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## A moderated mediation study of consumer extrinsic motivation and CSR beliefs towards organic drinking products in an emerging economy

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*Published in:*  
British Food Journal

*DOI:*  
[10.1108/BFJ-12-2020-1096](https://doi.org/10.1108/BFJ-12-2020-1096)

Published: 23/02/2022

*Document Version*  
Peer reviewed version

[Link to publication](#)

### *Citation for published version (APA):*

Dang, V. T., Wang, J., Nguyen, H. V., Nguyen, Q. H., & Nguyen, N. (2022). A moderated mediation study of consumer extrinsic motivation and CSR beliefs towards organic drinking products in an emerging economy. *British Food Journal*, 124(4), 1103-1123. <https://doi.org/10.1108/BFJ-12-2020-1096>

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**A moderated mediation study of consumer extrinsic motivation and CSR beliefs toward organic drinking products in an emerging economy**

Journal:	<i>British Food Journal</i>
Manuscript ID	BFJ-12-2020-1096.R2
Manuscript Type:	Research Paper
Keywords:	environmental consciousness, organic drinking products, social-cognitive theory, CSR, Perceived food healthiness, consumer perception theory

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3 **A moderated mediation study of consumer extrinsic motivation and CSR beliefs**  
4 **towards organic drinking products in an emerging economy**  
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11 **Abstract**  
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13 **Purpose.** Previous research has yielded mixed results on the relationship between  
14 consumer perception and purchase intention towards organic food products. **Although**  
15 **the prior literature has widely applied planned behaviour theory, using a single**  
16 **theoretical approach often provides limited understanding of organic food consumption.**  
17 **This study builds upon consumer perception and social cognitive theories to examine**  
18 **the effects of perceived food healthiness and environmental consciousness on the**  
19 **purchase intention of organic drinking products. The current research also assesses the**  
20 **mediating role of consumer extrinsic motivation and moderating role of corporate social**  
21 **responsibility (CSR) beliefs in these effects.**  
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26 **Design/methodology/approach.** A survey method was applied to collect data from 606  
27 consumers from different food retailers in Vietnam. Data were analysed using  
28 multivariate analysis techniques, such as structural equation modelling and bootstrap  
29 analysis.  
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32 **Findings.** Results of hypothesis testing support the predictive ability of perception and  
33 social cognitive theories in explaining consumers' perceptions, motivation and  
34 behavioural intention towards organic drinking products. Furthermore, results provide  
35 evidence for the moderating effect of CSR beliefs on the relationship between consumer  
36 extrinsic motivation and purchase intention.  
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40 **Originality/value.** This study may be amongst the first that explains consumption of  
41 organic drinking products from the perspectives of consumer perception and social  
42 cognitive theories. It provides a unique research model that explains the influence of  
43 perceived food healthiness and environmental consciousness on purchase intention of  
44 organic drinking products with the mediating role of consumer extrinsic motivation and  
45 moderating role of CSR beliefs. The current research provides fresh insights into the  
46 consumption of organic drinking products in an emerging market based on a mediated  
47 moderation mechanism, which has been limited in the prior literature.  
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51 **Keywords.** perceived food healthiness, environmental consciousness, organic drinking  
52 products, consumer perception, social cognitive theory, CSR.  
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## 1. Introduction

Green purchasing behaviour is an important topic in current marketing and consumer research (Cheung and To, 2019). As consumers' income increases, they care more about quality of life and health problems (Jaiswal and Kant, 2018). Consumers will choose to buy products that have minimal impact on the environment and are harmless to human health (Kautish *et al.*, 2019). Green purchasing behaviour can generate good outcomes for the environment, society and individual consumers (Cheung and To, 2019). Therefore, encouraging the consumption and purchase of green products and green purchasing behaviour is essential in addressing global environmental and health issues (Nguyen and Johnson, 2020).

Previous studies have examined different green product categories, including energy efficient products, organic foods, electric vehicles and recycled and reusable products. Of these products, organic foods have received increasing research and practice attention because the purchase and consumption of such products contribute significantly to the achievement of the UN's Sustainable Development Goals, particularly those relating to sustainable consumption and human wellbeing (Nguyen *et al.*, 2021). Moreover, organic foods generate only a few negative effects on the environment (Sultan *et al.*, 2020), and they are healthier than traditional foods, which are often affected by pesticides and non-natural substances (Shamsi *et al.*, 2020). Organic foods are beneficial to human health because they are fresh, nutritious and relatively safe (Boobalan and Nachimuthu, 2020). Despite these benefits, sales volume of organic foods remains extremely low compared with traditional foods (Sultan *et al.*, 2020). Accordingly, numerous consumers are unmotivated to purchase organic foods (Pham *et al.*, 2019).

Therefore, scholars have sought to investigate the factors that may motivate consumers to purchase organic food products. Despite extensive effort from prior studies, the results of the relationship between consumer perceptions and behavioural intentions towards organic food are often inconsistent and even contradictory (Sultan *et al.*, 2020). Basha and Lal (2019) found that health perceptions negatively influence consumer intention to purchase organic foods. Goetzke *et al.* (2014) and Dorce *et al.* (2021) indicated that perceived health benefits of organic food enhance consumer purchase intention and behaviour. Additionally, Asif *et al.* (2018) reported that perceived behavioural control is positively associated with organic food purchase intention amongst consumers in Turkey and Iran, whilst this association is negative amongst Pakistani consumers. Given these inconsistencies, additional research is needed to provide further insights into the association between these variables.

Numerous studies have used theory of planned behaviour (TPB) to explain consumer perception, behavioural intention and actual behaviour towards organic foods in different countries. Shamsi *et al.* (2020) applied TPB to determine attitudes towards organic food consumption amongst Iranian consumers. Sultan *et al.* (2020) used the TPB perspective examined the gap between Australian consumers' behavioural

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intention and actual behaviour towards organic foods. [Qi and Ploeger \(2019\)](#) used TPB as basis to investigate the effects of Chinese consumers' culture and personal characteristics on purchasing green foods. [Asif et al. \(2018\)](#) also used TPB in conducting a cross-country study that explains key antecedents to organic food purchase intention in Pakistan, Turkey and Iran.

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Apart from TPB, other theories have been adopted by organic food researchers. [Lin et al. \(2020\)](#) combined theory of consumption values with the social commerce model to identify the factors that drive consumers to purchase organic food. [Nadi et al. \(2016\)](#) used the push-pull model to explain the factors that influence consumers' acceptance of organic food. [Puska et al. \(2017\)](#) adopted costly signaling theory to determine the impact of status motives and reputational concern on consumers' consumption of organic food. [Prakash et al. \(2018\)](#) investigated organic food purchase intention using the consumer style inventory (CSI) approach.

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Note that a single theoretical approach often provides minimal knowledge of consumers' perceptions and behaviour in purchasing organic foods ([Molinillo et al., 2020](#)). Hence, additional integrated and comprehensive approaches to organic food consumption are encouraged. Studies adopting multiple theoretical models and approaches can provide an improved understanding of how different factors affect consumer green behaviours, such as organic food purchase and consumption ([Nguyen and Johnson, 2020](#)). Additionally, the majority of previous studies have examined organic food as a whole or certain organic products, such as fruits, vegetables and meat ([Nguyen et al., 2021](#); [Pham et al., 2019](#)). Current knowledge of consumer perception and behaviour towards organic drinking products is limited. The [Grand View Research \(2019\)](#) indicated that consumer demand for organic drinks, such as fruit beverages, coffee and tea, has increased considerably in recent years. Increasing consumer awareness of environmental and health issues and increasing disposable income in developing countries are driving the growth of the global organic beverages market. Hence, research on the factors affecting the purchase and consumption of organic drinking products can have theoretical and practical implications.

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This study adopts a multiple theoretical approach to determine consumers' psychographic variables affecting their motivation and behavioural intention towards organic drinking products. Specifically, the current study builds on perception theory ([Kenyon and Sen, 2015](#)) to investigate the influence of perceived food healthiness on the purchase intention of organic drinking products. This research draws on social cognitive theory ([Bandura, 2001](#)) to examine the relationship between environmental consciousness and purchase intention. Furthermore, the present study uses both theories to explore the mediating mechanism of consumer extrinsic motivation in the link between perceived food healthiness and purchase intention and that between environmental consciousness and purchase intention. This study considers the role of corporate social responsibility (CSR) on consumer decision making ([Dang et al., 2020](#)) to investigate the moderating impact of consumers' CSR beliefs on the relationship between consumer extrinsic motivation and purchase intention.

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This study contributes to the current organic food literature in several ways. Firstly, the current study explains consumers' perceptions, motivation and behavioural intention towards organic drinking products from different theoretical perspectives, instead of a single theory, such as TPB that has been widely used in the prior literature. Specifically, the present research extends consumer perception theory (Babin & Harris, 2018; Kenyon & Sen, 2015) to explain how consumers' perceptions of food healthiness in retail stores affect their intentions to purchase organic drinking products. This theory states that consumers observe products within a food store and perceive the healthiness of such products. This perception may trigger consumers' motivation to evaluate and take actions (e.g. purchase) towards organic drinking products because these products provide health benefits. Secondly, this study also enriches social cognitive theory, which explains consumers' awareness of environmental problems influencing their behavioural intention towards organic drinking products. By observing different phenomena in the social world, consumers may be aware of current environmental problems. This awareness may guide consumers' behaviour towards buying organic drinking products to reduce their negative impact on the environment (Bandura, 2008). Thirdly, the current study is amongst the first attempt to clarify the mediating mechanism of consumer extrinsic motivation in the link between perceived food healthiness and purchase intention and that between environmental consciousness and purchase intention. That is, consumers' perceptions and awareness of healthiness and environmental problems trigger consumers' extrinsic motivation, thereby enhancing their intention to purchase organic drinking products. Lastly, the present study clarifies the current knowledge of the moderating role of CSR beliefs in affecting the link between consumers' extrinsic motivation and behavioural intention, which has been generally disregarded in the current organic food literature.

The remainder of this paper is structured as follows. Section 2 reviews the literature and develops the hypotheses. Section 3 describes the sample data and analysis methods. Section 4 presents results. Lastly, Section 5 discusses the implications and provides the conclusions.

## 2. Theoretical Background and Hypothesis Development

### 2.1. Consumer perception theory

Perception, which refers to consumers' awareness and interpretation of reality, shapes their learning and behaviour (Babin and Harris, 2018; Kenyon and Sen, 2015). Consumer perception consists of three phases, namely, sensing, organising and reacting. Sensing is 'an immediate response to stimuli that have come to one of the consumer's five senses' (Babin and Harris, p. 55). In the organising stage, consumers organise the stimuli and comprehend them. The perception process ends with a reaction that occurs as a response or behaviour. To illustrate, consumers' perceptual process begins when they enter food stores. Consumers observe and recognise that stores sell and promote healthy products, such as organic drinking products, leading to their response (i.e. purchasing these products from stores).

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Consumer perception has been an important topic in consumer behavior, including food consumption (Hartmann and Siegrist, 2017; Krishna, 2012). Prior studies have demonstrated that consumers' perceptions of organic food production, quality, environmental friendliness, safety, taste and healthiness affect organic food purchase intention and behaviour (e.g. Radman, 2005; Suciú *et al.*, 2019; Wiedmann *et al.*, 2014). Of these aspects, perceived food healthiness plays an essential role in consumers' purchase decision because it is directly related to their health. However, only limited research has focused on consumer-perceived healthiness of food products in grocery stores that play an increasingly important role in meeting consumers' healthy needs (Konuk, 2019). Thus, the present study focuses on perceived food healthiness in the context of food stores.

## 2.2. Perceived food healthiness and purchase intention

Individuals' perceptions of eating and drinking are often associated with their awareness of healthiness. That is, people often perceive eating and drinking behaviour as an important factor that influences their health conditions (Boobalan and Nachimuthu, 2020). In the current environment, consumers care significantly about healthy eating and drinking (Jaiswal and Kant, 2018). Several factors determine this tendency, including increase in income, improvement of the quality of life, advanced consumption knowledge and awareness of the link between illness and eating and drinking behaviour (Rizk and Treat, 2015). As healthy eating and drinking become consumers' focus in their daily life, they are likely to choose healthy foods (Szocs and Lefebvre, 2016). Organic drinking products (e.g. organic coffee, organic tea, organic milk) are often viewed as a type of healthy foods because they generate more benefits to human health than traditional drinking products. Consequently, organic drinking products become consumers' preference when they consume drinking products (Suciú *et al.*, 2019).

Given the increasing health needs of consumers, food retailers have provided various healthy options, such as organic products (Konuk, 2019). Perception theory states that when consumers observe and compare products within food stores, they tend to recognise healthy products, such as organic drinking products, which satisfy their needs for healthiness. The reason is that freshness and healthiness are the most important factors affecting consumer decisions in food stores (Jacobs *et al.*, 2010; Konuk, 2019). Consequently, when consumers seek to purchase drinking products, they are likely to purchase organic drinking products because these products benefit their health (Bernacchia *et al.*, 2016). Therefore, consumers' perceptions of food healthiness are expected to enhance their intention to purchase organic drinking products. The following hypothesis is developed.

*H1. Perceived food healthiness is positively related to the purchase intention of organic drinking products.*

## 2.3. Social cognitive theory

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Social cognitive theory emphasises the important role of social environment on shaping individuals' cognition and behavioural outcomes (Schunk and DiBenedetto, 2020). Individuals' observations and perceptions of the social world affect their thought process, including motivation, emotions, attitudes and actions (Bandura, 1986). Specifically, when people observe social environment, they will form attitudes and emotions through a cognitive process, and respond to environmental stimuli. That is, people's behaviour is a function of behaviour and also of cognitive process and environmental factors (Boateng *et al.*, 2016). Accordingly, individual behaviour, cognition and environmental factors are influenced by one another (Bandura, 2001). For example, people's healthy eating behaviour is determined by their perceptions of the social environment on social media (Lin and Chang, 2018). Social cognitive theory is often used to explain the relationship amongst environmental factors, individuals' perceptions, attitudes and behavioural outcomes (Bandura, 1986, 2001).

Social cognitive theory has been widely used in various research fields, such as psychology, business, management, education and health care. Nazari *et al.* (2020) applied social cognitive theory to examine physical activities amongst obese and overweight women. Wang *et al.* (2019) used this theory to investigate personal and environmental factors in predicting entrepreneurship. Zacarías *et al.* (2019) used social cognitive theory as basis to suggest programs for promoting children's healthy eating. Plotnikoff *et al.* (2013) conducted a meta-analysis and concluded that social cognitive theory may be the most powerful model for explaining physical behaviours in adolescents. Given the importance of social cognitive theory in explaining human behaviour, this theory is surprisingly used rarely in the prior organic food research.

#### 2.4. Environmental consciousness and purchase intention

Climate change, pollution and natural disasters have focused people's attentions and concerns on environmental problems (Mishal *et al.*, 2017). Individuals, business and society have exerted extensive effort to reduce the negative impact of their activities on environment (Huang and Kung, 2011). For example, government agencies plan and implement regulations to guide residents and organisations' behaviour to protect the environment. Business firms engage in CSR to reduce their business impact on the environment and society. Individuals change their purchase behaviour and turn to buy environment-friendly products (Huang *et al.*, 2014). These activities reflect people's consciousness on environmental problems and their endeavours to solve environmental issues (Keszey, 2020).

Social cognitive theory states that consumers are relatively aware of environmental issues in the current environment (Keszey, 2020). Through cognitive process, consumers often respond to environmental problems in either negative or positive ways. On the negative side, consumers boycott organisations and brands that harm the environment. They also protest and exert considerable pressure on governments to protect the environment (Leaniz *et al.*, 2017). On the positive side, consumers change their purchase behaviour and seek to consume green products that bring wellbeing to



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3 individuals and society (Chekima *et al.*, 2019). Given that consumers are aware of  
4 environmental issues, they tend to purchase organic foods to substitute traditional foods  
5 (D'Amico *et al.*, 2016). That is, consumers who are environmentally conscious are  
6 likely to purchase organic foods. The reason is that these consumers may believe  
7 organic foods benefit consumers' healthiness and bring good to society (Kriwy and  
8 Mecking, 2012).  
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12 Organic drinking products (e.g. organic tea, organic coffee, organic milk) are plant-  
13 based or processed with no chemical elements and pesticides. Organic drinking  
14 products generate minimal harm to the environment and human health (Suciu *et al.*,  
15 2019). Consequently, organic drinking products may be the first choice for consumers  
16 when they need to buy drinking products because consumers care about environmental  
17 problems. On the basis of social cognitive theory, consumers who are aware of and care  
18 for environmental issues are expected to have a tendency to purchase organic drinking  
19 products. The following hypothesis is developed.  
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23 *H2. Environmental consciousness is positively related to the purchase intention of*  
24 *organic drinking products.*  
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## 27 **2.5. Mediating role of consumer extrinsic motivation**

  
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29 Extrinsic motivation is defined as the desire to perform an activity to obtain positive  
30 rewards and avoid negative outcomes (Kuvaas *et al.*, 2017; Welters *et al.*, 2014). That  
31 is, extrinsic motivation occurs when individuals are willing to perform and complete  
32 certain tasks because performing such tasks will generate positive consequences and  
33 reduce or eliminate negative outcomes for them (Howard *et al.*, 2016). Extrinsic  
34 motivation has been an important predictor of behavioural outcomes, such as work  
35 effort (Liang *et al.*, 2018), teaching practices (Stupnisky *et al.*, 2018), work  
36 performance (Howard *et al.*, 2016) and customer loyalty (Lin *et al.*, 2009).  
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41 According to consumer perception theory, consumers' perceived food healthiness  
42 may motivate them to seek ways to ensure their healthy eating and drinking. One way  
43 to satisfy consumers' demand of healthy eating and drinking is to select organic food  
44 products (Vega-Zamora *et al.*, 2019). Generally, consumers evaluate and assess the  
45 benefits of organic food products before purchasing these products (Basha and Lal,  
46 2019). Key indicators for evaluation include nutritional contents, freshness, chemical  
47 elements and the process that organic food products are farmed and processed. Given  
48 that organic drinking products are viewed as healthier and safer than traditional  
49 drinking products, consumers are more likely to be motivated towards organic drinking  
50 products (Suciu *et al.*, 2019). Consequently, consumers tend to purchase organic  
51 drinking products to satisfy their expectation of healthy drinking (Ghali-Zinoubi and  
52 Toukabri, 2019).  
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57 Consumers who care about healthy drinking tend to be aware of their healthy  
58 conditions and the healthiness of organic drinking products (Hwang and Chung, 2019).  
59 Given this perception, consumers may be motivated towards organic drinking products  
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3 because of the superior benefits of these products compared with traditional drinking  
4 products (Suciu *et al.*, 2019). Consequently, consumers will purchase organic drinking  
5 products with the belief that these products are good for human health (Suciu *et al.*,  
6 2019). Given the belief that purchasing organic drinking products will generate more  
7 benefits for human health than traditional drinking products, consumers are motivated  
8 to purchase the former to satisfy their demands of drinking. Drawing on the logic of  
9 consumer perception and motivation, perceived food healthiness arguably enhances  
10 consumers' extrinsic motivation, thereby increasing their intention to purchase organic  
11 drinking products. The following hypothesis is developed.

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16 *H3. Consumer extrinsic motivation positively mediates the relationship between*  
17 *perceived food healthiness and purchase intention of organic drinking products.*

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20 Social cognitive theory (Bandura, 1986, 2001) can be used to explain consumers'  
21 motivation and behavioural intention towards organic drinking products. Accordingly,  
22 when consumers are concerned with the environment, they may evaluate their own  
23 behaviour and are motivated to seek ways to reduce or avoid the negative impact of  
24 their activities on the environment (Keszey, 2020). That is, consumers who care more  
25 about environmental problems may be motivated to take actions towards activities that  
26 have less negative impact on the environment (Lin and Chang, 2018).

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29 Specifically, when consumers perceive environmental problems, they may  
30 evaluate their eating and drinking behaviour and link such a behaviour with  
31 environmental protection. This perception may trigger consumers' motivation and  
32 guide their behaviour towards green consumption (Huang *et al.*, 2014). Furthermore,  
33 organic drinking products are often viewed as green products that have minimal  
34 negative impact on the environment. Consumers who are concerned with the  
35 environment may hold positive attitudes because common knowledge tell them that  
36 organic drinking products are natural plant without pesticides and chemical elements  
37 (Kriwy and Mecking, 2012). Accordingly, consumers are motivated to purchase  
38 organic drinking products with the belief that the consumption of these products may  
39 contribute to environmental protection (D'Amico *et al.*, 2016). Given the belief that the  
40 consumption of organic drinking products will generate positive effect on  
41 environmental protection, consumers are motivated to purchase these products when  
42 they care about environmental problems. Drawing on the logic of social cognitive  
43 theory, consumers who are environmentally conscious are arguably likely to be  
44 motivated by the belief that their consumption of organic drinking products helps  
45 protect the environment. Consequently, consumers tend to purchase organic drinking  
46 products. The following hypothesis is developed.

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54 *H4. Consumer extrinsic motivation positively mediates the relationship between*  
55 *environmental consciousness and purchase intention of organic drinking products.*

## 56 57 **2.6. Moderating role of CSR beliefs**

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60 CSR beliefs refer to consumers' perceptions of retailers that integrate social and

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3 environmental concerns in their operations (Louis *et al.*, 2019). Specifically, when  
4 consumers hold a belief that retailers are socially responsible, they believe that these  
5 retailers will engage in business activities that protect the environment and bring  
6 goodwill to consumers and society (Dang *et al.*, 2020; Utgård, 2018). Consumers who  
7 hold different beliefs on food retailers' CSR may form different motivation and  
8 behavioural intention towards organic drinking products sold by food retailers.  
9 Particularly, consumers who perceive food retailers as socially irresponsible may hold  
10 negative motivation and behavioural responses towards them (Diallo and Lambey-  
11 Checchin, 2017). For example, consumers may distrust and boycott socially  
12 irresponsible food retailers because they believe that these retailers' business activities  
13 harm the environment and society (Lacœuilhe *et al.*, 2018). Given the belief that food  
14 retailers are socially irresponsible, consumers may think that they will provide bad  
15 quality, package traditional drinking products as organic drinking products and sell  
16 them to consumers. They may also believe that these food retailers may act to maximise  
17 their profits without concern for environmental protection and the wellbeing of  
18 consumers. Consequently, consumers will not buy organic drinking products from these  
19 food retailers (Hwang and Chung, 2019). By contrast, if consumers hold a belief that  
20 food retailers are socially responsible, they may form positive motivation and buy more  
21 organic drinking products from these food retailers when they need to buy drinking  
22 products (Lacœuilhe *et al.*, 2018). Vlachos *et al.* (2009) stated that consumers often feel  
23 confident and trust retailers who engage in CSR activities. Accordingly, consumers are  
24 motivated to buy more organic products from these retailers.  
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33 The relationship between consumers' motivation and purchase intention may differ  
34 when they hold different beliefs on food retailers' CSR. Consumers are likely to be  
35 motivated and intend to purchase organic drinking products if they believe that food  
36 retailers engage in CSR activities (Lacœuilhe *et al.*, 2018). The reason is that consumers  
37 tend to trust socially responsible retailers (Vlachos *et al.*, 2009). They believe these  
38 retailers sell high-quality organic drinking products and engage in business activities  
39 that bring benefits to consumers and society (Dang *et al.*, 2020). By contrast, consumers  
40 tend to have low motivation and do not purchase organic drinking products from food  
41 retailers who are socially irresponsible (Becker-Olsen *et al.*, 2006). The reason is that  
42 consumers do not trust these retailers because of the belief that the latter do not care  
43 about the environment and society. These retailers are egoism engaging in activities  
44 that harm consumers (Diallo and Lambey-Checchin, 2017). Therefore, consumers may  
45 arguably have different motivation and purchase intention towards organic drinking  
46 products when they hold different CSR beliefs on food retailers. The following  
47 hypotheses is developed.  
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53 *H5. CSR beliefs positively moderate the relationship between consumer extrinsic*  
54 *motivation and purchase intention of organic drinking products.*  
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57 As stated in H3 and H4, consumer extrinsic motivation mediates the relationship  
58 between perceived food healthiness and purchase intention and that between  
59 environmental consciousness and purchase intention. Moreover, H5 states that CSR  
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3 beliefs moderate the relationship between consumer extrinsic motivation and purchase  
4 intention. Therefore, a logical argument is that CSR beliefs will moderate the indirect  
5 effects of perceived food healthiness and environmental consciousness on purchase  
6 intention through consumer extrinsic motivation. Accordingly, the following  
7 hypotheses are developed.  
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11 *H6. CSR beliefs moderate the indirect effect of perceived food healthiness on purchase*  
12 *intention of organic drinking products through consumer extrinsic motivation.*  
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15 *H7. CSR beliefs moderate the indirect effect of environmental consciousness on*  
16 *purchase intention of organic drinking products through consumer extrinsic motivation.*  
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18 Figure 1 shows the research model of this study.  
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### 23 24 25 **3. Methods**

#### 26 27 **3.1. Instrumental design**

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29 This study used survey questionnaire to collect sample data. We followed  
30 [McGorry's \(2000\)](#) suggestion and invited three bilingual language translators pursuing  
31 professional translation career to design the questionnaire. The original English  
32 questionnaire was translated to Vietnamese by one translator and translated back to  
33 English by another translator. The third translator checked and confirmed the final  
34 version of the questionnaire. To confirm the meaning and clarity of questionnaire, we  
35 conducted a pre-test with 40 consumers participating. After a slight modification, the  
36 final version of the questionnaire was confirmed for collecting formal data.  
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#### 40 41 **3.2. Measures**

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43 This study adopted constructs and items from the prior literature that have been  
44 widely used and proven to have high validity and reliability ([Goudas et al., 1994](#); [Kim](#)  
45 [et al., 2013](#); [Konuk, 2019](#); [Prakash et al., 2018](#); [Hwang and Chung, 2019](#)). All  
46 measurement items were assessed using a **seven-point Likert scale** from 1 (strongly  
47 disagree) to 7 (strongly agree). Table 1 shows all constructs and items in this study.  
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#### 53 54 **3.3. Sample procedure**

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56 The sample data used to test the hypotheses were collected from consumers who  
57 visited 10 organic food stores in Vietnam selling organic drinking products. Owing to  
58 a lack of sample frame, the proportion of the sample to the population could not be  
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3 identified in this study. However, to increase the randomness of sample data, a  
4 systematic sampling technique was used for this study's data collection. That is, our  
5 research team personally approached consumers at food stores. The team selected each  
6 one out of four consumers and asked the respondent to complete the questionnaire.  
7 From August to October 2020, the research team collected 650 questionnaires. A small  
8 sample of 44 questionnaires was invalid owing to missing and incomplete values. The  
9 valid sample data were 606 questionnaires for a response rate of 92.23%. Kline (2011)  
10 stated that using SEM for hypothesis testing requires at least 10 cases per parameter  
11 estimate. In this study, the measurement instrument includes 16 measure items. A  
12 sample size of at least 160 cases is required. However, the sample data in this study  
13 comprise 606 cases, which are sufficient for analysis. Table 2 shows the demographic  
14 profiles of the respondents.  
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### 24 3.4. Control variables and analysis methods

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26 Demographic variables were controlled in our analysis because these variables may  
27 have potential influence on the dependent variable in the analysis. Control variables  
28 include gender, age, education, marital status and income.  
29

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31 This study used SPSS 22.0 and AMOS 22.0 to analyse the sample data. Data  
32 screening, descriptive statistics and reliability were tested using the SPSS statistical  
33 software. Confirmatory factor analysis, validity of measures and SEM were analysed  
34 using the AMOS statistical software. SEM involves two types of equations:  
35 measurement and structural models (Hair *et al.*, 2020, Tang *et al.*, 2015). Hence, this  
36 technique can be used to validate the proposed research model and test the hypotheses.  
37 Empirically, SEM has been successfully applied in prior organic food research (e.g.  
38 Nguyen *et al.*, 2019; Nosi *et al.*, 2020; Tandon *et al.*, 2021)  
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## 43 4. Results

### 44 4.1. Data screening

45  
46 Before performing data analysis, data screening was conducted to examine some  
47 issues and assumptions for multivariate analysis, including normality, outliers, linearity,  
48 heteroscedasticity, autocorrelation and endogeneity, following procedures in Davidson  
49 and MacKinnon (1993) and Hair *et al.* (2010). Normality of distribution was confirmed  
50 because all skewness and kurtosis statistical values were within the standard error ( $\pm$   
51 1.96). Box plots were used to detect univariate outliers, whilst Mahalanobis distance ( $p$   
52  $< 0.001$ ) was obtained to examine multivariate outliers. The results indicated no outliers  
53 in the data set. Assumptions of linearity and homoscedasticity of residuals were ensured  
54 because scatterplots did not show any clear patterns in the spread of points. Furthermore,  
55 the Brown–Forsythe test was conducted to detect heteroscedasticity in the sample data.  
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The results indicate that error variance was constant ( $F = 111.599, p < 0.001$ ), suggesting that heteroscedasticity was not a problem in our sample data. The Durbin–Watson test was used to test the autocorrelation problem. The results indicate that autocorrelation did not appear in our sample data (Durbin–Watson = 1.996).

An augmented regression test was conducted to detect endogeneity in our sample data (Davidson and MacKinnon, 1993). In the first stage, we obtained residuals by regressing three instrumental variables (i.e. altruistic, biopsheric and egoistic values) against three predictor variables (i.e. perceived food healthiness, environmental consciousness and extrinsic motivation). These instrumental variables were included in the questionnaire to explore the respondents' values. **The three values were selected because they are often highly correlated with consumer perceptions and motivations towards green products (i.e. predictor variables), and they generally do not directly affect green purchase intention (i.e. dependent variables)** (Nguyen *et al.*, 2017; Steg, 2016). In the second stage, we regressed the predictor variables and residuals in the first stage against the dependent variable (i.e. purchase intention). The results indicate that the null hypothesis was rejected ( $p < 0.05$ ). Thus, endogeneity was not a problem in our sample data.

#### 4.2. Descriptive statistics

The descriptive statistics of all variables are presented in Table 3. The results of the Pearson correlations indicate that perceived food healthiness was positively associated with consumer extrinsic motivation ( $r = 0.46, p < 0.01$ ) and purchase intention ( $r = 0.59, p < 0.01$ ). Environmental consciousness was positively associated with consumer extrinsic motivation ( $r = 0.49, p < 0.01$ ) and purchase intention ( $r = 0.56, p < 0.01$ ). Furthermore, consumer extrinsic motivation was positively associated with purchase intention ( $r = 0.56, p < 0.01$ ). CSR beliefs were also positively associated with purchase intention ( $r = 0.58, p < 0.01$ ). Given that the Pearson correlations between variables were slightly high, multicollinearity was tested using the VIF value (Hair *et al.*, 2010). The results indicate that all VIF values of variables (perceived food healthiness: VIF = 1.854; environmental consciousness: VIF = 1.468; consumer extrinsic motivation: VIF = 1543 and CSR beliefs: VIF = 1.881) were below the cutoff value of 10 (Hair *et al.*, 2010). Thus, multicollinearity may not be serious between variables in this study.

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 Insert table 3 about here  
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#### 4.3. Measurement model

*Confirmatory factor analysis (CFA)*. This study used AMOS statistical software with maximum likelihood method to estimate the measurement model. Model fit was satisfactory when the ratio of Chi-square ( $\chi^2$ ) to degree of freedom (d.f.) is below 3, root mean square error of approximation (RMSEA) is under 0.08, goodness-of-fit index (GFI) is over 0.90 and comparative fit index (CFI) is above 0.90 (Kline, 2011). The fit index of the measurement model indicates a good model fit in this study ( $\chi^2/d.f. =$

265.057/89 = 2.978, RMSEA = 0.057, GFI = 0.948 and CFI = 0.978).

*Reliability and validity.* Table 4 shows that Cronbach's  $\alpha$  values for all variables ranged from 0.83 to 0.95 and exceeded the cutoff value of 0.60 (Hu and Bentler, 1999), indicating an adequate reliability for the measures in this study. Furthermore, the composite reliability (CR) values of all variables ranged from 0.83 to 0.95 and was above the cutoff value of 0.70 (Hair *et al.*, 2010). The average variance extracted (AVE) values of all variables ranged from 0.63 to 0.83 and was over the cutoff value of 0.50 (Hair *et al.*, 2010). The CR and AVE results indicated that convergent validity is adequate in this study. Additionally, discriminant validity was evaluated by comparing the square roots of AVE and correlation coefficients of all variables in the Pearson correlation matrix. The results in Table 3 show that all correlation coefficients were less than the square roots of AVE of each variable. This outcome suggests an adequate discriminant validity for the measures in this study.

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 Insert table 4 about here  
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*Common method variance.* Survey data may suffer from the bias of common method variance (CMV) because data are collected for all variables simultaneously with the same respondents. The current study followed Podsakoff *et al.*'s (2003) suggestion and adopted Harman's single-factor test to determine CMV. The results of the unrotated principal component analysis show that five factors emerged, accounting for 71.78% of variance. The first factor accounted for 18.37% of variance, which is below the threshold of 50% (Dupuis *et al.*, 2017). To confirm this result, this study conducted a one-factor model of CFA. The results indicate poor model fit ( $\chi^2/d.f.$  = 3206.34/104, RMSEA = 0.222, GFI = 0.529 and CFI = 0.621), thereby suggesting that results are unlikely influenced by CMV bias.

#### 4.4. Hypothesis testing

SEM with AMOS statistical software was used to test the hypotheses in this study. The results in Figure 2 show that except for income ( $\beta = 0.075$ ,  $p < 0.05$ ), all controlled variables were not significantly related to purchase intention. This result implies that consumers' purchase intention towards organic drinking products depends only on their income because these products are often more expensive than traditional drinking products.

Figure 2 shows that perceived food healthiness was positively related to purchase intention ( $\beta = 0.318$ ,  $p < 0.001$ ). Thus, H1 is supported. Environmental consciousness was also positively related to purchase intention ( $\beta = 0.222$ ,  $p < 0.001$ ). Hence, H2 is supported.

To test the mediating and moderating effects, this study adopted bootstrap analysis,

which has been widely used in prior studies in marketing, management, information management, psychology and organic food consumption (Preacher *et al.*, 2007, Wang *et al.*, 2020). Cheung and Lau (2008) extended the research of MacKinnon *et al.* (2002) and concluded that bootstrap analysis ‘provides unbiased estimates of mediation and suppression effects, and that the bias-corrected bootstrap confidence intervals perform best in testing for mediation and suppression effects’ (Cheung and Lau, 2008, p. 296). Russell and Dean (2000) stated that ‘bootstrapping holds promise as a statistical estimation technique yielding precise estimates of population distributions from sample data’ (p. 169). Thus, bootstrap analysis was deemed appropriate to test the mediating and moderating effects in the research model.

The results in Figure 2 show that perceived food healthiness was positively related to consumer extrinsic motivation ( $\beta = 0.305, p < 0.001$ ), which was positively related to purchase intention ( $\beta = 0.433, p < 0.001$ ). The results of the bootstrap analysis with 1,000 samples and 95% confidence interval (Preacher *et al.*, 2007) show that the indirect effect of perceived food healthiness on purchase intention through consumer extrinsic motivation was statistically significant (perceived food healthiness  $\rightarrow$  consumer extrinsic motivation  $\rightarrow$  purchase intention:  $\beta = 0.132, p < 0.01, 95\% \text{ CI} = [0.083, 0.158]$ ). Thus, H3 is supported. Similarly, environmental consciousness was positively related to consumer extrinsic motivation ( $\beta = 0.379, p < 0.001$ ), which was positively related to purchase intention ( $\beta = 0.433, p < 0.001$ ). The results of the bootstrap analysis also show that the indirect effect of environmental consciousness on purchase intention through consumer extrinsic motivation was statistically significant (environmental consciousness  $\rightarrow$  consumer extrinsic motivation  $\rightarrow$  purchase intention:  $\beta = 0.164, p < 0.01, 95\% \text{ CI} = [0.108, 0.199]$ ). Thus, H4 is supported.

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 Insert figure 2 about here  
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 Insert figure 3 about here  
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Additionally, the interaction effect between CSR beliefs and consumer extrinsic motivation was positively related to purchase intention ( $\beta = 0.066, p < 0.05$ ). The results in Figure 3 also show that the effect of consumer extrinsic motivation on purchase intention varied between low- and high-level CSR beliefs. Thus, H5 is supported.

To test the moderated mediation effect, we followed Preacher *et al.*'s (2007) method. The results of bootstrap analysis with 1,000 samples and 95% confidence interval show that the indirect effect of perceived food healthiness on purchase intention through consumer extrinsic motivation significantly varied between low- and high-level CSR beliefs ( $\Delta\beta = 0.055, p < 0.01$ ). Thus, H6 is supported. Similarly, the results of bootstrap analysis also show that the indirect effect of environmental consciousness on purchase intention through consumer extrinsic motivation significantly varied between low- and high-level CSR beliefs ( $\Delta\beta = 0.127, p < 0.01$ ). Thus, H7 is supported.



## 5. Discussion and Implications

This study aims to investigate how perception and social cognitive theories help to explain consumers' perceptions, motivation and behavioural intention towards organic drinking products. Specifically, this study determines the relationship between perceived food healthiness and purchase intention and the relationship between environmental consciousness and purchase intention with the mediating role of consumer extrinsic motivation and moderating role of CSR beliefs. The results of this study reveal several interesting findings. Perceived food healthiness and environmental consciousness were positively related to purchase intention. Furthermore, consumer extrinsic motivation was found to have a mediating effect on the relationship between perceived food healthiness and purchase intention and that between environmental consciousness and purchase intention. CSR beliefs also had a significant moderating effect on the link between consumer extrinsic motivation and purchase intention. Additionally, CSR beliefs moderated the indirect effect of perceived food healthiness on purchase intention via consumer extrinsic motivation. CSR beliefs also moderated the indirect effect of environmental consciousness on purchase intention via consumer extrinsic motivation. This study uses these findings as bases to provide several implications for researchers and food retailer managers.

The prior literature has widely used TPB to explain consumers' perceptions and behavioural intention towards organic food consumption (Armitage and Conner, 2001; Scalco *et al.*, 2017; Molinillo *et al.*, 2020). However, the predictive ability of TPB is limited (Armitage and Conner, 2001). Furthermore, the relationship between consumers' perceptions and behavioural intention towards organic foods has also presented mixed results in the prior literature (Asif *et al.*, 2018; Goetzke *et al.*, 2014; Dorce *et al.*, 2021). The current study endeavors to explain consumers' perceptions, motivation and behavioural intention towards organic drinking products from different perspectives. From perception theory, this study found the positive impact of perceived healthiness on purchase intention of organic drinking products. This result is inconsistent with the findings of Asif *et al.* (2018) and Basha and Lal (2019), which reported the negative relationship between perceived healthiness and purchase intention towards organic foods. Furthermore, consumer perception theory helps explain the mediating role of consumer extrinsic motivation on the relationship between perceived healthiness and purchase intention of organic drinking products. That is, consumers who care about healthy drinking tend to perceive their healthy conditions and healthiness of drinking products. They are motivated towards organic drinking products (e.g. organic coffee, organic tea, organic milk) because they believe that these products are good for human health. Consequently, they tend to purchase more organic drinking products (Hwang and Chung, 2019; Suci *et al.*, 2019). These results demonstrate the predictive ability of perception theory in explaining consumers' perceptions of healthiness that affect consumers' motivation, thereby influencing consumers' intention to purchase organic drinking products. Therefore, this study provides fresh insights into the relationships amongst perceptions, motivation and behavioural intention from the perspective of perception theory.

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3 From social cognitive theory, this study found the positive impact of environmental  
4 consciousness on the purchase intention of organic drinking products. This result is  
5 consistent with [Huang \*et al.\* \(2014\)](#), which reported that environmental consciousness  
6 enhances green consumer behaviour. Additionally, the current study determined the  
7 mediating effect of consumer extrinsic motivation on the relationship between  
8 environmental consciousness and purchase intention of organic drinking products.  
9  
10 These findings demonstrate the predictive ability of social cognitive theory in  
11 explaining the relationship amongst environmental consciousness, consumers'  
12 motivation and purchase intention towards organic drinking products. Specifically,  
13 when consumers are concerned with environmental issues, they tend to find ways to  
14 reduce the negative impact of their activities on the environment. Consumers are likely  
15 to be motivated towards organic drinking products because these products are natural  
16 plant without pesticides and chemical elements and minimally harmful to the  
17 environment. Consequently, consumers may purchase more organic drinking products  
18 with the belief that consuming these products helps protect the environment ([D'Amico  
19 \*et al.\*, 2016](#); [Kriwy and Mecking, 2012](#)). The findings of the current study provide  
20 evidence to clarify the predictive ability of social cognitive theory in explaining the  
21 impact of environmental consciousness on consumer extrinsic motivation, thereby  
22 influencing consumers' intention to purchase organic drinking products. Perception and  
23 social cognitive theories provide new insights into our understanding of consumers'  
24 perceptions, motivation and behavioural intention towards organic drinking products,  
25 instead of TPB in the prior literature.  
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33 The moderating mechanism of CSR beliefs on the relationship between consumer  
34 extrinsic motivation and behavioural intention towards organic drinking products has  
35 not been determined in the prior literature. To fill in this gap, this study provided  
36 evidence on the moderating effect of CSR beliefs. That is, when consumers hold  
37 different beliefs on CSR of food retailers, they tend to have different motivation and  
38 take different actions towards organic drinking products ([Lacœuilhe \*et al.\*, 2018](#)).  
39 Specifically, consumers who believe food retailers as socially responsible tend to be  
40 motivated and intend to purchase organic drinking products because they believe that  
41 socially responsible food retailers will engage in business activities that bring the best  
42 for consumers and society ([Dang \*et al.\*, 2020](#)). By contrast, consumers who perceive  
43 food retailers as socially irresponsible may have negative motivation because they feel  
44 distrust and believe these food retailers harm the environment. Consequently,  
45 consumers will not purchase organic drinking products from these retailers ([Diallo and  
46 Lambey-Checchin, 2017](#)). The findings of the current study enriches our knowledge of  
47 the moderating effect of CSR beliefs on the link between consumer extrinsic motivation  
48 and purchase intention towards organic drinking products.  
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55 In terms of practical contributions, this study provides several implications for food  
56 retailer managers. Perceptions of healthiness and environmental protection are  
57 suggested to influence consumers' motivation and purchase intention. Therefore, food  
58 retailers should plan and implement marketing strategies that enhance consumers'  
59 perceptions of healthiness and environmental protection. For example, food retailer  
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3 managers can launch marketing advertising to trigger consumers' perceptions of  
4 healthy drinking, and relate it with the consumption of organic drinking products.  
5 Furthermore, advertising strategy can call for environmental protection by consuming  
6 organic drinking products. By linking consumers' perceptions of healthy drinking and  
7 environmental protection with the consumption of organic drinking products, food  
8 retailers can trigger consumers' motivation and their intention to purchase organic  
9 drinking products. Additionally, food retailers should engage in CSR activities and use  
10 CSR as a signal to convey positive image to consumers. When consumers believe in  
11 food retailers' CSR, they are motivated to purchase more organic drinking products.  
12 Food retailers are suggested to use marketing strategies to claim their CSR. For example,  
13 food retailers may claim their CSR policy and their actual CSR activities on their  
14 websites or social networking sites. Such a strategy may enhance consumers'  
15 motivation towards food retailers, and they may purchase more organic drinking  
16 products from these food retailers. In summary, food retailers should launch different  
17 marketing campaigns to integrate the consumption of organic drinking products with  
18 healthy eating and environmental protection, and combine the consumption of organic  
19 drinking products with CSR activities.  
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## 26 **6. Limitations and Future Research**

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28 Several limitations in this study should be acknowledged and overcome in future  
29 research. Cross-sectional data may affect the causal relationships between variables in  
30 this study, which is a natural problem of cross-sectional data. Future research should  
31 collect data from different periods. Such a longitudinal data can better observe the  
32 causal relationships between variables. Furthermore, self-report survey may cause the  
33 bias of common method variance (CMV) because the same respondents provide  
34 measures for all variables simultaneously. CMV bias could affect the results of data  
35 analysis in this study, particularly given the difficulty of collecting data from the same  
36 consumers at different periods. Future research should use a more appropriate sampling  
37 technique to avoid CMV bias. Additionally, all variables in this study were measured  
38 by asking consumers' perceptions and their evaluation. Some variables should be  
39 measured by actual data. For example, CSR may be measured by the actual behaviour  
40 of food retailers, and consumers' actual purchase behaviour may also be measured.  
41 Future research should use some other variables measured by consumers' actual  
42 behaviour. **Although this study used augmented regression test to assess endogeneity,**  
43 **further analysis should be conducted to ensure that instrumental variables are**  
44 **uncorrelated with disturbance (i.e. error term). Future research can also use other**  
45 **statistical methods, such as the Durbin–Wu–Hausman test.** Lastly, this study used data  
46 from consumers who visited food retailers in Vietnam, thereby possibly affecting the  
47 generalisability of the results. Future studies should collect data from consumers in  
48 different countries and different types of food retailers.  
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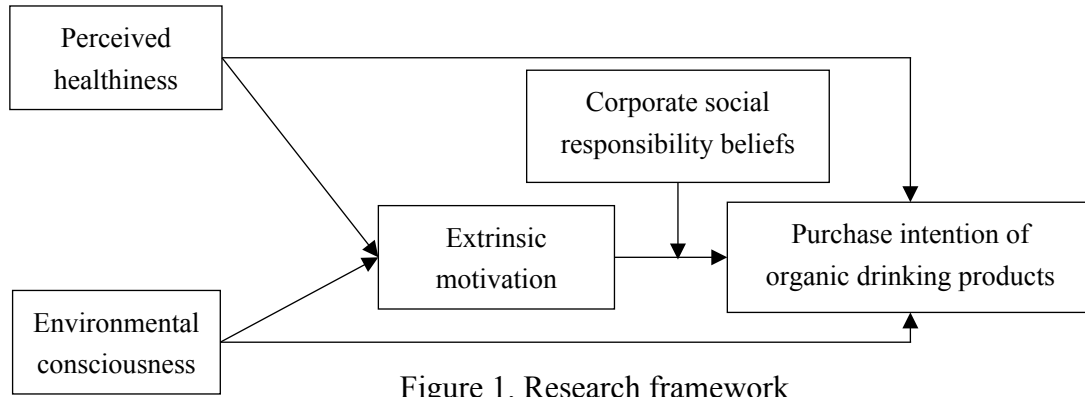
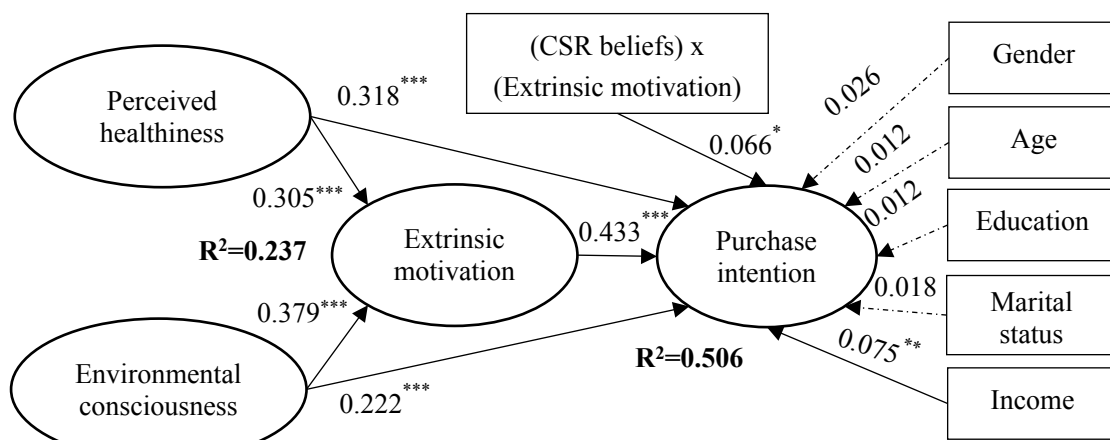


Figure 1. Research framework



Note: n=606, \*p<0.05, \*\*p<0.01, \*\*\*p<0.001

Figure 2. Results of hypothesis testing

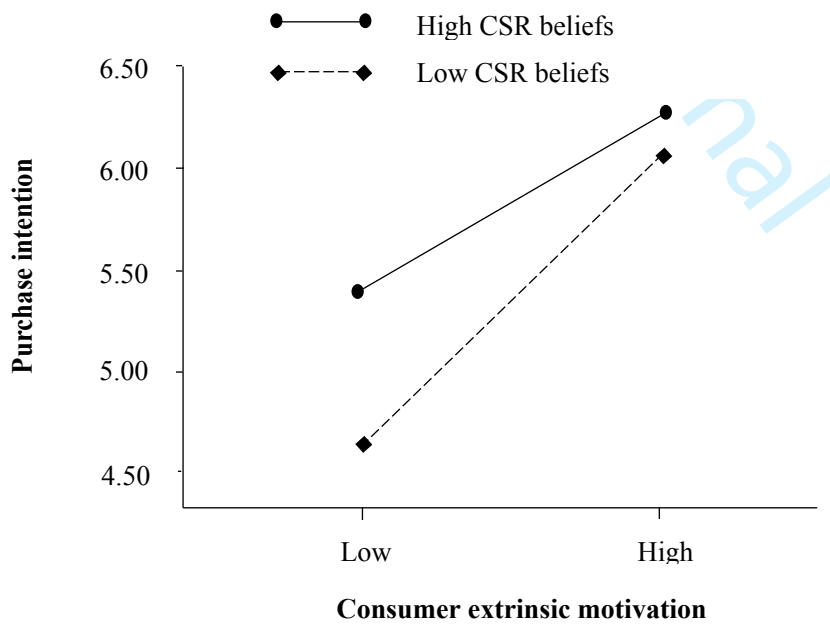


Figure 3. Interactive effect of extrinsic motivation and CSR beliefs on purchase intention

Table 1. Constructs and items

Constructs	Items and sources
Perceived food healthiness	<a href="#">Kim et al. (2013); Konuk (2019)</a> 1. This store provides fresh drinking products. 2. This store sells organic drinking products. 3. This store serves natural drinking products. 4. Healthy drinking products are sold in this store.
Environmental consciousness	<a href="#">Prakash et al. (2018)</a> 1. The balance of nature is very delicate and can be easily upset. 2. I have switched drinking products for ecological reasons. 3. When I have a choice between two equal drinking products. I purchase the one less harmful to other people and the environment.
Consumer extrinsic motivation	<a href="#">Goudas et al. (1994)</a> 1. Purchasing organic drinking products helps improve the ways others see my drinking behavior. 2. Purchasing organic drinking products is what I am supposed to do. 3. I get into trouble on drinking behavior if I do not purchase organic drinking products.
Corporate social responsibility beliefs	<a href="#">Hwang and Chung (2019)</a> 1. This store is involved in and supports the community in which they operate. 2. This store tries to hire a diverse pool of employees. 3. This store is good to their employees.
Purchase Intention	<a href="#">Prakash et al. (2018)</a> 1. I am willing to buy organic drinking products while shopping. 2. I will make an effort to buy organic drinking products in the near future. 3. I intend to buy organic drinking products.

Table 2. Demographics of respondents

Variable	Frequency	Percent
Gender		
<i>Male</i>	396	65.3%
<i>Female</i>	210	34.7%
Age		
<i>25 or below</i>	75	12.4%
<i>26-35</i>	293	48.3%
<i>36-45</i>	196	32.3%
<i>46-55</i>	30	5.0%
<i>56 or above</i>	12	2.0%
Education		
<i>High school and below</i>	67	11.1%
<i>University</i>	523	86.3%
<i>Master or above</i>	16	2.6%
Marital status		
<i>Married</i>	576	95.0%
<i>Not married</i>	30	5.0%
Income		
<i>Under 200 USD</i>	197	32.5%
<i>200-under 500 USD</i>	244	40.3%

<i>500-under 700 USD</i>	99	16.3%
<i>700-under 900 USD</i>	43	7.1%
<i>900 USD or above</i>	23	3.8%

Note: n=606

Table 3. Means, Standard Deviations, and Pearson Correlations

Variable	Mean	S.D.	1	2	3	4	5
1. Perceived food healthiness	5.50	1.02	<b>0.91</b>				
2. Environmental consciousness	5.62	0.99	0.46**	<b>0.79</b>			
3. Consumer extrinsic motivation	5.21	1.08	0.46**	0.49**	<b>0.81</b>		
4. Corporate social responsibility beliefs	5.11	1.08	0.64**	0.43**	0.49**	<b>0.90</b>	
5. Purchase intention	5.43	0.99	0.59**	0.56**	0.56**	0.58**	<b>0.88</b>

Note: n=606, \*\*P<0.01, square roots of AVE are along the diagonal.

Table 4. Confirmatory factor analysis results

Constructs	Items	Loadings	CR	AVE	$\sqrt{AVE}$	Cronbach's $\alpha$
Perceived food healthiness	PH1	0.92	0.95	0.82	0.91	0.95
	PH2	0.90				
	PH3	0.92				
	PH4	0.89				
Environmental consciousness	EC1	0.77	0.83	0.63	0.79	0.83
	EC2	0.84				
	EC3	0.77				
Consumer extrinsic motivation	CEM1	0.92	0.85	0.66	0.81	0.93
	CEM2	0.94				
	CEM3	0.85				
Corporate social responsibility beliefs	CSR1	0.88	0.93	0.82	0.90	0.85
	CSR2	0.77				
	CSR3	0.78				
Purchase intention	PI1	0.88	0.91	0.77	0.88	0.91
	PI2	0.87				
	PI3	0.88				

Note: n=606