier in their decision to choose healthy food. Some studies have pointed out that low-income consumers find it more difficult to understand the information on nutritional labels (Cowburn and Stockley, 2005). In the same line, it has been found that women on high incomes and with high education levels are more likely to look at nutritional labels (Cowburn and Stockley, 2005; Graham and Jeffery, 2012).

Consequently, nutritional traffic light colours are expected to have a greater influence on the affective and behavioural response of high-income consumers than low-income consumers,
who will presumably be more concerned by aspects like price. In fact, Popa et al. (2013) point out that the effect of colours on emotions varies according to socio-demographic aspects.

These arguments are reinforced by the qualitative study conducted in the present work, consisting in two focus groups, one with low-income women and the other with high- to medium-high-income women. Significant differences were found between the two groups regarding emotions and behavioural intentions evoked by different combinations of colours on the nutritional traffic light. Thus, whereas lower income consumers generally did not associate any emotion with the labels, those on higher incomes reported a wide variety of emotions including fear. Therefore, income is thought to have a moderating effect on the way nutritional traffic light colours influence emotions and purchase intention, as expressed in the following hypotheses:

\[ H4. \text{ The effect of colours on consumer emotions and purchase intentions differs between high-income and low-income consumers.} \]

\[ H4a. \text{ Red, yellow and green influence fear more strongly in high-income consumers than in low-income consumers.} \]

\[ H4b. \text{ Red, yellow and green influence guilt more strongly in high-income consumers than in low-income consumers.} \]

\[ H4c. \text{ Red, yellow and green influence purchase intention more strongly in high-income consumers than in low-income consumers.} \]

3. Method

3.1 Design and participants

The research was conducted in Ecuador in September 2016 and, specifically, in the cities of Las Salinas, La Libertad and Santa Elena. It focuses on women aged between 18 and 65 as in that country women generally do the shopping for their households. The research was carried out in two stages: an exploratory study and a quantitative study.

The first stage consisted of an exploratory study with two focus groups, one with women on low incomes and another with women on medium-high to high incomes. The focus group objective was to obtain a better understanding of the behavioural habits and perceptions of the study population in relation to the nutritional traffic light and the emotions and behavioural intentions it evokes.

The quantitative study uses a quasi-experimental design that manipulates nutritional traffic light colours (red, yellow, green) and participants’ income (high, low), resulting in a 3x2 factorial design. Hieke and Wilczynski (2012) suggest that consumers mainly focus on fat and sugar when choosing between different foods, so the colours of these two components were manipulated to present interviewees with three options (see Figure A1): red (high) in sugar and fat and no salt; yellow (medium) in sugar and fat and no salt; green (low) in sugar and fat and no salt. Participants had to imagine they were at the supermarket looking at dairy products and were asked to score on a seven-point Likert-type scale the degree of fear and guilt elicited by particular packaging for liquid yoghurt and their purchase intention with regard to the product. Yogurt is a popular product in Ecuador and its price is affordable for the vast majority of the Ecuadorian population. The price of a litter of yogurt on average is $1.10 cents, cheaper than a litter of milk costing $1.30 cents.

The information was collected by a questionnaire administered in person to 330 women, chosen through non-probabilistic sampling, obtaining 150 participants on high to medium-high incomes and 180 on low incomes. Three different models of questionnaire were used in which the nutritional traffic light colour had been manipulated, achieving 110 responses per colour. Through these manipulations, between 43 and 67 cases per condition were obtained.
In the sample, women predominating the sample were the young women between the ages of 18 and 39 with secondary and university education, low to medium-high income, some knowledge of nutrition and moderate concern over the sort of food they eat.

### 3.2 Measures

Regarding emotions, responses followed a seven-point Likert scale. Fear was measured on the three-item scale ($\alpha = 0.93$) proposed by Verhoef (2005). This specific scale was chosen for three reasons: first, it is used in a similar context because the author analyses the role of fear in the purchase of organic meat and, so, the impact of food on health is involved as it is in this study; second, Verhoef (2005) used Richins (1997) as the basis for the scale development and Richins (1997) is a reference work for the measurement of emotions in the consumption experience; and third, reliability of Verhoef’s fear scale is high ($\alpha = 0.94$; composite reliability $= 0.93$).

Guilt was captured through a four-item scale ($\alpha = 0.96$) mostly based on Yi and Baumgartner (2011). The justification for selecting such a measure is similar to the ones mentioned above: first, Yi and Baumgartner (2011) analyse the impact of fear in a buying context; second, the reliability index is high ($\alpha = 0.84$); and third, this scale is in the same line as the one used by Lee-Wingate and Corfman (2010) in a purchasing setting reaching a reliability level over 0.90 in several studies.

Purchase intention was measured with a single item on a seven-point scale ranging from “I definitely would not buy it” to “I definitely would buy it”. Finally, as regards the classification variables, in addition to socio-demographic characteristics, participants were asked about their degree of nutritional knowledge and their level of awareness of nutritional issues and health. Following Gracia et al. (2007), knowledge was measured with a single item on a five-point scale. A single-item scale was chosen rather than a multi-item measure in order to limit the questionnaire length because nutritional knowledge is not among the core concepts of this study and is only used to characterize the sample. Health awareness was collected through the eight items ($\alpha = 0.90$) proposed by Moon et al. (2011).

The income indicator was measured by dividing it into several intervals, with consumers on low and medium-low incomes earning under $700, medium between 701 and 1,050 and medium-high and high incomes over $1,051. These intervals were established according to the minimum average salary in Ecuador in 2016. The basic salary for this year was $350. The average salary in urban areas was $1,046.3 and, since the survey was carried out in three cities (Las Salinas, La Libertad and Santa Elena), $1,050 (a round figure) was chosen as the cut-off point between medium and high incomes.

Table I gives an overview of the measurement tool and Table AI provides the specific items and their descriptive statistics.

### 4. Results and discussion

The first three hypotheses were tested using a one-way ANOVA. In the case of fear and guilt, given that scale reliability is high (Cronbach’s $\alpha$ above 0.9), two new variables were created as means of the items they measured, called global fear and global guilt.
H1 and H2 predict that the nutritional traffic light colours will have a significant influence on the fear and guilt consumers feel and, therefore, these emotions are expected to go from more to less intensity when the colour changes from red to yellow and from yellow to green. Manipulation of colours on the labels (fat and sugar) shows an important significant effect on fear \( F(2.327) = 48.60, \ p < 0.001 \) and guilt \( F(2.327) = 53.39, \ p < 0.001 \). Thus, as proposed, when faced with a content low in fat and sugar (green), the interviewees say they do not feel fear \( (M = 2.64; \ dt = 1.64) \) or guilt \( (M = 2.49; \ dt = 1.66) \); when the content is medium (yellow), fear \( (M = 3.21; \ dt = 1.52) \) and guilt \( (M = 3.03; \ dt = 1.69) \) increase slightly but continue to tend towards lack of those emotions; but when the colour is red (high fat and sugar content) then fear appears \( (M = 4.82; \ dt = 1.93) \), as does guilt \( (M = 4.79; \ dt = 1.81) \).

These results agree with previous studies like those by Moller et al. (2009), Hieke and Wilczynski (2012), Koenigstorfer et al. (2014) and Pravossoudovitch et al. (2014) who conclude that colours have a significant influence on people. It can also be seen that the effect of colour on fear and guilt is asymmetric, and the increase in these emotions is greater when going from yellow to red than from yellow to green. These results are in line with the findings of Hieke and Wilczynski (2012), although those authors do not measure the impact of the nutritional traffic light on emotions but on choice.

H3 posits that nutritional traffic light colours influence consumers’ purchase intention and their influence is asymmetrical, being more intense for red. Results show that the different traffic light colours have a significant influence on purchase intention \( F(2.327) = 47.36, \ p < 0.001 \). Thus, purchase intention is high \( (M = 4.94; \ dt = 1.91) \) for products low in fat and sugar. When the values for those nutrients are medium (yellow), purchase intention drops very little, and remains positive. Nevertheless, when interviewees are faced with packaging were red predominates, their purchase intention drops sharply \( (M = 2.72; \ dt = 1.50) \). Thus, the asymmetric effect found by Hieke and Wilczynski (2012) is demonstrated.

The hypotheses on the moderating effect of income were tested with a two-way ANOVA. Global fear and global guilt calculated as the mean of measurement scale items were used once again.

H4a and H4b predict the effect of colours on the emotions “fear” and “guilt” differs between high- or medium-high-income people and low-income people, and will be more intense in the first group. The results only partially support these hypotheses. Income has been found to have a moderating effect on the influence of traffic light colours on fear and guilt, but the effect is not exactly what was expected. Both the global model and interaction effects are significant for fear \( F(5) = 22.05, \ p < 0.001 \) and guilt \( F(5) = 23.61, \ p < 0.001 \). Figures 1 and 2 show the interaction between traffic light colour and income.

Whereas the relationship between traffic light colours and the emotions they elicit in high- or medium-high-income consumers is linear, in low-income consumers reported fear and guilt hardly vary from green to yellow, but rocket when the traffic light label is red. Therefore, the initial hypothesis that argued the effect of colour would be greater in high-income women is only fulfilled in the case of green and yellow, but not red.

Thus, given that green shows the product is healthy, both income groups have a low level of fear and guilt, but in the case of high-income women, those emotions are even lower. As yellow indicates caution, fear and guilt should increase in relation to green, but this only occurs in high-income participants, and does not appear to affect those on low incomes. Finally, red rings alarm bells for both groups, as it indicates that the product is unhealthy thereby increasing the fear and guilt associated with the label. Nevertheless, the increase is much greater in low-income women than in those on high incomes. This finding suggests that the asymmetric effect proposed by Hieke and Wilczynski (2012) only occurs in low-income people.

A possible explanation for these results is as follows. Given that high-income consumers usually have higher levels of education (a contingency table between income and education gave a significant \( \chi^2 \) at 0.001, corroborating this claim) and considering that previous research...
suggests that consumers with high educational levels are more concerned about the foods they purchase (Gracia et al., 2007; Grunert and Wills, 2007; Nocella and Kennedy, 2012), they are likely to be better informed about the operation of the nutritional traffic light. In fact, Cowburn and Stockley (2005) and Graham and Jeffery (2012) found that women on high incomes and with higher levels of education were more likely to look at nutritional labels.
Thus, women on higher incomes and with higher education levels know that green indicates the go-ahead to consume the product because it contains little fat and sugar and so they do not feel afraid or guilty about consuming it. Furthermore, when the label is yellow, it advises caution because fat and sugar levels are medium, which increases their feeling of fear and guilt, although it is still low. Finally, when they see red, although obviously they feel more fear and guilt because they know the product is not healthy, those emotions are not as high as in low income and a priori less-informed people because they interpret red correctly (it indicates moderation in the consumption of these foods, but not stopping completely) (Moorman, 1996). Low-income/low-educated consumers know what the nutritional traffic light is, but are presumably less familiar with the exact interpretation of its colours. Thus, they experience similar levels of fear and guilt with green and yellow and are not aware that fats and sugar have increased, whereas with red, their fear and guilt shoot up excessively.

Finally, $H_4c$ proposes that the effect of colours on purchase intention differs between high- and low-income people and is more intense in high-income people. Once again these results are confirmed ($F(5) = 21.49, p < 0.001$), but only partially (see Figure 3).

In line with the previous findings, when the colour is green, higher income women show greater intention to purchase the product than lower income women, because it causes them less guilt and fear. When the label is yellow, their purchase intention drops more than that of low-income people amongst whom there is only a slight reduction. This finding is consistent with the more intense feeling of fear and guilt because they understand that this food should be consumed only moderately. Finally, when the colour is red, although the likelihood of purchase decreases quite a lot, it does so to a lesser extent than in low-income interviewees. Nevertheless, unlike the effect of colours on emotions, in the case of purchase intention the two groups show a certain asymmetrical, effect but different. Whereas low-income women barely notice the change from green to yellow but are very sensitive to red, those on higher incomes are more sensitive to the change from

![Figure 3. Moderating effect of income on the influence of colours on purchase intention](image-url)
green to yellow than from yellow to red. Therefore, in addition to fear and guilt, other
factors may be affecting their willingness to purchase the product, because the pattern of
purchase intention does not follow a linear relationship like fear or guilt. In contrast, in the
case of low-income women, the effect of colours on behavioural intentions is practically the
same as it is on emotions. A possible explanation for these findings may be that higher
income consumers are more concerned about taking care of their health, as supported by
recent studies by Hawley et al. (2013) in New Zealand which show that people who were on
some type of diet and on average incomes were more likely to use nutritional labels than
those on low incomes. Similarly, the results of the exploratory study also support this
theory because it was found that high-income women were more concerned about feeling
healthy than those on low incomes. A further reason could be that low-income consumers
have less power of election and price is more likely to have a stronger effect on purchase
decisions than the healthy properties of the food.

5. Conclusions, limitations and future research lines
The present study seeks to understand the effects of nutritional traffic light colours on
emotions (fear and guilt) and consumers’ behavioural intentions and to analyse the
moderating effect of income. The main contributions of the study have been to: first,
analyse the emotions aroused by nutritional traffic light colours because emotional aspects
have barely been addressed in the literature; second, shed light on the contradictory effect of
the variable income by treating it as a moderator rather than the usual treatment as an
antecedent of traffic light use; and third, study the impact of the nutritional traffic light in a
different cultural and geographical context (as most studies have been carried out in the
USA and Europe) and specifically, in a developing country.

The empirical study suggests that although the three traffic light colours have a
significant influence on consumers’ fear and guilt and their intention to purchase a given
product, the impact is different for high- and low-income consumers. Broadly speaking,
high-income consumers are more sensitive to green and yellow while low-income consumers
are more sensitive to red. Consumers on high-income/high-education level probably know
how to interpret traffic light colours more accurately than low-income/low-educated
consumers. Green transmits total certainty about the healthiness of the product, yellow
awakens caution because it indicates the product has medium amounts of sugar and fat and
red, although it arouses fear and low purchase intention by indicating an unhealthy product,
does not alarm them as much as consumers less familiar with these issues, because they
know the product can be consumed occasionally without it being a problem for their health.
In contrast, low-income, less-educated consumers do not perceive changes in nutrients and
their potential risk when the colour goes from green (low fat and sugar content) to yellow
(medium content), but they become excessively concerned when the colour is red.

For that reason, public authorities should reconsider whether the communication
campaign on the nutritional traffic light is operating correctly, as this study’s results
suggest that the colours in nutritional labels are being wrongly interpreted by a significant
segment of the population, this is, the low-income/low-education level consumers. This lack
of rightful interpretation may be harming manufacturers of products with high fat and/or
sugar contents as their sales may be drastically reduced. Furthermore, not giving yellow the
importance it merits may be increasing their likelihood of becoming overweight, with the
consequent negative effects on health. In this regard, the Ecuadorian Government could
advertise in the mass media where, in addition to explaining what the nutritional traffic
light is (which all the interviewees did know about), the meaning of each colour could be
explained more clearly. These advertisements should be broadcast on television spots
frequented by low-income people. Similarly, a very useful reinforcement to this informative
campaign would be to place advertising at the point of sale.
Nutritional labels, in this case the nutritional traffic light, undoubtedly have a significant impact on consumers and can be an excellent tool for combating health problems caused by overweight. Thus, both the public and private sectors, the educational system and the population should adopt measures for the well-being of the community. In this line, although firms seek to make a profit, they should also be concerned about their consumers’ health, working and collaborating with the government to adopt preventive public health measures. Firms could invest part of their communication budget on teaching consumers to use the nutritional traffic light to eat more healthily, which in turn would help to promote positive attitudes towards the brand and the firm as Garg et al. (2007) suggest. All these actions could help to show how committed firms are to the issue of social responsibility.

As regards the public sector, the government could develop public policies to improve nutritional education by working on two fronts, one with measurable results in the short term and the other in the long term. In the short term, as previously noted, persuasive communication can be designed to make the population aware of the importance of consulting nutritional traffic light information in order to ensure a balanced diet. To that end, the benefits of using this tool must be emphasised, transmitting trust in the information it contains. In the long term, subjects could be included in the obligatory education syllabus to reinforce the importance of a good diet or laws could be generated that exempt or reduce some type of tax on firms that promote the consumption of healthy foods (Higginson et al., 2002). Ways can be sought to educate people in the correct use of nutritional labels to prevent future illnesses (Prinsloo et al., 2012).

This work is not without its limitations. First, the exploratory study consists of only two focus groups, more would have been desirable. Similarly, the quantitative study focuses on a single category, dairy products, making it difficult to generalise the findings to other types of food. Another limitation is that the traffic light was manipulated with only sugars and fats, without taking salt into account. In addition, only women were considered in the sample. Finally, the sample size and the use of a non-probabilistic sampling reduces the external validity of the results.

As regards future research lines, first, it is proposed to extend the study to include other emotions in purchase situations (see Richins, 1997) such as shame, sadness, happiness or surprise, examining for an asymmetrical effect between positive emotions aroused by green and negative ones caused by red. This study has examined the moderating effect of income, but it would also be of great interest to analyse whether other socio-demographic or personal variables like education levels or degree of knowledge and awareness of nutrition act as moderators of the impact of colours on emotions and behaviour. Finally, given that the influence of normative and cultural factors in perception of the nutritional traffic light has barely been dealt with in the literature, we propose a cross-cultural study between various countries that use the nutritional traffic light system.

References


**Further reading**

Note: The label is in Spanish because Ecuador is a Spanish speaking country.
### Appendix 2

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please tell us how this packaging makes you feel indicating the extent of your agreement or disagreement with each of the following statements on a scale from 1 to 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fear</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be worried</td>
<td>3.77</td>
<td>2.11</td>
</tr>
<tr>
<td>I would be scared</td>
<td>3.55</td>
<td>2.06</td>
</tr>
<tr>
<td>I would be afraid to buy the product</td>
<td>3.56</td>
<td>2.03</td>
</tr>
<tr>
<td><strong>Guilt</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would feel guilty if I bought this product</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would feel bad if I bought this product</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would feel I was not doing the right thing if I bought the product</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would regret buying this product</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purchase intention</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Would you buy this product?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. No, definitely not</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Highly unlikely</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Not very likely</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Indifferent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Quite likely</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Very likely</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Yes, definitely</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nutritional knowledge</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you consider you know about nutrition?</td>
<td>3.02</td>
<td>1.30</td>
</tr>
<tr>
<td>1. No knowledge at all</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Not very much knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Some knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Quite a lot of knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. A lot of knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Health consciousness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Please indicate how far you agree or disagree with the following statements on a scale from 1 to 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I eat a lot of fresh fruits</td>
<td>5.51</td>
<td>1.41</td>
</tr>
<tr>
<td>I eat a lot of fresh vegetables</td>
<td>5.32</td>
<td>1.44</td>
</tr>
<tr>
<td>I actively try to consume less fat</td>
<td>5.44</td>
<td>1.50</td>
</tr>
<tr>
<td>I actively try to consume less cholesterol</td>
<td>5.42</td>
<td>1.46</td>
</tr>
<tr>
<td>I am very concerned about linkages between diet and chronic diseases</td>
<td>5.94</td>
<td>1.34</td>
</tr>
<tr>
<td>I am concerned about the amount of salt in my diet</td>
<td>5.39</td>
<td>1.58</td>
</tr>
<tr>
<td>I am concerned about getting enough calcium in my diet</td>
<td>5.07</td>
<td>1.61</td>
</tr>
<tr>
<td>I am generally concerned about nutrition</td>
<td>5.92</td>
<td>1.29</td>
</tr>
</tbody>
</table>

**Table AI. Measures and descriptive statistics**

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The role of religious motivation in an international consumer boycott

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Abstract

Purpose – Religion as a cultural element has the potential to drive a strong boycott campaign. Previous studies acknowledge the role of religion in consumer boycotts yet did not investigate its role in influencing the very core of consumers’ motivation to participate in religion-based boycott. The purpose of this paper is to explore the fundamental nature of religious influence in an international religion-based consumer boycott. The research model tests the role of intrinsic religious motivation as the root of Muslim consumers’ motivational factors to participate and their intention to boycott US food brand.

Design/methodology/approach – The study adopted the Hoffman’s’ (2013) consumer boycott model to test the hypotheses. Survey method is used to collect primary data from Muslim millennials in a northern state of Malaysia. The study tested its five hypotheses on a data set of 325 cases using structural equation modelling (partial least squares regression).

Findings – The findings support the primary role of religion influences underlying boycott motivation factors. The intrinsic religious motivation is related to all the four boycott’s motivation factors (i.e. attitudes towards boycotting the brand, subjective norms, make a difference, self-enhancement), and indirectly contributing to intentions to boycott US food brand through the constructs of self-enhancement, subjective norms and attitudes towards the boycott.

Research limitations/implications – The study is a cross-sectional in nature, confined to one US food brand. The findings may be limited to Muslim millennials in the same region or similar cultural background of the country surveyed.

Practical implications – Businesses may want to consider working with social agencies involved in a religion-driven consumer boycott in mitigating negative influences of such boycott on brands.

Originality/value – The study shows the root of consumers’ motivation to participate in an international religion-based consumer boycott, i.e. intrinsic religious motivation, by illustrating the mechanisms of religious influences (i.e. intrinsic religious motivation) on consumers’ intention to participate in Islam-driven boycott.

Keywords Religion, Muslim consumers, Boycott, Social dilemma, Intrinsic religious motivation

Paper type Research paper

1. Introduction

Consumer boycotts of select US brands have persisted for more than a decade. Since 2008, the popularity of such campaigns has risen sharply during heightened crises involving certain Muslim communities, especially in the Middle East (Ziadah, 2014; Abdul-Talib and Abdul-Latif, 2015). Such campaigns have reached global consumers irrespective of nationality and religious beliefs as part of efforts to uphold human rights and international law (Ziadah, 2014; Blythman, 2009; Griffin, 2015). However, the popularity of such campaigns in global Muslim communities is driven more by the religious appeals of the boycott campaign than anything else. Some Muslim communities could view boycotting select US brands, in particular, as a religious duty of Muslim consumers, thereby triggering the consumer group’s motivation to boycott brands.

A religion-driven consumer boycott is thought to be more persistent and more damaging to brands (Abosag and Farah, 2014); hence, it is imperative to understand the mechanism and extent of religion’s influence in consumer boycotts. This aspect has not been exhaustively explored in the literature. Previous studies in a similar boycott context approached this phenomenon from political (Sandikci and Ekici, 2009), socio-cognitive (Farah and Newman, 2010) and motivational perspectives (Abdul-Talib and Abdul-Latif, 2015), among others.
Although factors of religious influence, such as commitment and affiliation, have been found to affect the intention of consumers to participate in boycotts (e.g. Farah and Newman, 2010), there is no research examining the fundamental role of religion's influence on Muslim consumers' motivation to boycott in a campaign surrounded by religious sentiments.

Social dilemma theory offers a framework in which to explore the potential of religion as the motivator for a boycott. The theory suggests that the relevance of a boycott motive to a large, cohesive consumer group is essential to its success (Sen et al., 2001). Cultural agents, such as religion, bring people together with similar knowledge to form a collective social movement (Oliver and Marwell, 1992). The nature of religious teachings creates a strong cohesive group of followers who, if intrinsically driven towards their religion, would place religion as the primary objective in life (Allport and Ross, 1967) thus positioning religion as a potentially concrete platform on which to develop a successful boycott. However, the fundamentality of religious influence in concocting a religion-based boycott is not well understood.

This study aims to examine religion's role in priming consumers' motivation to participate in a religion-based boycott, in the context of US food brand. This study addresses the following research questions:

- **RQ1.** Is intrinsic religious motivation the source of consumers' motivation to support a religion-based boycott?
- **RQ2.** How does religion influence consumers' intention to participate in a religion-based boycott?

Scholars of consumer boycotts seek to understand the motivations driving consumers to act against their self-interest and support boycotts (Klein et al., 2004). This study focuses on religion-based boycotts, and, through consumers' boycott motivation factors, explores the role of intrinsic religious motivation in boycotts.

2. **Background**

International consumer boycotts are potentially damaging in the long term to a brand's image (Ettenson and Klein, 2005) and a company's reputation abroad (Abdul-Talib and Abdul-Latif, 2015). Boycotts require businesses to employ effective marketing strategies to curb the damaging effects of such campaigns (Ettenson and Klein, 2005). Due to the increasing number of consumer boycotts worldwide (Mellahi et al., 2011), there is a growing interest in discovering effective ways to deal with such campaigns (Knudsen et al., 2011; Abd-Razak and Abdul-Talib, 2012; Schrempf-Stirling et al., 2013). Knowledge of consumers' motivation to participate in a boycott better equips marketers to develop a customised strategy to minimise any negative impact on food brand performance and company reputation.

2.1 **Consumer boycott**

A boycott is an organised, collective, but nonmandatory, campaign (Garrett, 1987) whose organisers campaign to de-market particular goods for particular reasons (Friedman, 1985). Depending on the context of the boycott, a primary trigger motivates consumers to participate in such a campaign (Hoffmann, 2013). Proximity to the source of a boycott's subject is the prime factor that feeds consumers' motivation to participate, such as a boycott that pushes for the relocation of a factory (Hoffmann, 2013). In a religion-based boycott, instead of geographical proximity, the sense of belonging to a religious group could bring believers together and enable them to relate to a source of boycott that involves their fellow religious-group members elsewhere, thereby creating cross-border support.

Boycotting uses consumers' buying power to protest an organisation's practices and policies. It is an exercise of their political power to make a difference in the marketplace.
The goal of boycotting is to protect the economic and social well-being of the consumers, who believe they are being challenged by organisational practices. In many cases, boycotters attempt to persuade organisations to act more ethically or responsibly in their marketing practices, strategic policies and actions.

Boycotting as a social dilemma phenomenon highlights the fundamental of communal or group interests to consumers’ support and participation of boycott. The social dilemma perspective on boycotting suggests that consumers balance self and social or group interests when deciding whether to participate in a campaign (Sen et al., 2001). Those with strong personal standpoints on a boycott objective would participate in boycotting goods, while many generally prefer to favour personal interests instead (Sen et al., 2001). A religious group tends to have a strong connection among its believers (Ysseldyk et al., 2010), giving a potential advantage of strong support to a religion-based boycott campaign.

2.2 Religion and consumer boycotts

Followers of world religions sometimes participate in the boycott of goods or businesses. Although most of the time their plights vary, their basic motivation tends to be defending their religious beliefs, values and teachings or their religion’s reputation. For example, in Myanmar, Buddhists’ boycott of Muslim businesses is motivated by their concern that the Muslim community could weaken their religion’s hold on the country’s economy and social representation (Marshall, 2013). An American Christian group urges consumers to boycott brands that claim to downplay Christianity’s celebrations (Malykhina, 2009). Muslim consumers also boycott products from countries that claim to support the publication of materials perceived to harass their religion (Jensen, 2008).

A religion-based boycott capitalises on religious teachings or values to justify and motivate consumers to participate. Organisers may compile relevant religion-related materials, such as verdicts or the opinions of religious figures, to present a good case, so consumers support the boycott. Persuasively executed as in other types of boycott, urging consumers to contemplate the consequences of their purchasing power (Simon, 2011), this case, to achieve religious goals. For example, Muslim consumers perceived their participation in boycotts against brands termed “Friends of Israel” as an obligatory duty towards fellow Muslims in crisis (Farah, 2011).

Muslim consumers’ boycott movements on select US and western brands are deemed politically motivated (Sandikci and Ekici, 2009). Indeed, this makes sense in that campaigns target a specific country’s brands. Boycott organisers list brands from certain political states (e.g. the USA and Israel; see also Innovative Minds), and campaigns thrive in the rejection of those states’ unpopular policies on international issues (e.g. territorial dispute, violation of human rights) (Griffin, 2015). Consumers’ decisions to boycott US brands are driven by their political stance (Farah and Newman, 2010). Nonetheless, alongside consumers’ relevant political stances, religious influences play a distinct role in explaining consumers’ decisions to boycott US products (Farah and Newman, 2010). In fact, the term consumer jihad is used to describe Muslim consumers’ rejection of brands in the name of religion and in solidarity with oppressed Muslim communities (Izberk-Bilgin, 2012).

The religious appeals underlying campaigns for Muslim consumer boycotts are initiated by the Middle East conflicts, which place the religion at the heart of the boycott campaign. Organisers and scholars who support boycotts associate them with religious duty by citing relevant support from religious sources, such as a contemporary ruling on a point of Islamic law known as a fatwa. The boycott-related fatwa quotes religious anecdotes and Quranic verses prohibiting Muslims from participating in any activity that could victimise others and from transacting with parties that endorse or support injustice (Muhamad, 2011). In Malaysia, for example, evidence that the boycott is perceived as a religious issue is...
exemplified by the mainstream national newspaper placing articles on boycotting US brands in the “Religion” column of the newspaper (Mohd Zin, 2010).

The religion-based boycott can be best explained by the social dilemma theory on boycott (Sen et al., 2001). Being a believer in a religion gives one membership to religious group, which can be the primary reason for consumers to support a boycott (Gardberg and Newburry, 2013). Religious identification develops strong, long-lasting membership (Ysseldyk et al., 2010) that would have resulted in a more cohesive group unified under a similar values, norms and lifestyle framework. As a result, believers of a religion who are not directly related to the source of boycott easily develop a strong connection to a boycott that uses religious appeals. The relevance of boycotts to potential boycotters is crucial in shaping their attitude and interest in participating (Sen et al., 2001). Therefore, religion appears to be a solid backbone that brings boycotters onto the same platform. Nonetheless, the believers’ type of motivation in approaching their religion would discriminate their attachment to the religious group, likewise their motivation and participation in religion-based boycott.

Islamic teachings stress the connectedness of the believers. Aside from assisting the poor and upholding justice, essential teaching in Islam is helping Muslim communities in need, partly manifested through the importance of the Muslim brotherhood concept in the religion (Farook, 2007). One of the anecdotes of the Prophet Muhammad underlines the connectedness required among Muslim communities: “None of you [truly] believes until he loves for his brother what he loves for himself”. (Ibrahim and Johnson-Davies, 2010). Ideally, the teaching places a strong ground for Muslim individuals to reach out to their fellow believers to become responsible members of the religious group.

Regardless of political borders, Muslim consumers’ efforts to organise and participate in a religion-based boycott are driven by their bond owing to their religious identity, also known as the spirit of brotherhood (Mohd Yunus et al., 2013). The fact that Muslim consumers tend to participate more in boycotts against US brands as compared to consumers affiliated with other religions (Farah and Newman, 2010), may imply the religious sentiment of the campaigns as well as the connectedness among the members of the religious group.

The growing religious conservatism among Malaysian Muslim consumers (Aziz and Shamsul, 2004) may have facilitated the popularity and persistence of religion-based consumer boycotts in Malaysia. Malaysian Muslim consumers tend to respond to local and international issues concerning religion quickly. Protests, boycotts and petitions are widespread at the height of these issues, which include boycotts triggered by overseas events, especially crises in the Middle East. Palestine-related events are widely publicised and have resulted in calls to boycott brands claimed to be supportive of offensive military actions (Mohd Yunus et al., 2013; Glover, 2009). Studies of several predominantly Muslim markets (i.e. Lebanon, Malaysia and Saudi Arabia) show positive relationships between Muslim consumers’ degree of religiosity and their motivation to participate in past boycotts (Al-Hyari et al., 2012; Farah and Newman, 2010; Abdul-Talib and Abdul-Latif, 2015).

Previous evidence of religious influences on boycott participation has insufficiently addressed the centrality of religion’s influence on religion-based boycott. The striking use of religious appeals in a boycott campaign, and the growing Islamic conservatism among Muslim consumers would place religious influences at the core of the group’s motivation and participation in a boycott. The idea is encapsulated in the research model of this study.

3. Hypotheses development
3.1 Intrinsic religious motivation and boycott motivation factors
The construct of intrinsic religious motivation has been popularised by Allport and Ross (1967) and has been adopted to predict a wide range of human behaviours, including
attendance in religious functions, religiously controversial behaviours and psychiatric
tendencies. This concept is described as the state of being internally driven to adopt religious
teachings in life (Allport and Ross, 1967), and an attempt to represent an individual's
motivation to practise religious teachings for the sake of the religion itself, rather than external
factors such as social pressure and worldly objectives. The construct represents a sincere
appreciation of the religion and is therefore proposed in this study to capture Muslim
consumers' motivation and intention to engage in religion-based consumer boycotts.

Individuals who tend to be more intrinsically driven towards Islam would perhaps place
more attention to religiously motivated issues in the marketplace. They place religion as
their primary objective in life and tend to be more committed to religious teachings
(Winston, 2011). Hence, they could be more sympathetic to a boycott associated with
religious issues (Muhamad and Mizerski, 2013). Intrinsic religious motivation tends to
explain a person's ability to adjust to society (Winston, 2011), which could indicate his or her
greater involvement in the community. Hence, there is a greater possibility for them to
interact with others and learn about boycotts. Thus, consumers who are more intrinsically
driven towards their religion would be more willing to participate in the boycott of US
brands associated with the crisis in the Middle East:

**H1.** Intrinsic religious motivation is positively related to intention to boycott.

Subjective norms represent perceived importance of others' expectation in deciding whether
to perform a particular behaviour (Ajzen, 1991). An indicator of social pressure (Ajzen,
1991), subjective norms' influence in decision making is stronger in circumstances when one
is more motivated to conform to others' anticipations. Decision making that takes place
among a more collective society, and to perform controversial or moral behaviours, would
see stronger influence of subjective norms than in other circumstances (Muhamad and
Mizerski, 2013). Social pressure is an important mechanism of group membership that
motivates consumers to participate in a boycott (Garrett, 1987), and is found to have a
strong positive relationship with consumers' intention to boycott (Maher and Mady, 2010;
Farah and Newman, 2010).

Subjective norms and religion are closely related concepts. Commitment to religion is
found to be positively related to the value of conformity. Religion offers a strong group
identity and membership anchored to religious beliefs (Ysseldyk et al., 2010), and those who
strongly abide by religious teachings tend to strongly value social conformity (Saroglou
et al., 2004). In a religion-based boycott, an endorsement from respected religious scholars
lends weight to the boycott and warrants believers' support. The normative beliefs
regarding the boycott bring religious group members together and translate into a strong
influence of subjective norms in their boycotting decision.

A study shows that believers who tend to be more intrinsically motivated towards their
religion also tend to rely more on important people in their group when making decisions
(Muhamad and Mizerski, 2013). In a religious boycott, this eventually triggers a stronger
boycotting intention. Hence, the effect of consumers' perception of social pressure to boycott
on their intention to boycott depends on their intrinsic religious motivation:

**H2.** Subjective norms to boycott US brands mediate the influence of intrinsic religious
motivation on one's intention to boycott.

Self-enhancement is conceptualised as a drive to increase one's self-esteem (Bosson et al.,
2003). In boycotting behaviour, self-enhancement represents a consumer's belief that
participating in a boycott will create a good social image and portray him or her as an
individual with high morals (Klein et al., 2004), which will boost his or her self-esteem.
Studies of consumer boycotts show that self-enhancement is related to people's intention to
participate in boycotts (Klein et al., 2004; Hoffmann, 2013).
The link between religiosity and self-enhancement is well established. Religion is perceived as a medium for believers to achieve self-enhancement, and found to be positively related to one’s degree of religiosity (Sedikides and Gebauer, 2009). A study of believers from 18 counties showed that self-esteem, as the product of self-enhancement, is positively related to personal religiosity (Gebauer et al., 2016). Therefore, it is safe to propose a positive relationship between religious influences measuring with self-enhancement construct. In the context of this study, the influence of consumers’ belief that boycotting promotes favourable self-images (self-enhancement) or their tendency to participate in the boycott may depend on their degree of intrinsic religious motivation in practising Islam:

**H3.** Self-enhancement mediates the influence of intrinsic religious motivation on one’s intention to boycott.

The literature suggests that consumers’ willingness to participate in a boycott is related to their perceived likelihood of the campaign’s success in attaining its goals (Klein et al., 2004; Sen et al., 2001). Klein et al. (2004) conceptualised this phenomenon as “Make a difference”, which represents consumers’ beliefs and confidence in a boycott’s mechanism to achieve its ultimate goals, such as targeting an organisation to revise its unpopular policies.

In a religion-based boycott, believers’ boycotting behaviour could be driven by the inspiration to help the victimised parties or to restore justice. In this study, consumers could develop greater confidence in the boycott’s efforts when respected religious scholars, local government and other religious or nonreligious communities worldwide support the campaign. Intrinsically religiously motivated individuals tend to be enthusiastic about applying religious teachings in every aspect of their lives (Allport and Ross, 1967) and would find means to gain internal satisfaction from pursuing their believed religious duty. As the more intrinsically religiously motivated individuals would tend to be more aware of the supporters of the campaign, they would perhaps develop greater confidence in a religion-based boycott. Thus, it is proposed that their belief in promoting change through boycotts mediates the effect of intrinsic religious motivation on people’s intention to participate in a religion-based boycott:

**H4.** Beliefs and confidence in the boycott’s mechanism for achieving its goals (“Make a difference”) mediate the influence of intrinsic religious motivation on the intention to boycott.

There is a strong possibility that believers’ approach in following their religion influences their attitudes towards religion-based boycotts. Religion serves as a social identity that is anchored to a religious beliefs framework, and therefore strongly influences the believers’ psychological make-up (Ysseldyk et al., 2010). Believers’ commitment to religious teachings explains their beliefs and attitudes in various settings (e.g. ethical beliefs: Vitell et al., 2006; political beliefs: Friesen and Ksiazkiewicz, 2015; environmental attitudes: Felix and Braunsberger, 2016). In fact, their religious motivation towards practising religion significantly explains their attitudes towards behaviours subject to religious rulings (Muhamad and Mizerski, 2013).

The link between consumer attitudes and behaviours is well established in countless decision-making settings (Ajzen, 1991). But the role of consumer attitudes towards boycotting is not well explored in consumer boycott literature. A recent study shows the significant influence of attitudes on boycotting (Chiu, 2016), indicating the usefulness of the construct in understanding boycotting behaviours. This study proposes that the effect of consumers’ attitude towards boycotts on their intention to boycott depends on their intrinsic religious motivation:

**H5.** Attitudes towards boycotting US brands mediate the influence of intrinsic religious motivation on the intention to boycott.
4. Theoretical framework
Consumers’ initial filtering of whether to participate in or support a boycott depends on a unique factor or combination or factors relevant to the boycott scenario. In other words, different types of boycotts may be triggered by different factors. Hoffmann’s (2013) model has successfully tested the idea that consumers’ beliefs and attitudes towards a boycott are contingent on a primary factor that prompts their desire to boycott. For example, in the context of a local factory relocation effort, Hoffmann’s (2013) model found that consumers’ proximity to the consequences of the critical actions of the target company was the primary determinant of their intention to boycott.

This study adopted Hoffmann’s (2013) framework in proposing the primary role of religion’s influences – in this case, the intrinsic religious motivation factor – on Muslim consumers’ motivation and intention to boycott US food brand. In a boycott motivated by religious appeals, religious attachment and a sense of belonging may override one’s geographical proximity to the epicentre of the conflict that initiated the campaign. In this study, intrinsic religious motivation is proposed as the primary factor that fuels Muslim consumers’ motivation to participate in a religion-based boycott (Figure 1), as the mean to capture the element of religion’s influence on motivation and intention to boycott US food brand.

5. Methodology
5.1 Sample
A total of 341 Malaysian Muslim consumers aged 19–35 years responded to a survey in a lecture hall setting on an academic campus. The respondents were briefed on the confidentiality of their responses. Precautions were taken to make sure the respondents completed the survey independently. The Malaysian higher education system has adopted a centralised system to send students from different parts of the country to various public universities. Hence, to a certain degree, the sample would represent the cohort from diverse
geodemographic backgrounds and cultural and traditional values, given the significant
differences among Malaysians from different states in their appreciation of religious
teachings and values.

5.2 Instrument and the administration
The survey comprised two pages containing nine items on intrinsic religious motivation
(Essoo and Dibb, 2004); six items on consumer motivation to boycott (Klein et al., 2004) are
adapted to the context of this study by customising the subject of boycott to a selected US
food brand; three items on social pressure and general intention, respectively (Ajzen, 2002;
Table I); and basic demographic questions. The data collection for this study was performed
in 2015 when there was a moderate-to-weak campaign for boycotting US brands.

5.3 Context
The study chose a US fast-food chain as an example of boycotting against US brands or
supporters of Israel. Influential religious personalities outside the country declared official
religious rulings banning certain brands, which Malaysian Muslim consumers tend to adopt
(Muhamad and Mizerski, 2013). While the boycott is initiated abroad, such campaign in
Malaysia is supported by influential NGOs like The Malaysian Muslim Consumer
Association (BBC News, 2009), aside from prominent figures, such as the country’s previous
prime minister, Mahathir Mohamad (Glover, 2009). Malaysia is known as a progressively
moderate Muslim market with a significant market potential for international food brands;
thus, understanding the elements driving consumers’ motivation to participate in an
international religion-based boycott is important.

The proliferation of social media platforms that booming from the early 2000 helps
disseminate information on boycotts initiated abroad to young Malaysian Muslim
consumers. Since then the campaign is ongoing and spikes when there is an escalation in
Middle East tensions—especially that involves of Palestinian crisis. Muslim consumer
groups globally have the youngest median age of 23 years (Lipka and Hackett, 2015). The
young adolescent Malaysian Muslim consumers are active information seekers and are
well connected, mainly through social media platforms (Subramaniam, 2014). For this
group of consumers, religion and religion-related issues are far from taboo. In fact,
keeping updated on religion-related issues is perhaps a favourable idea in a close-knit and
moderate Muslim community.

Research shows that the intrinsically religiously motivated among them are
knowledgeable about contemporary Islamic rulings (Muhamad et al., 2016), and their
commitment to Islamic teachings found to influence their boycotting intention (Ahmed et al.,
2013; Abdul-Talib and Abdul-Latif, 2015). Malaysian television channels and radio stations
highlight young, religious and educated teenagers as part of the popular culture through
reality and talent shows (Pak, 2010). The possible effect of such programmes is a positive

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<th>Constructs</th>
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<th>Min.</th>
<th>Max.</th>
<th>Correlation matrix</th>
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<td>1.01</td>
<td>1</td>
<td>5</td>
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<tr>
<td>2. Intrinsic religious motivation</td>
<td>4.30</td>
<td>0.44</td>
<td>2</td>
<td>5</td>
<td>0.271*</td>
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<td>3. Attitude towards boycott</td>
<td>4.15</td>
<td>1.06</td>
<td>1</td>
<td>5</td>
<td>0.429* 0.315*</td>
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<td>4. Subjective norm</td>
<td>3.82</td>
<td>1.00</td>
<td>1</td>
<td>5</td>
<td>0.633* 0.419* 0.480*</td>
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<tr>
<td>5. Make a difference</td>
<td>4.26</td>
<td>0.63</td>
<td>2</td>
<td>5</td>
<td>0.383* 0.455* 0.397* 0.482*</td>
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<tr>
<td>6. Self-enhancement</td>
<td>3.81</td>
<td>0.74</td>
<td>2</td>
<td>5</td>
<td>0.392* 0.337* 0.310* 0.453* 0.626*</td>
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Note: *All correlations are significant at p < 0.01 (two tailed)
perception of religion, which assists in inculcating in young Malaysian Muslims the importance of religion. This phenomenon could serve as a basis for the adolescents to be more receptive to religion-based boycott appeals.

5.4 Analysis
The data set was modelled on the framework using the partial least squares (PLS) technique, a variance-based structural equation modelling technique, on the SmartPLS 3 software. The utility of SmartPLS software is widely acclaimed for testing new model (Hair et al., 2012), hence relevant for testing the framework in this study. The software generates a measurement and a structural model that allows the assessment of the measures’ reliability and validity, and the fit between the data and the proposed model, respectively. Hypothesis testing utilised results generated for the structural model after the data set was deemed statistically fit to the research framework’s structure and measurements.

6. Result
The objective of this study is to test the influence of intrinsic religious motivation on consumers’ intention to participate in a religion-based boycott of US food brand. A total of 325 cases have been retained for further analysis. Almost two-thirds of the respondents are undergraduate students in their senior year (22–23 years of age) and postgraduate students (59.1 per cent), while the rest are aged 19–21 years (40.9 per cent). The sample consists of 199 (61.2 per cent) male and 126 (38.8 per cent) female respondents. The descriptive analysis of the constructs and the bivariate correlations are presented in Table I.

6.1 Measurement models
A good measurement model indicates the measurement used to gauge variables and constructs are reliable and valid. The indexes used to verify measurement models are reliability, convergent validity and discriminant validity. The results generated from the data in this study suggest that the adopted measurement models are valid and reliable.

6.2 Reliability
Composite reliability offers a highly credible index for reliability by arranging indicators based on its reliability (Werts et al., 1974). Composite reliability indexes for the measurement models in this study indicate reliable measures with values greater than 0.80 (Hair et al., 2014). The reliability of indicators is inspected through individual item loading, which in this case shows that values fall within an acceptable range or are greater than 0.70 (Hair et al., 2014; Table II).

6.3 Convergent and discriminant validity
Convergent validity indicates that a set of indicators is from the same construct. PLS generates Fornell–Larcker’s criterion of the average variance extracted (AVE) as the indicator of convergent validity (Hair et al., 2014). The AVE of a construct should be at a value of at least 0.5, which suggests that a latent variable explains about 50 per cent of the variances in its indicators. The constructs in this study show sufficient convergent validity with AVE values at and greater than 0.60 (Table II).

Discriminant validity signifies that a latent variable shares more variances with its assigned indicators than with any other latent variables. Constructs adopted in this study have established their discriminant validity with the square root of AVEs are higher than its correlation with any other latent variables (Fornell and Larcker, 1981a, b; Table III). Inspections on the loadings of each indicator show greater values than the cross-loadings.

International consumer boycott
6.4 Structural models

The results indicate that the model offers a relevant framework for predicting the sample’s intention to boycott. The research model is categorised as moderately strong with a determinant coefficient ($R^2$) of 0.475 (as quoted in Hair et al., 2014) explaining almost half of the variances in the sample’s intention to boycott (see Figure 2). The model has a moderately strong predictive relevance in predicting one’s intention to boycott as indicated by the Stone–Geisser index ($Q^2$) of 0.317 (Hair et al., 2014). Intrinsic religious motivation has medium to large effects ($f^2$) on consumers’ motivation to boycott. Interestingly, religious motivation has no direct effect on one’s
intention to boycott, but other factors fully mediate its effect. Subjective norms have a large effect on consumers’ intention to boycott, whereas other factors have a small effect on consumers’ intention to boycott (Table IV). There is no issue of multicollinearity as indicated by the maximum variance inflation factor (VIF) of 1.850, which is below the threshold of 5 (Hair et al., 2014). Overall, PLS analysis has confirmed the goodness of fit of the proposed model. The model is free from common method bias with maximum VIF value lower than 3.3 (Kock, 2015).

6.5 Hypotheses testing

The hypotheses propose that subjective norm, self- and moral enhancement and subjective norms mediate the effect of intrinsic religious motivation on consumers’ intention to boycott. The structural model’s parameter estimates derived from the bootstrapping of 5,000 samples.

![Diagram of the structural model](image_url)

**Notes:** All path indicates its $\beta$ coefficient, $p$-value in brackets. The $R^2$ are indicated in italic

<table>
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<th>Indirect effects</th>
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<td></td>
<td>$\beta$</td>
<td>$p$-Values</td>
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<td>1. Intrinsic $\rightarrow$ Subjective norms</td>
<td>0.472</td>
<td>0.000</td>
</tr>
<tr>
<td>2. Intrinsic $\rightarrow$ Self-enhancement</td>
<td>0.294</td>
<td>0.000</td>
</tr>
<tr>
<td>3. Intrinsic $\rightarrow$ Make a difference</td>
<td>0.455</td>
<td>0.000</td>
</tr>
<tr>
<td>4. Intrinsic $\rightarrow$ Attitude</td>
<td>0.429</td>
<td>0.000</td>
</tr>
<tr>
<td>5. Intrinsic $\rightarrow$ Intention</td>
<td>-0.028</td>
<td>0.534</td>
</tr>
<tr>
<td>6. Subjective norms $\rightarrow$ Intention</td>
<td>0.522</td>
<td>0.000</td>
</tr>
<tr>
<td>7. Self enhancement $\rightarrow$ Intention</td>
<td>0.109</td>
<td>0.048</td>
</tr>
<tr>
<td>8. Make a difference $\rightarrow$ Intention</td>
<td>0.041</td>
<td>0.460</td>
</tr>
<tr>
<td>9. Attitude $\rightarrow$ Intention</td>
<td>0.170</td>
<td>0.004</td>
</tr>
</tbody>
</table>

**Table IV.** Structural path $\beta$ coefficients, $p$-values and effect sizes

International consumer boycott

Figure 2. The structural model and path significance
show that intrinsic religious motivation significantly explains all of the four aforementioned factors (Figure 2; Table IV). However, only social pressure (H2; 0.52, p < 0.0001), self-enhancement (H3; 0.11, p < 0.05) and attitudes (H5; 0.17, p < 0.05) are significantly related to one’s intention to boycott, but not intrinsic religious motivation and moral enhancement. Thus, H2, H3 and H5 are supported, while H1 and H4 are not supported. Intrinsic religious motivation has a significant indirect effect (0.37, p < 0.0001) but no direct effect on one’s intention to boycott, which indicates the total mediation effects of the proposed factors on the influence of intrinsic religious motivation on one’s intention to boycott.

7. Discussion
This study explores the potential of religion to induce and drive consumers’ participation in a religion-based boycott, through the lenses of social dilemma (Sen et al., 2001) and Hoffmann’s (2013) theories. Findings show that religion (i.e. religious motivation) does not directly influence sample’s motivation to boycott, yet it is the epicentre or the root of consumers’ motivation to participate in a religion-based boycott. This study illustrates the mechanisms of Islamic influences through Muslim consumers’ intrinsic religious motivation on their intention to participate in Islam-driven boycott on US food brand, through their perception of the subjective norms on boycotting, self-enhancement and attitude towards the boycott. Religion as a cultural agent is found to be the driving force that moves a religion-based consumer boycott. The fact that respondents’ intrinsic religious motivation indirectly influences their support for the boycott through their motivation, attitudes and perceptions towards the boycott, signals the ingrained religious influences on the respondents’ cognitive and affective reactions towards religion-based boycott. The finding provides evidence for the strong potential of a cultural element in driving social movement (Oliver and Marwell, 1992), religion as a catalyst for social change (Izberk-Bilgin, 2012), and explain the endurance and strength of religion-based consumer boycott (Abosag and Farah, 2014).

Beyond corroborating the major role of subjective norms in consumers’ boycott intentions and participation (Maher and Mady, 2010; Muhamad and Mizerski, 2013; Abosag and Farah, 2014), this study found that subjective norms influence on participation in a religion-based boycott draws from religious influence. Those who tend to be more internally driven to follow Islam and stronger intention to participate in religion-based boycotts, perceived greater social pressure to boycott a product or brand. The finding offers new evidence to understanding the source of subjective norms in consumers’ decision making, particularly in a religion-based consumer boycott.

The finding indicates that respondents’ degree of conformity to important others (i.e. subjective norms) is the religion’s mechanism to influence their deciding to participate in the religion-based boycott. In the case of Islam-based boycott, subjective norms act as a medium in binding members of a religious group, and to a certain degree in enforcing religious teachings. While the important role of social pressure in Muslim consumers’ intentions has been widely reported in previous studies on boycott and consumer behaviours in general, most of the time, the strong effect of subjective norms is credited to the sample’s collective cultural values within the context of nationality or in a political border sense of community (e.g. Kuwaitis in Farah and Newman, 2010; Malaysians in Muhamad and Mizerski, 2013; Asian consumers in Le Monkhouse et al., 2012). Respondents’ perception of subjective norms, in the case of an Islam-based boycott, is significantly sourced from their motivation to practice Islamic teachings. This finding points to religion as the primary entity defining the importance of others in a religion-based consumer boycott, and perhaps similarly in other religion-related behaviours in the marketplace.
Consumers’ with high intrinsic religious motivation may have carried a strong religious connection with other members of the same religion. Intrinsically religiously motivated consumers are knowledgeable in religious rulings (Muhamad et al., 2016), but the more intrinsically religious Muslim consumers in this study can internalise Islamic teachings that place extreme importance on developing and maintaining a connection (i.e. brotherhood) within Muslims’ circle, more than their counterparts, albeit their geographical distances from the epicentre of the boycott event, as well as their differences in race and nationality. Perhaps, similar to their Middle East counterparts (Farah, 2011), they may perceive boycotting the brand as part of their religious duty to fellow Muslims. This perhaps explains Muslim consumers’ strong motivation to support and participate in Islam-driven boycotts (e.g. Farah and Newman, 2010).

Findings indicate that religion influence managed to develop consumers’ confidence in the practicality of the religion-based boycott and induce their intention to participate in the boycott. The consumers’ confidence in the effectiveness of boycott to achieve its aims is known to explain Muslim consumers' intention to participate in religion-based boycott (Abd Razak and Abdul-Talib, 2012). However, the significant role of religious influences in forming consumers’ confidence in religious boycotts is new to the literature.

In this study, the more intrinsically religiously motivated consumers who want to participate in a religion-based boycott have more confidence in the boycott mechanism to achieve the primary goal of the Islam-driven consumer boycott. Supports from influential religious and public figures give credits to the campaign as the credible means to put pressure on the brand owner and to achieve the campaign’s aim. The intrinsically religiously motivated consumers treasure acting on religious ground and thus are driven to participate in the boycott.

Findings from this study corroborate the positive relationship between attitudes towards boycotts and consumers’ intention to participate in a boycott in previous studies (e.g. Farah and Newman, 2010). Positive feelings about a boycott tend to precede consumers’ boycotting intention. Additionally, this study found consumers’ attitude towards religion-based boycotts mediates the religious influence on one’s intention to boycott. The young Muslim consumers who are more intrinsically motivated in practicing Islam and want to participate in boycotts tend to have a more positive attitude towards religion-based boycotts than their counterparts. The religion-based campaign’s appeals may have shaped their positive attitude towards the boycott that position participation as a behaviour in the spirit of Muslim brotherhood, to support fellow Muslims. As the intrinsically religious consumers generally value religion as the prime objective in life (Allport and Ross, 1967), the more intrinsically religiously motivated respondents in this study could be strongly moved by the boycott’s religious appeals and perceived the boycott favourably, which lead to a greater intention to boycott the brand.

Overall, evidence from this study demonstrates a consumer boycott viewed from the social dilemma perspective. The study exemplified the role of religion as a credible agent in moving consumers to participate in a religion-based boycott and cementing group cohesiveness among consumers to support a religion-based consumer boycott. In a religion-based boycott, there is greater importance in pursuing group interests than self-interest among the religious group members. Consumers’ attitude towards religious boycotts— which represents their personal feeling and a smaller role on consumers’ intention to participate in a religion-based boycott as compared to other drivers, especially compared to the role of perceived subjective norms on boycotting the targeted brand. The description fit Sen et al.’s (2001) description of a precursor to a successful boycott campaign, whereby group interests that could be gained from participating in a boycott become more important than personal pursuit. The finding offers a possible explanation for the reported persistence of Islam-driven boycotts over the past decade (Farah, 2011).
The study highlights an example of an arguably persistent boycott campaign that adopted religious appeals to gain support from its religious group members. The fundamental role of religion in shaping consumers’ overall beliefs, values and strong group membership and belonging, qualify it as a strong platform to drive a competitive international consumer boycott.

Nonetheless, the potential role of religion to gather consumers to reject products could be unethically manipulated in the marketplace. Unless consumers are well informed of the aims of the supposedly religion-based movement as a genuine threat to the group or their beliefs, the strong religious sentiment among members of a religious group could be manipulated to trigger an attack on rivals’ brands.

8. Managerial implications
Marketers should be cautious in interpreting drivers of boycott involving religious groups or sentiment. Even in a “less religious” or secular market, religion may still be the key source for consumers’ motivation to participate in the boycott due to its ubiquitous role in shaping consumers’ motivational elements and values.

The Islam-driven consumer boycott in this study enabled consumers to articulate their opposition to companies’ actions that were not in line with their religious principles and beliefs. Due to the consumers’ confidence in the power of boycott, and their positive attitudes towards Islam-driven or religious-based boycott, ignoring the boycotters and choosing to do nothing may not be the best option for companies. The literature suggests that while in some cases companies do survive, in others, this avoidance option can be hazardous to brands and may not be a good tactic to adopt in the long run. It is safer to deal diligently with the boycotters as religious boycott tends to persist over time.

Due to the strong importance of important others found in this study, companies could consider engaging with the dominant players in boycotts rather than just opting to speak to consumers through the mass media. NGOs, boycott organisers or relevant local religious figures could provide an efficient conduit for conveying accurate information to the public in case companies have been falsely associated with the events that triggered the boycott. Some of the brands have long established footholds in Muslim countries and have recruited Muslims to run their business operations. These companies, with strong bases in Muslim markets, could work with local NGOs to reduce the negative repercussions of Islam-driven boycott on brands. Such efforts could initially focus on developing an understanding of the role of companies or brands concerning the Palestinian issue.

In cases where international brands and franchises are unable to deny the boycotters’ claims, local representatives of the companies could highlight their limitations in being able to influence their overseas counterparts to the leaders of the boycott. The companies could also stress their economic contributions to Muslim societies. In cases involving dispersed boycotters, internationally, as in the context of this study, targeting the most influential group within the community would be a practical approach as Muslim consumers are relatively connected and frequently exchange information on religious issues.

However, companies should proceed with caution and should understand the local Muslim communities in which they operate. Though Muslim consumers are united in many of their worldviews, there are still significant differences of opinion over some issues, including consumer boycotts. There are groups in Malaysia and in the Muslim world that oppose the use of boycotts against selected brands to protest the attacks in Gaza. This fact reveals the existence of other community perspectives relating to religion-based boycotts. Opponents of the boycotts also argue on religious grounds and stress that pursuit of these boycotts could jeopardise other Muslims. This section of the Muslim community has questioned the feasibility of these boycotts, simultaneously arguing that they will harm
Muslim consumers’ economic well-being. Given the sensitivity of this issue, it is safer for companies to engage with the majority opinion in a market.

On a different note, the role of religious influences on Muslim consumers’ psychological makeup would benefit the growth of halal brands.

9. Limitations and future research areas
The cross-sectional nature of this study may not have captured possible fluctuations in consumers’ intention to participate in the boycott. Given that boycott campaigns tend to spike during assaults carried out on Palestinian territory, a longitudinal study could facilitate a much deeper understanding of the phenomenon.

The study’s confinement to US food brand has restricted the scope of its findings to one category of boycotted brands. As Islam-driven consumer boycotts do not just target US brands, future studies could broaden their focus relating to brand origins to include those from other countries policies. These findings could be compared to isolate general anti-US sentiments from those explicitly relating to events in Palestine. Worth noting is the nature of relatively secular values of US society that may inflate the sentiment against buying US food brands. It would also be useful to test the effects of a product category, as consumers may not boycott products that have no substitutes.

The findings of this study are limited to its sample of a more educated section of young Malaysian Muslim consumers. It is necessary to investigate the possible moderating effects of age group and education level to advance understanding in this area. The social desirability effect has also not been considered in this study. Thus, future studies may include testing the possible effects of social desirability because of the perceived sensitivity of this topic.

10. Conclusion
This study has explored the nature of religious boycotts and tested the influence of religion on consumer’s motivation to participate in these boycotts. It has attempted to define religion-based boycotts and has offered an alternative perspective for understanding primary stimuli that activate consumers’ motivations to partake in religion-based boycott of food product. The study complements previous work aimed at furthering understanding regarding consumer boycotts by acknowledging religion as a significant contributing agent driving international boycott campaigns.

References


Further reading


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Model construction of engagement and outcomes in consumers food life
Evidence from chain stores customer

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Abstract
Purpose – The purpose of this paper is to determine the impact of food-related lifestyle (FRL) and food-related personality traits (FRPTs) on customer satisfaction and loyalty so that sufficient evidence for forming a new pattern of predictors of customer satisfaction and loyalty can be explored.
Design/methodology/approach – The research method in this study was the descriptive type and was based on the goal of the applied research methods. Data were collected from 384 sample group consumers of chain stores in the city of Tehran. The hypothesized relationships were tested using structural equation modeling (SEM).
Findings – Final results of study showed the significant effects of FRL and FRPT on satisfaction and loyalty of consumers. This indicates that aforementioned variables can create customer satisfaction and loyalty toward food. The research conceptual model was confirmed with goodness of fit.
Research limitations/implications – First, the sample consisted of customers who use a wide range of food despite diverse motives and interests. While knowing that costumers’ specific traits about food would have provided a more detailed and comprehensive understanding, conducting research in a set of general food consumer without considering special foods category could be a limitation. Second, and more importantly, since the customer behavior in consumption choices is an unconscious and cognitive process, other factors and domain that are linked to customer satisfaction and loyalty would have been missed.
Practical implications – This study shows that understanding the behavioral aspects of food consumption can help food producing companies to adjust their production and specially to foresee changes. Marketers are advised to investigate customer traits to promote customer satisfaction and loyalty effectively. This paper contributes to the body of knowledge in food marketing.
Originality/value – The present study offers a unique and valuable insight into a customer’s behavior and deepens customer satisfaction and loyalty by incorporating FRL, food neophobia scale and food involvement scale as independent variables to contribute knowledge in the context of food marketing, and throws some light upon the predictive power of mentioned variables on customer behaviors.
Keywords Satisfaction, Loyalty, Food-related lifestyle, Chain store, Food-related personality traits
Paper type Research paper

Introduction
Rapid change in customer preferences and markets' competition has reformed marketing landscapes in the last couple of decades (Thakur, 2016; Abdul Jalil et al., 2016). Markets are segmented based on lifestyle and are combined with themes of attitudes, beliefs and personalities (Goetzke and Spiller, 2014). In fact, lifestyle refers to patterns of behavior or consumption, reflecting people’s choice and is closely related to consumers’ actions and behaviors (Choi, 2016; Hur et al., 2010). Marketers therefore should benefit from conceptualizing lifestyles to understand and predict changes in behavior or purchasing patterns (Anic et al., 2014; Hur et al., 2010; Lawson and Todd, 2002).
Food-related lifestyle (FRL) is a new concept of a domain-specific lifestyle which is a cognitive approach to analyzing consumer behavior (Brunso and Grunert, 1995; Chen, 2011). Lifestyle, as defined in the FRL concept, mediates between consumers’ personal values and situation-specific product perceptions and behaviors (Pe´rez-Cueto et al., 2010). Its approach regards lifestyle as a mental construct that explains actual food-related behavior (Grunert et al., 2011). Consumption behaviors originate from an individual’s unique values, personality traits and attitudes (Liang, 2014). In other words, an individual’s personal traits or interests can play a role in establishing personal choice criteria through the values held by the individual (Kim et al., 2010). Food-related personality traits (FRPTs) are recognized as an individual’s characteristics that influence a broad range of food choices and food-related behaviors (Mak et al., 2017). Accordingly, different levels of satisfaction and loyalty could be identified based on this (Ji et al., 2016).

Therefore, consumer preferences and attitudes have a significant impact on customer satisfaction and loyalty but there are few studies that specifically address food purchasing behavior (Grunert et al., 2011). Customer satisfaction is both a goal and a marketing tool for chain stores that are really focusing on the customer. It is considered as consumer judgment about goods and services (Kim et al., 2010) and customer satisfaction has become the most core marketing priority, since it is a necessary prerequisite of consumer loyalty (Ryu Hye et al., 2012; Chang et al., 2009). Most frequently, loyalty is calculated as a straight outcome to customer satisfaction (Gul, 2014). Organizations should keep hold of their loyal customers as a competitive asset and develop their activities (Haghighi et al., 2012). Customer loyalty is the totality of feelings or attitudes that would incline a customer to consider the repurchase of a particular product, service or brand or re-visit a particular company or shop which affects the success and profitability of companies (John, 2011). As consumers are surrounded by advertising, information, variety of goods, stores and shopping malls, and having greater choice of purchasing opportunities, decision making in purchasing food products has become more complex and even more important nowadays than in the past (Yasin, 2009). Also, creating and maintaining loyal customers is a challenge for chain stores, since if their customers gain more value elsewhere, they will be prone to change their stores, as changing shops by customers has become common (Jahandideh et al., 2013). Loyal customers not only enjoy a high degree of continuity and increase profitability for the store with their purchase, but they will also remember the store with a positive attitude (Lehew et al., 2002). Identifying the characteristics of these clients can be helpful in today’s complex market. The research is now shifting from customary construct of satisfaction to more active constructs of engagement in customer choice models to predict loyalty (Thakur, 2016). Hence, understanding the factors that influence food consumer satisfaction and loyalty professionally and deeply could effectively indicate the importance and role of independent variables in achieving this purpose.

In the current study, two key issues including FRL and FRPTs are considered as suitable predictors of food consumer satisfaction and loyalty with focus on local foods; also by performing the first exploratory investigation of consumer behaviors in food markets in the specific context of Iran, it is hoped that this study can assist the food industry by identifying food consumer satisfaction and loyalty drivers, and inspire marketing managers to plan appropriate marketing strategies.

Literature review

Food-related lifestyle

In consumer behavior literature, there are three approaches that characterize consumer styles: the psychographic lifestyle approach, the consumer typology approach and the consumer characteristics approach (Anic et al., 2014). Lifestyle is one of the most commonly used concepts in marketing (Goetzke and Spiller, 2014) and refers to patterns of behavior or
consumption (Choi, 2016). It is generally linked with the constructs of psychographic and values (Lawson and Todd, 2002) so FRL is defined as a system of cognitive categories, scripts and associative networks relating a set of food-related behaviors to a set of values (Bruns et al., 2004). FRL initialed in the mid-1990s and, being the major concept used in the food domain, it attempts to characterize consumers by how they employ food and eating to obtain life values (Grunert et al., 2011). Therefore, FRL may be defined as “a consumer’s perceptions of the value of food consumption, which represent the importance of self-related considerations” (Liang, 2014). The FRL concept is used to measure people’s attitudes to food which attempts to characterize people by the role that food plays in their lives and the achievement of desired consequences (Pe’rez-Cueto et al., 2010).

FRL could be analyzed from five aspects and distinct parts of consumers’ cognitive structure are expected to reflect the following life domains:

(1) Ways of shopping reflect consumers’ shopping behavior for food with regards to whether their decision making is characterized by impulse buying or by extensive deliberation, their tendency to read labels, their reliance on the advice of others, one-stop shopping vs specialty food shops and their use of shopping lists whilst shopping.

(2) Cooking methods examine such aspects as how products purchased are transformed into meals. How much time is used for the preparation of a meal and the extent to which the meal is planned? It investigates whether it is a social activity, or one characterized by family division of labor or if it is simply a woman’s task.

(3) Quality aspects refer to attitudes to health, nutrition, freshness and the luxury attributes of a product.

(4) Consumption situations examine how meals and snacks are spread over the day and assess the importance of eating out.

(5) Purchasing motives explores what consumers expect from a meal and the importance of these expectations. It also addresses its importance with social aspects, tradition and security (O’Sullivan et al., 2005).

FRL can be helpful in the identification of a consumer segment and their profiling in terms of consumer values and attitudes on the one side and purchase frequencies on the other side (Grunert et al., 2011). FRL instrument is a major instrument used for segmentation in the food domain and has been applied in different cultural contexts (Pe’rez-Cueto et al., 2010). The researchers who created the FRL instrument argued that FRL reflects personal values and that it can predict consumer behavior (Uimonen, 2011). The FRL instrument has been developed after an extensive review of existing instruments such as VALS, Rokeach’s List of Values and Schwartz’s Motivational Types of Values in works of Brunsø and Grunert (1995), Grunert et al. (1997) and Reid et al. (2005). It is able to capture consumption features as it integrates five interrelated aspects of the food lifecycle, including ways of shopping, cooking methods, quality aspects, consumption situations and purchasing motives (Su and Haynes, 2017; O’Sullivan et al., 2005). Therefore, in this way, it can be characterized as an integrated instrument for studying food and lifestyle factors and attempts to show consumers preferences and attitudes toward specific products (Grunert, 2006).

Food-related personality traits
An important psychological construct affecting food consumption and changes in behaviors or purchasing patterns is FRPTs (Mak et al., 2017; Hur et al., 2010). Personality traits play an important role in predicting and explaining human behavior (Anic et al., 2014) and can play a part in establishing personal choice criteria through the values held by the individual (Kim et al., 2010). In fact, food preference could be measured by FRPTs (Ji et al., 2016).
One FRPT that has been specifically related to food choice is food neophobia. Food neophobia can refer to the actual, observable behavior (Knaapila et al., 2014) and it is an accurate predictor of consumers' tendency toward novel foods consumers (Kim et al., 2010). Significant differences in influence of high and low levels of familiarity on satisfaction and loyalty can be observed (Muhammad et al., 2016). Therefore, food neophobia was reported to be a significant predictor for willingness to buy certain types of foods (Dolgopolova et al., 2015). It is defined as the extent to which consumers are reluctant to try novel foods, including food products, dishes and cuisines, and avoid any unpleasant taste that a person expects (Asperin et al., 2011; Kim et al., 2010) and is used to predict the willingness to try unfamiliar as well as some familiar foods (Kim et al., 2010). It leads to the tendency in consuming the same types of food over and again (Muhammad et al., 2016), and neophobics have different expectancies about unfamiliar food and these expectancies influence food and rating behaviors (Kim et al., 2010). Closely connected with food neophobia in relation to FRPTs is food involvement, which is defined as the level of importance of food in a person's life (Kim et al., 2010) and the amount of effort invested in meal preparation (Sarmugam and Worsley, 2015). It is a motivational state, which affects the extent and focus of consumers' attention and comprehension processes as well as overt behaviors such as shopping and consumption activities (Hu, 2010).

Researchers operationalized food involvement as the extent to which people enjoy talking about food, entertain thoughts about food during the day and engage in food-related activities (Kim et al., 2010). Referring to the food provisioning cycle, aspects of acquisition, preparation, cooking, eating and disposal are used to measure the consumer's food involvement and considered as a series of behaviors that consumers engage in (Jarman et al., 2012; Kim et al., 2010). Individuals who are more highly involved with food are better able to discriminate between foods (Bell and Marshall, 2003; Cohen and Avieli, 2004; Chen, 2007; Pliner and Hobden, 1992; Ritchey et al., 2003). The level of food involvement and food neophobia varies widely from person to person in present-day populations (Knaapila et al., 2014; Marshall and Bell, 2004).

Customer satisfaction and loyalty

In 1980s and 1990s, marketers and researchers mostly focused on the issue of customer satisfaction and on methods to increase customer satisfaction (Haghighi et al., 2012). Satisfaction has been regularly characterized as the final goal of marketing, and its role in predicting loyalty has been well established (Thakur, 2016). Satisfaction is a consumer's fulfillment response and judgment about a product or service and provides a pleasurable level of consumption-related fulfillment (Pollack, 2009). In fact, it is an outcome of a subjective evaluation about whether the selected alternative meets or exceeds the expectation (Kim et al., 2010). The cognitive model of consumer behaviors further posits that consumer satisfaction leads to attitude change, which, in turn, affects their future consumption intentions and behaviors (Ji et al., 2016). Customer satisfaction is the beginning in creating customer retention (Dimayati, 2015), but, over the time, marketers realized that many customers who were satisfied did not necessarily reuse the goods or services (Haghighi et al., 2012). Efforts to improve satisfaction and repurchase intentions led to the discovery of the criticality that companies understand how to build customer loyalty (Chang et al., 2009; Fraering and Minor, 2013).

They recognize the importance of customer loyalty as a strategic objective (Nyadzayo and Khajehzadeh, 2016) so their marketing strategy should be framed in such a way that they will be able to retain the existing customers by increasing their loyalty and value (John, 2011). Organizations and institutions are turning toward the loyal customers from satisfied ones and those that are successful in gaining customer loyalty have a major competitive advantage (Gul, 2014; Aksu, 2006). Also, it is the best measure of success in any organization (Nyadzayo and Khajehzadeh, 2016).
**Hypothesis development**

*Food-related lifestyle*

The concept of lifestyle has been developed to measure behaviors as a function of inherent individual characteristics that have been shaped through the social interaction of psychological and sociological factors and past experience (Kesic and Piri-Rajh, 2003). It is assumed that lifestyle is connected to personal values and the process by which people seek to achieve their values through various modes of expression, including food purchasing and consumption (Grunert et al., 2011).

The FRL concept has been used to measure people’s attitudes to food (Pe‘rez-Cueto et al., 2010). FRL research was initiated in the 1990s (Brunsø and Grunert, 1995) and draws on the means-end chain theory (Bruns et al., 2004). The means-end chain theory aims to measure consumers’ preferences and attitudes toward specific products at various and represents the links that consumers establish between product attribute perceptions and abstract motives or values (Hu, 2010; Pe‘rez-Cueto et al., 2010). Although human values guide behavior, values cannot predict behavior directly (Uimonen, 2011). Grunert et al. (1997) thus created an instrument that would focus on behavior in measuring the linkages between food products and end goals.

Consumers’ attitudes toward food purchases, shopping and consumption vary, and they have different food lifecycle patterns (Liang, 2014). Ryan et al. (2004) claimed that individuals with different FRLs exhibit differences in the attention and trust that they attribute to suggestions from others, their purchasing attitudes and the extent to which they engage in food preparation.

Grunert (2006) also used the FRL concept to determine how people employ food and eating and defined four aspect as ways of food shopping behavior, meal preparation methods, purchasing motives, quality perception, etc. Kesic et al. (2008) proposed that individuals with different FRLs have a different trial intentions regarding food. For instance, with respect to food purchases, uninvolved food consumers are extremely casual and neither depend on suggestions from others nor worry about the freshness of their food; in contrast, rational food consumers consider the opinions of others and must re-examine their consumption decisions if faced with food choices with different characteristics. Pe‘rez-Cueto et al. (2010) investigated FRL as a factor influencing repeatable behaviors and formation of habits, and concluded that obesity is related to some dimensions of FRL (Perez-Cueto et al., 2010). In addition, Wycherley et al. (2008) used FRL for segmenting specialty food purchasing behaviors, while Scholderer et al. (2004) investigated the relationships between values and FRL.

The empirical findings of Liang and Lim (2011) regarding online specialty food purchasing behaviors indicated that individuals with different FRLs may place varying degrees of emphasis on particular product attributes, consumption preferences and the perspectives (or recommendations) of others, and thus have significantly different attitudes, subjective norms, perceived control and behavioral intentions. Liang (2014) used the FRL scale to assess types of psychographic variables and investigate consumers’ organic food purchasing profiles, and then compared the applicability of the TPB model across different FRL clusters.

In view of the arguments set out above, FRL is related to particular perceptions and repeatable actions or behaviors (Pe‘rez-Cueto et al., 2010). Higher- and lower-frequency users showed significant differences in the FRL (Jang et al., 2011). Jang et al. (2011) explored FRL segments of the mature market to investigate the differences in their attitudes toward home meal replacement. Consumers must simultaneously try to satisfy their preferences, achieve their minor goals as well as life goals and adapt to contextual differences (Uimonen, 2011). Choi (2016) used an FRL instrument to determine nutrition information-conscious behavior and found significant body satisfaction differences among the segments.
Although FRL has been widely surveyed in foreign studies, it still needs further studying among domestic population and might be a useful step toward a better understanding of food consumer’s behaviors in Iran. By reviewing the literature and studies, our first and second hypothesis were formulated as follows:

H1. FRL affects chain stores customers’ satisfaction.

H2. FRL affects chain stores customers’ loyalty.

The ways of shopping, cooking methods and consumption situations domains measure individual differences in the habitual use of scripts and skills with regard to food purchasing, preparation and consumptions. The quality aspects domain measures a generalized schema for the evaluation of product attributes and the purchasing motives domain measures individual differences in the importance attached to food-specific instantiations of personal values (Grunert et al., 2011). Therefore, FRL subsidiary hypothesis such as WS, CM, CS, QA and PM can be considered.

Food-related personality traits
The means-end chain theory in particular closely parallels expectancy-value theories of motivation in stressing that the products have little or no importance for their own sake; it is the consumption of the products or the act of consumption that yields meaning to the consumer (Olson and Reynolds, 2001). Expectancy-value approaches place particular weight on active cognitive processes (Uimonen, 2011). In fact, individuals will have different views about the same food, and their behaviors will vary depending on their personal characteristics (Liang, 2014). FRPTs are stable individual predispositions to not only food consumption, but also to the larger process of growing, allocating, cooking, eating and disposal as described by Goody (1982). Much emphasis in FRPT research is on novelty seeking or avoidance. This is captured in the traits of food neophobia and food involvement (Metz, 2014).

Pliner and Hobden (1992) aimed to evaluate the food neophobia trait. The result was that food neophobia is a personality characteristic and an undergoing part of personality in food research and suggested a ten-item food neophobia scale (FNS). Further to their research, Ritchey et al. (2003) conducted a cross national comparison using the FNS. Confirmatory factor analysis (CFA) proved empirically that the FNS accurately predicted responses to novel foods.

Krugman (1965) introduced the food involvement concept to consumer psychology and identified it as an important factor in explaining consumer behaviors, and it has been developed to predict and/or assess the likelihood of food purchasing and consumption behaviors (Hu, 2010). Olsen (2001) developed a theoretical model of involvement based on the expectancy-value theory, adding new variables, such as negative feelings, social norms and moral obligations, into the original model. Bell and Marshall (2003) assessed the potential effects of food involvement on various relationships between food choice motives and the consumer’s behavioral intentions to purchase foods. Thus, they developed the food involvement scale (FIS), consisting of a final 12 items, associated with the five activities of the food lifecycle.

Eertmans et al. (2005) conducted a study on the relationships between consumers’ FRPTs, specific food choice motives and food intake. They found that motives mediated the effect of food involvement on the intake of specific food categories; the relation of motives with food intake appeared to vary with level of food involvement or food neophobia. Chen (2007) investigated the motives determining consumers’ attitude to organic foods and their subsequent purchase intentions in Taiwan. The author found that the FRPTs of food neophobia and food involvement had significant moderating effects on the relationships
between some of the food choice motives and the consumers’ attitude. Kim et al. (2010) applied the concept of FRPTs to hospitality and tourism, which was carried out on 335 visitors and identified the relationships between personality, satisfaction and loyalty; findings showed that food neophobia had a negative effect on satisfaction and loyalty, and food involvement had a positive relationship with loyalty and satisfaction. Food neophobia and food involvement may predict the likelihood of future food intake (Cohen and Avieli, 2004). Ji et al. (2016) extended the relationship between FRPTs and satisfaction by including a mediator of actual consumption of novel food and proposed a framework of tourist food experience; also, they found that FRPTs suggest conflicting projection on tourist food preference. Mak et al. (2017) examined the effects of two FRPTs on the motivational dimensions underlying food consumption in tourism and that both food neophobia and variety-seeking were found to have significant effects on food consumption motivations. Hypothetically, FRPTs should result in significant relationships with satisfaction and loyalty. In sum, a review of previous research has suggested that the FRPTs of food neophobia and food involvement may have a significant relationship with customers’ loyalty, such as intention to re-visit and recommend to others, which are, in turn, influenced by satisfaction (Kim et al., 2010). Considering research background, the following hypotheses were established:

H3. FRPTs affect chain stores customers’ satisfaction.

H4. FRPTs affect chain stores customers’ loyalty.

Customer satisfaction and loyalty. The primary premise of the relationship between satisfaction and behaviors rests on attitude formation theory in that consumer conation is largely impacted by affective responses such as satisfaction (Ji et al., 2016). Satisfaction is regarded as a consequence of the customer’s post-purchase evaluation and a key determinant of customer loyalty (Nyadzayo and Khajehzadeh, 2016). Satisfaction role in predicting loyalty has been well established (Thakur, 2016) and studies have shown that higher levels of satisfaction lead to greater loyalty and buying intentions for specific foods (Saba et al., 2013). Loyalty is defined as repeating purchase behavior and is characterized in terms of repurchase intentions, word-of-mouth communication, and recommendations (Kim et al., 2010). The relationship between satisfaction and loyalty has been tested in Pollack (2009) and Chang et al. (2009), as well as Bodet (2008) observed a positive relationship between overall satisfaction and attitudinal loyalty. Russell-Bennett et al. (2007) found satisfaction as the key construct in the development of attitudinal loyalty.

The ability to keep customers is related to the intensity of customer satisfaction so it is reasonable to predict that satisfied users will have a higher loyalty intention. Therefore, it is proposed that:


Conceptual framework
The conceptual research model is based on theoretical relationships among a number of factors that have been identified as an important research issue. This theory flows by studying the research background, definitions and issues such as research and theoretical foundations in the realm of logic (Khanalizadeh et al., 2010).

The main purpose of this research was to form a conceptual framework in the field of food consumer behaviors and new marketing concepts. It approached this issue with investigating the effects of FRL and FRPTs on customer satisfaction and loyalty. All constructs included in the proposed model were measured using multi-item scales designed to test all relevant domains of Figure 1.
**Methodology**

In terms of objective, this study is practical, and in terms of methods of data collection, it is a descriptive survey research, in kinds of the correlation since it seeks relationships between latent and observed variables together and evaluating the fitness and approximation degree of the model and, in particular, is based on the structural equation model (SEM).

**Data collection and the sample**

For data collection, a survey method was used and the instrument was a questionnaire. Statistical populations of research were all customers of chain stores of Iran in Tehran city. The sampling method based on population distribution was a stratified random type. The adequate sample size has been calculated according to the Cochran formula and equals 384.

As research aimed to be generalizable for Iran community, its sample has been weighted and was rather adequate \( (N = 384) \) which made up the inequality in the sample. Compared to a more general audience, this sample is even more representative, as the Tehran population is getting increasingly more diverse, and this could prevent bias. Since this sample consists of customers with different backgrounds at chain stores, their responses prevent biased results. A possible way to minimize the bias would be by extending this research to cities all over Iran as each city has a very different background. Also, the inconsistency characteristics of the sample would solve social bias.

As much as circumstances affecting the results are a concern, it must be mentioned that the physical face-to-face distribution of the questionnaires was done during rush hours in public areas. So, contrary to when people fill out the questionnaire in the company of their family which may harm the credibility of research methods and to counter social desirability bias, respondents of this survey filled them out individually in the store, but the factor of pressure by accompanying persons must not be underestimated. When money and time would not have been the issue, customers could have been asked to fill the questionnaire out in separate places after their purchase. Also, the effect of distributing the questionnaire...
personally and usually still being around while the questionnaire was being filled out might have affected the results as if being rushed.

To enable respondents to easily fill in the questionnaire in a short time, we adjusted the length of questionnaire to the minimum possible items. Additionally, if they knew the researcher personally, this could have resulted in socially desired, or biased answers, while having others distribute the questionnaire, although could have been costly, could have minimized this effect.

**Measures**

In this study, consistent with prior studies, indicator items to measure each construct or latent variable of the model are adapted from previous studies to ensure the content validity of the measurement scales. The selected item measures were then modified to fit the context of the study. Required data were gathered using a questionnaires and exploratory factor analysis is used for the validity determination of questions. This questionnaire consisted of three parts and included 54 questions. The first part elicited the respondents’ socio-demographic characteristics and past experiences. The variables to measure socio-demographic characteristics were gender, age, education level, financial status, etc. The second part was intended to identify the consumer’s FRLs and FRPTs, in compiling subscales, literature, conceptual patterns and models were evaluated, and then the question extracted factors of tuning, validation, and consolidation that were distributed. There is limited opportunity to add other measures in case of using the original FRL questionnaire; it consists of 69 items, so for the purposes of this research, a similar approach was taken using the Wycherley et al. (2008) questionnaire. Accordingly, of the five elements of the FRL, cooking methods were measured using seven statements, quality aspects were measured with six statements and ways of shopping were measured using seven statements. One statement for each of the remaining two elements, purchase motives and consumption situation, was identified as important (Wycherley et al., 2008).

The fundamental items of the FRPTs include the FNS of Ritchey et al. (2003) and FIS of Bell and Marshall (2003) and Robinson and Getz (2016), and considering the aims of this study in terms of chain stores, these were applied and combined.

The third part investigates consumers’ outcome. Customer satisfaction and loyalty measures were obtained from Chang et al.’s (2009) study and adjusted in ten questions with respect to reliability and validity. These questions were rephrased for this study and measured on a five-point Likert scale, with answers ranging from “strongly disagree” (1) to “strongly agree” (5). The content of discussing factors was confirmed through the expert’s opinions, using CFA and KMO index. To determine the measures reliability, first 30 questionnaires were distributed, and Cronbach’s α coefficient was calculated. The Cronbach’s α coefficient was calculated as 0.886, and was approved.

**Data analysis**

The data collected from the survey were analyzed using the SPSS and Linear Structural Relations (LISREL) softwares. A descriptive analysis was conducted to profile the respondents. Some methods, such as factor analysis, regression analysis and structural equation modeling, were used for data analysis and hypothesis testing which is briefly described. Exploratory and CFA as part of structured equation modeling were used to examine the reliability and validity of the constructs. SEM was also used to test the hypotheses forming the conceptual model. SEM was applied because of its capability of estimating relationships among constructs with multiple measurement items in a multivariate environment (Li et al., 2017). Goodness-of-fit measures were assessed in SEM.
Results

Descriptive statistics

The questionnaires were distributed in Tehran city among chain stores costumers, and a total number of 384 respondents answered the questionnaire. The profile of the respondents is presented in Table I. A majority of the respondents were female (70.05 percent, $N=269$), this polarity is in line with the conventional lifestyle of Iran society that shopping is mainly conducted by women. Most of the respondents of the sample (52.34 percent, $N=201$) are in the range between 35 and 44 years old. In addition, 59.89 percent ($N=230$) of the respondents were bachelor’s degree holders, representing the part of the population with the highest educational level. The fact that the survey was conducted in Iran capital might explain why the majority of the respondents had a higher education. The minority of the respondents had a PhD degree 0.87 ($N=3$). In total, 48.96 percent ($N=188$) of the respondents’ financial status were modest. This study showed that 94.27 percent of respondents were repeat customers, while 5.73 percent of respondents were first-time costumers.

Measurement model assessment

After analyzing the descriptive statistics, further analysis was conducted by using structural equation modeling via the LISREL software. SEM is capable of estimating a series of inter-relationships among latent constructs simultaneously in a model (Byrne, 2009). According to Kline (2005), as a rule of thumb, any sample size above 200 is understood to provide sufficient statistical power for data analysis in SEM. Therefore, the sample size of this study has met the minimum requirement. Basically, two types of models are involved in SEM analysis, namely, the measurement model and structural model. The former demonstrates the relationships between response items and their underlying latent construct, while the latter demonstrates the correlational or causal dependencies among the measurement models. In this study, the analysis was divided into three parts, which were the first-order CFA, second-order CFA for the measurement models and the structural model analysis (Tan and Wong, 2015).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Category</th>
<th>$N$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>115</td>
<td>29.95</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>269</td>
<td>70.05</td>
</tr>
<tr>
<td>Age</td>
<td>Under 25</td>
<td>36</td>
<td>9.37</td>
</tr>
<tr>
<td></td>
<td>25–34</td>
<td>141</td>
<td>52.34</td>
</tr>
<tr>
<td></td>
<td>35–44</td>
<td>201</td>
<td>36.72</td>
</tr>
<tr>
<td></td>
<td>Above 45</td>
<td>6</td>
<td>1.57</td>
</tr>
<tr>
<td>Education</td>
<td>High school</td>
<td>20</td>
<td>5.20</td>
</tr>
<tr>
<td></td>
<td>College</td>
<td>80</td>
<td>20.85</td>
</tr>
<tr>
<td></td>
<td>Bachelor</td>
<td>230</td>
<td>59.89</td>
</tr>
<tr>
<td></td>
<td>Master</td>
<td>51</td>
<td>13.28</td>
</tr>
<tr>
<td></td>
<td>PhD</td>
<td>3</td>
<td>0.78</td>
</tr>
<tr>
<td>Financial status</td>
<td>Not well-off</td>
<td>1</td>
<td>0.26</td>
</tr>
<tr>
<td></td>
<td>Difficult</td>
<td>1</td>
<td>0.26</td>
</tr>
<tr>
<td></td>
<td>Modest</td>
<td>188</td>
<td>48.96</td>
</tr>
<tr>
<td></td>
<td>Reasonable</td>
<td>120</td>
<td>31.25</td>
</tr>
<tr>
<td></td>
<td>Well-off</td>
<td>50</td>
<td>13.02</td>
</tr>
<tr>
<td></td>
<td>Do not know</td>
<td>24</td>
<td>6.25</td>
</tr>
<tr>
<td>Past experience</td>
<td>First-time customers</td>
<td>22</td>
<td>5.73</td>
</tr>
<tr>
<td></td>
<td>Repeat customers</td>
<td>362</td>
<td>94.27</td>
</tr>
</tbody>
</table>

Note: $N=384$
So, first, the measurement models have to go through the assessment of unidimensionality, reliability, validity and normality. Exploratory factor analysis utilizing the principal components method with varimax rotation was employed (Li et al., 2017) and undertaken to ensure construct validity and assess the underlying dimensions of the conceptual model. Unidimensionality is achieved when the items have acceptable factor loadings that are 0.5 or higher (Hair et al., 2006). Reliability is the extent to which the items are consistently measuring the intended latent construct. To satisfy the reliability criterion, a Cronbach’s α value of more than or equal to 0.7 is required (Nunnally and Bernstein, 1994). The results of the unidimensionality and reliability analysis for all the constructs are shown in Table II.

Validity is the ability of a construct to measure what it is supposed to measure. Convergent validity and discriminant validity were checked for each construct. Convergent validity refers to the degree to which items that should be related are in fact related, while discriminant validity signifies the degree to which items that should not be related are in fact not related. For convergent validity, the composite reliability value must be more than or equal to 0.7 and the average variance extracted (AVE) value must be greater than or equal to 0.5 (Hair et al., 2010). As shown in Table I, all the constructs have fulfilled these two requirements.

Discriminant validity is achieved when the square root of AVE for each construct is higher than the correlation coefficients among the constructs (Hair et al., 2010). Referring to Table II, this condition has been satisfied. In addition, the normality of the data at hand was examined. To achieve normality, the value of skewness should fall within the range of −1 to 1 (Coakes and Steed, 2009) and the value of kurtosis should be within the range of −3 to 3 (Balanda and Macgillivray, 1988). The data for each item have met the normality requirements (Table III).

Next, the second-order CFA was conducted for the first-order constructs of the study. It was used to confirm that the underlying measurement constructs loaded into their respective theorized construct (FRLS and FRPT). In this respect, the factor loadings between the first-order constructs and second-order constructs must be higher than or equal to 0.5 (Hair et al., 2010), and this condition has been fulfilled. The results of the second-order CFA are displayed in Table IV.

**Hypothesis testing**

The final stage was analyzing the correlational and causal relationships among the constructs simultaneously. To ensure the fitness of the structural model, the comparative fit index must be more than or equal to 0.9 (Bentler, 1990), root means squared error of approximation must be less than or equal to 0.08 (Browne and Cudeck, 1993) and χ² per degree of freedom (χ²/df) must be less than or equal to 5.0 (Marsh and Hocevar, 1985). Goodness-of-fit index must be more than or equal to 0.9, adjusted goodness-of-fit index must be more than or equal to 0.85 (Schermelleh-Engel et al., 2003), and incremental fit index and normed fit index must be more than or equal to 0.9 (Hu and Bentler, 1999). The developed model has been proven to meet all the requirements, and the results are shown in Table V.

Hence, the model was utilized to test the hypothesized relationships among the constructs (see Figure 2). Hypotheses which have an absolute significance t-value of more than 1.96 were significant and accepted.

Table VI presents the hypotheses testing results for the causal effects of FRLS, FRPT on SA and LO.

As Table VI shows, the data provided support for the hypotheses. FRL had a direct positive effect on customer satisfaction and customer loyalty with a standardized path coefficient of 0.46 and 0.48, respectively. This provided support for H1 and H3. The effect of FRPTs on customer satisfaction and customer loyalty was found significant, with path coefficients of 0.48 and 0.23, respectively. H2 and H4 were thus supported. Finally, as
### Constructs and measurement items (first-order construct)

<table>
<thead>
<tr>
<th>Constructs and measurement items (first-order construct)</th>
<th>Factor loading</th>
<th>Cronbach’s $\alpha$</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food-related lifestyle (adapted from Wycherley et al., 2008) ways of shopping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I need to know about product information and what the food product contains</td>
<td>0.84</td>
<td>0.945</td>
<td>0.95</td>
<td>0.71</td>
</tr>
<tr>
<td>I compare product information labels to decide which brand to buy</td>
<td>0.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am influenced by what people say about a food product</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information from advertising helps me to make better buying decisions</td>
<td>0.87</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I make a shopping list to guide my food purchases</td>
<td>0.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping for food does not interest me at all</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I do not see any reason to shop in speciality stores</td>
<td>0.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cooking methods</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recipes on food make me experiment in the kitchen</td>
<td>0.88</td>
<td>0.934</td>
<td>0.93</td>
<td>0.67</td>
</tr>
<tr>
<td>Cooking is a task best over and done with</td>
<td>0.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use a lot of mixes, for instance, baking mixes and powder soups</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We use a lot of ready-to-eat food in our household</td>
<td>0.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nowadays, the responsibility for shopping and cooking ought to lie just as much with the husband as with the wife</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What we are going to have for supper is often a last-minute decision</td>
<td>0.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is the women’s responsibility to keep the family healthy by serving a nutritious diet</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Consumption situation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I eat whenever I feel the slightest bit hungry</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Quality aspects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I enjoy a good meal</td>
<td>0.82</td>
<td>0.918</td>
<td>0.92</td>
<td>0.65</td>
</tr>
<tr>
<td>Enjoying the taste of food is important to me when I am eating</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I prefer to buy meat and vegetables fresh rather than frozen/canned</td>
<td>0.77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I make a point of using organic food products</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I do not mind paying a premium for products</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I love to try recipes from foreign countries</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purchasing motive</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over a meal one can have a good chat</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Food-related personality traits food neophobia (adapted from Ritchey et al., 2003)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am constantly sampling new and different foods</td>
<td>0.82</td>
<td>0.950</td>
<td>0.95</td>
<td>0.66</td>
</tr>
<tr>
<td>I do not trust new foods</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If I do not know what a food is, I would not try it</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like foods from different cultures</td>
<td>0.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnic food looks too weird to eat</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At dinner parties, I will try new foods</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am afraid to eat things I have never had before</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am very particular about the foods I eat</td>
<td>0.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will eat almost anything</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like to try new ethnic restaurants</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Food involvement (adapted from Bell and Marshall, 2003; Robinson and Getz, 2016)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I do not think much about food each day</td>
<td>0.75</td>
<td>0.954</td>
<td>0.95</td>
<td>0.64</td>
</tr>
<tr>
<td>Talking about what I ate or am going to eat is something I like to do</td>
<td>0.79</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(continued)

Table II. Results of unidimensionality, reliability and convergent validity analysis
expected, $H5$ was supported, which means that customer satisfaction had a direct effect on customer loyalty with path coefficients of 0.27.

The $R^2$ value of the dependent latent variable customer loyalty indicates that the independent latent variables FRL, FRPTs and customer satisfaction explain 60 percent of
the variance in customer loyalty. On the other hand, FRL and FRPTs account for a total of 66 percent of the variance in customer satisfaction. The $R^2$ values for the endogenous latent variables are adequate and demonstrate a moderate to large effect on customer satisfaction and customer loyalty. Chin (1998) recommended $R^2$ values of 0.67, 0.33 or 0.19 for endogenous variables as signifying substantial, moderate and weak values, respectively.

**Discussion**

The current study was undertaken in a relevant context of food consumption behaviors. It approached this issue with the food-related and FRPTs instrument for analyzing satisfaction and loyalty of chain store customers. Research on food purchase behavior in Iran is scarce; one possible reason is the complexity of measuring food purchase patterns by the new emerging cultural values of consumption, coupled with the existence of different subcultures, many of which have a long heritage and great significance in the Iran society. Another reason is the fast developing economy that is the cause and consequence of

<table>
<thead>
<tr>
<th>Second-order construct</th>
<th>First-order construct</th>
<th>Factor loading (≥ 0.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food-related lifestyle (FRLS)</td>
<td>WSh</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td>CM</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>CS</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>QA</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>0.73</td>
</tr>
<tr>
<td>Food-related personality traits (FRPT)</td>
<td>FN</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>FI</td>
<td>0.68</td>
</tr>
</tbody>
</table>

**Table IV.** Factor loadings between first-order constructs and second-order constructs in the second-order CFA

<table>
<thead>
<tr>
<th>Name of index</th>
<th>Decision criteria</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$/df</td>
<td>≤ 5</td>
<td>1.243</td>
</tr>
<tr>
<td>NFI</td>
<td>≥ 0.90</td>
<td>0.99</td>
</tr>
<tr>
<td>CFI</td>
<td>≥ 0.90</td>
<td>1.00</td>
</tr>
<tr>
<td>IFI</td>
<td>≥ 0.90</td>
<td>1.00</td>
</tr>
<tr>
<td>RMSEA</td>
<td>≤ 0.08</td>
<td>0.025</td>
</tr>
<tr>
<td>GFI</td>
<td>≥ 0.90</td>
<td>0.96</td>
</tr>
<tr>
<td>AGFI</td>
<td>≥ 0.85</td>
<td>0.94</td>
</tr>
</tbody>
</table>

**Table V.** Fitness indexes of the overall model

![Figure 2. Structural model of study](image)

Notes: $\chi^2$=140.43, df=113, $p$-value=0.04105, RMSEA = 0.025
considerable social-cultural preferences which is driven by media, cultural and legal contexts and is actually shaped by products, global corporate interests and lifestyle. Included among these features is the transformation of food consumption as a result of many pressures in the food marketing environment. Also, the consumer’s view to well-being depends on their demographic and country characteristics; in fact, an individual’s consumption lifestyle is defined by a disposition or cognitive style that shapes unique patterns of consumer behavior that are shared in classifiable social groups and even could lead to none-consumption behaviors such as rituals of fasting among Muslims (Leong et al., 2016; Kashif, 2017).

Regarding the test results of proposed model, internal relations of latent variables of the study were confirmed and the underlying dimensions (FRL and FRPTs) were found to have a significant effect on customer satisfaction and loyalty. Findings of this study contribute to more extensive understanding in an individual’s nature and the consumer’s intentional behavior in particular with food. It offers three major contributions to the literature on consumer behavior. First, consumers’ FRL has an impact on their satisfaction and loyalty and considered hypothesis is consistent with previous studies (Ryan et al., 2004; Liang and Lim, 2011; Kесic and Piri-Rajh, 2003); this positive and significant relationship could be justified in terms of the effect of FRL on food culture, conventions, habits (Chang et al., 2009), in trust to the advice of others, their purchase attitude, consumption involvement, different emphasis on the specific characteristics of the product, consumer preferences and, finally, different attitudes, individual norms and user behavioral tendencies.

Moreover, consumers in general tend to exhibit anti-consumption behaviors toward some products when they are unsatisfied with this product, and it could influence the purchase of products as well.

Second, the effect of food personality traits on consumer satisfaction and loyalty demonstrates that personality traits can predict consumers’ satisfaction and loyalty. The study hypothesized that, on one hand, customers who like to try new foods, and who consider food important in their lives, are more likely to be satisfied and loyal due to their interest for reviewing and repurchase intention, and, on the other hand, intentional non-consumption behaviors when a consumer rejects a specific product and avoid consumption can become tantamount to anti-consumption (Leong et al., 2016). The results indicate that satisfaction and loyalty of customers are influenced by their FRPTs of food neophobia and food involvement, which is aligned with previous studies (Pliner and Hobden, 1992; Ritchey et al., 2003; Bell and Marshall, 2003; Chen, 2007; Kim et al., 2010; Ji et al., 2016) and have shown that personality traits relate to food choice and predict the likelihood of future food intake, with this description that the present study was to test

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Causality</th>
<th>Standardizes path coefficient</th>
<th>t-value</th>
<th>Results</th>
<th>$R^2$ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Food-related lifestyle has a positive direct effect on the customer satisfaction</td>
<td>0.46</td>
<td>7.58</td>
<td>Accepted</td>
<td>0.66</td>
</tr>
<tr>
<td>H2</td>
<td>Food-related personality traits have a positive direct effect on the customer satisfaction</td>
<td>0.48</td>
<td>7.44</td>
<td>Accepted</td>
<td></td>
</tr>
<tr>
<td>H3</td>
<td>Food-related lifestyle has a positive direct effect on the customer loyalty</td>
<td>0.40</td>
<td>6.01</td>
<td>Accepted</td>
<td>0.60</td>
</tr>
<tr>
<td>H4</td>
<td>Food-related personality traits have a positive direct effect on the customer loyalty</td>
<td>0.23</td>
<td>3.24</td>
<td>Accepted</td>
<td></td>
</tr>
<tr>
<td>H5</td>
<td>Customer satisfaction has a positive direct effect on the customer loyalty</td>
<td>0.27</td>
<td>2.52</td>
<td>Accepted</td>
<td></td>
</tr>
</tbody>
</table>

Note: $R^2$, squared multiple correlation
multiple variables simultaneously and developed dimensions have been considered. This result is different from the existing popular belief that food consumption should be independent of consumers’ psychological preferences and personality traits (Mak et al., 2012; Randall and Sanjur, 1981). It may be explained by the expectation-disconfirmation theory, which suggests that satisfaction is a function of people’s expectations and disconfirmation (whether positive or negative) of their prior beliefs (Ji et al., 2016). Further research may consider examining other FRPTs from motivational dimensions aspect (e.g., variety-seeking) to extend our understanding on their effects on customer satisfaction and loyalty.

Third, this study tests and confirms the effect of satisfaction on loyalty. Satisfaction, despite being only a single component of consumer’ attitude, can influence consumer’ future repurchase intentions and recommendations to others. The findings support the positive impact of satisfaction on loyalty and coincided with the findings of past studies (Pollack, 2009; Chang et al., 2009; Bodet, 2008; Russell-Bennett et al., 2007). The swift changes of today’s society, together with the characteristics of consumer, are leading to an interesting personalization in level of satisfaction and loyalty and in the way that these products are purchased and used. In addition, consumer well-being is normally assessed with satisfaction and a varied set of experiences has been employed for overall consumer well-being measurement (Leong et al., 2016). Hence, from a societal perspective, the meaning of consumer well-being is different for different person, and with economic progress, people seek different ideals of consumption, and different conceptualizations of what constitutes consumer well-being.

Marketing managers should focus on satisfaction as the main and direct driver of customer loyalty. They had to work hard to attract new customers, and retain old customers that are loyal since new customers are interested to talk with others about their new experience; according to this, marketers should implement strategies with considering FRLs and FRPTs as the most important factors influencing satisfaction and loyalty of customers which can lead to high profits and reduce marketing costs.

Our findings have important practical implications for marketing managers and could benefit food sellers by providing a better understanding of customer’s motivation and attitude. First, by testing the cognitive drivers of food customer satisfaction and loyalty, this research seeks to inform managers regarding what key factors drive satisfaction and loyalty of food customer. Due to the intense competition in food industries, it is important for marketing manager to understand the behavioral aspects of the consumption so that they could make decision. Specially, with this understanding, they can stimulate customers to react appropriately which will produce customer satisfaction, and, in turn, influence the loyalty of customers.

Second, our findings acknowledge the importance of FRPTs and FRL in food consumer satisfaction and loyalty. These findings provide an important message for marketers suggesting that expectations and personality traits posit attitude change, which, in turn, affects their future consumption, intentions and behaviors, and it can help food producing companies to adjust their production to the defined FRLs and specifically to foresee changes. Food manufacturers can also organize food festivals and events to inform neophobics customers from various aspects of the product, and by putting brochures and method of using in product packages or at the store shelves to encourage them to use and test the product. Marketers should consider customer FRL and FRPTs when organizing food marketing programs. Thus, food industry marketers are advised to think about those with higher food neophobia and low food-involved individuals because low food neophobia and high food-involved consumers are loyal and likely to be repeat customers; such loyalty is believed to produce more revenue and help reduce marketing costs, and they should emphasize the positive aspects of food, e.g., authentic experience, health benefits or exciting experience to attract these people to food purchase. Hence using positive aspects in their
advertisements helps them to promote customer satisfaction and loyalty effectively. They could promote the adoption of consumption of specific food by developing campaigns to change food neophobics’ view to new foods. Marketer should investigate the manner in which previously held attitudes and values with consumption experience – ranging from the first exposure to marketing campaigns to the point of purchase – to result in an anti-consumption attitude (Zavestoski, 2002).

Finally, perhaps the most important managerial implication from this study relates to the role played by particular perceptions and repeatable actions or behaviors as a direct effect of the customer satisfaction on customer loyalty. Marketers are advised to promote their ability to communicate with the customers since retaining existing customers is a much more effective strategy for the organization than attempting to attract new customers to replace the lost ones (Gee et al., 2008). Customer loyalty is considered to be an important factor for increasing the profitability and maintaining the position of the organization (Haghighi et al., 2012). So as discussed above, the marketing strategy of the companies should be framed in such a way that they will be able to retain the existing customers by increasing their loyalty and value (John, 2011) and it is recommended that marketers build their capabilities to establish and maintain relationships with customers because maintaining existing customers is a very effective strategy for the organization.

Limitations and future research directions
The current study may have limitations due to its new and complex exploratory nature. This study introduced a new research direction aimed at understanding satisfaction and loyalty effective factors despite numerous chain stores customers with diverse motives and interests include chain stores. Conducted in the setting of a general food consumer without considering special foods category could be another limitation. However, other important factors may have been missed which future studies could cover aforementioned limitations and add a new domain that covers those aspects of FRL and FRPTs that are linked to customer satisfaction and loyalty. Since the customer behavior in consumption choices is an unconscious and cognitive process, future research to enhance the validity of results with different methods is suggested.

Considering the fact that Iran is composed of several regions, each having many cities with distinct characteristics, it may not be possible to generalize the results found with the consumer sample used in this study to whole population in Iran. Future research with a more diverse sample representing consumers from all regions of the country is warranted in order to generate more robust support.

The present study is thus only a first step that needs to be followed up by item development and a modification of the instrument for applications in Iran and possibly in other Asian cultures.

References


**Further reading**


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We are pleased to commence our 121st volume with a special issue on “Food anti-consumption and consumer well-being”, led by Guest Editor Dr Muhammad Kashif Saeed.

As publisher of the *British Food Journal*, it is a pleasure to be able to work with a global network of academics, especially those who share the same vision of publishing intellectually rigorous work that contributes to the progression of ideas based on reason, quality and scholarly excellence.

This special issue culminates over 12 months of hard work from Dr Saeed. We are extremely thankful for his contribution to the journal.

As well as the 14 articles published in this special issue, Dr Saeed kindly worked on 6 additional papers on the topic of anti-consumption that were published in last year’s volume. These were:


To further showcase this work, these papers will be promoted together and compiled to form a virtual special issue, available to view at: www.emeraldgrouppublishing.com/products/journals/news_story.htm?id=8512

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