CONSUMER PURCHASE INTENTIONS TOWARDS ORGANIC FOOD: INSIGHTS FROM SOUTH AFRICA

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ABSTRACT

Amid the global drive to promote environmentally less threatening food production methods, marketers have been exposed to many opportunities as well as challenges, in their desire to profitably satisfy consumers’ ever-changing needs and wants. In South Africa today, the organic food drive is showing good signs of growth, with key hypermarkets stocking an ever increasing collection of such foodstuffs. Of late, interest and consideration towards organically produced foodstuffs and purchasing intentions thereof have been augmenting in importance amongst many consumers, in their response to concerns about the effects of conventional farming practices on human health, environment, and food safety among others. As consumers are increasingly becoming conscious about the positive benefits of non-conventional foodstuffs, marketers are forced to devise new strategies that effectively incorporate these highly sought organic produces. For this reason, organic farming has been regarded as the best and most attractive alternative to inorganic farming and has led to the production of ‘new’ foodstuffs. Consequently, the purpose of this study was to determine the antecedents of consumer purchase intentions for organic food in Johannesburg, South Africa. This study used a survey questionnaire for primary data collection and the gathered data was used to quantitatively test the hypotheses. Through Analysis of Moment Structures (AMOS) statistical software and by means of Structural Equation Modeling (SEM), the significance of the variables of this study was determined from a sample of 305 respondents across Johannesburg. Confirmatory Factor Analysis (CFA) was used to check model fit, reliability and validity of the measurement instruments while Path Modeling was used for hypothesis testing. The findings revealed that consumer attitude was the key antecedent that provided the highest level of explained variance in consumer purchase intention of organic food. It was observed that Woolworths was the most popular retail outlet for organic food. The results and insights from this study are likely to contribute to consumer attitudes and health consciousness.

KEYWORDS: Purchase Intention, Organic Food, Attitude, Price, Subjective Norms, Environmental Concern, Health Consciousness.

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1. INTRODUCTION

Organic food researchers have long been interested in unearthing the key antecedents behind consumers’ purchase intentions for these foodstuffs. Past empirical studies (Lodorfos & Dennis, 2008; Smith & Paladino, 2010; Ragavan & Mageh, 2013; Pomsanam, Napompech & Suwanmaeneepong, 2014) have established significant relationships between the predictors of consumer purchase intention and organic food. Whilst the topic of organic food is well-researched, extant research tends to focus on western society, and much less on emerging countries like South Africa (Du Toit & Crafford, 2003; Engel, 2008). According to Thøgersen, (2010), organic food is viewed as being a more sustainable alternative to conventional food. For this reason, the widely held view from organic producers is that it is expected to have less agrochemical residues than conventional food; yet, the reliability of this expectation remains questionable, inasmuch as the superiority of organic food in comparison with conventionally grown alternatives (Thalheimer, 2013). Whether the advantage of food depends on the implementation of a particular farming technique (which has been argued to lead to different yields) remains a matter of debate, and there is limited literature from a developing nation perspective. (Olivová, 2011). Nonetheless, the technicalities of this expectation and its relationship with organic food have yet to be examined comprehensively, especially in with reference to South Africa. While there is an urgent need for scientific evidence to justify the key antecedents linked to organic food, available findings still remain inconclusive regarding the primary predictors of consumer purchase intentions for organic food (Lockie, Lyons, Lawrence & Grice, 2004). Besides, available evidence is extremely limited to question the usefulness of these generalized statements that exists in many consumers’ minds. However, insight into consumer purchase intentions for organic food was deemed to be of great value for marketers or entrepreneurs of all types, particularly those selling organic food, and policymakers together with concerned stakeholders. Consequently, although many researchers have investigated consumers’ purchase intentions for organic food, their conclusions have not reached a consensus regarding the primary determinants of consumer purchase intents for such produces (Lockie et al., 2004).

Against this backdrop, this study sought to examine the antecedents of consumer purchase intentions toward organic food produces. Specifically, the study attempts to delineate the relative importance of each of the variables under study and determine which construct is the most significant predictor of consumer purchase intentions for organic food. In so doing, a conceptual model was formulated and was subjected to empirical validation through the use of a survey questionnaire approach. This model was conceptualised in order to incorporate the variables that have sparked a great debate amongst researchers in this field. The model postulates that predictors like, but not limited to attitudes, subjective norms, and perceived price predict consumer purchase intentions for organic food. Overall, it is important to note that owing to limited resources, the current study was only limited to South Africa’s economic hub – Johannesburg, and hence may not be representative of the residents of the whole country. Therefore, the findings from this study were interpreted with caution and prospective researchers can use them as a foundation for more in-depth follow-up research efforts.

While organic food production endeavours to be environmentally sustainable, deliver healthy and safe produces, until now, it has not yet reached its aims and certain issues still need to be addressed (what issues?). This failure of organic food production to reach its aims and perhaps stimulate positive purchase intentions for such produces can be ascribed to both research and practical-related problems. This shortage of empirical
evidence ultimately affects the way consumers shape their purchase intentions for organic food (Engel 2008; Olivová, 2011; Peart, 2013; Pomsanam et al., 2014). Empirical evidence from foregoing studies on consumer purchase intentions for organic food demonstrates that significant problems exist and many issues still remain unresolved, despite extensive previous research efforts (Engel, 2008; Lockie et al., 2004; Klöckner, 2012; Olivová, 2011; Padel & Foster, 2005; Thalheimer, 2013; Pomsanam et al., 2014). Nevertheless, only a handful of studies on consumer purchase intentions for organic food have been undertaken in South Africa (Engel, 2008). This may be the basis for the deficiencies in the extant literature.

Expectedly, little is known about South African consumers’ views, concerns, knowledge levels and consumer attitude toward organic food and their related purchase intentions. Arguably, there is small, yet growing amount of literature on the topic of consumer purchase intentions for organic food in emerging countries like South Africa (Engel, 2008). The shortage of studies can be explained by the fact that the organic food sector is relatively new as the South African organic food market demonstrates features of the immature market (Engel, 2008). The symptoms are low levels of knowledge, low demand levels, low acceptance of premium pricing for organic food and a dearth of studies on the subject at hand. Although a vast amount of studies have investigated the predictors of organic food purchase intents, particularly in developed countries, their conclusions have not reached consensus regarding the primary determinants of consumer purchase intentions for organic food (Lockie et al., 2004; Lodorfos & Dennis, 2008; Smith & Paladino, 2010; Pomsanam et al., 2014). Such inconsistencies in research warrants further examination of the previously studied variables in order to validate some findings, while rejecting others that may be deemed inconsistent to results of the current study. In South Africa, organic food production emerged without government support (Engel 2008). No attention was previously paid toward the potential for organic agriculture to enhance local food security. In line with the purpose of this study and with reference to the causal linkages or relationships that this study sought to investigate, the empirical objectives were to establish the extent to which consumer attitude impact consumer purchase intention for organic food, find out whether health consciousness affect consumer purchase intention for organic food. Other empirical objectives were to determine whether a negative effect exists between perceived price and consumer purchase intention for organic food as well as discover whether perceived availability positively affects consumer purchase intention for organic food. Finally the present study sorts to find out whether subjective norm positively affect consumer purchase intention for organic food and determine whether environmental concerns positively influence consumer purchase intention for organic food.

2. LITERATURE REVIEW

Ajzen’s Theory of Planned Behaviour (TPB) and an empirical investigation are used to contextualize this study. The research framework will be discussed first, followed by the discussion of the study variables.

Ajzen’s TPB

Ajzen (1991) developed a behavioural-intention model which has been widely used within the marketing context, particularly in predicting intentions that are used to estimate consumer behaviour. The simple postulation of the original TPB framework is that behavioural intention is significantly determined by three predictor variables of attitude towards behaviour, subjective norm, and perceived behavioural control (Ajzen, 1991). On the whole, this model has proven to be applicable in many studies on consumer purchase intentions and those that seek to determine consumers’ actual behaviour (Holst & Iversen, 2011). Although several constructs that measure...
consumer purchase intentions have been widely researched (Lodorfos & Dennis, 2008; Smith & Paladino, 2010; Werner & Alvensleben, 2011; Ragavan & Mageh, 2013; Pomsanam et al., 2014), their precise relationships are still vague and there is a lack of unanimity in their findings. Additionally, their links to the South African food market have not yet been fully investigated. To bridge this gap, a literature review on all the study variables under exploration and their likely effect on consumer purchase intentions will be first addressed. The main function of this review is to provide a valuable foundation for the formulation of the appropriate conceptual model and hypotheses that will ultimately direct the way the subsequent survey will be conducted.

Figure 1: The Theory of Planned Behaviour

The relevance of Ajzen’s TPB in the current environment
While Ajzen’s TBP has been widely invalidated and criticised by a number of researchers or skeptics (Armitage & Conner, 1998) primarily for its methodological flaws and the inability of the theory to take all plausible influencers on behavioural intention into account (Bagozzi, 1992; Armitage & Conner, 1998), this theory has remained popular amongst researchers. More precisely, the critiques of the construct of attitude say that it partially determines intention (Armitage & Conner, 1998).

Attitudes
Attitudes impact the intentions held by consumers and the more positive the attitude, the greater the intention to execute the behaviour (Tarkiainen & Sundqvist, 2005). The TPB hypothesised that a stronger attitude to a certain conduct leads to a greater intention to perform that behaviour (Ajzen, 1991). The literature suggests that most attitudes are important predictors of how consumers derive value as well as their purchase intentions for organic food. Foregoing literature has supported the attitude-intention link, showing some statistical evidence that, for example, environmental attitudes do have an influence on buyers’ purchase intentions for organic food.
food (Tarkiainen & Sundqvist, 2005; Smith & Paladino, 2010). In contrast, other researchers found that positive attitudes were not ultimately replicated in consumers’ purchase intentions (Magnusson, Arvola & Hursti, 2001). Although behavioural studies advocate a positive correlation between attitudes and intentions (Magnusson et al., 2001; Padel & Foster, 2005; Tarkiainen & Sundqvist, 2005; Chen, 2007; Werner & Alvensleben, 2011), empirical results on this relationship are still inconclusive. For instance, research by Padel and Foster (2005) has shown that attitudes have little bearing on intentions while Tarkiainen and Sundqvist (2005) maintained that attitudes have a significant impact on purchase intentions. In contrast however, research by Tung, Shih, Wei & Chen (2012) has found that there is attitudinal inconsistency when consumers intend to buy organic food. This may mean that even though consumers may have positive attitudes to buying organic food, they may be at the same time ambivalent, and this indecision has the likelihood of not turning out to positive purchase intentions. Consequently, this conclusion challenges the common proposition that having positive attitudes lead to positive purchase intentions.

Subjective norm
Subjective norms can be conceptualised as the internalised view about important individuals in the decision maker’s life, making the decision maker to desire to act (or not act) in a certain way (Smith & Paladino, 2010). The construct of subjective norm is also regarded as the ‘perceived social pressure’ that an individual feels the necessity of performing a particular behaviour (Ajzen, 1991). These norms are centered on the individual’s preferences of referents and also the decision maker’s desire to act in accordance with these referents. The subjective norm theory hypothesises that important reference groups or individuals support or disapprove of a particular behaviour (Ajzen, 1991). Increasing approval from reference groups like friends, family members and other important individuals may strengthen a person’s intention to buy organic food. However, there is an evident inconsistency in the literature regarding subjective norm as an antecedent of consumer purchase intentions for organic food and this will be explained below.

The relevance of subjective norm as a construct has been widely disputed in theory, but is usually found to be the weakest predictor of intention, and this feature has also been witnessed in domains exclusive of health (Bagozzi, 1992; Armitage & Conner, 1998; Holst & Iversen, 2011). This is due to the fact that meta-analyses on previous empirical studies applying the TPB framework within the health sphere consistently found that subjective norm had the weakest predictor of intention (Godin & Kok, 1996; Conner & Armitage, 1998; 2001). Therefore, when considering all previous findings, a slight influence of this predictor variable is expected in this study. Additionally, whether or not this slight effect truly exists has been empirically investigated and the findings of this investigation will be discussed later.

Perceived behavioural control
Since this study will not measure the actual behaviour of consumers, the researcher deemed it unnecessary to include this construct in the model because it will not be tested. Since organic food production and marketing is a fairly new phenomenon in South Africa, the researcher expected respondents to be less informed about the topic as compared to consumers in developed countries like America, Germany, among others. Hence, it followed that consumers in Johannesburg would perceive themselves as less self-confident and not in control of the situation as compared to overseas consumers, making the construct less relevant for the current study.

Health consciousness and food safety
A considerable number of studies are reported in literature and these studies
generally confirm a positive correlation between health consciousness and consumer purchase intentions for organic food (Harper & Makatouni, 2002; Pollard, Kirk & Cade, 2002; Zandstrade, Graaf & Van Staveren, 2001; Shepherd, Paisley, Sparks, Anderson, Eley & Lean, 2005). Over the years, researchers in the organic food sector have consistently highlighted the importance of health-related issues as one of the key antecedents to consumer purchase intentions for non-conventional produces. For example, consumers may be motivated to purchase organic food by the widely held proverb that “you are what you eat”. This saying serves as an example of an ideal that a lot of people may agree with, irrespective of their outlook toward healthy eating at large (Fischler, 1988). It stands to reason that if consumers derive health benefits from organic food, their purchase intentions for such foodstuffs is likely to be positive. Klöckner, (2012) found that health motivations are also relevant, although they indirectly impact purchase intention. In this day and age, consumers have turned out to be more sensitive about their health, nutrition and value of the food they eat (Kyrikopolous & van Dikj, 1997). An increase in knowledge levels has made human beings to not only take more care of themselves, but the environment as well. On the whole, consistent practical evidence exists to support a positive link between health consciousness and consumer purchase intentions for organic food. Studies demonstrate that health hazards are the key motivation for the purchase of organic food and correspondingly the notion of free-from-pesticides is the greatest and central attribute of the organic food (Wier & Andersen, 2001; Lodorfos & Dennis, 2008). In a similar vein, Mayfield, Holt &Tranter (2001) found that conventional intensive farming techniques and their requisite of the extensive use of chemical substances have widely become undesirable to a lot of consumers. On the contrary, according to Magkos, Arvaniti & Zampelas (2006), it appears as if organic food may not be pesticide-free, as for instance, with regards to fruits and vegetables, they are more likely to contain agrochemical residues as compared to their conventionally grown alternative. Therefore, it is hard to weigh the risks of different produces, but it should be made apparent is that ‘organic’ is not automatically equivalent ‘safe’. Essentially, studies seem to demonstrate that health consciousness alone may not be adequate to forecast purchase intentions for organic food. Similarly, even though health conscious consumers would invariably be more likely to be motivated to purchase healthier foodstuffs (Quah, & Tan, 2009); this likelihood is questionable due to the contradictory results from other researchers.

Figure: Relative Prominence of Food Vulnerabilities for Human Health

| Acute                                      | Increased health risk | Chronic                                      |
|--------------------------------------------|-----------------------|----------------------------------------------|
| Microbial agents                           |                       | Mycotoxins                                   |
| Phycotoxins                                |                       | Anthropogenic contaminants                   |
| Some phytotoxins                           |                       | Some phytotoxins                             |
| Mycotoxins                                 |                       | Unbalanced diet                              |
| Anthropogenic contaminants                 |                       | Phycotoxins                                  |
| Food additives                             |                       | Microbial agents                             |
| Pesticide residues                         |                       | Food additives                               |
|                                           |                       | Pesticide residues                           |

Source: Magkos et al. (2003)
Availability and convenience (The effort dimension)

As organic food development is predominantly demand-led, this implies that consumers may confront or have to deal with availability issues, and most often there are inadequate choices of organic foods (Latacz-Lohmann & Foster, 1997). According to Saunders (1999) the main purchasing criteria affecting organically grown food is availability, and if consumers have to spend extra time and effort locating organically produced food, their purchase intentions will be negatively affected (Thompson, 2000). On the contrary, studies have found that limited availability is not a key impediment to positive purchase intentions (Magnusson et al., 2001). In actual fact, Tarkiainen and Sundqvist (2005) established that the perceived accessibility of organic foodstuffs has no influence on consumer’s intention to purchase such produces. Closely linked to the construct of availability is convenience (which reflects a tendency to lessen the time and effort (both physical and mental) when intending to buy) and research suggests that consumers do not switch to organic food owing to convenience reasons (Gofton, 1995; Chandel, 2001; Brunsø, Fjord & Grunert, 2002). Generally consumers are more likely to develop unfavourable intentions towards organic food if they are inconvenienced by the lack of convenient retail outlets for such foodstuffs. The table below shows examples of the main retail outlets that sell organic food around South Africa.

**Table 1: Availability of organic produce in South Africa (Western Cape)**

| Retail Stores that Sell Organic Goods | DISTRIBUTION OF SURVEY RESPONSES IN PERCENTAGES (%) | Organic Products | Fresh Goods | Organic Grocery Lines | Organic Juice | Fruit | Organic Wine |
|-------------------------------------|-----------------------------------------------------|------------------|-------------|-----------------------|--------------|-------|--------------|
|                                     |                                                     | YES   | NO  | YES  | NO  | YES  | NO  | YES  | NO  |
| Woolworths                          |                                                     | 94%   | 4%  | 88%  | 12% | 100% | 0%  | 67%  | 33% |
| Pick ‘n Pay                         |                                                     | 20%   | 80% | 100% | 0%  | 100% | 0%  | 91%  | 9%  |
| Shoprite/Checkers                   |                                                     | 20%   | 80% | 92%  | 8%  | 92%  | 8%  | 92%  | 8%  |
| Spar                                |                                                     | 65%   | 35% | 82%  | 18% | 100% | 0%  | 64%  | 36% |

Source: Engel 2008

Price consciousness

Generally, organic products are charged at a higher price. This has essentially been the greatest and paramount reason for consumers’ failure to develop positive purchase intentions toward organic food (Magnusson et al., 2001; Al-Sabbahy, Ekinci & Riley, 2004). Padel & Foster, (2005) suggests that consumers require value for their money so as to justify the price premium being paid. Contrary to the above findings, it is usually difficult for consumers to justify whether the price is premium or not, as buyers often lack the facts to sufficiently evaluate their intended purchases (Padel & Foster, 2005). Arguably, price is frequently in conflict with other impetuses, for example, environmental concern (Lockie et al., 2002). This implies that consumers’ ecological concerns may

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stimulate them to intend to buy organic food but the price premium may limit their ability to buy these foodstuffs. Accordingly, price is not an unqualified hurdle to consumers’ positive purchase intentions for organic foodstuffs and is by far not the only factor that discourages consumers from intending to buy non-conventional produce. Environmental/ ecological concern. South Africa is facing a dilemma of growing its economy while at the same time protecting the environment from further degradation. This problem is further exacerbated by the growing population in the country as a result of immigrants (both legal and illegal), leaving the government with no option than to promote economic development (to meet the basic needs of the country’s inhabitants) at the expense of environmental protection. This economic consideration is explained by the relatively lesser amounts of resources set aside by the South African government to protect the environment (de Villiers, 1998). With an increasing awareness of environmental degradation, certain factions of the society have begun to understand the harmful effects of ecological deterioration to their well-being. To this end, consumers’ ecological concerns have forced the marketers to incorporate the environment problem in their decision making (Werner & Alvensleben, 2011). Environmental consciousness, coupled with an increasing consumers’ interest in organic foodstuffs as well as their willingness to pay for organics has thus led to a commercial interest in organic marketing. Additionally, consumers’ interest and willingness to pay has also led to the introduction of key changes in the food market (Ragavan & Mageh, 2013). Intensified consumers’ concern over the environment in recent years has further been fueled by the heated debate on climate change, for example the 2011 United Nations Climate Change Conference (COP17) in Durban, which increased consumers’ awareness about the problem of climate change. Unquestionably, this consumer anxiety is bound to create new opportunities and/or challenges for both marketers and policy makers. Against this backdrop, this study is set to examine the effect of environmental concern on consumers’ purchase intentions for organic food. The variable – price consciousness can be explained by consumers’ willingness to pay as illustrated below.

**Figure 2: Factors influencing consumers’ willingness to purchase organic food**

![Diagram showing factors influencing consumers' willingness to purchase organic food.](source: Pouratashi (2012))
All these empirical results, as discussed above, seem to echo the view that the concept of the TPB that intention is the most closely relevant predictor of resultant behaviour (Ajzen, 1991).

**Purchase intention**

The construct of intention is a function of its three direct determinants or antecedents of attitude towards behavior, subjective norm, and perceived behavioral control (Holst & Iversen, 2011). This construct epitomizes a person’s drive or choice to enact a particular behaviour (Armitage & Conner, 1998). It can also be viewed as the immediate determinant of action and the predictor for future buying decisions (Ajzen, 1991).

The TPB proposes that once one has a good grasp of intention, behaviour becomes easy to predict. Furthermore, with the exception of unforeseen challenges or events, for example resources or skills and lack of opportunities, an individual will typically act in line with his/her intention, i.e. consistent with this theory. Stated differently, intention can be used as a proximal measure of behaviour (Holst & Iversen, 2011).

Nonetheless, this does not imply that there is constantly a perfect correlation between intention and behaviour as some circumstances necessitate the actual measure of the construct behaviour. In addition, the presumption is that the TPB model can be practically applied with great adequacy and predictability even though there is not a readily existing measure of real behaviour (Armitage & Conner, 1998; Francis, Eccles, Johnston, Walker, Grimshaw, Foy, 2004).

The construct of intention is fundamental to the TPB (as shown in Figure 1 above), because this variable is intended to pull together all the motivational influences or antecedents determinants of attitude, subjective norm and perceived behavioural control, typified in the three key constructs that precedes it (Ajzen, 1991). This in turn strengthens the construct of intention to estimate actual behavior.

**Conceptual Model, Hypotheses Development and Statement**

In order to statistically test the associations between the study constructs, a conceptual model, as depicted in Figure 3 below, was developed drawing from the research objectives, research questions, literature review on the antecedents of consumer purchase intention for organic food, and it was also premised on the TPB. Briefly stated, the model hypothesizes that a attitude, subjective norms, health consciousness and environmental concerns among others, impact consumers’ intention to purchase organic food.

**Figure 3: The conceptual model**
Figure 1: Conceptual Model

Hypotheses development and statement.

Consumer attitude and purchase intention

Mounting empirical evidence demonstrate that consumer attitude play a prominent role in shaping consumer purchase intentions for organic food (Chen, 2007; Magnusson et al., 2001; Olivová, 2011; Smith & Paladino, 2010). Further evidence derived from the conventional wisdom found that an attitude toward a specific activity is likely to give rise to a stronger intention to perform that behaviour (Fishbein & Ajzen, 1975). Moreover, a lot of studies have validated a positive attitude–intention relationship (Chen, 2007; Magnusson et al., 2001; Smith & Paladino, 2010 Werner & Alvensleben, 2011; Tarkiainen & Sundqvist, 2005), although with contrasting results. A positive relationship was also found by Squires et al. (2001). Additionally, Honkanen et al. (2006) found a statistically significant and positive relationship between consumer attitude and purchase intention for organic food. On the contrary, Magnusson et al. (2001) found that consumers’ positive attitude did not result in purchase intention, showing a discrepancy between having positive consumer attitude and the resulting intentions. Drawing from the preceding theoretical discussion and also in line with the empirical evidence on the attitude-intention relationship, this study hypothesised that:

\[ H1: \text{There is a positive relationship between consumer attitude and consumer purchase intention for organic food.} \]
Organic food is consistently viewed as healthier than conventional alternatives (Magnusson et al., 2001; Lea & Worsley, 2005; Radman, 2005). It stands to reason that if consumers derive health-related benefits from organic food, they are bound to develop positive purchase intention for such produces. A considerable number of previous studies generally confirm a positive correlation between health consciousness and consumer purchase intention for organic food (Pollard et al., 2002; Harper & Makatouni, 2002; Shepherd, Magnusson & Sjoden, 2005; Zandstra et al. 2001). Notwithstanding the general belief regarding a positive relationship between health consciousness and purchase intention for organic food, other research outcomes do not support this position. For example, Kristensen & Grunert (1991) found that health consciousness was not a significant antecedent of purchase intention for organic food and may not be adequate in predicting purchase intention. Similarly, Lockie et al. (2002) concurred with Despite the dominance of this construct, and the fact that it explains the most variance, this variable alone is an inadequate in predicting consumer purchase intentions for organic food (Sakthirama et al., 2013). This study similarly submits that even though health conscious consumers may invariably be more likely to be motivated to purchase healthier foodstuffs (Quah, & Tan, 2009); this probability is remains debatable owing to the contradictory results that have been reported by other researchers. Consequently, drawing from the above discussion and past empirical evidence, the current study hypothesises that:

\[ H2: \text{There is a significant positive relationship between health consciousness and consumer purchase intention for organic food.} \]

Perceived price and purchase intention.

Pricing is a significant variable that can be used to predict consumer purchase intentions for organic. Consistent with Magnusson et al. (2001)’s claim, organic produces are charged at a slightly higher price. This has been deemed the greatest cause of consumers’ failure to develop positive purchase intentions toward organic foodstuffs (Magnusson et al., 2001; Al-Sabbahy et al., 2004). Further research suggests that consumers tend have positive purchase intentions for the produces that they can derive value for their money (Padel & Foster, 2005). Interestingly, Lockie et al. (2002) stated that the price cue is often in conflict with other drives, for example, environmental concern – a consumer may be willing to show that they care about the environment, but price premium may discourage them from developing positive purchase intentions for organic food (Effendi, Ginting, Lubis & Fachruddin, 2015; Gan, Wee, Ozanne & Kao, 2008). Note-worthy, premium pricing for organic food does not always lead to negative purchase intentions. Evidence exists to support the notion that a number of consumers tend to use price as a sign to indicate higher product quality. Consumers can use the price cue to differentiate whether the produce is organic or conventional. However, it is counter-intuitive for organic food to be priced lower or the same as conventional food (Byrne, Toensmeyer, German & Muller, 1991). It can thus be expected that higher prices may positively influence purchase likelihoods for organic food (Lichtenstein et al., 1988; Erickson & Johansson, 1985; Zeithaml, 1988; Tellis & Gaeth, 1990).
Pricing can thus have two functions and this dual was modeled by Erickson and Johansson (1985) where price had a direct negative effect on purchase intentions while at the same time it can also had an indirect positive effect on purchase intentions when using perceptions on product quality. Therefore, price can play a negative or positive role in influencing consumers’ purchase intention for organic food. Based on the fact that organic food is frequently priced higher than conventional food and also premised on the fact that a higher price raises the ‘affordability issue’, which ultimately results in a negative effect on price sensitive consumer, the current study hypothesised that:

\[ H3: \text{There is a negative relationship between perceived price and consumer purchase intention for organic food} \]

**Perceived availability and purchase intention**

Perceived availability of organic food is an important variable due to the fact that it may also predict consumers’ purchase intention for organic food. As stated by Saunders (1999) and Thompson (2000), perceived availability is the main purchasing criteria, as if consumers ‘waste’ their time and effort trying to find organic food, their purchase intentions may end up being negatively affected. In contrast, other studies have found that limited perceived availability is not a key impediment to positive purchase intentions (Magnusson et al., 2001). Research further suggests that consumers do not switch to organic food owing to availability reasons (Gofton, 1995; Brunsø et al., 2002). Actually, Tarkiainen and Sundqvist (2005) found that the perceived availability of organic foodstuffs has no influence on consumer’s intention to purchase such produces. For the most part, perceived availability of organic food can play a role in shaping positive purchase intentions for organic food, while the reverse may hold for unavailability (Olivová, 2011). Drawing from the reviewed literature (though there appears to be no unanimity on the direction of causality), and the above discussion, the current study hypothesised that:

\[ H4: \text{There is a positive relationship between perceived availability and consumer purchase intention for organic food} \]

**Subjective norm and purchase intention**

The relationship between subjective norm and purchase intention has been extensively researched in marketing literature (for example, Ajzen, 1991; 2006; Gotschi et al., 2007; Pomsanam et al., 2014; Smith & Paladino, 2010; Tarkiainen & Sundqvist, 2005). The relevance of subjective norm has been widely critiqued in theory, but may scholars have frequently found it to be the weakest predictor of intention (Holst & Iversen, 2011; Bagozzi, 1992; Armitage & Conner, 1998). When applied to the organic food context, a significant positive relationship was found between subjective norm and purchase intention (Chen, 2007; Dean et al., 2008; Thøgersen, 2007b). Inversely, Pomsanam et al. (2014) found that subjective norms had a minor effect on Thai-Cambodian consumers’ purchase intentions for organic food. Other studies have underscored the cross-over effect of subjective norm to influence other variables. Hence, the current study hypothesised that:

\[ H5: \text{There is a positive relationship between subjective norm and consumer purchase intention for organic food} \]

**Environmental concerns and purchase intention**

A positive link has been established between ecological concerns and consumer purchase intentions for organic food (Werner & Alvensleben, 2011; Sarigollu, 2009; Ragavan & Mageh, 2013; Pomsanam et al., 2014). Moreover, Honkanen et al. (2006) supported Durham and Andrade (2005)’s finding that consumer attitude and ecological motives toward organic food
have a significant positive effect on the intention to purchase organic food. In addition, a number of earlier studies have also shown that people with less knowledge about the environment may still display a strong affection to it (Dispoto, 1997; Chan & Lau, 2000). Other key findings from previous research suggest that the level of ecological knowledge amongst South African consumers is generally minimal, and many younger consumers have remained apathetic or uninterested in issues that relate to environmental protection (Engel, 2008; National Youth Commission, Undated). Deducing from the above discussion and empirical backing, it can be concluded that the more environmentally concerned consumers are, the more likely that they are bound to develop or have positive purchase intentions toward organic food. Thus, it was hypothesised that:

$H6: \text{There is a positive relationship between environmental concerns and consumer purchase intention for organic food.}$

4. RESEARCH METHODOLOGY AND DESIGN

The study used a hypothetico-deductive methodology which is generally applied within a positivist research paradigm and objective ontology. Therefore, this study used a quantitative research design. Furthermore, this research design was divided into three classifications – questionnaire design, sampling design and data collection technique. The sampling design indicated that the study participants were drawn from Johannesburg consumers who shop at selected stores – Woolworths, Pick ‘n Pay, Shoprite/Checkers and Spar (i.e., the sampling frame). Non-probability convenience sampling technique was employed in deriving a sample size of 305 respondents. Convenience sampling through a mall-intercept approach was considered as the most suitable technique for the current study given the fact that respondents were approached while they were doing their shopping or when they were leaving the organic food retail outlets. The data used were collected from the so-called “Big Four” retail outlets in Johannesburg (South Africa’s economic hub), and these selected stores included Woolworths, Pick ‘n Pay, Shoprite/Checkers and Spar due to their accessibility to the researcher. The sample comprised of consumers who shop in these selected outlets. A researcher-administered survey questionnaire was preferred as the data collection technique because with a deductive study, a researcher is perceived as distinct from the study and can barely prejudice the responses of respondents. Therefore, the researcher distributed and collected the questionnaires after permission was sought from the owners or managers of the selected retail outlets. The survey forms stated explicitly that the anonymity of the respondents would be safeguarded and that their responses were to remain confidential at all times. It was made clear to the respondents that the study was purely for academic purposes and all the necessary ethical requirements were met prior to data collection. In the month of July 2014 of the total of 393 questionnaires which were distributed, 305 of the returned forms were in order, and thus providing a response rate of 77.61%.

**Measurement instrument development**

In terms of the questionnaire design, the constructs and instruments were mainly adapted from Olivová (2011) and there were 4 or 5 measuring items per construct. Research scales were operationalised from previous works and appropriate amendments were made so as to fit the present research context and its purpose. All the measurement items were measured on a 5 point scale, with 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree to signal the degree of agreement to the statements.
5. DATA ANALYSIS

Descriptive and inferential statistics were used to analyse the coded data using SPSS 22, through off-field analysis techniques. Descriptive statistics was relevant mainly for demographic data and general information while inferential statistics was utilised to make conclusions on the variables of this study.

**Respondent profile**

The descriptive statistics displayed in Table I below the gender, age, home language, marital status, educational and income level, number of children as well as the employment status of the surveyed respondents. The same table indicates that female respondents dominated and constitute 64.9% of the profile while the remainder was represented the male respondents. The most represented age group from the participating retail outlets is that between 26 to 35 years which constituted 38.4% of the total respondents, followed by those between 18 to 25 years, then those between 36 to 45 years, then 46 to 55 years, then 56 to 65 years and finally those above 66 years, constituting 31.5%, 16.1%, 8.9%, 4.6% and 0.7% respectively.

English was the dominant language (i.e., 36.4%), followed by the native language – Zulu (14.1%) which slightly surpassed Afrikaans (at 13.8%).

The remainder represented the rest of the country’s official languages, together with Sotho (form Lesotho) and “Other languages” which were specified by respondents. Respondents who were single or divorced or widowed occupied 63.5% and the remainder was shared between those who were married and other, constituting 29.5% and 6.9% respectively. Results on the level of education demonstrated that a total of 43.3% of the respondents had a matric qualification, while those who are at University or had a University qualification ranked second, with 42.0%. Both secondary with matric and University explain most of the variance under the education level as a demographic characteristic, while the rest was shared between the levels of education – primary, apprenticeship and FET colleges.

Amongst the surveyed participants, all of them had, at least, some primary education. Under income level, many of the respondents (i.e., 27.2%) had incomes ranging between R11000 – R20000. The remainder was shared between those earning ≤ R1000 and > R20000. Moreover, 14.4% of the respondents had an income that exceeded R50000. The profile shows that more than half of the participants (i.e., 56.1%) of the respondents had no children. This can be due to the fact that many people confessed that they were either single or divorced or widowed, making no room for them to have children. The remainder (i.e., 25.9%), had either 2 or more children while 18% of all the respondents had one child. Participants with full-time employment constituted 70.8% followed by those who were unemployment, constituting 15.7% with part-time employment and retired, who constituted 13.1% and 0.3% respectively.
Table 1: Sample profile characteristics

| Gender   | Frequency | Percentage (%) | Age          | Frequency | Percentage (%) |
|----------|-----------|----------------|--------------|-----------|----------------|
| Male     | 107       |                | < 18         | 0         | 0.0            |
|          |           |                | 18-25        | 96        | 31.5           |
|          |           |                | 26-35        | 117       | 38.4           |
|          |           |                | 36-45        | 49        | 16.1           |
|          |           |                | 46-55        | 27        | 8.9            |
|          |           |                | 55-65        | 14        | 4.6            |
|          |           |                | ≥ 66         | 2         | 0.7            |
| Female   | 198       |                | Total        | 305       | 100.0          |
| Total    | 305       | 100.0          |              |           |                |

| Home Language | Frequency | Percentage (%) | Marital Status          | Frequency | Percentage (%) |
|---------------|-----------|----------------|-------------------------|-----------|----------------|
| Afrikaans     | 42        | 13.8           | Other                   | 21        | 6.9            |
| English       | 111       | 36.4           | Single/Divorced/Widowed | 194       | 63.5           |
| Ndebele       | 6         | 2.0            | Cohabitation            | 0         | 0.0            |
| Northern Sotho| 21        | 6.8            | Married                 | 90        | 29.5           |
| Southern Sotho| 12        | 3.9            | Total                   | 305       | 100.0          |
| Sotho (Lesotho)| 3         | 1.0            |                          |           |                |
| Tsonga        | 14        | 2.0            | Educational Level       |           |                |
| Tswana        | 16        | 5.2            | No Education            | 0         | 0.0            |
| Venda         | 43        | 14.1           | Primary                 | 2         | 0.7            |
| Xhosa         | 4         | 1.3            | Apprenticeship          | 3         | 1.0            |
| Zulu          | 24        | 7.9            | Matric                  | 132       | 43.3           |
| Swazi         |           |                | FET College             | 40        | 13.1           |
| Other Languages| 305       | 100.0          | University              | 128       | 42.0           |
| Total         |           |                | Total                   | 305       | 100.0          |

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| Total | Frequency | 100.0 | Number of Children | Frequency | Percentage (%) |
|-------|-----------|-------|--------------------|-----------|----------------|
|       |           |       | None               | 171       | 56.1           |
| Income Level |           |       | One                | 55        | 18.0           |
| <R10000 | 83        | 20.7  | Two or More        | 79        | 25.9           |
| R11000 - R20000 | 47    | 27.2  | Total              | 305       | 100.0          |
| R21000 - R30000 | 42    | 15.4  |                     |           |                |
| R31000 - R40000 | 26    | 13.8  | Employment Status  | Frequency | Percentage (%) |
| R41000 - R50000 | 44    | 8.5   | Unemployed         | 48        | 15.7           |
| ≥R50000 | 305       | 100.0 | Part-time          | 40        | 13.1           |
| Total   |           |       | Full-time          | 216       | 70.8           |
|         |           |       | Retired            | 1         | 0.3            |
|         |           |       | Total              | 305       | 100.0          |

**Descriptive statistics, reliability and validity**

As illustrated in Table 2 below, respondents’ attitude level was above average (Mean=3.8451), inferring that their attitude toward purchase intention for organic food was fairly high. The respondents also had a fairly high agreement with the health consciousness construct (Mean=4.1082), signifying that respondents felt that purchase intentions for organic food are influenced by their health consciousness. Moreover, the participants also identified their level of perceived price to be above average (Mean=3.9840), implying that they also agreed to the fact that price influenced their purchase intents for organic food.
The degree of agreement on perceived availability was also above average (Mean=3.5279), that is, respondents somewhat agreed that organic food availability affected their purchase intention. Participants’ level of agreement was also above average for subjective norm, environmental concerns and purchase intention, which had mean values of 3.5836, 4.0098 and 3.7906 respectively.

Table 2: Mean and standard deviation values of the study variables

| Study Variable           | Mean   | Standard Deviation |
|--------------------------|--------|--------------------|
| Consumer Attitude        | 3.8451 | 0.78140            |
| Health Consciousness     | 4.1082 | 0.71094            |
| Perceived Price          | 3.9840 | 0.71300            |
| Perceived Availability   | 3.5279 | 0.77351            |
| Subjective Norms         | 3.5836 | 0.77258            |
| Environmental Concerns   | 4.0098 | 0.76298            |
| Purchase Intention       | 3.7906 | 0.63556            |

Note: Valid N (listwise) = 305

The study further checked for both discriminant and convergent validity of the measurement instruments. Discriminant validity was established by means of inspecting whether the AVE values for each construct were more than the highest shared variance value and above the recommended value of 0.5 as suggested by Fornell and Larcker (1981). Additionally, the correlation between variables under study was less than the marginally acceptable value of 0.85, which meant that the constructs did not suffer from the problem of multi-collinearity (Hulland, 1999). For this reason, all the techniques used demonstrated a satisfactory level of discriminant validity. All the item loadings for the study constructs ranged between 0.527 - 0.889 and, as a result, they were above the recommended threshold of 0.5 (Anderson & Gerbing, 1988; Karatepe, 2006). This indicated satisfactory individual item convergent validity as fifty three percent or more of every single item’s variance was shared with its corresponding variable. Related results for the above validities are displayed in Table 3 and 4 below.
Table 3: Inter-construct correlation matrix

| Research Constructs          | CA   | HC   | PR   | AV   | SN   | EC   | PI   |
|------------------------------|------|------|------|------|------|------|------|
| Consumer Attitude (CA)       | 1    |      |      |      |      |      |      |
| Health Consciousness (HC)    | 0.556| 1    |      |      |      |      |      |
| Perceived Price (PR)         | 0.061| 0.138| 1    |      |      |      |      |
| Perceived Availability (AV)  | 0.255| 0.226| 0.361| 1    |      |      |      |
| Subjective Norms (SN)        | 0.533| 0.356| 0.048| 0.149| 1    |      |      |
| Environmental Concerns (EC)  | 0.338| 0.499| 0.097| 0.117| 0.287| 1    |      |
| Purchase Intentions (PI)     | 0.457| 0.408| 0.296| 0.327| 0.441| 0.448| 1    |

Source: This Study

Reliability of measures was tested through the assessment of corrected item-to-total values and coefficients of Cronbach alpha as well as through examining the composite reliability (CR) values while validity was checked through examining average variance extracted (AVE) values. The corrected item-to-total ranged from 0.514 to 0.789, and therefore, all of them were above the suggested threshold of 0.5 (Nunnally, 1978). Cronbach alpha coefficients ranged from 0.632 to 0.841, hence also above the marginally acceptable threshold of 0.6 (Bagozzi and Yi, 1988; Byrne, 2006; Hair, Money, Samouel & Page, 2007; Nunnally; 1978). Moreover, composite reliability values ranged from 0.667 to 0.856, and were thus beyond the recommended threshold of 0.7 (Fornell & Lacker, 1981). The AVE values were also above the recommended threshold of 0.5 (Fraering & Minor, 2006), i.e., they ranged between 0.502 and 0.695. All these results displayed evidence for satisfactory levels of the reliability and validity of the research scales.

Table : Accuracy statistics

| Research Construct          | Corrected Item-to-Total | Cronbach Value | α   | CR Value | AVE Value | Factor Loading |
|-----------------------------|-------------------------|----------------|-----|----------|-----------|----------------|
| Consumer Attitude (CA)      | CA1 0.693               | 0.841          | 0.801| 0.669    | 0.779    | 0.842          |
|                             | CA2 0.744               |                |     |          |           | 0.790          |
|                             | CA3 0.708               |                |     |          |           |                |

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|                          | CA4  | 0.593 |         |         |         |         |         |         |         |         |
|--------------------------|------|-------|---------|---------|---------|---------|---------|---------|---------|---------|
| **Health Consciousness (HC)** |      |       |         |         |         |         |         |         |         |         |
| HC3                      | 0.534|       |         |         |         |         |         |         |         |         |
| HC4                      | 0.690| 0.780 | 0.749   | 0.560   | 0.667   | 0.822   | 0.747   |         |         |         |
| HC5                      | 0.634|       |         |         |         |         |         |         |         |         |
| **Perceived Price (PR)**  |      |       |         |         |         |         |         |         |         |         |
| PR2                      | 0.510|       |         |         |         |         |         |         |         |         |
| PR3                      | 0.547| 0.726 | 0.798   | 0.502   | 0.527   | 0.640   | 0.594   | 0.693   |         |         |
| PR4                      | 0.529|       |         |         |         |         |         |         |         |         |
| PR5                      | 0.514|       |         |         |         |         |         |         |         |         |
| **Perceived Availability (AV)** | |       |         |         |         |         |         |         |         |         |
| AV4                      | 0.695| 0.818 | 0.667   | 0.695   | 0.820   | 0.847   |         |         |         |         |
| AV5                      | 0.695|       |         |         |         |         |         |         |         |         |
| **Subjective Norms (SN)** |      |       |         |         |         |         |         |         |         |         |
| SN1                      | 0.548|       |         |         |         |         |         |         |         |         |
| SN3                      | 0.542| 0.616 | 0.748   | 0.507   | 0.657   | 0.546   | 0.675   |         |         |         |
| SN5                      | 0.550|       |         |         |         |         |         |         |         |         |
| **Environmental Concerns (EC)** | |       |         |         |         |         |         |         |         |         |
| EC3                      | 0.734|       |         |         |         |         |         |         |         |         |
| EC4                      | 0.789| 0.632 | 0.749   | 0.682   | 0.801   | 0.889   | 0.783   |         |         |         |
| EC5                      | 0.668|       |         |         |         |         |         |         |         |         |
| **Purchase Intentions (PI)** | |       |         |         |         |         |         |         |         |         |
| PI 1                     | 0.577|       |         |         |         |         |         |         |         |         |
| PI 2                     | 0.604|       |         |         |         |         |         |         |         |         |
| PI 4                     | 0.535|       |         |         |         |         |         |         |         |         |
| PI 5                     | 0.583|       |         |         |         |         |         |         |         |         |
| PI 6                     | 0.534|       |         |         |         |         |         |         |         |         |
| PI 8                     | 0.580|       |         |         |         |         |         |         |         |         |

**Structural equation modelling**

SEM was conducted in order to test the reliability, validity and fitness (CFA) of the proposed model and model fitness as well as hypothesis testing (path modeling) as detailed below.

**Confirmatory factor analysis**

In order to confirm the fitness of research model, CFA was conducted using AMOS version 21 statistical software package. Satisfactory model fit was displayed by chi-square value divided by degrees of freedom ($\chi^2/(df)$) value, which was less than 3.

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Furthermore, the values for goodness-of-fit index (GFI), incremental fit index (IFI) comparative fit index (CFI), normed fit index (NFI) and tucker lewis index (TL) were almost equal to or greater than 0.90. Also, the root mean square error of approximation (RMSEA) was less than 0.08 while root mean square residual (RMR) value was less than 0.5 (Hair et al., 2006).

Also, the root mean square error of approximation (RMSEA) was less than 0.08 while root mean square residual (RMR) value was less than 0.5 (Hair et al., 2006).

**Table 3: Model Fit Results**

| Model Fit Indices                      | Acceptable Threshold | Acceptable/ Unacceptable |
|----------------------------------------|----------------------|--------------------------|
| Chi-Square Value: $\chi^2/(df)$        | $<3$                 | Acceptable               |
| Comparative Fit Index (CFI)            | $>0.900$             | Acceptable               |
| Goodness of Fit Index (GFI)            | $>0.900$             | Acceptable               |
| Incremental Fit Index (IFI)            | $>0.900$             | Acceptable               |
| Normed Fit Index (NFI)                 | $>0.900$             | Acceptable               |
| Tucker Lewis Index (TLI)               | $>0.900$             | Acceptable               |
| RMSEA                                  | $<0.08$              | Acceptable               |
| RMR                                    | $<0.5$               | Acceptable               |

*Note: RMSEA = Random Measure of Standard Error Approximation, RMR = Root Mean Square Residual*

**Structural path model**

After obtaining an acceptable CFA measurement model fit, the next analysis stage was to check the structural model fitness and ultimately hypothesis testing. Recommended statistics for the overall structural equation model analysis, likewise, revealed a satisfactory fit of all indices as represented in Table 3 above: $\chi^2/(df)$ was 2.725; GFI=0.885; CFI=0.910; IFI=0.889; NFI=0.916; RMSEA=0.067 and RMR=0.373. As indicated by the above indexes, model fit for structural paths was deemed satisfactory, thereby creating a good platform for hypothesis testing. The parameter estimates of the structural model displayed direct relationships of each variable on the other. A coefficient that was found to be significant at a particular alpha level revealed a significant correlation between latent constructs. The results for hypothesis testing are presented in Table 4 and revealed support for the all the proposed six study hypotheses. The path coefficients for H1, H2, H3, H4, H5 and H6 are 0.431, 0.016, -0.010, 0.310, 0.331 and 0.388 respectively. All hypothesis coefficients, except H2 and H3 were significant at 0.01 confidence (or p) level.
Table 4: Results from testing the structural model

| Proposed Hypotheses | Hypothesis | Factor Loading | Rejected/Supported |
|---------------------|------------|----------------|-------------------|
| PI → CA             | +H1        | 0.431***       | Supported         |
| PI → HC             | +H2        | 0.016          | Supported         |
| PI → PR             | –H3        | –0.010         | Supported         |
| PI → AV             | +H4        | 0.310***       | Supported         |
| PI → SN             | +H5        | 0.331***       | Supported         |
| PI → EC             | +H6        | 0.388***       | Supported         |

Note: CA = Consumer attitude; HC = Health Consciousness; PR = Perceived Price; AV = Perceived availability; KL = Knowledge Levels; SN = Subjective Norms; ***p<0.01; p**<0.05

6. DISCUSSION AND CONCLUSIONS

The purpose of this study was to quantitatively ascertain the key antecedents that motivate Johannesburg consumers to purchase organic food. The TPB was employed to provide a theoretical basis for the conceptualized framework. Specifically, six hypotheses were posited and in order to test these hypothesised relationships, raw data was collected from consumers who shop at the Big 4 food retail outlets in the country – Shoprite/Checkers, Spar, Pick ‘n Pay and Woolworths. The empirical findings provided support to all the postulated hypotheses, with four out of six hypotheses being supported in a significant way. In line with H1, the findings revealed that respondents held rather positive attitudes toward organic food. The positive and significant (at p < 0.01) linkage between CA and PI was also validated by a sizable number of studies (for example, Honkanen et al., 2006; De Magistris & Gracia, 2008; Chen, 2007; Lodorfo & Dennis, 2008; Magistris & Gracia, 2008; Olivová, 2011) who found similar results. Also in support of H2, the study findings revealed that there was a positive relationship between health consciousness and purchase intention. This inference is in agreement with the conclusions made by Krystallis & Chryssohoidis (2005), Millock et al. (2004), Olivová (2011) as well as Padel and Foster (2005). Paradoxically, the relationship between health consciousness and purchase intention for organic food was found to be insignificant and this finding contradicted with the findings carried by many previous researchers, for example, Pomsanam et al. (2014) who placed more weightage on health consciousness’ positive and significant effect on consumer purchase intentions for organic food (i.e., β = 0.312***). Perhaps this could be explained by the fact that health-conscious individuals in Johannesburg have a habit of depending on medicines (and less on ‘healthy’ food) as dietary supplements, for example, vitamin, in order to improve their health (Engel, 2008). In concurrence with H3, the results confirmed that an inverse relationship exists between perceived price and purchase intention. This finding is in line with the results from, for example, Magnusson et al. (2001) and Al-Sabbahy et al. (2004) and it supports the notion that premium pricing of...
organic food is one of the key reasons that discourage consumers from developing positive purchase intentions for such products.

Consistent with H4, the results of this study further substantiated the fact that there is a positive relationship between perceived availability and purchase intention for organic food. This effect of was also found to be significant at $p<0.01$ and was in agreement with the findings from a study done by Vermeir & Verbeke (2007) as well as Lodorfos and Dennis (2008) among others. As per H5, the current study had posited that there was a positive relationship between subjective norm and purchase intention for organic food. Support for this hypothesis was provided from the findings of this study and also, this linkage was found to be significant at $p<0.01$. This finding corroborated Pomsanam et al. (2014)'s conclusion on the Thai, but not Cambodian consumers as well as Chen (2007), Dean et al. (2008) and Thøgersen (2007b), who also found a significant positive relationship between the two variables. Finally, in concurrence with H6, the current study established that there is a positive relationship environmental concerns and purchase intention for organic food. In particular, it was also be noticed that this relationship was significant at $p<0.01$. This discovery is further supported by previous scholars, for example, Pomsanam et al. (2014), Ragavan and Mageh (2013), Werner and Alvensleben (2011) as well as Sarigollu (2009) among others. This finding meant that Johannesburg consumers do exhibit stronger interests on environmental issues and their concerns eventually affect their purchase intentions for the food they consume.

6.1 Implications

The current study submits that TPB can be extended to explain consumer purchase intentions for organic food. Correspondingly, the results contribute to the growing body of knowledge and provided support to the empirical investigation for the validation of the applicability of the TPB as a worthwhile predictive theory. Drawing from the results, it is suggested that the TPB is a valuable model to understand consumer purchase intentions for organic food. Insights from this study can be used to further expand the horizons of our knowledge of organic food-related aspects, particularly in an emerging country like South Africa. The results also contribute to practice by helping marketers target and retain health conscious customers more effectively. Given that consumer attitudes, perceived availability, subjective norm and environmental concerns have positive significant impact on consumers’ purchase intentions for organic food, it is therefore imperative for marketing practitioners to consistently expand their efforts in trying to create positive consumer attitudes (e.g., through advertisements), ensure availability of organic food (e.g., through Just-In-Time delivery system), utilise other individuals that are likely to positively influence purchase intentions for organic food (e.g., through the use of celebrity endorsers) and ultimately pledge their support for sustainable environment in order to attract environmentally conscious customers. Perhaps such sustainability measures might include the support for green initiatives and support for a cleaner environment among others.

6.2 Limitations and future research

Although the study highlighted its usefulness, it was not immune to certain limitations which opened avenues for additional research. First and most significantly, this study was piloted only from the perspective of Johannesburg consumers who shop at selected organic food retail outlets. Perhaps if the data was gathered from the two big cities in Gauteng – i.e., both Johannesburg and Pretoria, resulting in a comparative study, then insightful findings about the influence of the anteceding variables on consumer purchase intentions for organic food could have been revealed.
Notably, additional research could also explore the effects of these antecedent variables on consumers’ purchase intentions in a wider context, for example, including consumer insights from areas outside Gauteng. Such research endeavours could potentially increase our comprehension of the key antecedents on purchase intention for organic food in South Africa. Furthermore, qualitative research which, specially, studies the multidimensional interaction of varied individuals, social and situational characteristics, may possibly be of great importance in the enhancement of upcoming research endeavours. In future, a longitudinal research is recommended, as it is expected that it will have more explanatory power when determining how the variables under study are linked over time. This is a vital future direction as further studies should draw a parallel between PIs of young consumers and mature consumers (i.e., start at a younger age – when consumers move from their teenage years until they become matured). The proposed future directions that resulted from this study stand to immensely contribute fresh knowledge to the existing body of organic food literature. On the whole, this study underscored the prominence of, for example, consumer attitudes and environmental concerns in effectively predicting consumer purchase intentions for organic food.

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APPENDIX: MEASUREMENT INSTRUMENTS

| Description of organic food                                      | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|-----------------------------------------------------------------|-------------------|----------|---------|-------|----------------|
| Healthy                                                         | ☐                 | ☐        | ☐       | ☐     | ☐              |
| High nutritional value                                          | ☐                 | ☐        | ☐       | ☐     | ☐              |
| Products grown in harmony with nature                          | ☐                 | ☐        | ☐       | ☐     | ☐              |
| Free from chemical pesticides and fertilisers                  | ☐                 | ☐        | ☐       | ☐     | ☐              |
| Produced with environmentally/animal friendly techniques        | ☐                 | ☐        | ☐       | ☐     | ☐              |
| Free from Genetically Modified Organisms (GMO)                  | ☐                 | ☐        | ☐       | ☐     | ☐              |
| All products coming from organic agriculture are certified      | ☐                 | ☐        | ☐       | ☐     | ☐              |
| **Consumer Attitudes** |   |   |   |   |   |
|------------------------|---|---|---|---|---|
| I think it is reasonable for me to intend to buy organic food |   |   |   |   |   |
| I am motivated to purchase organic food because of its benefits |   |   |   |   |   |
| I believe it is better for me to intend to buy organic than conventional food |   |   |   |   |   |
| I intend to buy organic food because of its positive image to me |   |   |   |   |   |
| **Health Consciousness** |   |   |   |   |   |
| My health is very important to me |   |   |   |   |   |
| Conventional foods are as healthy as organic foods |   |   |   |   |   |
| Organic foods are natural and therefore better for my health |   |   |   |   |   |
| Organic foods are healthier because they have no/less growth hormones additives and antibiotics |   |   |   |   |   |
| Organic foods are healthier because they have no/less chemical residues |   |   |   |   |   |
| **Perceived Price** |   |   |   |   |   |
| The price of organic food is important to me |   |   |   |   |   |
|--------------------------------------------|---|---|---|---|---|
| I often refrain from intending to buy organic |   |   |   |   |   |
| food because I think it is expensive       |   |   |   |   |   |
| It is important for me that organic food is |   |   |   |   |   |
| priced the same as conventional food        |   |   |   |   |   |
| I always try to find the most reasonable lowly |   |   |   |   |   |
| priced foodstuffs where I shop              |   |   |   |   |   |
| I intend to buy organic food if they are sold at |   |   |   |   |   |
| more cheaper prices                          |   |   |   |   |   |

Perceived Availability

| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|-------------------|----------|---------|-------|---------------|
| [1]               | [2]      | [3]     | [4]   | [5]           |

| Organic food is sufficiently available at the store where I shop |   |   |   |   |   |
|------------------------------------------------------------------|---|---|---|---|---|
| Organic food is hard to find in a store where I purchase        |   |   |   |   |   |
| I can easily find organic food in my neighbourhood               |   |   |   |   |   |
| I would consider purchasing organic food if it is available at the place where I purchase food produces |   |   |   |   |   |
| I intend to buy organic food if they are more accessible in the market |   |   |   |   |   |

Labelling

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| Labels are a way of distinguishing between organic and conventional foods |   |   |   |   |   |
| I am able to recognize an organic food label |   |   |   |   |   |
| I have more trust in organic food that has a familiar label |   |   |   |   |   |
| I can tell if the label is genuine or not |   |   |   |   |   |
| I have no idea about organic food labels |   |   |   |   |   |

**Knowledge Levels**

| I have good knowledge about organic food |   |   |   |   |   |
| It is difficult for me to know if the produce is organically produced |   |   |   |   |   |
| I know that organic food tastes better than conventional food |   |   |   |   |   |
| I know that organic food is fresher than conventional food |   |   |   |   |   |
| I know that organic agriculture supports the growth of small local farmers |   |   |   |   |   |

| Strongly Disagree [1] | Disagree [2] | Neutral [3] | Agree [4] | Strongly Agree [5] |
| Subjective Norms                                                                 |   |   |   |   |   |
|---------------------------------------------------------------------------------|---|---|---|---|---|
| People that are important to me would like me to consider buying organic food   |   |   |   |   |   |
| Most people who influence what I do, think that I should not intend to buy organic food |   |   |   |   |   |
| It is good for me to consider buying organic food                               |   |   |   |   |   |
| I think it is not important to consider buying organic food                      |   |   |   |   |   |
| My family would me to have organic food purchasing plans                         |   |   |   |   |   |
| Environmental Concerns                                                          |   |   |   |   |   |
| The environment should be protected through environmentally friendly farming methods |   |   |   |   |   |
| The production of *conventional* food does not harm the environment             |   |   |   |   |   |
| Organic food production is better for the environment because it uses no/less chemical residues |   |   |   |   |   |
| Organic food production is better for the environment because it uses no/less growth hormones |   |   |   |   |   |
| Organic food production practices are better for the environment than conventional farming methods |   |   |   |   |   |
| Purchase Intentions                                                             |   |   |   |   |   |
| Statement                                                                 | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---------------------------------------------------------------------------|-------------------|----------|---------|-------|----------------|
| My attitudes are linked to my intention to buy organic food               |                   |          |         |       |                |
| My intention to buy organic food in me comes from health reasons          |                   |          |         |       |                |
| My intention to buy organic food is linked to price of such foods         |                   |          |         |       |                |
| My intention to buy organic food can develop with level its availability  |                   |          |         |       |                |
| I intend to buy produces with an organic food label                       |                   |          |         |       |                |
| My intention to buy organic food can increase with more knowledge I may have about such foods |                   |          |         |       |                |
| Intention to buy organic food in me comes from the influence I get from others |                   |          |         |       |                |
| My concerns about the environment improves my intention to buy organic food |                   |          |         |       |                |