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# **Predicting the Organic Food Purchase Behaviour in Egypt: An Empirical Study Investigating the Pro-Environmental and Service-Scape Effect on the Consumer's Purchase Behaviour**

توقع سلوك شراء الأغذية العضوية في مصر: دراسة تجريبية لبحث التأثير الداعم للبيئة  
وتأثير نطاق الخدمة على سلوك شراء المستهلك

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## **Abstract**

*Society is faced with increased environmental deterioration due to the current status of environmental pollution and scarcity of resources, making it a necessity to evolve towards sustainable lifestyles which pressure people to change their behavioural patterns. This research explores the organic food purchase resulting from pro-environmental behaviour in the Egyptian market, with a specific emphasis on the service-scape phenomenon and its effect on the consumer's purchase experience. The research aims at bringing out new insights related to the organic food purchase decision because of pro-environmental behaviour based on the development of a comprehensive framework. Moreover, the study puts emphasize on the relationships between attitude, social influence, and anticipated guilt on the intention to purchase organic food. In addition, it examines the moderation roles of self-transcendence values, perceived behavioural control and store's atmospherics. Furthermore, the research expands the understanding of the service-scape in an original approach by exploring the physical, social, and natural dimensions in the organic food grocery retail industry. A deductive research approach using a quantitative research strategy is employed with a total of 403 surveyed consumers. The results reveal that the organic food purchase is a result of pro-environmental behaviour that is moderated by the interaction of store's atmospherics and an environmental intention to purchase*

*organic food. Additionally, the intention is affected by the attitude and the social influence while, moderated by self-transcendence values and perceived behavioural control. As well as, the different antecedents are found affecting the consumer's purchase experience by acting as different service-scape dimensions. The research contributes to knowledge by providing a solid body of knowledge of the antecedents that best predict organic food purchase from a pro-environmental behaviour perspective. Also, gaining new knowledge related to the service-scape concept and its application in the organic food retailing context likewise, the contribution to theory in this work emerges from the development of a hypotheses tested conceptual model that offers a deeper understanding to the organic food purchase decision and its relation to behaving pro-environmentally. Besides, enhance the understanding of the service-scape multi-disciplinary dimensions. Practically, the identification of motives behind the organic food purchasing/pro-environmental behaviour helps prospering the environmental essence. Hence, create pleasurable consumer's organic food purchase experiences accompanied by increased environmental awareness and responsibility to achieve and promote sustainability.*

### ملخص:

يواجه المجتمع تدهور بيئي متزايد بسبب الوضع الحالي للتلوث البيئي وندرة الموارد مما يجعل من الضرورة التطور نحو أنماط الحياة المستدامة التي تضغط على الناس لتغيير أنماطهم السلوكية.

هذا البحث يستكشف شراء الأغذية العضوية الناتجة من السلوك الداعم للبيئة في السوق المصري مع التأكيد بشكل خاص على ظاهرة نطاق الخدمة وتأثيرها على خبرة شراء المستهلك. يهدف البحث إلى إيجاد رؤى جديدة متعلقة بقرار شراء الأغذية العضوية بسبب السلوك الداعم للبيئة على أساس إيجاد إطار عمل شامل. علاوة على ذلك تؤكد الدراسة على العلاقات بين الموقف والتأثير الاجتماعي والشعور بالذنب المتوقع على نية شراء طعام عضوي.

بالإضافة إلى ذلك تفحص الدراسة أدوار الاعتدال في قيم السمو الذاتي وأجواء التحكم السلوكي المُتصَوّر وأجواء المتاجر. علاوة على ذلك يوسع البحث من فهم البيئة نطاق الخدمة في النهج الأصلي من خلال استكشاف الأبعاد المادية والاجتماعية والطبيعية في صناعة التجزئة للبقالة الغذائية العضوية. نهج البحث الاستنتاجي الذي يستخدم إستراتيجية البحث الكمي يوظف إجمالي عدد 403 من المستهلكين الذين شملهم الاستطلاع. تكشف النتائج أن شراء الأغذية العضوية هو نتيجة لسلوك داعم للبيئة الذي يكون معتدلاً من خلال تفاعل أجواء المتاجر والتوجه البيئي لشراء طعام عضوي. بالإضافة إلى ذلك يتأثر هذا التوجه بالموقف والتأثير الاجتماعي في حين أنه يكون معتدلاً من خلال قيم السمو الذاتي والتحكم السلوكي المُتصَوّر.

وكذلك وُجد أن السوابق المختلفة تؤثر على خبرة شراء المستهلك من خلال العمل كأبعاد مختلفة لنطاق الخدمة. البحث يساهم في المعرفة من خلال توفير مجموعة متينة من معرفة السوابق التي تنتبأ بشكل أفضل بشراء الأغذية العضوية من منظور السلوك الداعم للبيئة. أيضاً اكتساب معرفة جديدة تتعلق بمفهوم نطاق الخدمة وتطبيقه في سياق تجارة تجزئة المواد الغذائية العضوية بالمثل والمساهمة في النظرية في هذا العمل تنبثق من إعداد نموذج مُختبر مُتصور للفرضيات الذي يقدم فهم أعمق لقرار شراء الأغذية العضوية وعلاقته بالتصرف الداعم للبيئة.

بجانب تعزيز فهم نطاق الخدمة متعدد الأبعاد متعدد الانضباط. عملياً تحديد الدوافع وراء شراء الأغذية العضوية / السلوك الداعم للبيئة الذي يساعد في ازدهار الكيان البيئي. ومن ثم إيجاد خبرات ممتعة لشراء الأغذية العضوية للمستهلك مصحوبة بالوعي البيئي المتزايد والمسئولية لتحقيق وتعزيز الاستدامة.

## Introduction

The planet's ability to generate resources is being surpassed, as people recently are consuming more resources. Consequently, this challenge of securing food puts pressure on the environment to meet the increased demand (McCarthy et al., 2018). Moreover, pollution and over usage of the world's resources are increasingly threatening man's wellbeing and quality of life (Sutton et al., 2013). The planet cannot sustain this pattern of consumption anymore. Therefore, this new reality must be acknowledged and managed. An evolution towards a more sustainable lifestyle is essential to ensure future generation's access to fair share of resources (Witjes & Lozano, 2016). Consumers might have little knowledge of the link between their consumption choices and the environmental consequences (Camilleri et al., 2019). In the last three decades, consumer's pro-environmental behaviour has become one of the most popular research topics among academics. On the other hand, despite the observed growth in the organic food market and improvements in environmental awareness, extensive efforts still need to be made (Sahota, 2014). It has become crucial to acknowledge and accept that the ecological worldview consists of accepting beliefs that human activity endangers the natural equilibrium. Behavioural change has the potential to reduce environmental damages so understanding the key drivers and antecedents affecting such behaviour, predicting its development and eventually changing it to diminish negative outcomes is pivotal (Klockner, 2013) which reflects the importance of this research.

According to Jungbluth et al. (2000), household individuals have an important environmental impact by changing their behaviour particularly in their food choices. The broad literature on pro-environmental behaviour highlights the diversity of variables, which influence different environmentally significant behaviours (i.e., organic food purchase). The majority of the findings are diverse and not comparable due to differences in the organic food motivational structures and market backgrounds, different types of consumers with different consumption habits and different country specific contexts. Therefore, further work is needed to explore these variables, understand their interactions and consider their consequences and their contextual dimension (Scalco et al., 2017; Ling and Xu, 2020). Since the 1980s many scholars have been proposing and testing theories and models that aim to predict environmentally relevant behaviour in efforts, to identify entry points for interventional behaviour change. Until present, it is not entirely clear which of the model variables are central variables, which are direct determinants of behaviour, or which have moderation and/or mediated influence on behaviour. When it comes to attitude – intention – behaviour relationships a gap still exists (Chekima et al., 2017). While many consumers consider themselves as environmentally sensitive individuals, many studies do not show consistent results regarding actual behaviour. According to Cronin et al., (2011), this complex illogicality suggests the need for research to deal with the enormous cut off between attitudes, intention, and actual purchase behaviour.

The research aims to cover the gaps found in research through enhancing the understanding of consumer behaviour from an environmental perspective, through acknowledging the antecedents that best predict organic food purchase as a result of behaving pro-environmentally within the Egyptian context. Consequently, this study intends to offer insights about the organic food purchase decision as a result of pro-environmental behaviour. The purpose of the research is to combine theories with discrete but complementary motivations which are important to pro-environmental behaviour along with other important relevant variables. That will enable the development of a comprehensive framework that provide a better understanding of important constructs predicting organic food purchase as a result of such pro-environmental behaviour. Furthermore, the research help understand the effect of the service-scape different dimensions on the consumer's organic purchase decision within the pro-environmental domain.

The current paper is made of seven sections, starting with the introduction of the paper, then the literature review, followed by the methodology in section three. Section four represents the results and findings, then the research discussion and conclusion in section five. Section six presents the research recommendations. Finally, section seven shows the limitations and suggestions for future research.

## **Literature Review**

This section discusses the past literature related to the interdisciplinary nature of the research topic. The literature review discusses the research variables elaborating on the theoretical framework, the proposed conceptual model adopted by the study and the development of the research hypotheses.

### ***Attitude towards Organic Food Purchase***

Attitudes are favorable or unfavorable evaluation of the individual forms of a specified behaviour (Ajzen, 1991). Attitude symbolizes what consumers like and dislike (Blackwell et al., 2006). From an environmental perspective, environmental attitudes are embedded in a person's self-concept. In other words, it expresses the degree to which an individual perceives him- or herself to be an essential part of the natural environment (Schultz and Zelezny, 2000). In environmental behaviour domain attitudes are considered a powerful key predictor and the strongest contributor of effective pro-environmental behaviour (Lindenberg and Steg, 2007). Tanner and Kast (2003) stated that organic food purchase is strongly facilitated by positive environmental attitudes. Also, environmental attitudes were found significantly related to individuals' intentions to consume organic vegetables (Sawitri et al., 2015). Most of the research found that the intention to purchase organic food depends on the person's attitude and that the relationship between consumers' attitudes towards purchasing and their intentions to purchase organic products is strong (Tarkiainen and Sundqvist, 2005; Zhou et al., 2013; Park and Ha, 2014).

Kim and Chung (2011) stated that consumer's attitude towards buying organic products will positively influence their intention consequently buying behaviour. On the contrary, some researchers explained inconsistency between attitude, intention, and behaviour where even in some cases positive attitudes and intentions were not

ultimately reflected in purchase behaviour (Chen and Chai, 2010; Smith and Paladino, 2010). Therefore, to strengthen this attitude-intention-behaviour linkage more, researchers consider additional antecedents that better predict consumer's pro-environmental behaviour.

There are two types of attitudes that are measured in this research; cognitive and affective. Cognitive attitude signifies one's evaluation of an object resulting from one's thinking (Eagly et al., 1994). In addition to this, affective attitude refers to a set of emotions in association with an object. The consumers' intentions to purchase organic food are likely to be a function of both cognitive and affective attitudes (Liang, 2016).

In general, consumer's shopping behaviour and purchase decisions (if not constrained by being difficult to perform) are predicted based on environmental attitudes (Schwepker and Cornwell, 1991; Stern, 2000), as it is interpreted as a low-cost domain. Attitudes' regarding the environment is having a significant positive influence on pro-environmental behaviour (Diekmann and Preisendörfer, 2003). However, results concerning the influence of attitudes are inconsistent (Moser, 2016). Based on Tantawi et al, (2009) and Park and Ha (2012), the cognitive and affective attitudinal components of any behaviour do not always match with actual behaviour.

The link between attitude, intention and behaviour can be approached in a different way and tested deeply. Therefore, the following hypothesis is assumed:

**H1a:** There is a positive relationship between attitude towards organic food purchase and intention towards organic food purchase.

### ***Social Influence towards Organic Food Purchase***

The influence of social models and social expectations on behaviour should not be underrated to support and encourage pro-environmental behaviour and influence decision making (Moser, 2016). One of the focuses of this research is to develop a predictive construct through identifying factors that socially influence the intention to purchase organic food. Social influence within this research domain goes beyond Ajzen's (1991) Theory of Planned Behaviour (TPB) by incorporating two important pressures. The first is the influence of social norms. The second is the influence resulting from social actors during the situation within the store itself. This research

supports that combining both influences will improve the explanatory power of such construct, aiming to measure the overall cumulative social influences affecting the intention to purchase organic food.

Individuals tend to follow social norms due to the fear of social pressure and/or because their referents provide guidance about an appropriate or beneficial behaviour in their society (Bamberg et al., 2007). As a result, the greater the social pressure perceived by an individual, the more likely the intention to perform the behaviour (Ajzen and Fishbein, 1977). Past research has highlighted the important role of social norms in predicting one's pro-environmental behaviour (Ajzen, 2011). On one hand, empirical evidence shows that consumer's intentions towards pro-environmental behaviour depend on social norm (Park and Ha, 2012). On the other hand, others' perceptions about one's behaviour have influence on the purchase behaviour for organic food (Kumar and Ghodeswar, 2014). It was argued that social norms indirectly activate organic food purchasing through effecting intentions (Golob et al., 2018). Social pressure in specific situations can be more influential than the person's own attitude towards the intention (Zhou et al., 2013). According to a study by Goldstein et al. (2008), individuals in a specific situation could be motivated to behave like other people in the same situation, as individuals have a tendency to react to other people's expectations and even more to what other people do. Additionally, communicating social expectation from important social groups is of extreme value (Kleinschafer and Morrison, 2013). The influence that social norms exert is very important when wanting to predict the intention to perform certain behaviours.

The second type of influence that should not be underestimated is the influence resulting from people within the purchase situation. The situational social influence (which extends the social norms construct in TPB) is temporary social factors particular to a time and place. It captures the way individuals feel and think about the product/environment. This affects their intentions by influencing the way they think and act in such a situation, thus affecting their current behaviour. These despite past research, highlighting those consumers need less help from shop assistance during buying (Parment, 2013). Some consumer prefer the interaction with a salesperson (looking for human contact), that meets their needs and wants and in turn affects their purchasing intention (Demoulin and Djelassi, 2016).



According to the above, the following hypothesis is assumed:

**H1b:** There is a positive relationship between social influences (representing the social service-scape) towards organic food purchase and intention towards organic food purchase.

### *Anticipated Guilt towards the Environment*

Guilt can be either intellectualized as a personality trait or as an emotion, denoting a temporary state "guilt trait" versus "guilt state" (Lascu, 1991). Based on the second approach, guilt is defined as a negative and unpleasant state taking place when individual's behaviour or intentions contradict his/her moral standards (Baumeister et al., 1994) or violate well-established social standards (Kugler and Jones, 1992). Huhmann and Botherton (1997) acknowledged three main types of guilt based on different reasons that lead to the "experience of guilt". Reactive guilt happens when the internalized norms regarding what makes behaviour acceptable are invaded. Existential guilt occurs when the individual feels luckier or more fortunate than others. Anticipatory guilt refers to the anticipation of a feeling an individual might experience when considering violating their personal standards. The anticipation of guilt provides an opportunity to avoid the unpleasant emotion linked to misbehaving. In practice, the two main types that are commonly contrasted are reactive and anticipated guilt (Elgaaied, 2012).

Guilt involves a social dimension (Parkinson and Illingworth, 2009) and that altruistic behaviours are sometimes only performed to reduce the feeling of guilt. Parallel, pro-environmental behaviour is seen as a pro-social behaviour, which in turn benefits other people. Additionally, it is future oriented and not directly benefiting the individual who is doing the behaviour (Elgaaied, 2012). Individuals may take part in pro-environmental behaviour to avoid guilt emotions stemming from non-environmental behaviour. The higher the tendency of feeling guilty to certain behaviour, the more likely to behave in a more environmentally friendly manner (Pensini, 2012).

Researchers examined the role of guilt in pro- environmental behaviour and explained that guilt influence environmental behaviour (Steenhaut and Kenhove, 2006). Bamberg et al. (2007) considered the effect of ecological guilt in explaining travel

mode choices and found it to be a relevant predictor. Concerning the organic food context, it was argued that the anticipated guilt can guide the consumer's decision for reasons of easing such a feeling (Pelozo, et. al., 2013). Feelings of self-accountability and ethical attributes can trigger an organic purchase. Podobsky and Haynes (2016) stated that 70% of their respondents chose to purchase organic food because of anticipated guilt appeals and their environmental concerns. Furthermore, Chandra (2018) argued that the guilt anticipated of not purchasing organic food can motivate intention driven purchasing.

Studies examining the influence of affective variables on pro-environmental behaviours in general and organic food purchase behaviour in specific are rather scarce. This research discusses whether anticipation of guilt would be a relevant predictor encouraging such pro-environment behavioural intention through choosing organic food. According to Elgaaied (2012), there is a strong correlation between anticipated guilt and intention. Therefore, the following hypothesis is proposed:

**H1c:** There is a positive relationship between anticipated guilt towards the environment (representing the natural service-scape) and the intention towards organic food purchase.

### *Self-Transcendence Values*

The term "value" symbolizes the individual's preferences, interests, pleasures, likes, duties, moral obligations, desires, wants, needs and many other kinds of selective orientations based on a notion of better-ness (Brown, 1984; Williams 1979). The most influential definition of values highlighting action is traced back to Kluckhohn (1951), "A value is a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable, which influences the selection from available modes, means, and ends of action" (Hitlin and Piliavin, 2004). From a psychological aspect, values are defined as enduring beliefs about desirable end-state of existence (Rokeach, 1973; Schwartz and Blisky, 1987). It refers to notion of desirability that directs the way social actors select actions, assess people and events and give explanation to their actions and evaluations (Schwartz, 1994).

Research within the context of environmental behaviour showed that values indeed matter for pro-environmental behaviour (Lindenberg and Steg, 2013). However, the

literature does not address consumption from the point of view of the values that guide consumer's behaviour (Kilbourne and Pickett, 2008). Still despite observed efforts in previous work to increase pro- environmental behaviour, many failures exist due to overlooking the link between behaviour and value fulfillment (Oreg and Katz-Gerro, 2006). Research understanding the consumer's psychographic variables such as "values" seems to be more fruitful in forecasting and explaining consumer's attitudes, intentions and, particularly, pro-environmental behaviour (Shaw and Shiu, 2003; Mostafa, 2007; Luzio and Lemke, 2013). Pro-environmental behaviour can ultimately be traced back to basic value orientations, even if the distance between such values and behaviour is bridged by a long line of variables (Faletar et al., 2021). Thus, the current research develops the following hypotheses are proposed:

**H2a:** Self-transcendence values (representing the natural service-scape) moderate the relationship between the attitude towards organic food purchase and the intention towards organic food purchase.

**H2b:** Self-transcendence values (representing the natural service-scape) moderate the relationship between the social influence towards organic food purchase and the intention towards organic food purchase.

**H2c:** Self-transcendence values (representing the natural service-scape) moderate the relationship between the anticipated guilt towards the environment and the intention towards organic food purchase.

### ***Perceived Behavioural Control***

The amount of control an individual feels over their environment may be an important factor influencing his/her pro-environmental behaviour. If one feels he/she has the ability of making and implementing choices, then it would be motivating to engage in pro-environmental behaviour (Pensini, 2012). Consumers give importance to environmental attributes and are willing to consider organic food. However, behaving environmentally does not simply happen, as they face obstacles and difficulties hindering them from behaving accordingly (Gadema and Oglethorpe, 2011). Behaviour depends on both motive and ability (behavioural control) behaviour (Ajzen, 2002). TPB predictors are significantly correlated with purchase intentions, however their relative weight varies. Many researchers agreed that the perceived

behavioural control plays a moderator role on the relationship between the attitude and the intention. The more the perceived behavioural control, the stronger is the relationship between the attitude and intentions (Kim and Chung, 2011). This is also relevant to various pro-environmental behaviours like recycling (Park and Ha, 2014) and purchasing organic products (Zhou et al, 2013). On the contrary, if obstacles were perceived they act to reduce the behaviour and can have the potential to limit purchases including factors like price and availability (Ajzen, 1991; Smith and Paladino, 2010). Therefore, this research will examine the effect perceived behavioural control as a moderator as one element in the research model. Thus, the following hypothesis is proposed:

**H2d:** Perceived behavioural control moderates the relationship between the attitude towards organic food purchase and intention towards organic food purchase.

### *Intention towards Organic Food Purchase*

The rule is that the stronger the intention to do a behaviour, the more likely that this is behaviour is performed (Zhu, 2018). In general, TPB is supported empirically as a theoretical foundation and appropriate base investigating environmental behaviour (Greaves et. al, 2013). According to the theory, the key antecedent of an individual's behaviour is his/her intention towards the behaviour. This is determined by three constructs:

- The individual's attitude towards the behaviour
- The assessment of the subjective norm
- The perceived behavioural control

Therefore, intention could be defined as the individual's willingness to behave in a specific way. Behavioural intentions are an intermediate variable between attitudes and behaviour (Fishbein and Ajzen, 1975; Grønhøj and Thøgersen, 2012). Accordingly, upon applying TPB on environmental studies, the precision with which the attitudes and behaviours are defined is the key moderator for intentions as a reliable predictor of actual behaviour (Greaves et. al, 2013). For example, attitudes towards recycling predicted the intentions to recycle newspapers, which predicted directly actual recycling (Sawitri, 2015). However, according to a study by Kor and Mullan (2011) intentions could be sometimes found to be poor predictor of behaviour.

This is especially true to pro-environmental behaviour as expressing intentions needs little or no commitment from the individuals. They could be only expressing their support instead of their intentions as being an actual predictor of behaviour (Moser, 2016). The purchase decision happens when the individual evaluates the implications of specific pro-environmental acts and balances the psychological anticipated costs and benefits of potential behaviours (Schwartz, 2010).

TPB has been widely applied and acknowledged to explain pro-environmental behaviours (Kim and Chung, 2011; Pino et al., 2012; Zhou et al., 2013; Moser, 2016). Recently, the theory was also exploited in the food choice area especially in the organic food field (Zhu, 2018). Chen and Chang (2012) examined the environmental purchase intentions and found out that it was related to environmental values. Yet, apart from the prevalence of environmentalism, the literature is not definite on how the environmental purchase intentions are developed. So to comply with the environmental trends of increasing such environmental purchase intentions, this research framework studies intentions under the context of environmental thinking. Therefore, this framework investigates what best predicts organic food purchase intentions through:

- Attitude towards purchasing organic food
- Social influence towards purchasing organic food
- Anticipated guilt towards the environment with the non-purchase of organic food.

Thus, the following hypotheses are suggested:

**H3a:** There is a positive relationship between intention towards organic food purchase and organic food purchase behaviour.

**H3b:** There is a positive relationship between intention towards organic food purchase and pro-environmental behaviour.

### ***Store's Atmospherics***

This study adopts the term —store's atmospherics| to refer to the situational influences related to the store's environment and reflects the physical service-scape phenomena. The differences between intentions and behaviour are often due to

situational factors (Belk, 1975). There is a wealth of studies demonstrating the linkages between atmospherics and behaviour (Turley and Milliman, 2000; Summers and Herbert, 2001; Michon et al., 2005; Lin, 2010) and how situational forces can overwhelm values to the extent that sometimes individuals contradict their own values (Maio et al., 2001; Bardi and Schwartz 2003; Whitmarsh and O'neill, 2010). The current research makes use of six environmental stimuli as possible moderators (five of which are identified by Kazancoglu, 2018):

- Store design, colors, and layout
- Presentation of visual merchandise
- Background music
- Lighting of the store
- Smell of the store
- Store location and parking facility

Mueller and Szolnoki (2010) recommended that the sensory attributes has to be boosted for a food product to be prosperous in the market. Nonetheless, there has been very little effort, in researching the role of sensory appeal when it comes to its influence on the organic food purchase, especially in developing countries like Egypt. Thus, the following hypotheses are assumed:

**H4a:** Store atmospherics (representing the physical service scape) moderates the relationship between the intention towards organic food purchase and organic food purchase behaviour.

**H4b:** Store atmospherics (representing the physical service scape) moderates the relationship between the intention towards organic food purchase and pro-environmental behaviour.

### ***Organic Food Purchase***

It was agreed upon that the perception towards organic food affects individual's pro-environmental behaviour, but limited research is there on the relationship between organic food purchase and behaving pro- environmentally (Suki, 2013). This is true especially in developing countries where the term "organic" was only recognized for around 30 years (Buyanovsky and Wagner, 2019). According to Chen and Chai

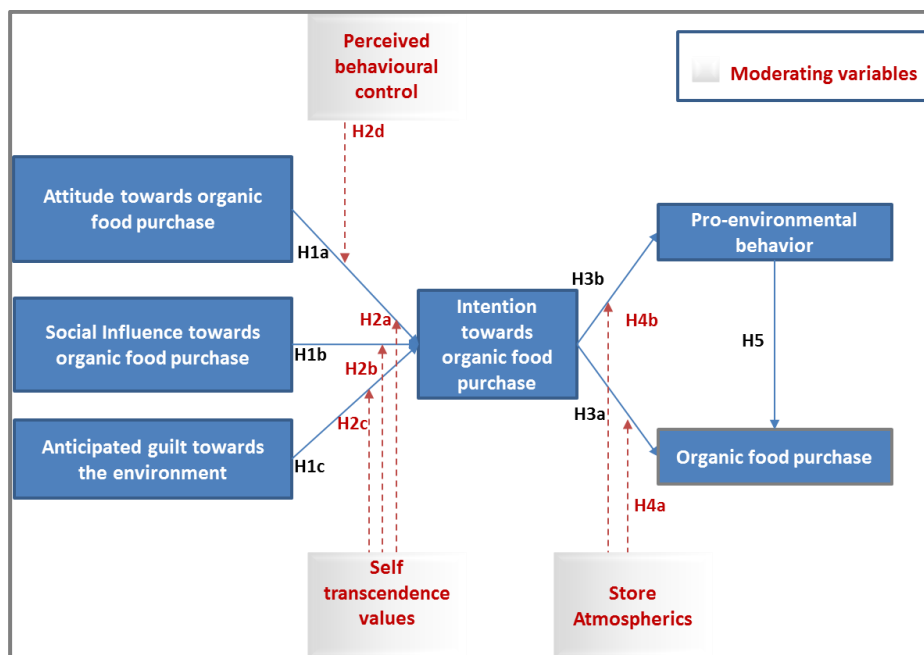
(2010), environmental researchers generally believe that through the purchase of environmentally friendly products, individuals can significantly contribute to protecting and improving the environment. Consumers are more willing to purchase green products that are not harmful to the environment as environmentalism is becoming more popular in the world. Buying organic products is the most popular action to reduce an individual's environmental impact in order to meet the needs of current and future generations (Moser, 2016). Where environmental protection along with environmental motives were from the most important attributes that influence people's intention to purchase organic food (Zhu, 2018).

Thus, the following hypotheses are assumed:

**H5:** There is a positive relationship between pro- environmental behaviour (representing the natural service-scape) and organic food purchase behaviour

## Research Methodology

The current study aims to enhance the understanding of consumer behaviour from an environmental perspective, through acknowledging the antecedents that best predict organic food purchase because of behaving pro-environmentally. Accordingly the research framework is represented as follows:



**Figure 1: Proposed Conceptual Model**

### Source: Designed by the Researcher

After showing the framework and the hypotheses, it is imperative to refer to data collection, the population and sample. The researcher collects primary data through applying a questionnaire. A convenience sampling is chosen by picking elements (walk-in consumers) that just happen to be situated near to where the data collection is conducted. The questionnaires are distributed in a newly opened all organic grocery stores in Cairo and Alexandria called —Fresh N Fresh. It has three branches operating in Alexandria and two branches recently opened in Cairo. This chain was chosen as it fits the research purpose due to different reasons. Firstly, it is the first store offering an all organic experience to consumers specializing in such a novel concept. Secondly, Fresh N Fresh offers a diverse range of organic food (vegetables, fruits and dairy products) and is still working on expanding to offer more diverse food. Thirdly, the whole store is made of elements that reflect the all organic/pro-environmental idea. Such walk-in consumers aged 18 and above (excluding younger consumers) were considered target population. A sample size of 500 respondents from the population under study was determined with final responses of 403. After finalizing the preliminary study, the data was statistically analyzed using the SPSS statistical package (Version 24) and Microsoft Excel. Furthermore, the questionnaire statements, operational definitions of the variables and the way of measuring them are shown in table (1),

**Table 1: Operational Definitions of the Research Variables**

Variable	Scale used for measurement	Source
Attitude towards purchase of organic food	The cognitive attitudinal component was measured using a seven point Likert scale where "Buying organic food instead of conventional food is" and "Behaving pro-environmentally is" (1) "Wise" and (7) "Foolish". (1) "Beneficial" and (7) "Harmful". The affective attitudinal component was measured using a seven point Likert scale where "Buying organic food instead of	Ajzen (1991), Kim and Chung (2011), Grønhøj and Thøgersen, (2012), Zhou et.al, (2013)



Variable	Scale used for measurement	Source
	<p>conventional food would make me feel" and "Behaving pro-environmentally would make me feel"</p> <p>(1) "Good" and (7) "Bad".</p> <p>(1) "Pleased" and (7) "Unpleased".</p>	
<p>Social influence towards purchase of organic food</p>	<p>The social norms were measured using a seven point Likert scale where "Most people who I value would buy organic food instead of conventional ones" and "Most people who I value would behave pro-environmentally"</p> <p>(1) "Strongly agree" and (7) "Strongly disagree".</p> <p>The situational social influence was measured using a seven point Likert scale where "People who influence my decisions would approve of me buying organic food instead of conventional ones" and "People who influence my decisions would approve of me behaving pro-environmentally"</p> <p>(1) "Strongly agree" and (7) "Strongly disagree".</p>	<p>Ajzen and Fishbein, (1980), Ajzen (1991), Bitner (1992), Bansal and Taylor (2002), Lin (2007).</p>
<p>Anticipated guilt towards the environment</p>	<p>The anticipated guilt towards organic food was assessed using a seven point Likert scale where "I would feel guilty if I did not buy organic food" and "My conscience towards the environment would bother me if I did not buy organic food"</p> <p>(1) "Not guilty" and (7) "Guilty"</p> <p>(1) "Not bothered" and (7) "Bothered"</p> <p>The anticipated guilt towards the environment was assessed using a seven point Likert scale where "I would feel guilty if I did not behave</p>	<p>Elgaaied, (2012), Bitner's (1992).</p>

Variable	Scale used for measurement	Source
	<p>pro-environmentally" and "My conscience towards the environment would bother me if I did not behave pro-environmentally"</p> <p>(1) "Not guilty" and (7) "Guilty"</p> <p>(1) "Not bothered" and (7) "Bothered"</p>	
<p>Self-transcendence personal values</p>	<p>Self-transcendence values (Universalism and Benevolence) were measured using 15 items, with a six point scale from "very much like me" (coded as 6) to "not like me at all" (coded as 1).</p> <p>The universalism values were subdivided into three categories:</p> <p>Universalism – Concern</p> <p>It is important to me that the weak and vulnerable in society be protected.</p> <p>It is important to me that every person in the world has equal opportunities in life.</p> <p>It is important to me that everyone be treated justly, even people I do not know.</p> <p>Universalism – Nature</p> <p>It is important to me to care for nature.</p> <p>It is important to me to take part in activities to defend nature.</p> <p>It is important to me to protect the natural environment from destruction or pollution.</p> <p>Universalism – Tolerance</p> <p>It is important to me to be tolerant towards all kinds of people and groups.</p> <p>It is important to me to listen to and understand people who are different from me.</p> <p>It is important to me to accept people even when I disagree with them.</p>	<p>Schwartz's Portrait Value Questionnaire (PVQ) (Schwartz et al., 2001; 2012).</p>

Variable	Scale used for measurement	Source
	<p>The benevolence values were subdivided into two categories:</p> <p>Benevolence – Dependability</p> <p>It is important to me to be loyal to my friends. I want to devote myself to people close to me. It is important to me to be a dependable and trustworthy friend.</p> <p>It is important to me that all my friends and family can rely on me completely.</p> <p>Benevolence – Caring</p> <p>It is very important to me to help the people dear to me. It is important to me to take care of people I am close to. It is important to me to concern myself with every need of my dear ones.</p>	
Perceived behavioural control	<p>Respondents were asked about the ease/difficulty of purchasing organic food by using a seven-point Likert scale where "In general, for me to buy organic food instead of conventional ones would be" and "If I want to, I could easily buy organic food instead of conventional ones"</p> <p>(1) "Easy" and (7) "Difficult".</p> <p>(1) "Strongly agree" and (7) "Strongly disagree".</p> <p>Respondents were asked about the ease/difficulty of behaving in a pro environmental manner by using a seven-point Likert scale where "In general, for me behaving pro-environmentally would be" and "If I want to, I could easily behave pro-</p>	Ajzen (1991), Ajzen (2002), Bansal and Taylor (2002), Zhou et al., (2013).

Variable	Scale used for measurement	Source
	<p>environmentally"</p> <p>(1) "Easy" and (7) "Difficult".</p> <p>(1) "Strongly agree" and (7) "Strongly disagree".</p>	
<p>Intention towards purchase of organic food</p>	<p>The intention towards purchase of organic food was assessed using a seven point Likert scale where "I intend to buy organic food instead of conventional ones in the near future" and "I will buy organic food instead of conventional ones in the near future"</p> <p>(1) "Definitely do" while (7) "Definitely do not"</p> <p>(1) "Extremely likely" while (7) "Extremely unlikely"</p>	<p>Fishbein and Ajzen (1975), Ajzen and Fishbein (1980), Ajzen (1991), Kim and Chung (2011), Grønhøj and Thøgersen, (2012), Zhou et al., (2013).</p>
<p>Store's atmospherics</p>	<p>Atmospherics were measured by respondents being asked to give their views based on a seven point Likert scale ranging from (1)"strongly disagree" to (7) "strongly agree".</p> <p>The store atmospherics variables were as follows:</p> <p>The store's lighting affects my purchase behaviour</p> <p>The store's background music affects my purchase behaviour</p> <p>The store's smell affects my purchase behaviour</p> <p>The store's design, colors and layout affect my purchase behaviour</p> <p>The store's presentation of visual merchandising affects my purchase behaviour</p> <p>The store's location and parking facilities affect my purchase behaviour</p>	<p>Kotler (1974), Baker (1987), Bitner (1992), Eroglu et al., (2003), Tanner and Kast (2003), Newman (2007), Hägerhed-Engman et al., (2009), Bezençon and Blili (2010), Carrington et al., (2010), Hooper et al., (2013), Lindberg et al., (2018), Grimmer et al. (2016), Jalil et al. (2016),</p>

Variable	Scale used for measurement	Source
		Moser, (2016), Kazancoglu and Aydin, (2018).
Pro-environmental Behaviour	<p>The pro-environmental used an instrument with responses ranged from 1 (never) to 7 (always). These actions were as follows:</p> <p>I wait until having a full load before doing laundry.</p> <p>I pointed out un-ecological behaviour to someone.</p> <p>I buy products in refillable packages.</p> <p>I buy seasonal produced food.</p> <p>I read about environmental issues.</p> <p>I talk with friends about environmental problems.</p> <p>I turn down the air conditioning when leaving place</p> <p>I look for ways to reuse things.</p> <p>I encourage friends and family to recycle.</p> <p>I buy food to my convenience.</p> <p>While, the deleted actions were as follows:</p> <p>I collect and recycles used paper.</p> <p>I bring empty bottles to a recycling bin.</p> <p>I conserve gasoline by walking or bicycling.</p> <p>I use a clothes dryer.</p>	Kaiser et al., (1999), Bonnes and Bonaiuto, (2002)
Organic food purchase	<p>First, six items were evaluated based on a seven point Likert scale ranging from (1)"strongly disagree" to (7) "strongly agree" as follows:</p> <p>I purchase organic food even if I rarely see it where I shop.</p> <p>I purchase organic food regardless of its price.</p>	Lindenberg and Steg (2007). Chen and Chai (2010). Hu et al. (2010). Chen and Chang (2012). Di pietro et al., (2013).

Variable	Scale used for measurement	Source
	<p>I purchase organic food even if I do not have enough information about it.</p> <p>I purchase organic food even if I have no confidence that food labeled organic produce is truly organically produced.</p> <p>I purchase organic food regardless of seeing its benefits.</p> <p>I purchase organic food regardless of its quality.</p> <p>Second, 3 items were used to obtain some basic descriptive data intended to result in like a consumer typology database. The respondents were asked to answer a seven point Likert scale questions as follows:</p> <p>How often do you buy organic food? (1) "Never buy", while (7) "Always buy".</p> <p>How much organic food do you purchase in comparison to your overall food purchases? "Very little of my consumption" while (7) "Most of my consumption".</p> <p>How much do you spend on organic food in relation to your total spending? (1) "Spend a little" while (7) "Spend a lot".</p> <p>This second part was deleted due to irrelevance and for matters of simplicity and length issues.</p>	<p>Luzio and Lemke (2013). Suki (2013). Zhou et al. (2013). Moser (2016).</p>

## Results and Findings

This section presents the statistical analysis and results of the research hypothesis, where the analysis is divided into four sub sections.

### *Descriptive Analysis*

A descriptive analysis summarizing the mean values for the research variables is presented in Table (2). It could be claimed that Store's Atmospherics has the highest mean (5.685), followed by the Attitude towards organic food purchase (5.581). On the contrary, Organic food purchase has the lowest mean (2.658). Looking at the standard deviation, it could be noticed that Anticipated Guilt has the highest standard deviation (1.67756) with respect to its mean (3.204). This implies that the respondents' responses when it comes to the anticipation of guilt feeling have the highest level of variation in respect to other constructs. In contrast, the Self-Transcendence values construct has the lowest standard deviation (0.89513), suggesting that it has a low level of variation concentrated in zones 4 (neutral) and 5 (somewhat agree).

**Table 2: Descriptive Analysis of the Research Variables**

Variables	N	Mean	Std. Deviation	Frequencies						
				1	2	3	4	5	6	7
Attitude towards organic food purchase	403	5.581	1.24801	0	4	17	70	81	112	119
Social Influence towards organic food purchase	403	4.218	1.51673	11	47	74	99	85	57	30
Anticipated Guilt towards the environment	403	3.204	1.67756	91	57	74	89	59	18	15
Intention towards organic food purchase	403	5.218	1.35564	0	16	27	81	85	117	77
Pro-Environmental Behaviour	403	4.303	1.27262	7	23	73	120	115	48	17
Organic Food Purchase	403	2.658	1.38106	92	117	89	67	23	10	5

Variables	N	Mean	Std. Deviation	Frequencies						
				1	2	3	4	5	6	7
Self-Transcendence values	403	3.953	0.89513	2	24	87	168	122	0	0
Perceived Behavioural Control	403	5.127	1.32386	4	7	37	74	108	110	63
Store Atmospheric	403	5.685	1.09837	1	7	3	40	103	151	98

### *Normality Assumption*

An assessment of the normality of data is a prerequisite for many statistical tests. It is an underlying assumption in parametric testing. In this study, testing the exact normality of the data is done through two common methods:

Kolmogorov-Smirnov test of normality: This test assesses the normality assumption for samples greater than 50 observations. It indicates that the data are normal, if the p-values obtained are greater than 0.05 (Dag et al., 2018). Table (3) shows the results of Kolmogorov-Smirnov testing accordingly; it can be said that the data are not normally distributed as all the values are below 0.05.

**Table 3: Kolmogorov-Smirnov Test for the Normality of the Research Variables**

	Kolmogorov-Smirnov <sup>a</sup>		
	Statistic	Df	Sig.
Attitude	.205	403	.000
Social Influence	.130	403	.000
Anticipated Guilt	.132	403	.000
Intention	.199	403	.000
Pro-Environmental Behaviour	.155	403	.000
Organic Food Purchase	.202	403	.000
Self-Transcendence	.241	403	.000
Perceived Behavioural Control	.175	403	.000
Store Atmospheric	.231	403	.000



Even though the data turned out to be not exactly normal, the researcher can still test the approximate normality of the data. This is because the research sample size is greater than 150 respondents. The test for approximate normality is conducted through computing the skewness and kurtosis values. Therefore, the second normality test was done.

Skewness and Kurtosis test of normality: As a general rule of thumb, if the values are within the range of -1.5 to +1.5, then data are considered as normally distributed. On the contrary, if the skewness and kurtosis values are beyond this range, then data are considered as not normally distributed (Mishra, 2019).

Table (4) shows the skewness and Kurtosis values of all the variables. Thus, it could be observed that the values of the research variables are within the range of -1.5 to 1.5 which implies that data are normally distributed. This means that the parametric tests could be used.

**Table 4: Skewness and Kurtosis for the Normality of the Research Variables**

	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Attitude	403	-.540	.122	-.583	.243
Social Influence	403	-.004	.122	-.692	.243
Anticipated Guilt	403	.280	.122	-.749	.243
Intention	403	-.486	.122	-.504	.243
Pro-Environmental Behaviour	403	-.110	.122	-.119	.243
Organic Food Purchase	403	.752	.122	.207	.243
Self-Transcendence	403	-.577	.122	-.193	.243
Perceived Behavioural Control	403	-.506	.122	-.109	.243
Store Atmospherics	403	-.958	.122	1.432	.243

### ***Multicollinearity Problem***

The multicollinearity problem occurs when two or more variables in the model are highly correlated with each other. This leads to problems with understanding which variables contribute to the variance explained in criterion, as well as technical issues in calculations as redundant information about the criterion are provided. To test if whether this problem exists between the variables, the Variance Inflation Factor (VIF) is computed for each variable in the model. If the VIF has values less than 5, then there is no multicollinearity problem between the research variables. The values for all the variables are computed and presented in table (5) below. It could be realized that all the VIF values are all less than 5. Consequently, the independent variables in the research model are not inter-correlated which states that the problem of multicollinearity does not exist within the current study.

**Table 5: VIF Values of the Research Variables**

<b>Variables</b>	<b>VIF</b>
Attitude	1.477
Social Influence	1.340
Anticipated Guilt	1.163
Intention	1.431
Self-Transcendence	1.074
Perceived Behavioural Control	1.262
Store Atmospheric	1.093

### ***Hypotheses Testing***

In the following sub section, the research hypotheses are tested using the Structural Equation Modeling (SEM). This statistical modeling technique is the most widely used technique in behavioural research. It signifies the relationships between theoretical constructs by representing the path coefficients between the variables. For a hypothesis to be proven significant, the P-value has to be less than 0.05 (Hox and Bechger, 1998). Table (6) presents the values for SEM.

It could be realized that the relationship between the attitude towards organic food purchase and intention towards organic food purchase is significant. On the same note, the relationship between the social influence towards organic food purchase and intention towards organic food purchase is significant. On the contrary, there is an insignificant relationship between anticipated guilt towards the environment and intention towards organic food purchase as the p-value is 0.635.

Moreover, it could be noticed that perceived behavioural control plays a significant moderation role between the attitude towards organic food purchase and intention towards organic food purchase. Moreover, there is a significant moderation role of self-transcendence values on the relationship of the attitude towards organic food purchase and intention towards organic food purchase, on the one hand, and the relationship of the social influence towards organic food purchase and intention towards organic food purchase, on the other. On the contrary, the self-transcendence values had no significant moderation effect (0.729) on the relationship between anticipation of guilt towards the environment and intention to purchase organic food.

Furthermore, it could be seen that there is a significant (0.026) direct relationship between intention to purchase organic food and the purchase of organic food. This relationship is also moderated (0.004) by the interaction of the store's atmospherics and the intention to purchase organic food. On a different note, there is no significant relationship found between intention to purchase organic food and pro-environmental behaviour. Yet, there is a moderation effect from the interaction of store's atmospherics and intention to purchase organic food on pro-environmental behaviour.

In addition, there is a significant relationship observed between organic food purchase and pro-environmental behaviour. This implies that organic food purchasing is impacted by behaving pro-environmentally.

**Table 6: SEM Model for the Effect of the Model**

			<b>Estimate</b>	<b>S.E.</b>	<b>P</b>
Intention	<---	Attitude	4.493	.899	***
Intention	<---	ATT.PBC	-.425	.105	***
Intention	<---	Social Influence	2.768	.661	***
Intention	<---	Anticipated Guilt	.075	.157	.635

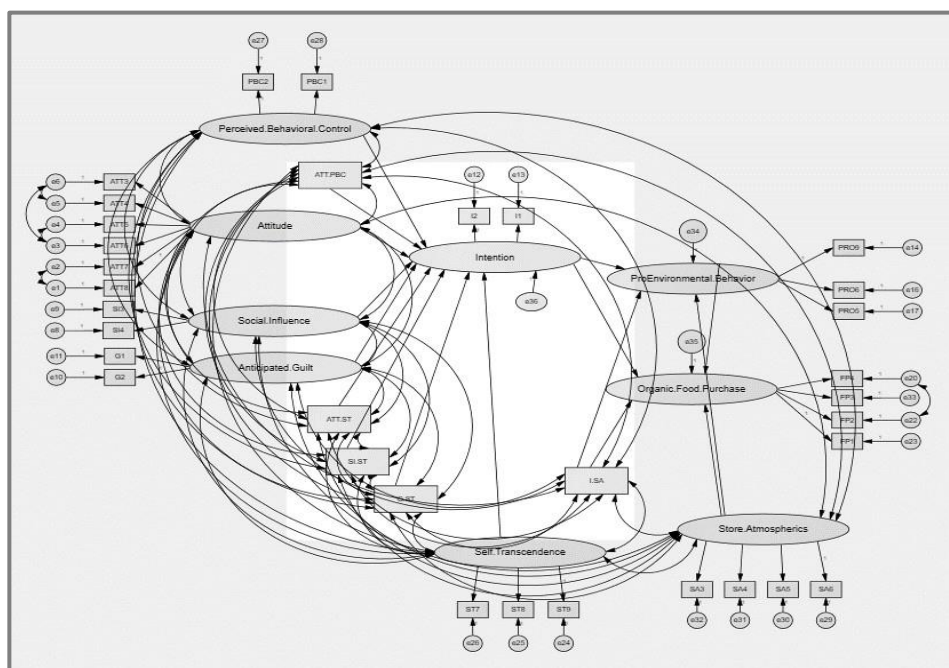
			<b>Estimate</b>	<b>S.E.</b>	<b>P</b>
Intention	<---	ATT.ST	-.646	.175	***
Intention	<---	SI.ST	-.596	.155	***
Intention	<---	G.ST	-.011	.033	.729
Intention	<---	Perceived Behavioural Control	2.565	.599	***
Intention	<---	Self-Transcendence	7.021	1.425	***
Pro-Environmental behaviour	<---	Intention	-.025	.101	.804
Pro-Environmental behaviour	<---	I.SA	.043	.017	.012
Pro-Environmental behaviour	<---	Store Atmospheric	-.174	.097	.072
Organic Food Purchase	<---	I.SA	.068	.024	.004
Organic Food Purchase	<---	Intention	-.317	.142	.026
Organic Food Purchase	<---	Store Atmospheric	-.158	.136	.246
Organic Food Purchase	<---	Pro-Environmental Behaviour	.481	.095	***

Accordingly, the model fit analyses were computed, and Table (7) below was obtained. It was found that the minimum discrepancy (chi-square divided by the degrees of freedom-(CMIN/DF) is 2.696 which indicates a good fit. Moreover, the probability of getting as larger discrepancy as occurred with the present sample (p-value) is 0.000 which is within the accepted threshold. Furthermore, the goodness of fit (GFI) is 0.860 which is greater than the minimum accepted value of 0.80 and which denotes a good fit index. Similarly, the adjusted goodness of fit index (AGFI) is 0.815 which is greater than the minimum accepted value of 0.80. Additionally, the Bentler-Bonett normed fit index (NFI) is 0.912 which is higher than the threshold and the Tucker-Lewis index or Bentler-Bonett non-normed fit index (TLI) which is 0.928 and exceeds the minimum accepted threshold level. Also, the comparative fit index (CFI) is 0.942 which marks a high value indicating a very close to great fit. The root mean square residual (RMR) is 0.040 which is accepted. On the same note, the root mean square of approximation (RMSEA) is 0.065 indicating a moderate close to good model fit and (PCLOSE) is 0.000 which indicates the test of exact fit.

**Table 7: Fit Indices and Thresholds for Measurement Model of Independent Variables**

Measure	Results	Threshold
Chi-square/df	2.696	< 5
P-value	0.000	> 0.05
GFI	0.860	> 0.80
AGFI	0.815	> 0.80
NFI	0.912	> 0.80
TLI	0.928	> 0.80
CFI	0.942	> 0.90
RMR	0.040	< 0.09
RMSEA	0.065	< 0.10
PCLOSE	0.000	> 0.05

To summarize, the indicators values represented above as compared to the recommended values for them suggests that the data fit the model quiet well, with the exception of the p-value for the model that may be caused by larger sample size.



**Figure 2: SEM Model Conducted for the Research Model**

## **Research Discussion and Conclusion**

The aim of this section is to discuss the research results that were obtained by synthesizing all the responses that were collected from questionnaires in order to reflect the organic food/pro-environmental consumer purchase decision in the Egyptian market. The discussion demonstrates all the researcher's interpretations and understanding of past literature in relation to understanding the current organic food market from the pro-environmental standpoint. The findings are demonstrated according to the sets of hypotheses that are aligned with the research objectives. Reaching the objectives leads to finding better ways of encouraging individuals to behave in a pro-environmental manner when it comes to day to day activities. Besides, a better exploration of the organic food purchases behaviour because of pro-environmental behaviour.

Objective one: Examine how the organic food purchase behaviour can be best predicted through specific antecedents. The actual purchase behaviour was predicted through the purchase intentions interaction with the store's atmospherics. The intention was predicted through the three different antecedents (the purchase attitude, the social influence, and the anticipated guilt) and their interaction with the self-transcendence values and perceived behavioural control. The attitude towards the purchase of organic food (cognitive and affective) symbolized a powerful predictor to the intention. As food purchasing is considered an everyday grocery activity and due to the amount of information available during the time of purchase, not much environmental-related rational thinking was involved during the attitude formation phase. Consequently, only the emotional attitudinal aspect towards the environment had significance on the intention. In addition, the novelty of the organic industry in Egypt, the confusion about the organic concept itself and the lack of sufficient knowledge about the environmental consequences of purchasing highly contributed to the attitude- intention results.

The social norms and the situational influence were equally effective on the intention when it came to purchasing organic food. Such results were expected because of the new reshaped modernized societal norms encouraging healthy lifestyles and appearances. Moreover, the motivational and encouraging store environment in which the study took place had the same effect. On the contrary, the pro-environmental

social influence was not as statistically significant. The unclear understanding about the organic food/environment relationship along with low environmental awareness levels and pro-environmental knowledge were behind the results. Also, the inexistence of relevant opinion leaders and societal environmental influencers contributed to the statistically non-significant results of the social influence when it comes to behaving pro-environmentally.

The anticipated environmental guilt had no effect on the intention to purchase organic food. This was very much expected, organic food purchasing as an activity is not clearly put under the umbrella of pro-environmental behaviours. Furthermore, even if some consumers did relate such behaviour to the environment, still, self-serving denial and discarding one's own liability terminated/put an end to such rationale. In case few felt guilty, they perceived themselves as incapable of acting in favor of the environment. This is because they believed that to face global macro environmental problems there should be a need for collective action and not individual ones in addition to, the mistrust and lack of confidence in the environmental claims and organic information. All summed up led to a statistically non-significant effect of anticipated guilt on purchase intentions.

Objective two: Explore the attitude-intention-behaviour relationships. After examining the antecedents that best predicted organic food purchasing, the relationships between these antecedents, the intention and the behaviour were explored. This objective helped in narrowing the attitude-intention-behaviour gap that was discussed in the literature. The relations were better understood by further assessing the moderation roles played by the self-transcendence values and the perceived behavioural control. The significance of the moderation of self-transcendence values was due to the concern for universalism values.

The attitude was transformed directly to an intention to purchase. Likewise, the attitude was indirectly moved because of a concern for the society's welfare which affects the environment as a whole. It could be said that consumers' intentions were driven by offering organic farmers and worker better opportunities. By intending to purchase organic food from a local grocery store instead of big chain supermarkets, such act took care of less fortunate individuals in the society. Moreover, these concern-driven intentions offered the organic food industry better chances of

competing against conventional food stores. Thus, different workers were treated fairly and equally.

Objective three: Investigate organic food purchase/pro-environmental behaviour relationship. The results showed that the intention was pro-environmental motivated and led to actual purchase behaviour. Generally, organic food was purchased because of multiple reasons like being healthy, being appearance cautious and looking for quality, natural freshness, authenticity and taste. The environmental element was integrated among the reasons of purchase. The pro-environmental driven intention turned in to behaviour indirectly through the store's atmospherics which were environmental in nature. Furthermore, the pro-environmental motives added to the value of the overall purchase behaviour, giving the shopping experience an environmental edge.

Objective four: Understand the service-scape phenomenon associated with organic food purchase within a pro-environmental context. Examining the all different dimensions and enhanced the understanding of how such a concept could be controlled and manipulated in benefits of the organic market and pro-environmental domain. The natural and social service-scape dimensions positively influenced the consumer's organic purchase experience from a pro-environmental behaviour perspective through being concerned with others and giving back by helping the society which reflected on the environment. Moreover, being exposed to new social norms and humanistic elements all directed towards the environment affected the organic food purchase behaviour.

The social service-scape dimension integration with the natural service-scape dimension also led to higher level of environmental knowledge and awareness towards the organic food purchasing behaviour. These dimensional results were demonstrated by the significance of the self-transcendence values and the social influence. On the contrary, the negative emotions of anticipated guilt and its interaction with self-transcendence values did not contribute to the results and did not affect the consumer's experience. This resulted from the values being mainly related to the concern for others and not to the environment directly. The combined influential effect of the society's new post-materialism social norm and the situational interactions with the consumer's value system resulted in consumers experiencing



organic food purchase decisions from a pro-environmental perspective. It was realized that consumers got affected by external influences more than inner influences and motives.

## **Research Recommendations**

The research is of importance as it investigates a daily human behaviour that has an impact on social and environmental sustainability. The idea behind the study is linking the consumer organic food purchasing behaviour to the concept of environmental consciousness and environmental protection. Understanding the determinants of the consumer's organic food purchase is vital as it uncovers the individuals' pro-environmental behaviour. From one side, understanding pro-environmental behaviour is mainly the number one solution to the environmental deterioration problems. On the other side, understanding the variables that predict organic food purchasing behaviour from a pro-environmental perspective help awaken the environmental spirit. The research contribution is twofold. Firstly, the results contributed to theory and knowledge by adding to the current body of literature and knowledge of organic food, consumer behaviour, environmental psychology and service-scape. Secondly, the results contributed to practice by representing new fruitful insights and offering different strategic implications and recommendations to stakeholders who are interested in organic food purchase behaviour that results from pro-environmental behaviour. Understanding this organic food purchasing/pro-environmental behaving relationship will make people realize the environmental consequences of their personal behavioural activities so that they eventually change their behavioural patterns and reach the ultimate goal of living a sustainable lifestyle which will save planet Earth.

The practical contribution of the research aided in the realization of some strategic implications that benefited the stakeholders interested in the areas of organic food and the environment. These strategies could be adopted through the following recommendations:

- Strategies are to be developed by government officials and industry makers directed towards increasing environmental knowledge and awareness in the society. Such strategies target improving the individual's attitudes and

intention towards organic food purchasing. Educating society by offering valuable information like nutritional related and environment related from credible source will enhance the purchase behaviour from a pro-environmental perspective. Moreover, these strategies will make society more aware and familiar with the different activities and behaviours that are under the umbrella of sustainability. An example for these kinds of strategies is planning on developing popular opinion leaders and social influencers that have nowadays influential persuasion powers which would increase the levels of environmental awareness.

- Policies are to be set by governmental authorities promoting the delegation of ethical responsibility within the society and influencing societal decisions.
- Planning learning educational programs that promote environmental protection and sustainability with the help of governmental authorities and environmental institutions is seen as a futuristic step. A lot of people are interested in obtaining better social statues through gaining higher degrees and learning about new topics. Developing workshops, diplomas and degrees in sustainability would maximize the welfare of people and spread the environmental essence within the society.
- An interesting point that the researcher noticed is that food crises (such as the crisis in china) and global pandemics (such as influenza and most recently Covid-19) affect consumers' perceptions of food and accordingly their choices. On the same token, organic food is perceived as a healthier option as it contains more primary vitamins, secondary nutrients and fewer additives as compared to conventional food. As a result, marketers should make use of such points for the sake of gaining a competitive edge in the markets. Business models and practices should market organic products as paragons of environmental benefits in the consumer's eye so that consumers would be encouraged to adopt pro-environmental habits that can later become rooted in their daily activities and eventually change their behaviours in a pro-environmentally sustainable direction.
- Segmented and targeted interventions and messages to different consumer typologies to behave pro-environmentally through purchasing organic food are a must. Pointing out the positive environmental impact of purchasing and

framing positive emotions with the individual's inner value systems will embellish the environmental impact of daily routine behaviours like organic grocery shopping. Retails should offer a satisfactory bundle of values in a tempting service-scape environment. Such value-based interventions will strengthen the environmental norms while, at the same time satisfy all other aspects in return for the premium price paid.

- Developing environmental management systems for corporations and implementing rigorous laws, control, rules and regulations for organic food industries aimed at environmental protection is vital. This is to ensure quality standards and true organic labeling from accreditation bodies for effective sustainable business development. Furthermore, business models and practices should market organic products as paragons of environmental benefits in the consumer's eye so that consumers would be encouraged to adopt pro-environmental habits that can later become rooted in their daily activities and eventually change their behaviours in a pro-environmental sustainable direction.

## **Research Limitations and Future Work**

The researcher realized some points of limitations that came across during the study and then illustrated some opportunities and ideas for future research that have surfaced along the way. Some limitations were seen as areas of improvement for later research while other points were considered for bringing out more rich insights to light.

As organic food was recently introduced to the market in Egypt, the study followed a convenient sampling approach for reasons of accessibility. Such a technique limits the representation of entire populations. Moreover, the results of convenience samples are hard to replicate. Also, the study only covered Cairo and Alexandria as the urban cities of Egypt. Modernized cities may differ in ideas, rituals and behaviours from other un-urban cities and countryside areas inside Egypt. This, in turn, may limit the research outcomes a little. Further research is needed to have even more reliable research results by overcoming the points stated above. Other sampling techniques could be used focusing on more generalization of the results. Likewise, other research

could investigate the reproducibility of the research findings as well as manipulating some of the model's variables and their relationships. Furthermore, more techniques could be implemented as a way to increase the response rate. Having a larger sample size would be parallel with the dramatic growth in the organic product markets in general and food in specific. Additionally, the research could be administered again in different countries, cities, cultures, and store types (like farmer markets not grocery stores) so as to have more diversified samples of organic food purchase behaviour within the pro-environmental context.

Another limitation was related to the time frame of the study. The research was of a cross-sectional design nature as in a single-occasion study with a time based model. Such design hinders a deep exploration of the relationships between the different variables in the research model. Due to dynamic rapid developments in today's organic markets, the antecedents should not be tested only once. Moreover, the study did not consider investigating the different stages of the consumers' purchase experience. For future research, testing these promising and interesting cause and effect relationships with the moderation roles in a longitudinal design over a certain elongated time horizon would offer an ongoing evaluation of the research model and its change relationships. This will help in gaining further knowledge especially if the different stages of the consumer purchase experience were considered.

An area that needs more research is in the role of values within the pro- environment behaviour domain. The current research was value specific as in testing the moderation role of self-transcendence values on the intention to purchase organic food. This is because the researcher wanted to investigate the values that are only environmentally related to better understand the organic food purchase behaviour resulting from pro-environmental behaving. Therefore, considering the influence of the imperatives of cultural values in future studies would strengthen the results and provide narratives for cross-cultural comparative studies. From a different perspective, the weight that different personalities and identities put on behavioural actions should not be understated.

This paper presented the research importance, aim, objectives and questions. It discussed the methodology used along with the analysis and findings. It ended with demonstrating some strategic implications based on the research results that were

obtained which benefit a lot of stakeholders in the area of organics and individuals interested in the area of pro-environmental behaviours. Likewise, the researcher recommended some points to research in the future. In addition, stating some points that were seen as limiting the current study. The researcher hopes that this study enriches the literature and covers the gaps when it comes to organic food behavior within the pro-environmental behaviour context. Also, it is believed that this research is of benefit as it is implemented in a developing and emerging market which has received less attention from scholars. At last, this paper highlights the potential emerging trends expressing effective and effective and efficient pro-environmental lifestyles.

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