



Why do people buy organic food? The moderating role of environmental concerns and trust

Anushree Tandon^a, Amandeep Dhir^{b,c,*}, Puneet Kaur^{c,d}, Shiksha Kushwah^e, Jari Salo^f

^a Turku School of Economics, University of Turku, Finland

^b Norwegian School of Hotel Management, University of Stavanger, Stavanger, Norway

^c Optentia Research Focus Area, North-West University, Vanderbijlpark, South Africa

^d Department of Psychosocial Science, University of Bergen, Norway

^e NTPC School of Business, Noida, India

^f Department of Economics and Management, Faculty of Agriculture and Forestry, University of Helsinki, Finland

ARTICLE INFO

Keywords:

Buying behaviour
Environmental concerns
Organic food
Self-determination theory
Trust

ABSTRACT

Although consumer interest in organic food has risen over time, resulting in a generally positive attitude toward these organic food products, scholarly research suggests a comparatively low volume of its consumption in the market. This has resulted in an urgent need to study the motivations which enhance consumers' proclivity to purchase food items produced organically. The current research attempts to understand potential associations between motivations (intrinsic and extrinsic), attitude, and buying behaviour towards organic food. Self-determination theory (SDT) was applied to develop a theoretically grounded framework which was evaluated with 378 organic food consumers. The hypotheses were tested by analyzing the data through structural equation modelling (SEM), wherein environmental concerns and trust were the moderating variables. The study results demonstrate the significant influence of intrinsic motivation, integrated and external regulation on consumer attitude, and buying behaviour. But, attitude had no significant association with buying behaviour. The findings indicate consumers' motivation may be stimulated to encourage higher frequencies of purchasing organic food by emphasizing values that reflect motivations arising from ethical or green consumerism, health, and social benefits. Furthermore, policymakers should focus on avenues to integrate organic food as permanent parts of individual lives and a socially exalting behavioral action.

1. Introduction

A gradual, yet, extensive growth has been witnessed worldwide in demand for organic food (Sultan et al., 2020) with global sales posited to have crossed USD 90 billion in the past twenty years (Willer et al., 2020). Scholars have suggested myriad reasons for this growth, foremost among which are consumer concerns about ecological sustainability (H. C. Lee et al., 2018) and ethical choice considerations (Kushwah et al., 2019a). It is posited that such concerns may be attributed to motivations arising out of consumption choices that reflect healthy lifestyles (Basha and Lal, 2019). Extant literature has witnessed multiple attempts to develop an understanding of various motives behind a consumer's behaviour (Feil et al., 2020) and reasons to consume organic food (Birch et al., 2018; Kareklas et al., 2014; Tandon et al., 2020). Yet, food

consumption is a dynamic and contextual phenomenon, which is influenced by multiple factors such as moral norms (Dean et al., 2012), subjective norms (Chekima et al., 2017; Nuttavuthisit and Thøgersen, 2017), social pressures (Hansen et al., 2018; Wheeler et al., 2019), cultural and geographical differences (Nuttavuthisit and Thøgersen, 2017). Thus, to explicate the complexities involved in motivating consumers to consume or purchase organic food, researchers have utilized theories based in study of human psychology, such as self-construal theory (Kareklas et al., 2014), behavioral reasoning theory (Tandon et al., 2020), social desirability theory (Wheeler et al., 2019) and social comparison theory (Hansen et al., 2018).

While these studies lend some insights into phenomena driving the increasing advancement of organic food consumption, yet there is a knowledge gap pertaining to the motives that promulgate its actual

* Corresponding author. Norwegian School of Hotel Management, University of Stavanger, Stavanger, Norway.

E-mail addresses: anushree.tandon@utu.fi (A. Tandon), amandeeep.dhir@uis.no (A. Dhir), puneet.kaur@uib.no (P. Kaur), shiksha.kushwah@nsb.ac.in (S. Kushwah), jari.salo@helsinki.fi (J. Salo).

<https://doi.org/10.1016/j.jretconser.2020.102247>

Received 16 September 2019; Received in revised form 26 April 2020; Accepted 17 July 2020

Available online 28 August 2020

0969-6989/© 2020 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

consumption (Hansen et al., 2018), especially in context of emerging economies (Pham et al., 2019). Instead, the majority of studies in this field concentrated on understanding attitudes and intentions to purchase, which may not translate into actual consumption for many reasons (Fleseriu et al., 2020). Researchers have indicated the need to investigate and expound upon this gap among consumers' consumption, intention and attitude; through the exploration of factors or motives that drive actual consumption (Chekima et al., 2017; Janssen, 2018; Shamsi et al., 2020).

Extant literature has thus identified research gaps signifying the need to articulate sophisticated theoretical frameworks and test additional constructs to cultivate a profounder understanding of factors promulgating actual consumption for organically produced food products (Prakash et al., 2018; Shamsi et al., 2020; Yadav and Pathak, 2016). In the present study, we aim to address this challenge by utilizing the self-determination theory (SDT hereafter) to examine associations among motivations (intrinsic and extrinsic), attitude, and buying behaviour. SDT defines motivation as a continuum that covers a comprehensive range of motivational drivers, including extrinsic and intrinsic motivators (Ryan and Deci, 2000). It is argued that SDT may offer a new perspective on understanding consumer motivations for organic food consumption.

Specifically, through the address of the gaps mentioned above, this study renders a three-fold enhancement to findings of prior studies. First, we examine motivational factors that advocate buying behaviour for organic food items using SDT. Contrastingly, majority of prior studies have used other frameworks such as Theory of Planned Behaviour (TPB, Sultan et al., 2020) and Theory of Reasoned Action (TRA, Birch et al., 2018). The authors acknowledge that although SDT has been adapted into different contexts, to the best of our awareness, the present research is a forerunner in SDT's application for elucidating motives that may induce consumers' organic food consumption. Second, this study focused on buying behaviour toward organic food, instead of attitude or intention, which have been focal issues in prior research. This addresses extant need for reducing persisting gaps among attitude, intention and actual behaviour exhibited by organic consumers. Third, this study focused on an emerging economy which have seen limited research (Molinillo et al., 2020). Only a few studies have previously focused on India (Basha and Lal, 2019) and analogous emerging economies, such as Vietnam (Van Huy et al., 2019), and Brazil (Feil et al., 2020) among others. Given the nascence of the Indian market for organic food, marketers and producers can derive vital advantages through insights derived from findings of this research. The findings direct attention to consumers' tendency to be motivated by individual self-identity, personal values, and external/social pressures or rewards. These may be used by policymakers and practitioners to design interventions for promoting adoption of organic food items.

The remaining manuscript is structured as subsequently described. Section two entails a brief discussion of India's organic food market along with prior research on organic food and pertinent findings from prior research. Section three provides a brief overview of SDT and its previous applications. Subsequently, section four details the hypotheses developed for the theoretical framework followed by section five which describes the methods through which this study was conducted. Further, the data analysis and results are described in section six. Section seven presents an inferential discussion on these findings. The study concludes with the presentation of pertinent implications for academicians, marketers, and policymakers.

2. Background literature

2.1. India's organic food market

Willer and Lernoud (2019) posit that a foremost challenge faced by organic food marketers is the concentrated nature of its demand. Notably, statistics on consumption of organic food suggests its primary

relegation to developed nations in Europe along with United States of America (USA) (Willer and Lernoud, 2019). Contrarily, greater part of global production is concentrated in developing countries (over 80% of the total produced value) (Willer and Lernoud, 2019). On a regional basis, Asia sustains highest numbers for producers cultivating organic food and is ranked third in terms of global sales. India has the third-largest allocation of wild harvest land committed to farming organic food (4.2 million hectares) and supports highest number of organic producers across the globe (Assocham & EY, 2018; Willer et al., 2020). With a steadily maintained compounded annual growth rate (CAGR) of 25% (Willer et al., 2020), the current value of India's organic food sector is estimated at USD 6 billion which is projected to cross USD 15 billion by 2025 (Assocham & EY, 2018). Organic food produced in India is witnessing global recognition and adoption, a fact made evident by exports worth approximately 757 million USD in 2018–2019, a growth of roughly 49% from 2017 to 2018 (Sally, 2019).

Interestingly, although the world acknowledges India's organic food production prowess, the local demand for organic food is currently in nascent stages (Prakash et al., 2018; Yadav and Pathak, 2016; Tandon et al., 2020). This is despite the fact that consumers' enhanced environmental consciousness has driven India's placement at a higher position on the Greendex compared to more developed counterparts such as China, Canada, Australia, and USA (Prakash et al., 2018). Moreover, metropolitan cities account for the maximum demand registered for organic food in India (Assocham & EY, 2018; Basha and Lal, 2019). Scholars argue that the growth of Indian market would, to a great extent, depend on gaining insights into determinants that would motivate consumers to pay premium prices for organically grown food (Singh and Verma, 2017).

2.2. Overview of prior studies on organic food consumption

Increasingly higher numbers of studies are investigating organic food consumption because of rising interest in sustainable foods and healthy lifestyles (Lazzarini et al., 2018). A review of prior literature suggests utilization of different theories, predominantly TPB (Khare and Pandey, 2017) and TRA (Koklic et al., 2019); for comprehending consumers' demonstrated behaviour for organic food items. Additionally, other theoretical frameworks tested in this context include stimulus-organism-response model (Lee and Yun, 2015), value-attitude system model (Pandey and Khare, 2015), self-construal theory (Karklas et al., 2014), social identification and identity theories (Khare and Pandey, 2017). Many scholars have also tried to assimilate supplementary constructs to increase TPB's predictive power (Yadav and Pathak, 2016).

These studies report the influence of multiple antecedents on increased buying behaviour for organic food items, including health consciousness (Chekima et al., 2017), social norms (Mørk et al., 2017) and environmental concerns (Ghali, 2019). Research has also considered the predictive effect of product-related attributes such as price barriers/sensitivity (Tariq et al., 2019) and product accessibility (Vittersø and Tangeland, 2015). Additionally, studies have explored the favourable influence of personal factors such as socio-demographics (Singh and Verma, 2017), decision-making styles (Prakash et al., 2018), and innovativeness (Persaud and Schillo, 2017) on individuals' intent to buy organic food items. Contrastingly, relatively limited studies have incorporated consumption motives within frameworks aimed at understanding organic food purchases. The deficiency of focus on consumption motives in the extant literature is an emergent gap in contemporary knowledge (Shamsi et al., 2020) addressed by this study.

Previous research has studied socio-demographically diverse samples in terms of age, gender and geographic scope. Extant studies represent samples that include consumers aged between 18 and 60 years, but focal attention has rested primarily on consumers aged 20–40 years (T. H. Lee et al., 2019; Tariq et al., 2019). With respect to gender, several studies examined balanced samples, i.e., equivalent male and

female ratio (Lazzarini et al., 2018; Vittersø and Tangeland, 2015), but some studies reported predominant male samples (Asif et al., 2018; Singh and Verma, 2017). In contrast, Konuk (2018) focused on a purely female sample comprised of pregnant women in order to investigate their orientation toward organic food. In terms of geographic focus, research has concentrated on developed economies such as United Kingdom (Tait et al., 2016), Norway (Vittersø and Tangeland, 2015), Denmark (Juhl et al., 2017), Germany (Hempel and Hamm, 2016) and USA (Boobalan and Nachimuthu, 2020). Contrarily, a smaller number of studies focussed on studying organic food within the environment of emerging markets such as India (Basha and Lal, 2019; Singh and Verma, 2017), Pakistan (Qasim et al., 2019) and China (Zhang et al., 2018).

Another critical notation about prior research relates to the dependent variable that has been investigated which indicates enhanced emphasis on stated purchase intention (Aitken et al., 2020; Singh and Verma, 2017), attitude (Asif et al., 2018; Basha and Lal, 2019) and willingness to pay (Zhang et al., 2018). Janssen (2018) posits that the concentrated focus on stated intentions and attitudes might be a reason for the attitude – intention gap in extant literature. Additionally, Shamsi et al. (2020), Singh and Verma (2017) as well as Chekima et al. (2017) suggest that intentions may be a preceding factor to actual consumption and may not fully explain consumers' decision-making processes for organic food items. To address this gap, Janssen (2018) called for research focused on actual consumer behaviour and the factors or motives affecting this phenomenon. The present study attempts to answer this call for research and addresses aforementioned research gaps, by using SDT to investigate motivations that facilitate actual organic food consumption in the specific context of India's emerging economy.

3. Self-determination theory (SDT)

SDT suggests individual motivations exists on a continuum representative of differing degrees of self – determination that reflect internal or external loci of control among various individuals (Deci and Ryan, 1985). An impersonal locus of control can lead to an individual's absent desire, or amotivation, to perform specific behaviour which represents an extreme end of this continuum (Ryan and Deci, 2000). Individuals' sense of internalized locus of control gives rise to highly self-determined, autonomous motives that originate from their own commitments. Contrarily, an external locus of causality is determined by external conditions, and contingencies considered by an individual give rise to controlled motivation (Shamsi et al., 2020).

Differing levels of self-determination can thus lead to varying forms of motivations that range from intrinsic to extrinsic (Ryan and Deci, 2000; Wang and Hou, 2015) (Fig. 1). Intrinsic motivation (IM) is defined as the drive to engage in specific behaviour for its own sake (Gilal et al., 2019). Conversely, extrinsic motivation (EM) considers the motivational aspect of activities that may be undertaken by consumers as a responsibility, duty, or obligation (Gilal et al., 2019). Deci and Ryan (1985) proposed a typology of EM that encompasses four forms of

regulations, namely introjected (INR), external (ER), identified (IDR), and integrated (IR).

In the recent past, these typologies of motivation and self – determination have found applications in various food-related contexts. Chiu et al. (2019) found self – determination to positively affect consumers' perceived relevance, as well as subsequent citizenship behaviour intended for organic food. Further, internalized motivation and intrinsic enjoyment have been identified to be driving forces for sustainable choices of consumption (Schösler et al., 2014). Shamsi et al. (2020) determined highly self-determined motives to positively affect purchase intention aimed at organic food. Thus, prior studies on organic food have unequivocally established the critical role of motivation in driving consumption decisions (Lazzarini et al., 2018). We contend that the concept of self – determination has also prompted researchers' to acknowledge the significance of green self-identity (Khare and Pandey, 2017; Pino et al., 2012) in determining consumers' choice to consume organic food (Tait et al., 2016). Due to these reasons, this study has utilized SDT to study associations among distinctive motivations, attitudes, and buying behaviour for organically produced food.

4. Hypotheses development

Review of extant literature implies consumption of organic food to be integral to an individual's ideology (Kareklas et al., 2014) and reflective of personal concerns, such as moral norms (Yadav and Pathak, 2016), health consciousness (Birch et al., 2018), ethically-driven consumption (Tariq et al., 2019) and environmental impact (Tait et al., 2016). The seminal work of Lee et al. (2000) suggests that consumer concerns significantly influence the decision-making or reasoning processes of consumers, thus acting as regulators during their pursuance of a goal. Moreover, they can also impact individual motivation and emotions (Markus and Kitayama, 1991). These consumer concerns can be classified as intrinsic and extrinsic, which reflect two facets of an individual's self (Kareklas et al., 2014). For example, environmental concerns may be termed as extrinsic, while concerns about health consciousness and ethical consumerism may be referred to as intrinsic.

Recent studies recommend imperative determination of consumer motives, choice, and risk perception (Khare and Pandey, 2017) to develop sustainable consumption patterns for organic food (Feil et al., 2020). These studies suggest consumers' self-identity, their extrinsic and intrinsic dimensions, may significantly influence motives, attitudes, and buying behaviour. Based on these arguments and a qualitative grounding of variables, the research model was conceptualized with four independent variables, namely IM, INR, ER, and IR (Table 1, Fig. 2). The dependent variables are attitude (ATT) and buying behaviour (BB). In addition to this, the research model has hypothesized the moderating role of environmental concerns (EC) and trust (T) on the associations between different motivations, attitude and buying behaviour.

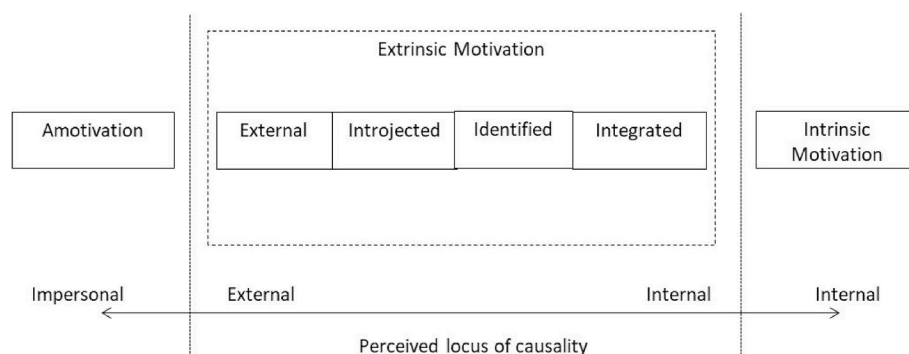


Fig. 1. Graphical illustration of SDT.

Table 1
Study measures.

Measures	Definition	Hypothesized relationship
Attitude (ATT)	It is a stable and elaborate (Thøgersen et al., 2017) relational construct resulting from interactions (Säfvenbom et al., 2014), defined as the favourable or unfavourable propensity harboured by an individual towards an object (Singhal, 2017)	ATT) - > BB
Buying Behaviour (BB)	The dynamic process that is undertaken by the consumer while selecting, and buying products while concurrently considering individual measures of satisfaction and resource constraints (Schiffman et al., 2014)	Dependent Variable
Intrinsic Motivation (IM)	Motivation resulting from individuals' inherent joy from performing an activity in itself (Engström and Elg, 2015; Gillison et al., 2009; Ng et al., 2012).	IM - > ATT IM - > BB
Extrinsic Motivation (IM)	Motives that drive an individual to perform an activity resulting in a distinct, separable outcome (Engström and Elg, 2015). It focuses on goal-driven reasons (Lin, 2007)	
(1) Introjected regulation (INR)	Represents motivation arising out of the need to demonstrate self-worth, avoid guilt or shame, and obtain social approval (Ng et al., 2012). It is a moderately controlled motivational form (Wang and Hou, 2015)	INR - > ATT INR - > BB
(2) Integrated regulation (IR)	Most developed, autonomous, and fully internalized form of EM, it is the process that allows for synchronization and synthesis of various identifications into a unified sense of self (Gilal et al., 2019).	IR - > ATT IR - > BB
(3) External regulation (ER)	Pursuance of activity to avoid a punishment or get rewarded; it represents external pressure to exhibit a particular behaviour (Ng et al., 2012; Reznickova and Zepeda, 2016).	ER - > ATT ER - > BB
Environmental concern	Reflects consumers' positive feeling towards green issues (Konuk, 2018) and evaluation of individual activities on the environment (Hansla et al., 2008; Roberts and Bacon, 1997)	Moderator
Trust	State of positive expectation regarding the action and intention of the other people involved in the transaction (Möllering, 2001), which reduces uncertainty and unambiguity related to action (Khare and Pandey, 2017).	Moderator

4.1. Attitude (ATT)

Attitude is a relational construct that results from interactions with an activity or environment (Säfvenbom et al., 2014). With respect to organic food, attitudes are one of the strongest precursors for intentions to purchase (Zhang et al., 2018) and can strongly affect actual consumption or buying behaviour towards organic food (Persaud and Schillo, 2017). Feil et al. (2020) suggest that consumers' attitude is affected by a complex interaction of multiple variables including personal (Molinillo et al., 2020), environmental (Shamsi et al., 2020) and product attributes (Aitken et al., 2020). Furthermore, it has been acknowledged that with respect to organically produced food, attitudes are expressively influenced by consumption motives (Teng and Lu, 2016), especially those motives that are high in self-determination or internal in nature (Shamsi et al., 2020). Prior research indicates that favourable attitude strongly relates to increased organic food buying behaviour (Ham et al., 2018) and buying intention (Nuttavuthisit and Thøgersen, 2017), which is considered to be the precedent of actual behaviour (Fleseriu et al., 2020). For example, behavioral intention was found to act as a mediator for attitude and behaviour by Sultan et al. (2020). Based on prior literature, we contend favourable attitude to be correlated with increased buying behaviour for organic food and propose the following hypothesis,

H1. Favourable attitude is associated with increased buying behaviour towards organic food.

4.2. Intrinsic motivation (IM)

Scholars argue that IM can explain a range of behavioral outcomes, including greater engagement with an activity, as well as a concentrated and persistent effort towards its enactment (Kim and Drumwright, 2016). Consumers may continually engage in particular activities due to innate satisfaction or pleasure derived from the nature of the act itself (Gilal et al., 2019; Kim and Drumwright, 2016). Subsequently, it is posited that consumers may become increasingly involved with organically produced food primarily due to the resultant pleasure and enjoyment arising from its consumption (Janssen, 2018). This enjoyment may be derived from the ecologically-friendly attribute of organic food (Asif et al., 2018; Azzurra et al., 2019), which may instill good feelings (self-interest) among consumers.

Steg et al. (2016) argue that pro-environmental behaviour may be encouraged through different typologies of IM depending upon the

values that individuals may prioritize. It is posited that individuals' engagement with organic food could be induced by motivational factors aimed at promoting self-interests (White et al., 2019). Organic food is considered to be a sustainable (Pino et al., 2012) and comparatively safer consumption alternative (Ghali, 2019). Consequently, it may be argued that consumers are self-motivated to buy these products due to their intrinsic need to safeguard personal health as well as the environmental well-being. In fact, consumers' concerns for environment and ecology have been indicated to exert substantial favourable influence on their attitude (Nuttavuthisit and Thøgersen, 2017) and intent to buy organic food (Basha and Lal, 2019). Thus, it is posited that IM has the potential to influence attitude and buying behaviour positively and the following hypotheses are proposed.

H2a. Increased IM is associated with favourable ATT towards organic food

H2b. Increased IM is associated with favourable BB towards organic food

4.3. Extrinsic motivation (EM)

Extrinsic motivations (EM) may be attributed to the pursuance of an activity that leads to the development of external indicators of self-esteem (Wang and Hou, 2015). Prior literature suggests that adult individuals rarely undertake an activity purely for pleasure (or intrinsic motivation). Instead, majority of activities are enacted for attainment of external rewards, such as an enhanced social image or monetary benefits (Wang and Hou, 2015). Schösler et al. (2014) found that extrinsically motivated consumers exhibit a lower propensity to consider the effect of food-related choices on sustainability, which could be attributed to lower levels of perceived competence or autonomy. On the other hand, organic food adoption may be higher for consumers who perceive a need to attain social status among their peers (Kim et al., 2018). Thus, we argue that EM, in the form of social value, could promulgate higher incidences of organic food consumption. Further, Shin et al. (2019) found social value to be a significant influence on increased intentions to buy and higher readiness to pay for organic food in restaurants. Similarly, Hwang (2016) found evidence for a significant positive relationship between consumers' adoption and their desire for improved self-presentation among society by consuming organic food. It is argued that higher levels of EM may be associated with greater organic food consumption due to consumers' desire to engage in activities that may result in enhanced social and cultural capital. Positive associations

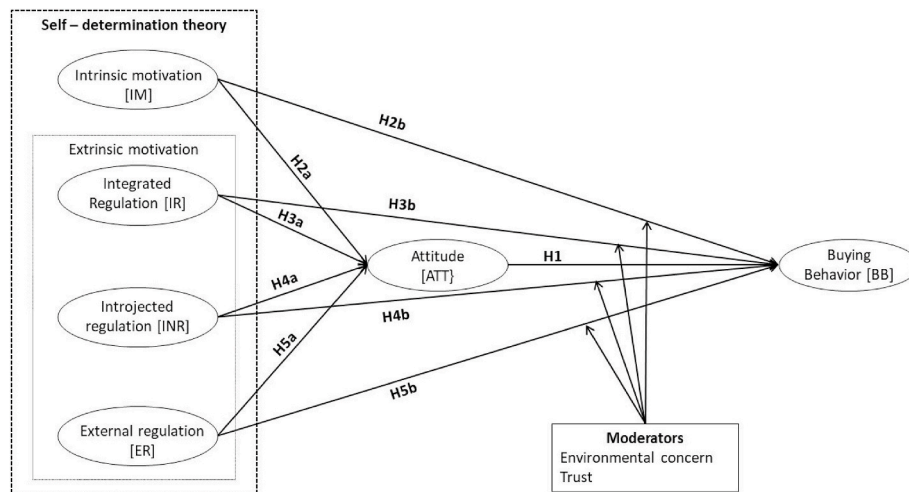


Fig. 2. Research model and the proposed hypothesis.

are thus hypothesized between three types of EM (i.e., INR, IR and ER), attitude, and buying behaviour towards organic food.

4.4. Integrated regulation (IR)

Integrated regulation (IR) contributes to building a sense of self (Gillison et al., 2009) and providing a sense of autonomy to the individual who decides to adopt a particular behaviour. IR reflects an individual's desire to be involved in a particular activity due to its perceived contribution in developing an enhanced personal sense of self (Ryan and Deci, 2000). An autonomous dimension of EM, IR, is posited to be related to perceived personal values and influences individual choices (Wang and Hou, 2015). Individuals, under the influence of IR, may thus try to enhance their self-identities by contemplating higher incidences of enacting a behaviour in daily life which is perceived to generate higher levels of personal value (Ryan and Deci, 2000). With regards to organic food, consumers exhibit a higher tendency to engage in its purchase either due to amplified health consciousness (egoistic values) or social consciousness (altruistic values) (Yadav and Pathak, 2016). In both cases, organic food items provide individuals with substantial alternative motives to make such products an integral part of their life. Organic food is considered to have both nutritional and environmental benefits (Kushwah et al., 2019), which could be easily integrated with individuals' personal values. It is thus argued that a consumer with higher form of IR may be motivated to show an increased proclivity to consume organic food due to engagement of their congruent personal values and goals (Ng et al., 2012). Based on the preceding discussion, it is proposed that IR should be positively associated with consumer attitudes and buying behaviour.

H3a. Increased IR is positively associated with favourable ATT towards organic food

H3b. Increased IR is positively associated with favourable BB towards organic food

4.5. Introjected regulation (INR)

Introjected regulation has been described as motivation with a low degree of internalization that prompts individuals to consider the implicit consequences of demonstrating or concealing a particular behaviour (Wang and Hou, 2015). These consequences include positive outcomes such as rewards or ego enhancement, which are pursued, and negative consequences such as guilt or shame, that are avoided (Haivas et al., 2012). With conspicuous growth of ecological activism, concerns

for environmental protection (Gupta et al., 2019), have been indicated by prior research to create rising social pressures, such as peer influence, for consuming organic food, (Khare and Pandey, 2017; Pandey and Khare, 2015). Thus, the growth of organic food consumption may be attributed to a perceived gain of positive social sanctions (Lin and Hsu, 2015), by observing social standards of acceptable pro-environmental behaviour (Khare and Pandey, 2017). Such socially acceptable standards, thus act as social or external enforcements for an individual to demonstrate or avoid particular behaviors (Ajzen, 1991). Such external influences may be argued to constitute a form of motivation that becomes internalized among individuals engaged with organically produced food items. Such social pressures, or subjective norms (Boobalan and Nachimuthu, 2020; Shamsi et al., 2020), have been tested in prior research through the TPB framework. Boobalan and Nachimuthu (2020) found support for an individual's belief about others' perceptions to influence their subjective norms and potentially influence greater purchase of organic food items. Additionally, Hansen et al. (2018) and Molinillo et al. (2020) established that consumers' motive of social consciousness, i.e., concern for society and social surroundings, significantly influenced them to show greater levels of positive intentional behaviour toward organic food. Further, Persaud and Schillo (2017) determined social influence and identity as vital influencers for consumers' development of higher intentions to purchase. Their study also found social identity to influence consumers' development of higher perceived value of organic food. It may be said that attaining and maintaining a specific self-identity among social and peer groups may be a form of INR for organic consumers (Dean et al., 2012). Subsequently it is theorized that consumers' higher INR would be positively related to more favourable attitudes and buying behaviour.

H4a. Increased INR is associated with favourable ATT towards organic food

H4b. Increased INR is associated with favourable BB towards organic food

4.6. External regulation (ER)

External regulation (ER) is controlled by external forces and does not incorporate any level of internalized or autonomous behaviour (Ng et al., 2012; Wang and Hou, 2015). Individuals may be driven by motivations or controlled pressure from an influence that is separate from oneself (Persaud and Schillo, 2017; Wang and Hou, 2015). With respect to organic food, such motivations may arise due to food safety concerns and the desire to avoid health issues (Konuk, 2018). As organic food

production avoids chemical or synthetic components, it is considered to have high nutritional value and environmental benefits in comparison to conventional alternatives (Kushwah et al., 2019a; Kushwah et al., 2019). Such food items are posited to inculcate development of favourable attitudes by delivering perceivably greater health benefits to health-conscious consumers who are increasingly cognizant of food scandals and quality issues (Nuttavuthisit and Thøgersen, 2017). Some skepticism may persist among consumers with regards to actual benefits derived from organic food consumption (Olson, 2017). Yet, consumers may be more motivated to consume organic food due to their desire to avoid negative consequences that are reportedly associated with consumption of food produced through conventional, chemical and synthetic means (Thøgersen et al., 2016). These benefits may thus act as positive external pressures and induce higher levels of purchase as well as development of more favourable attitudes for buyers of organic food. Following these arguments, the following hypotheses are posited.

H5a. Increased ER is associated with favourable ATT towards organic food

H5b. Increased ER is positively associated with favourable BB towards organic food

4.7. Moderating role: environmental concerns and trust

4.7.1. Environmental concerns

Environmental concern (EC) pertains to the extent to which consumers are cognizant of environment-related issues and showcase the desire or inclination to participate in solving them (Dunlap and Jones, 2002). Consuming organic food is considered to reflect behaviour that is environmentally protective and promotes sustainability (De-Magistris and Gracia, 2016). Influence of EC on consumer decision to enact pro-environmental behaviour has been previously investigated (Asif et al., 2018; Pham et al., 2019) and has been shown to be associated with increased frequency of buying organic food (Birch et al., 2018). For instance, a recent study found EC to positively influence consumers' social and health consciousness and subsequently increase their willingness to pay for organic food items (Molinillo et al., 2020). Amatulli et al. (2019) determined EC to be a significant mediator that influenced associations between negatively framed communication and anticipated shame among consumers who are faced with the choice to purchase environmentally friendly products. Similarly, Kushwah et al. (2019) found evidence for the moderating effect of EC on associations between consumer value and intention to engage in organic food consumption. Additionally, organic food is considered to have product-related attributes that may significantly contribute to ecological preservation. Consumers' awareness of such attributes can moderate the association between EC and purchase intention (Asif et al., 2018). Consequently, we argue that the level of EC demonstrated by a consumer, and their acceptance of environment-friendly products can indirectly influence their motivations and intentions to buy organic food. As such, the current study is aimed at understanding potential moderating effect of EC through the following hypothesis.

H6a. EC moderates the association between IM, EM (INR, IR and ER) and BB, such that consumers with higher EC would be more inclined to exhibit favourable BB toward organic food

4.7.2. Trust

Sirdeshmukh et al. (2002) describe trust as a reflection of consumers' perceived dependability on, and ability of service provider to deliver promised product attributes. This is reflected in the nascent markets of emerging economies, such as India, which lack proper regulations and

policies governing production of organic food. Consumers' formulation of trust may also be complicated by their limited awareness of such regulations (Kushwah et al., 2019b) and lack of knowledge of organic food product attributes (Misra and Singh, 2016). This limited awareness may limit consumers' ability to process perceived differences between organic and conventional food (Torres-Ruiz et al., 2018) and can result in the development of consumers' skepticism toward organic food. Numerous studies have suggested that consumers are sceptical about claims made by organic food items (Torres-Ruiz et al., 2018). Therefore, trust exerts a significant influence on encouraging consumers' decision to purchase organic food (Sobhanifard, 2018).

Literature suggests that consumers may consider more than one kind of trust while deciding on purchase of a credence good, like organic food (Nuttavuthisit and Thøgersen, 2017). The current study incorporates trust as an amalgamation of personal and system trust. Personal trust refers to consumers' knowledge about the attributes of organic food items and their relationship with local vendors and farmers. Conversely, system trust is universalistic and depends on consumers' belief in institutions, such as organic certification bodies, or inherent processes involved in production, or labelling of organic items, such as government procedures. Trust, as a determinant of purchase, has been investigated by multiple studies on organic food. For example, Zhang et al. (2018) found consumers' trust in organic labels could influence them to showcase higher propensity to purchase organically produced food items. Similarly, Nuttavuthisit and Thøgersen (2017) determined consumers' trust in marketers and producers could create a positive influence on their buying intentions for organic food. Contrarily, Carfora et al. (2019) suggest consumers' decision to buy organic milk was progressively affected by their trust in farmers, whereas trust in government, manufacturers, and retailers were found to be insignificant. Recently, Sultan et al. (2020) also established the moderating influence of perceived trust in organic food for consumers' behaviour – intention relationship. Consequently, the current study examines the moderating role of trust in the studied associations with regards to buying behaviour:

H6b. Trust moderates the association between IM, EM (INR, IR and ER) and BB, such that consumers with higher trust would be more inclined to exhibit favourable BB toward organic food

5. Methods

The data collection was performed using a mall-intercept survey, which was conducted over three weeks in January 2019. The target users were organic food buyers from the Delhi-National Capital Region (commonly referred to as the NCR) of India. The study was conducted in supermarkets, exclusive brand outlets (EBOs), and hypermarkets situated in four large shopping malls in NCR. Individual respondents were identified as actual purchasers of organic food (fruits and vegetables) aisles within the stores and were approached for permission to conduct the survey. To ensure a relatively representative sample, participants were approached during the weekdays (14:00 to 21:00) and weekends (11:00–21:00). The participants chose to either respond through paper-based or online questionnaires on mobile phones/tablets. Out of 512 filled questionnaires that were returned, 378 were valid, resulting in a 73.83% response rate. The variables of gender, age, education, and the number of household members were used to understand the respondents' profile. The average and median respondents' age was 28 years and 25 years, respectively. Sample was majorly comprised of male respondents (63.2%), and on average, four people were found to be present in respondents' households. Lastly, the preliminary analysis presents a clear majority of respondents with formal education,

Table 2
Factor loadings.

Study Measures	Measurement items	Study	
		CFA	SEM
Intrinsic Motivation (IM)	IM1: It is my pleasure to improve the quality of the environment by using organic food	.85	.85
	IM42: It is my pleasure to contribute to protecting the environment by using organic food	.82	.82
Integrated regulation (IR)	IR1: Consuming organic food is an integral part of my life.	.86	.86
	IR2: Consuming organic food has been a part of the way I've chosen to live my life	.84	.84
Introjected regulation (INR)	INR1: I would regret it if I am not doing something for the environment and future generations	.85	.85
	INR2: I would feel ashamed of myself if I was doing nothing to help the environment	.81	.81
External Regulation (ER)	ER1: Because buying organic food is good for my health	.73	.73
	ER2: Because using organic food is environment-friendly	.81	.81
	ER3: Because organic food is better than conventional alternatives	.73	.73
	ER4: Because organic food has high nutritional content	.76	.76
Attitude (ATT)	ATT1: Consuming organic food is good	.81	.81
	ATT2: Consuming organic food is pleasant	.85	.85
Buying behaviour (BB)	BB1: During the last five times, I have bought "organic fruits."	.88	.88
	BB2: During the last five times, I have bought "fruits and vegetable juice."	.75	.75

Note: Factor loadings structural model (SEM), Factor loadings structural model (CFA).

including undergraduate degrees (57.67%) and master's degree (30.7%). For data analysis, Anderson and Gerbing (1988) two-step approach was performed using SPSS 25.0 and AMOS 25.0. During the first stage, confirmatory factor analysis (CFA) was used for examining the measurement model as well as reliability and validity of adopted study measures (Table 2). Subsequently, the structural equation model (SEM) was assessed to test the hypothesized model in the second stage.

6. Results

The common method bias was assessed using Harman's single factor test. The results report that the considered study items explained variance that is less than the recommended threshold value of 50% (Podsakoff et al., 2003). This reveals that the study did not have any issues related with common method bias. The possibility of the presence of multicollinearity in the independent variables was examined by calculating their variance inflation factors (VIF). The analysis suggests that all the four independent variables were free from any issues related to multicollinearity since the values of the VIF ranged between 1.55 and 2.09. Our values were far below the recommended threshold value of 5.0 (Hair et al., 2017).

CFA of the measurement model returned good model fit as per the recommendations in existing literature ($X^2/df = 1.98$, $CFI = 0.98$, $TLI = 0.96$, $RMSEA = 0.06$) (Bagozzi and Yi, 1988). All the study measures had factor loadings and composite reliability values above the recommended threshold values of 0.50 and 0.70, respectively. Furthermore, average variance extracted (AVE) of different study constructs was also higher than 0.50 (Table 3). All aforementioned values show that the present study possessed sufficient convergent validity (Fornell and Larcker, 1981). Additionally, the study also possessed discriminant validity (Fornell and Larcker, 1981) as the square root value of each study measure's AVE is more than extant correlation among the various pairs of studied constructs (Table 3).

SEM provides information about the predictability of the proposed

Table 3
Validity and reliability analysis.

	CR	AVE	MSV	ASV	ATT	IM	IR	INR	BB	ER
ATT	.81	.69	.62	.44	.83					
IM	.82	.70	.63	.49	.79	.84				
IR	.84	.72	.55	.46	.73	.74	.85			
INR	.81	.68	.63	.39	.61	.80	.66	.83		
BB	.80	.67	.36	.20	.39	.39	.60	.35	.82	
ER	.84	.57	.53	.40	.73	.68	.66	.61	.46	.76

Note: Attitude (ATT), Intrinsic Motivation (IM), Integrated Regulation (IR), Introjected Regulation (INR), Buying behaviour (BB), External regulation (ER), Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Variance (MSV), Average Shared Variance (ASV).

research model. This is achieved through estimated path coefficients for the hypothesized paths, and the percentage of the variance explained for different dependent study variables. SEM returned good model fit ($X^2/df = 1.98$, $CFI = 0.98$, $TLI = 0.96$, $RMSEA = 0.06$). The study findings find support for H2a ($\beta = 0.55^{***}$), H3a ($\beta = 0.23^{**}$), H3b ($\beta = 0.67^{***}$), H5a ($\beta = 0.31^{***}$) and H5b ($\beta = 0.25^*$). On the other hand, H1 ($\beta = -0.18$), H2b ($\beta = -0.06$), H4a ($\beta = -0.17$) and H4b ($\beta = -0.10$) are not supported (see Table 4). The present model explained 71.9% variance in user's attitudes towards organic food and 39.5% variance in user's buying behaviour towards organic food (Fig. 3).

6.1. Moderation analysis

The moderating influence of trust and environmental concern was estimated using model 1 in process macro on SPSS. As shown in Table 5, environmental concerns do not moderate the association between different organic food-related motivations and buying behaviour. Similarly, trust also does not act as the moderator in the majority of the

Table 4
Confirmation of hypothesis (Full sample analysis).

Hypothesis	Path	β	Significance
H1	ATT → BB	-0.18	n.s
H2a	IM → ATT	0.55	<0.001
H2b	IM → BB	-0.06	n.s
H3a	IR → ATT	0.23	<0.01
H3b	IR → BB	0.67	<0.001
H4a	INR → ATT	-0.17	n.s
H4b	INR → BB	-0.10	n.s
H5a	ER → ATT	0.31	<0.001
H5b	ER → BB	0.25	<0.05

Note: Attitude (ATT), Buying behaviour (BB), Intrinsic Motivation (IM), Integrated Regulation (IR), Introjected Regulation (INR), External regulation (ER).

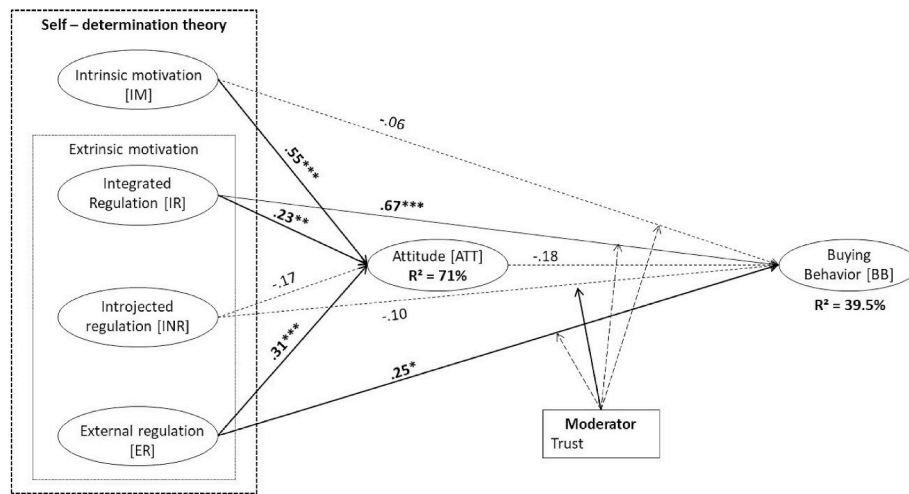


Fig. 3. Results of the structural model.

Table 5 Results of moderation analysis.

Trust						
	β	t	p	LLCI	ULCI	Moderation
IM → BB	-.02	-.31	.76	-.1216	.0884	No
IR → BB	.03	.59	.55	-.0627	.1167	No
INR → BB	.13	2.65	.01	.0344	.2314	Yes
ER → BB	.05	.87	.39	-.0634	.1634	No
Environmental Concern						
	β	t	p	LLCI	ULCI	Moderation
IM → BB	.03	.53	.60	-.0705	.1220	No
IR → BB	-.01	-.29	.77	-.0962	.0711	No
INR → BB	.01	.13	.90	-.0906	.1036	No
ER → BB	-.07	-1.15	.25	-.1899	.0495	No

Note: Intrinsic Motivation (IM), Integrated Regulation (IR), Introjected Regulation (INR), Buying behaviour (BB), External regulation (ER).

cases with the exception of association between INR and buying behaviour. Upon further probing the interaction, the conditional process analysis shows that trust moderates the association between INR and buying behaviour positively among the users with medium and high levels of trust (Tables 5 and 6 Fig. 4). Thus, it can be concluded that H6a is not supported while H6b is partially supported.

Table 6 Conditional process analysis at values of the moderator.

INR → BB having (Trust as moderator)					
	Effect	t	p	LLCI	ULCI
Low	.00	.05	.96	-.1221	.1282
Medium	.11	2.01	.05	.0025	.2270
High	.21	2.88	.00	.0680	.3608

Note. Introjected Regulation (INR), Buying behaviour (BB).

7. Discussion

The first hypothesis examined the association between ATT and BB (H1), which was determined to be insignificant. This finding concurs with proposition made by Ajzen (2008) that attitudes could be an indecisive factor for forecasting behaviour. The insignificant association suggests that, for organic food, actual purchase may be additionally influenced by supplementary factors, including motivation and reasons, rather than a positive attitude.

The second set of hypotheses tested the effect of IM on ATT (H2a) and BB (H2b). The finding for H2a confirms that internalized motivational factors are associated with the development of favourable consumer attitudes toward organically produced food. Consumers' positive

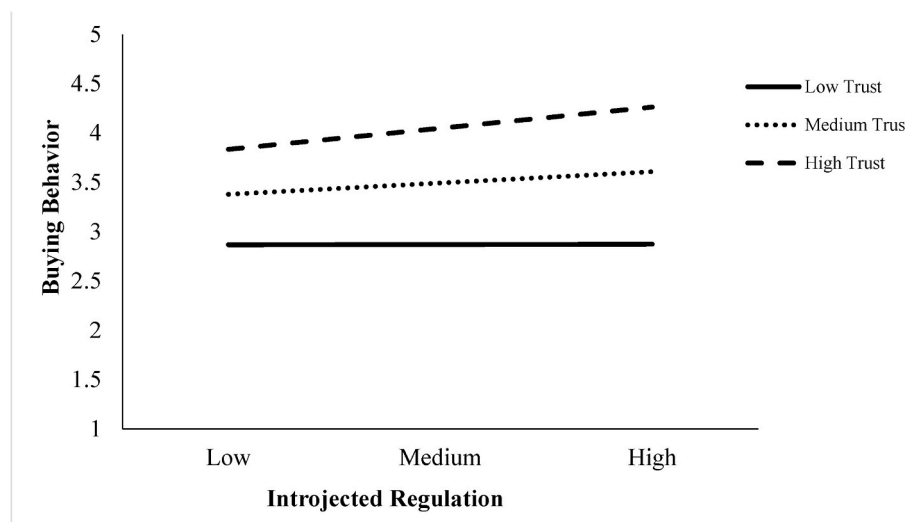


Fig. 4. The moderation effect of trust.

attitude may be attributed to their beliefs that, compared to conventionally produced food, organic food has a perceivably higher ability to promote sustainability and protect the environment (Pino et al., 2012). The finding concurs with previous studies that suggest IM, or motives aimed at achieving self – interests may lead to higher propensity to adopt environmentally friendly and sustainable behaviour (Steg et al., 2016). This indicates consumers' propensity to develop favourable attitudes towards, and innately enjoy partaking in activities that protect and sustain the environment. Contrarily, H2b, which examined the association between IM and BB, was found to be insignificant. This suggests that consumers do not find inherent enjoyment in exhibiting buying behaviour for organic food products. This may occur due to context-specific barriers, including consumers' price sensitivity and availability constraints for organic food, as have been suggested by previous investigations (e.g. Thøgersen et al., 2017, Yadav and Pathak, 2016). Furthermore, such barriers increase consumers' perceived costs of engaging in organic consumption-related behaviour. It may be a significant reason for inconsistency between consumer motivation – attitude – purchase behaviour for organic food buying as identified by extant literature.

The next set of hypotheses examined the association of IR with ATT (H3a) and BB (H3b). The study found support for H3a, which indicates the potential of personal values to induce consumers' to inculcate a favourable attitude toward buying organic food items. This is in concurrence with prior studies that indicate personal norms and values can influence organic food consumption (Singhal, 2017). Organic food consumption may offer psychological benefits (e.g. pleasure), and positively influence attitudes of consumers who believe that this act would be congruent to personal values and goals of engaging in ethical consumption (Thøgersen et al., 2016). This is concurrence with the core concept of IR (Ng et al., 2012). The association between IR and BB was also found to be significant (H3b). Consumers who engage in ethical consumption may consider buying organically produced food to reflect their distinctive identity or personality. Thus, it may be said that consumers are motivated by aspects related to IR, which is consistent with the proposition of prior researchers who postulated self-identity as a critical predictor of favourable buying intentions (Pino et al., 2012).

The association between INR, ATT (H4a) and BB (H4b) was investigated and found to be insignificant. This suggests that internalized motivations associated with social pressure or consciousness such as guilt, shame or ego-enhancement, have no impact on Indian consumers' attitude or buying behaviour towards organic food. Our finding contradicts previous studies that suggest negative emotions such as anticipated guilt (Theotokis and Manganari, 2015) or altruistic and egoistic considerations (Kareklas et al., 2014) may be equivalently predictive of attitude and intention among consumers. The contradiction may be attributed to differences in geolocations, contexts, and scopes between previous and current study. Consequently, we argue that an economy's developmental stage may impact consumers' externally-induced motivation and engagement with organic food consumption.

The associations between ER, ATT and BB; (examined through hypotheses H5a and H5b respectively), were determined as significant. Study findings suggest external pressures (e.g., subjective norms) and rewards (e.g., positive social sanctions) may have a favourable influence on the development of positive consumer attitudes. This contradicts the findings of Yadav and Pathak (2016) pertaining to the insignificant influence of subjective norms on purchase intentions of Indian consumers. However, a recent study by Basha and Lal (2019) found that cultural awareness and the importance of social integration assume a central role in Indian society. We argue that, over time, Indian consumers are being increasingly induced to buy organic food due to the development of an enhanced consciousness that is contingent on externally-oriented motivations. The results suggest that organic food may be bought more by consumers who are motivated to do so by their social or familial peer-group members. These consumers may be positively influenced by constructive word-of-mouth from credible members of their reference

groups and may thus exhibit higher tendency to buy organic food items. Thus, our findings are in agreement with previous studies in the Indian context (Basha and Lal, 2019; Singh and Verma, 2017). This also implies that consumers' perceived barriers of price sensitivity can be overcome through effective recommendations for adoption and formidable negative sanctions for rejecting organic food purchases. Since adherence to cultural norms and social norms in India carries strong effects on consumer behaviour, it may be suggested that deeper integration of organic food consumption as a social norm can significantly increase actual purchase frequency in the Indian market.

The results of this study show that EC does not moderate the associations between different users' motivations and organic food buying behaviour (H6a). This could be attributed to the contextually lower awareness/knowledge (Chen et al., 2014; Misra and Singh, 2016) of Indian consumers about the environmental benefits precipitated by the consumption of organic food. The results contradict the findings of Moser (2016), who studied German consumers and found environmental belief along with self-interest beliefs to be motivational forces of an equivocal nature on decision-making heuristics. Additionally, this study found partial support for moderating influence of trust on the association between motivations, ATT and BB (H6b). We found trust to only influence the association of introjected regulation (INR) and BB when compared to other motivational factors (IM, ER & IR). This insinuates that varying levels of trust can influence consumers' need to buy organic food if they are driven by the desire to avoid undesirable and negative emotions, including regret, shame or guilt (Ng et al., 2012), which reflect the core tenets of the concept of INR.

8. Conclusion

This study investigated the associations among attitude, motivational dynamics, and behaviour of consumers in buying organic food. Additionally, the moderating influence of environmental concerns and trust were examined. The study utilized the self-determination theory (SDT) to build a research model and evaluated it with 378 consumers through structural equation modelling (SEM). Results allude to the supposition that, with respect to organic food items, consumer attitude is determined by intrinsic motivation (IM), and extrinsic motivations of integrated regulation (IR), and external regulation (ER). Introjected regulation (INR) is posited to have no association with either attitude or buying behaviour. The results further indicate that internal motives and autonomous regulators of conduct are positively associated with consumers' favourable attitude towards buying and consuming organic food items. The emergent significance of these motives implies the need to promulgate consumer actions that induce ethical consumerism. Such promotion would be more useful if endorsed by social, familial, and peer group members as specific extrinsic forms of motives were found to significantly influence potentially increased buying of organic food items. The understanding of such associations between motivations, attitude, and buying behaviour raise significant theoretical and practical inferences for marketers and policymakers who handle the promotion of organic food products.

8.1. Theoretical implication

The study has resulted in significant theoretical contributions to the extant body of knowledge. First, the present research has utilized a newer theoretical framework, i.e., SDT, which has never before been used in organic food literature. The use of SDT has brought significant insights into the effect of individual factors, i.e., intrinsic and extrinsic motivations, on organic food buying behaviour. The findings imply that organic food may be bought by individuals because of intrinsic (IM), integrated (IR), and external (ER) sources of motivation. This suggests that the existing attitude-intention gap for organic food may be lessened by focusing on individual characteristics of organic food consumers, such as their enjoyment in contributing to ecological welfare and the

inculcation of their own sense of self as ethical consumers. These factors may also be used to design and test effective marketing communications to promote organic food purchases.

Second, unlike most prior literature, the current study has focused on buying behaviour, i.e., the purchase of organically produced food. It answers the call of recent studies that have suggested scholars' need to focus on actual behaviours instead of intentions (Ham et al., 2018; Kushwah et al., 2019b). This study has contributed to existing theoretical knowledge by bringing focus on the factors that translate into increased purchase frequency. Further, these factors have been tested in the context of an emerging economy that provides novel insights into the consumption scenario of such developing organic food markets. For instance, the significance of external regulation (ER) suggests that Indian consumers may be driven to buy organic food by the thought of social acceptance and rewards. Furthermore, these consumers may be more attuned to sustainable and organic patterns of consumption.

Third, the current research tried to develop a holistic understanding of consumer decision-making processes for organic food since motivations (intrinsic and extrinsic) would be the pre-requisite and precipitating factors of consumption. The designed research model thus provides a better explanation of consumer actions for organic food products. The insignificant association between attitude and buying behaviour suggests that several factors may directly influence consumers' buying decisions, regardless of their attitudes. This implies the need to further extend the current boundaries of research to incorporate more individual and personal factors in order to narrow the extant gaps between consumer attitude and behaviour toward organic food items. The limited moderating role of trust (T) and the insignificance of environmental concern (EC) suggest the need for examining the moderating effect of other variables that could affect organic purchase behaviour. Potential moderators may include variables such as gender, brand name, labels, and buying involvement, which could further explicate consumer processes during decision-making for organic food.

8.2. Managerial implications

This study raises significant practical implications through the findings. First, to stimulate the increased buying of organic food; marketing managers and policy-makers should focus on educating consumers about the benefits and positive societal outcomes of its adoption. Particular campaigns could be developed by appealing to basic psychological needs and personal goals that can create or influence consumer motivations, such as the need to preserve their ecological surroundings. Additionally, educating customers about different organic certifications and certifying bodies could build trust in consumers' minds about the authenticity of organic labels. Such trust could appeal to the ethical self-identity of consumers who, in turn, may be induced to buy organic food with proper labelling and certifications.

Second, organic food marketers can utilize the study findings to design marketing campaigns that would heighten consumers' intrinsic and extrinsic motivations. Such campaigns could further induce consumers' buying behaviour by focusing on the intrinsic benefits of organic food, e.g., personal and health-oriented benefits. This could be especially useful for markets wherein food safety and contamination are primary concerns among consumers. Additionally, campaigns could also focus on extrinsic benefits such as building individual self-esteem by gaining social status (or positive sanctions), which could appeal to consumers' need for communal or social approval. Such campaigns should also account for the cultural aspects of a market, i.e., the importance of communal well-being, which could potentially influence consumers' motivational levels and, subsequently, their buying behaviour. Concurrently, marketing promotions should focus on the benefits of environmental conservation on individuals and society by consuming organic food.

Third, marketers could converge attention to connecting the consumption of organic food with a sense of duty and personal achievement.

This could promulgate the intention to consume organic food as an outcome with significant personal value to the consumer. This could impact not just consumers' integrated motivation (IR) levels, but also impact their intrinsic motivation (IM) and sense of ethical consumerism. Such consumer-oriented campaigns could also be undertaken by the government to try and induce the feeling of doing the right thing by consuming organic food among the populace. The findings for the moderating role of trust on the association between introjected (INR) form of motivation and buying behaviour suggests that such campaigns may be targeted at establishing an association between organic consumerism and environment protection. Through these campaigns, marketers may try to establish a sense of shame or regret among consumers if they do not contribute to sustaining the environment by consuming organically produced food items. Furthermore, markets may also try to generate positive word-of-mouth to stimulate externally regulated (ER) forms of motivation by encouraging peer group members to promulgate benefits of organic food and giving special recognizance to group members who display ethical consumerism by making conscious efforts to buy organic food. This could motivate consumers through the perceived gain of positive social sanction and credibility among social/peer groups, thereby affecting their attitudes, intentions, and actual consumer behaviour. Attention from marketers and the government towards promoting organic food could not just stimulate consumer demand in urban areas, but may also potentially affect consumer demands in semi-urban areas as well as smaller towns and cities. Thus, such campaigns may encourage consumers in widespread urban, and semi-urban, locations to adopt organic food items.

8.3. Limitations and future research

The present research is mainly constrained by two key limitations. First, the findings may be limited in generalizability as its scope is constrained to India. Second, the current study focused on relatively younger consumers dwelling in metropolitan cities. The results may be different from findings based on other age groups and populations dwelling in semi-urban and rural regions. Future studies may concentrate on the following aspects: First, cross-cultural studies may be conducted to investigate, whether and how cultural differences affect organic food consumption. Second, similar studies are required among consumers dwelling in smaller towns and semi-urban regions. The consumers of such cities and towns traditionally have more exposure to locally produced food, and they may be more positively oriented towards organic food purchase. In addition to this, future studies should focus on assessing the legal policies and governmental support for organic food marketing and production. The results obtained in the present situation do not mean that environmental concern and trust do not, in general, moderate the association between users' motivations and buying behaviour. Future research should further investigate their influence in different research contexts, such as different demographic settings.

Appendix A. Supplementary data

Supplementary data related to this article can be found at <https://doi.org/10.1016/j.jretconser.2020.102247>.

References

- Aitken, R., Watkins, L., Williams, J., Kean, A., 2020. The positive role of labelling on consumers' perceived behavioural control and intention to purchase organic food. *J. Clean. Prod.* 255, 120334.
- Ajzen, I., 1991. The theory of planned behavior. *Organ. Behav. Hum. Decis. Process.* 50 (2), 179–211.
- Ajzen, I., 2008. Consumer attitudes and behavior. In: Haugvedt, C.P., Herr, P.M., Cardes, F.R. (Eds.), *Handbook of Consumer Psychology*, first ed. Lawrence Erlbaum Associates, pp. 525–548. New York.

- Amatulli, C., De Angelis, M., Peluso, A.M., Soscia, I., Guido, G., 2019. The effect of negative message framing on green consumption: an investigation of the role of shame. *J. Bus. Ethics* 157 (4), 1111–1132.
- Anderson, J.C., Gerbing, D.W., 1988. Structural equation modeling in practice: a review and recommended two-step approach. *Psychol. Bull.* 103 (3), 411.
- Asif, M., Xuhui, W., Nasiri, A., Ayyub, S., 2018. Determinant factors influencing organic food purchase intention and the moderating role of awareness: a comparative analysis. *Food Qual. Prefer.* 63, 144–150.
- Assocham & Ey, 2018. *The Indian Organic Market: A New Paradigm in Agriculture*. New Delhi, India.
- Azzurra, A., Massimiliano, A., Angela, M., 2019. Measuring sustainable food consumption : a case study on organic food. *Sustainable Production and Consumption* 17 (na), 95–105.
- Bagozzi, R.P., Yi, Y., 1988. On the evaluation of structural equation models. *J. Acad. Market. Sci.* 16 (1), 74–94.
- Basha, M.B., Lal, D., 2019. Indian consumers' attitudes towards purchasing organically produced foods: an empirical study. *J. Clean. Prod.* 215, 99–111.
- Birch, D., Memery, J., De Silva Kanakarathne, M., 2018. The mindful consumer: balancing egoistic and altruistic motivations to purchase local food. *October 2017 J. Retailing Consum. Serv.* 40, 221–228.
- Boobalan, K., Nachimuthu, G.S., 2020. Organic consumerism: a comparison between India and the USA. *J. Retailing Consum. Serv.* 53, 101988.
- Carfora, V., Cavallo, C., Caso, D., Del Giudice, T., De Devitiis, B., Viscecchia, R., et al., 2019. Explaining consumer purchase behavior for organic milk: including trust and green self-identity within the theory of planned behavior. *Food Qual. Prefer.* 76 (September 2018), 1–9.
- Chekima, B., Oswald, A.I., Wafa, S.A.W.S.K., Chekima, K., 2017. Narrowing the gap: factors driving organic food consumption. *J. Clean. Prod.* 166, 1438–1447.
- Chen, J., Lobo, A., Rajendran, N., 2014. Drivers of organic food purchase intentions in mainland China - evaluating potential customers' attitudes, demographics and segmentation. *Int. J. Consum. Stud.* 38 (4), 346–356.
- Chiu, T.S., Ortiz, J., Chih, W.H., Pang, L.C., Huang, J.J., 2019. Antecedents of consumers' citizenship behaviour towards organic foods. *J. Consum. Behav.* 18 (4), 332–349.
- Dean, M., Raats, M.M., Shepherd, R., 2012. The role of self-identity, past behavior, and their interaction in predicting intention to purchase fresh and processed organic food. *Journal of applied social psychology*, 42: 669 – 688. *J. Appl. Soc. Psychol.* 42 (na), 669–688.
- Deci, E.L., Ryan, R.M., 1985. The general causality orientations scale: self-determination in personality. *J. Res. Pers.* 19 (2), 109–134.
- De-Magistris, T., Gracia, A., 2016. Consumers' willingness-to-pay for sustainable food products: the case of organically and locally grown almonds in Spain. *J. Clean. Prod.* 118, 97.
- Dunlap, R.E., Jones, R.E., 2002. Environmental concern: conceptual and measurement issues. *Handbook of Environmental Sociology* 3 (6), 482–524.
- Engström, J., Elg, M., 2015. A self-determination theory perspective on customer participation in service development. *J. Serv. Market.* 29 (6/7), 511–521.
- Feil, A.A., da Silva Cyrne, C.C., Sindelar, F.C.W., Barden, J.E., Dalmoro, M., 2020. Profiles of sustainable food consumption: consumer behavior toward organic food in southern region of Brazil. *J. Clean. Prod.* 258, 120690.
- Fleseriu, C., Cosma, S.A., Bocanet, V., 2020. Values and planned behaviour of the Romanian organic food consumer. *Sustainability* 12, 1–21.
- Fornell, C., Larcker, D.F., 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research* 18 (1), 39–50.
- Ghali, Z., 2019. Motives of willingness to buy organic food under the moderating role of consumer awareness. *Journal of Scientific Research & Reports* 25 (6), 1–11.
- Gilal, F.G., Zhang, J., Paul, J., Gilal, N.G., 2019. The role of self-determination theory in marketing science: an integrative review and agenda for research. *Eur. Manag. J.* 37 (1), 29–44.
- Gillison, F., Osborn, M., Standage, M., Skevington, S., 2009. Exploring the experience of introjected regulation for exercise across gender in adolescence. *Psychol. Sport Exerc.* 10 (3), 309–319.
- Gupta, A., Dash, S., Mishra, A., 2019. All that glitters is not green: creating trustworthy ecofriendly services at green hotels. *Tourism Manag.* 70 (August 2018), 155–169.
- Hair, J., Hollingsworth, C., Randolph, A., Chong, A., 2017. An updated and expanded assessment of PLS-SEM in information systems research. *Ind. Manag. Data Syst.* 117, 442–458.
- Haivas, S., Hofmans, J., Pepermans, R., 2012. Self-determination theory as a framework for exploring the impact of the organizational context on volunteer Motivation : a study of Romanian volunteers. *Nonprofit Voluntary Sect. Q.* 41 (6), 1195–1214.
- Ham, M., Pap, A., Stanic, M., 2018. What drives organic food purchasing? – evidence from Croatia. *Br. Food J.* 120 (4), 734–748.
- Hansen, T., Sørensen, M.I., Eriksen, M.L.R., 2018. How the interplay between consumer motivations and values influences organic food identity and behavior. *October 2017 Food Pol.* 74, 39–52.
- Hansla, A., Gamble, A., Juliusson, A., Gärling, T., 2008. The relationships between awareness of consequences, environmental concern, and value orientations. *J. Environ. Psychol.* 28 (1), 1–9.
- Hempel, C., Hamm, U., 2016. Local and/or organic: a study on consumer preferences for organic food and food from different origins. *Int. J. Consum. Stud.* 40 (6), 732–741.
- Hwang, J., 2016. Organic food as self-presentation : the role of psychological motivation in older consumers' purchase intention of organic food. *J. Retailing Consum. Serv.* 28 (na), 281–287.
- Janssen, M., 2018. Determinants of organic food purchases : evidence from household panel data. *Food Qual. Prefer.* 68 (February), 19–28.
- Juhl, H.J., Fenger, M.H.J., Thøgersen, J., 2017. Will the consistent organic food consumer step forward? An empirical analysis. *J. Consum. Res.* 44 (3), 519–535.
- Kareklas, I., Carlson, J.R., Muehling, D.D., 2014. "I eat organic for my benefit and yours": egoistic and altruistic considerations for purchasing organic food and their implications for advertising strategists. *J. Advert.* 43 (1), 18–32.
- Khare, A., Pandey, S., 2017. Role of green self-identity and peer influence in fostering trust towards organic food retailers. *Int. J. Retail Distrib. Manag.* 45 (9), 969–990.
- Kim, E., Drumwright, M., 2016. Engaging consumers and building relationships in social media : how social relatedness influences intrinsic vs . extrinsic consumer motivation. *Comput. Hum. Behav.* 63 (na), 970–979.
- Kim, S.W., Lusk, J.L., Brorsen, B.W., 2018. "Look at me, I'm buying organic": the effects of social pressure on organic food purchases. *J. Agric. Resour. Econ.* 43 (3), 364–387.
- Koklic, M.K., Golob, U., Podnar, K., Zabkar, V., 2019. The interplay of past consumption, attitudes and personal norms in organic food buying. *Appetite* 137, 27–34.
- Konuk, F.A., 2018. Antecedents of pregnant women's purchase intentions and willingness to pay a premium for organic food. *Br. Food J.* 120 (7), 1561–1573.
- Kushwah, S., Dhir, A., Sagar, M., 2019a. Ethical consumption intentions and choice behavior towards organic food. Moderation role of buying and environmental concerns. *J. Clean. Prod.* 236, 117519.
- Kushwah, S., Dhir, A., Sagar, M., 2019b. Understanding Consumer Resistance to the Consumption of Organic Food. A Study of Ethical Consumption, Purchasing, and Choice Behaviour. *Food Quality and Preference*.
- Kushwah, S., Dhir, A., Sagar, M., Gupta, B., 2019. Determinants of organic food consumption. A systematic literature review on motives and barriers. *October 2018 Appetite* 143, 104402.
- Lazzarini, G.A., Visschers, V.H.M., Siegrist, M., 2018. How to improve consumers' environmental sustainability judgements of foods. *n.a. J. Clean. Prod.* 198, 564–574.
- Lee, A.Y., Aaker, J.L., Gardner, W.L., 2000. The pleasures and pains of distinct self-construals: the role of interdependence in regulatory focus. *J. Pers. Soc. Psychol.* 78 (6), 1122.
- Lee, H.C., Chang, C.T., Cheng, Z.H., Chen, Y.T., 2018. Will an organic label always increase food consumption? It depends on food type and consumer differences in health locus of control. *Food Qual. Prefer.* 63 (January 2017), 88–96.
- Lee, H.-J., Yun, Z.-S., 2015. Consumers' perceptions of organic food attributes and cognitive and affective attitudes as determinants of their purchase intentions toward organic food. *Food Qual. Prefer.* 39, 259–267.
- Lee, T.H., Fu, C.J., Chen, Y.Y., 2019. Trust factors for organic foods: consumer buying behavior. *Br. Food J.* 122 (2), 414–431.
- Lin, H., 2007. Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *J. Inf. Sci.* 33 (2), 135–149.
- Lin, H.Y., Hsu, M.H., 2015. Using social cognitive theory to investigate green consumer behavior. *Bus. Strat. Environ.* 24 (5), 326–343.
- Markus, H.R., Kitayama, S., 1991. Culture and the self: implications for cognition, emotion, and motivation. *Psychol. Rev.* 98 (2), 224.
- Misra, R., Singh, D., 2016. An analysis of factors affecting growth of organic food: perception of consumers in Delhi-NCR (India). *Br. Food J.* 118, 1066.
- Molinillo, S., Vidal-Branco, M., Japutra, A., 2020. Understanding the drivers of organic foods purchasing of millennials: evidence from Brazil and Spain. *J. Retailing Consum. Serv.* 52, 101926.
- Möllering, G., 2001. The nature of trust: from Georg Simmel to a theory of expectation, interpretation and suspension. *Sociology* 35 (2), 403–420.
- Mørk, T., Bech-Larsen, T., Grunert, K.G., Tsalis, G., 2017. Determinants of citizen acceptance of environmental policy regulating consumption in public settings: organic food in public institutions. *J. Clean. Prod.* 148, 407–414.
- Moser, A.K., 2016. Buying organic – decision-making heuristics and empirical evidence from Germany. *J. Consum. Market.* 33 (7), 552–561.
- Ng, J.Y.Y., Ntoumanis, N., Thøgersen-ntoumani, C., Deci, E.L., Ryan, R.M., Duda, J.L., Williams, G.C., 2012. Self-determination theory applied to health contexts : a meta-analysis. *Perspect. Psychol. Sci.* 7 (4), 325–340.
- Nuttavuthisit, K., Thøgersen, J., 2017. The importance of consumer trust for the emergence of a market for green products: the case of organic food. *J. Bus. Ethics* 140 (2), 323–337.
- Olson, E.L., 2017. The rationalization and persistence of organic food beliefs in the face of contrary evidence. *J. Clean. Prod.* 140, 1007–1013.
- Pandey, S., Khare, A., 2015. Mediating role of opinion seeking in explaining the relationship between antecedents and organic food purchase intention. *Journal of Indian Business Research* 7 (4), 321–337.
- Persaud, A., Schillo, S.R., 2017. Purchasing organic products: role of social context and consumer innovativeness. *Market. Intell. Plann.* 35 (1), 130–146.
- Pham, T.H., Nguyen, T.N., Phan, T.T.H., Nguyen, N.T., 2019. Evaluating the purchase behaviour of organic food by young consumers in an emerging market economy. *J. Strat. Market.* 27 (6), 540–556.
- Pino, G., Peluso, A.M., Guido, G., 2012. Determinants of regular and occasional consumers' intentions to buy organic food. *J. Consum. Aff.* 46 (1), 157–169.
- Podsakoff, P.M., MacKenzie, S.B., Podsakoff, N.P., Lee, J.Y., 2003. The mismeasure of man(agement) and its implications for leadership research. *Leader. Q.* 14 (6), 615–656.
- Prakash, G., Singh, P.K., Yadav, R., 2018. Application of consumer style inventory (CSI) to predict young Indian consumer's intention to purchase organic food products. *Food Qual. Prefer.* 68, 90–97.
- Qasim, H., Yan, L., Guo, R., Saeed, A., Ashraf, B.N., 2019. The defining role of environmental self-identity among consumption values and behavioral intention to consume organic food. *Int. J. Environ. Res. Publ. Health* 16 (7).
- Reznickova, A., Zepeda, L., 2016. Can self-determination theory explain the self-perpetuation of social Innovations ? A case study of slow food at the university of Wisconsin — madison. *J. Community Appl. Soc. Psychol.* 17, 3–17, 2015.

- Roberts, J.A., Bacon, D.R., 1997. Exploring the subtle relationships between environmental concern and ecologically conscious consumer behavior. *J. Bus. Res.* 40 (1), 79–89.
- Ryan, R.M., Deci, E.L., 2000. Intrinsic and extrinsic motivations: classic definitions and new directions. *Contemp. Educ. Psychol.* 25 (1), 54–67.
- Säfvenbom, R., Haugen, T., Bulie, M., Säfvenbom, R., 2014. Attitudes toward and motivation for PE : who collects the benefits of the subject ? *Phys. Educ. Sport Pedagog.* 20 (6), 629–646.
- Sally, M., 2019. November 9). APEDA Eyes \$60 Billion Agriculture Exports with Support of New Policy. *Economic Times*, p. 1. Retrieved from. <https://economictimes.indiatimes.com/news/economy/agriculture/apeda-eyes-60-billion-agriculture-exports-with-support-of-new-policy/articleshow/71981555.cms>.
- Schiffman, L.G., Kanuk, L.L., Brewer, S.W., 2014. *Consumer Behaviour: Global and Southern African Perspectives*. Pearson.
- Schöslér, H., de Boer, J., Boersema, J.J., 2014. Fostering more sustainable food choices: can Self-Determination Theory help? *Food Qual. Prefer.* 35, 59–69.
- Shamsi, H.R., Najafabadi, M.O., Hosseini, S.J.F., 2020. Designing a three-phase pattern of organic product consumption behaviour. November 2018 *Food Qual. Prefer.* 79, 103743.
- Shin, Y.H., Im, J., Jung, S.E., Severt, K., 2019. Motivations behind consumers' organic menu choices: the role of environmental concern, social value, and health consciousness. *J. Qual. Assur. Hospit. Tourism* 20 (1), 107–122.
- Singh, A., Verma, P., 2017. Factors influencing Indian consumers' actual buying behaviour towards organic food products. *J. Clean. Prod.* 167, 473–483.
- Singhal, N., 2017. A study of consumer behavior towards organic food and the moderating effects of health consciousness A study of consumer behavior towards organic food and the moderating effects of health consciousness. *J. Market. Manag.* 16 (3), 45–79.
- Sirdeshmukh, D., Singh, J., Sabol, B., 2002. Consumer trust, value, and loyalty in relational exchanges. *J. Market.* 66 (1), 15–37.
- Sobhanifard, Y., 2018. Hybrid modelling of the consumption of organic foods in Iran using exploratory factor analysis and an artificial neural network. *Br. Food J.* 120 (1), 44–58.
- Steg, L., Lindenberg, S., Keizer, K., 2016. Intrinsic motivation, norms and environmental behaviour: the dynamics of overarching goals. *International Review of Environmental and Resource Economics* 9 (1–2), 179–207.
- Sultan, P., Tarafder, T., Pearson, D., Henryks, J., 2020. Intention-behaviour gap and perceived behavioural control-behaviour gap in theory of planned behaviour: moderating roles of communication, satisfaction and trust in organic food consumption. *Food Qual. Prefer.* 81, 103838.
- Tait, P., Saunders, C., Guenther, M., Rutherford, P., 2016. Emerging versus developed economy consumer willingness to pay for environmentally sustainable food production: a choice experiment approach comparing Indian, Chinese and United Kingdom lamb consumers. *J. Clean. Prod.* 124, 65–72.
- Tandon, A., Dhir, A., Kaur, P., Kushwah, S., Salo, J., 2020. Behavioral reasoning perspectives on organic food purchase. *Appetite* 104786. <https://doi.org/10.1016/j.appet.2020.104786>.
- Tariq, A., Wang, C., Tanveer, Y., Akram, U., Akram, Z., 2019. Organic food consumerism through social commerce in China. *Asia Pac. J. Market. Logist.* 31 (1).
- Teng, C.C., Lu, C.H., 2016. Organic food consumption in Taiwan: motives, involvement, and purchase intention under the moderating role of uncertainty. *Appetite* 105, 95–105.
- Theotokis, A., Manganari, E., 2015. The impact of choice architecture on sustainable consumer behavior: the role of guilt. *J. Bus. Ethics* 131 (2), 423–437.
- Thøgersen, J., Pedersen, S., Paternoga, M., Schwendel, E., Aschemann-Witzel, J., 2017. How important is country-of-origin for organic food consumers? A review of the literature and suggestions for future research. *Br. Food J.* 119 (3), 542–557.
- Thøgersen, J., Zhou, Y., Huang, G., 2016. How stable is the value basis for organic food consumption in China? *J. Clean. Prod.* 134, 214–224.
- Torres-Ruiz, F.J., Vega-Zamora, M., Parras-Rosa, M., 2018. Sustainable consumption: proposal of a multistage model to analyse consumer behaviour for organic foods. *Bus. Strat. Environ.* 27 (4), 588–602.
- Van Huy, L., Chi, M.T.T., Lobo, A., Nguyen, N., Long, P.H., 2019. Effective segmentation of organic food consumers in Vietnam using food-related lifestyles. *Sustainability* 11 (5), 1–16.
- Vittersø, G., Tangeland, T., 2015. The role of consumers in transitions towards sustainable food consumption. the case of organic food in Norway, 2014 *J. Clean. Prod.* 92, 91–99.
- Wang, W., Hou, Y., 2015. In: *Information and Organization Motivations of Employees' Knowledge Sharing Behaviors : A Self-Determination Perspective*, vol. 25. Information & Organization, pp. 1–26.
- Wheeler, S.A., Gregg, D., Singh, M., 2019. Understanding the role of social desirability bias and environmental attitudes and behaviour on South Australians' stated purchase of organic foods. *Food Qual. Prefer.* 74, 125–134.
- White, K., Habib, R., Hardisty, D.J., 2019. How to SHIFT consumer behaviors to be more sustainable: a literature review and guiding framework. *J. Market.* 83 (3), 22–49.
- Willer, H., Lernoud, J., 2019. The world of organic agriculture. In: *The World of Organic Agriculture Statistic and Emerging Trends 2019*. Research Institute of Organic Agriculture (FiBL) and IFOAM – Organics International. Retrieved from. <https://shop.fibl.org/chen/mwdownloads/download/link/id/1202>.
- Willer, H., Schlatter, B., Trávníček, J., Kemper, L., Lernoud, J., 2020. The world of organic agriculture. In: Helga, W., Bernhard, S., Trávníček, J., Kemper, L., Lernoud, J. (Eds.), *The World of Organic Agriculture*. Research Institute of Organic Agriculture (FiBL) and IFOAM – Organics International. Retrieved from. <https://shop.fibl.org/de/artikel/c/statistik/p/1663-organic-world-2015.html>.
- Yadav, R., Pathak, G.S., 2016. Intention to purchase organic food among young consumers: evidences from a developing nation. *Appetite* 96, 122–128.
- Zhang, B., Fu, Z., Huang, J., Wang, J., Xu, S., Zhang, L., 2018. Consumers' perceptions, purchase intention, and willingness to pay a premium price for safe vegetables: a case study of Beijing, China. *J. Clean. Prod.* 197, 1498–1507.