

Unpicking motives to purchase locally-produced food: analysis of direct and moderation effects

Motives to
purchase
locally-
produced food

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Abstract

Purpose – This study aims to investigate how attributes associated with local food (intrinsic product quality; local support) motivate purchase behaviour. Previous research assumes heterogeneity in consumer motivation, but this has never been formally assessed. As such, the influence of local food attributes in motivating product use is integrated into a model in which consumer values and personal characteristics/situational variables are specified as moderators.

Design/methodology/approach – Eight hypotheses are tested using data collected from a quota sample of respondents recruited via an online panel of 1,223 shoppers. A three-stage analysis is used using structural equation modelling. Moderation effects are tested using both latent interactions and multiple-group analysis.

Findings – Shoppers purchase local food more frequently as a consequence of local support rather than intrinsic product quality. Unpicking these relationships reveal that local support has an amplified effect when local identity is higher, and when the shopper is either female or of an older age (55 years plus). Surprisingly, the influence of intrinsic product quality is equivalent by gender, age and location (rural/urban).

Practical implications – Marketers promoting locally produced foods should focus on both the intrinsic attributes of local food as well as the role it plays within the local community. The latter is more likely to be successful with communications aimed at women and older consumers.

Originality/value – With previous studies focusing on how local food attributes influence favourable consumer behaviours, the current study unpicks these relationships by examining

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heterogeneity in responses. This is the first study to concurrently use attributes, values and personal characteristics/situational variables in explaining shopping behaviour for local food.

Keywords Motivation, Values, SEM, Local food, Moderation

Paper type Research paper

Introduction

In the domain of food purchasing, the consumption of locally produced food has attracted significant attention in the past decade (Blake *et al.*, 2010; Megicks *et al.*, 2012; Weatherell *et al.*, 2003; Zepeda and Deal, 2009). A notable development was the word “locavore” being admitted to the 2007 Oxford American Dictionary, defining people who show a preference for locally produced foods sourced with minimal food miles. Estimates suggest that the market for locally sourced food in the UK will increase by 18 per cent between 2012-2017, to a value of £6.5 billion (Intel, 2013). Recent research shows that consumers are now more interested in obtaining local food than they are in organic/natural equivalents (Intel, 2012). To this end, food giants such as Tesco and McDonalds have introduced campaigns in the UK promoting the provision of local ingredients in selected offerings. Researchers have suggested that its growing popularity resonates, in part, because local food presents benefits beyond self-interest with advantages also achieved in terms of society, the environment and more consistent, sustainable food policy development (McEachern *et al.*, 2010). Others have gone so far as to suggest that the growing consumer concern for local food, with corresponding shortened links between stakeholders, represents a social movement in its own right (Starr, 2010).

Despite the more general notion that “local food” exudes benefits spanning both individual and societal levels, only a handful of studies have attempted to “unpick” the various attributes of local food that determine its purchase (Megicks *et al.*, 2012; Weatherell *et al.*, 2003). For instance, Weatherell *et al.* (2003) performed both qualitative and quantitative research in north-west England, concluding that consumers were driven to purchase local food as a consequence of a wide ranging set of factors. Whilst criticism can be levelled at the composition and content of several items underlying said factors (e.g. image and convenience), Weatherell *et al.* make the clear distinction between moralistic and altruistic (i.e. moral and health concerns; origin) drivers of consumer behaviour and those motivated by self-interest (i.e. the intrinsic qualities of local food and price). This work was revisited by Megicks *et al.* (2012), who drew upon a nationally representative sample of respondents. Utilising a similar mixed method research design, they identified a number of factors that could be broadly classifiable into motives associated with self-interest (e.g. intrinsic product quality and shopping benefits) and altruism (e.g. local support and ethical sustainability). Of these two studies, only the latter evaluated the relative importance of each factor by using a regression analysis in which the dependent variable captured intentions to purchase and use. Megicks *et al.* (2012) concluded that being motivated by self-interest through pursuing *more* intrinsic qualities associated with local food (e.g. wholesome, free from preservatives and chemicals, etc.), as well as supporting local communities, retailers and producers (i.e. local support), were the only significant drivers of positive purchasing behaviour concerning local food. Whilst both studies imply heterogeneity to be prevalent in the factors important to consumers, neither explicitly investigated *how* this is manifested.

Instead, *post hoc* clustering revealed differences between respondents exhibiting varied characteristics. However, the potential for *drivers* to be moderated (amplified/suppressed) by matching additional salient variables (such as *values*; *personal characteristics/situational variables*), has not hitherto been considered.

In light of the above, the present study contributes to the development of shopping motivation theory, specifically around food consumption, by presenting an empirical model of local food purchasing behaviour. This establishes how salient local product attributes (*intrinsic product quality*; *local support*) are influenced by consumer values (i.e. *health consciousness*; *local identity*) together with selected personal characteristics (*age*; *gender*) and situational or contextual factors (*rural/urban location*). The integration of values and personal characteristics/situational variables to explain consumer motives is in keeping with recent developments within the literature (Steenkamp and de Jong, 2010). However, as yet, this approach has neither been considered in the context of local food provision nor has it been integrated into a framework in which product attributes, consumer values and personal characteristics/situational variables concurrently explain variation in shopping behaviour.

This paper begins with a review of the extant literature from which eight hypotheses are derived. Next, the study's methodology and analytical approach – latent regression analysis with latent moderated structural (LMS) equations – are presented, before the concluding sections discuss the theoretical and practical implications of the findings, highlight limitations and outline directions for future research.

Conceptual background

Defining local food

One of the most hotly debated streams in the food marketing literature centres on the “meaning” of *local food* (Blake *et al.*, 2010; CPRE, 2012; Durham *et al.*, 2009; Khan and Prior, 2010; Lang *et al.*, 2014). Despite a plethora of work, there is, as yet, no universally agreed upon or legally recognised definition of what is understood by this term. As such, this topic has garnered disagreement on several fronts. For instance, some studies propose an objective approach focusing on the geographical distance food has travelled from the source before being sold. This *might* be a socio-administrative area such as a region, state or county or some other arbitrary distance (Morris and Buller, 2003), for example, 10, 30, 50, 100 or 400 food miles (Martinez *et al.*, 2010; Smith and MacKinnon, 2007). However, this approach can evoke problems associated with its operation; for instance, consumers may struggle to accurately judge the distance between source and place of purchase, especially at higher levels of congruence. An alternative method is the perceptual approach which places the emphasis on local food being the product of consumer perception – in other words, it is “local” only if the consumer subjectively believes it to be so (Weatherell *et al.*, 2003). The perceptual view benefits the researcher through its greater versatility. Yet, people's interpretation of “What is local?” *may* raise issues of reliability (e.g. the same product may be viewed differently by neighbours living in the same street). Given advantages and disadvantages are evident with both approaches the current study chooses to adopt a definition based upon research undertaken by IGD (2005, p. 3), who stated “local food is predominantly about distance”. Hence, in keeping with IGD (2005), and to ensure response consistency, in this study, a definition based on the notion that *local food must be grown or produced within 30 miles of where the buyer lives* is used.

Motivations for local food from product attributes

Shopping motivations have been widely debated over the past four decades (Arnold and Reynolds, 2003; Jarratt, 1996; Tauber, 1972; Westbrook and Black, 1985). In terms of store choice, which has been the context for the majority of research in this area, customers are more attracted to offerings containing a range of attributes that satisfy their personal motives (Dawson *et al.*, 1990; Megicks *et al.*, 2008; Swoboda and Morschett, 2001; Theodoridis and Chatzipanagiotou, 2009). This logic also holds for product-based decisions (Bond *et al.*, 2008), whereby product attributes, of different levels of salience, are compared between available options. Bridging shopping motivation and product attribute concepts implies that decisions are determined by:

- the performance of salient attributes in satisfying customer motives; and
- a product's ability to deliver salient attributes better than alternative offerings (Angell *et al.*, 2012; Megicks *et al.*, 2008).

Regarding local food, few studies have explored the attributes affecting demand in a holistic and comprehensive manner (Hu *et al.*, 2012). Nevertheless, when taken incrementally, a broad range of attributes have been suggested to be important. For instance, COI/FSA (2007) identified the main reason for buying local food as supporting local businesses and the local community. However, other studies (Knight, 2013; Weatherell *et al.*, 2003) have suggested that the practical, more “self-gratifying”, benefits of food (e.g. freshness, taste, healthiness, appearance and availability) continue to dominate purchase decisions. The study by Megicks *et al.* (2012) established (and validated) the drivers and inhibitors influencing purchase behaviour. The authors synthesized the attributes resulting from their qualitative investigation into factors, proposing the following framework explaining motivations to purchase local food. These were:

- intrinsic product quality;
- local support and provenance;
- ethical sustainability; and
- shopping benefits.

In their model, “intrinsic product quality” and “local support and provenance” were significant. Despite previous research showing ethical sustainability (i.e. issues relating to reducing food miles, being environmentally friendly, being ethical) to be an important factor driving consumer behaviour, (Tregear and Ness, 2005), Megicks *et al.* (2012) found it to have a non-significant effect on their dependent variables (i.e. past use and future intentions). This finding may be explained, in part, by the fact that much of the work relating to ethical sustainability is narrowly focused within the field of environmental marketing, normally using “environmentally concerned” consumers as the sample (Minton and Rose, 1997; Roberts and Bacon, 1997). Other studies considering environmental drivers tend to be unique to organic food (Lockie *et al.*, 2002; Michaelidou and Hassan, 2010) and fail to integrate environmental sustainability into a framework that considers a broader range of factors determining consumer decision-making. Furthermore, there is growing debate about whether local food can actually be classed as ethically derived and environmentally friendly. Some researchers question the positive environmental impacts commonly assumed to be part of local food production

(Edwards-Jones *et al.*, 2008) and concerns surround the subject of food miles, as well as the energy efficiency and carbon emissions of its distribution (Coley *et al.*, 2009; Mundler and Rumpus, 2012). As such, local food may not actually be better for the environment and the concept of “food miles” may be too simplistic (Cho, 2012; Koch, 2012; McKie, 2008). Indeed researchers from the Union of Concerned Scientists concluded that “if you want to buy local food for its freshness or to support [local] area farmers, fine, but don’t do it to save the planet!” (Koch, 2012). This verdict was supported by an investigation tracking typical consumer concerns relating to the origins of food. Only 3.6 per cent of respondents indicated that local food being “less harmful for the environment” was their primary or secondary motivation for choosing British rather than imported products (Kemp *et al.*, 2010). Indeed local food being considered as ethical has been subject to even greater scrutiny, as buying “local” goes against ethical concepts such as Fairtrade, which supports workers in poorer and developing countries. This has led to conflict between green (who favour locally produced food) and social justice campaigners (who favour fairly traded food) (Morgan, 2010).

The present study draws from these contemporary discussions and investigates how two key factors, *intrinsic product quality* and *local support* influence consumer behaviour in this context in an empirical model (Figure 1). The following section justifies the model in the form of eight hypotheses.

Hypotheses

Direct effects of local food attributes on past use

This section establishes a rationale for the two hypothesised direct effects proposed in Figure 1. It is worth noting that *past use* represents the *frequency* with which someone has bought local food within a designated timeframe in the past. Furthermore the relationship between *past use* and *future intentions* is made a parameter in the model,

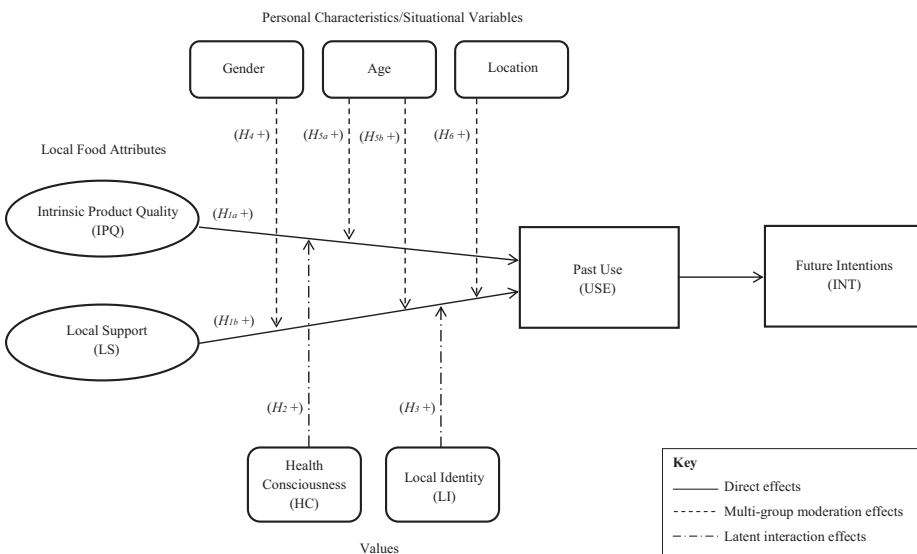


Figure 1. Conceptual model

but given that this is both an intuitive and established path, it is not given focus in the theoretical section of this paper.

Intrinsic product quality

Past research identifies the “properties of food” to be a major influence on food choice, affecting a consumer’s decision-making process through both physiological effects and sensory perception (Steenkamp, 1997; Verbeke, 2000). These properties manifest through attributes associated with the product, whereby positive evaluations of the outcomes they deliver lead to purchase. Amongst the most important criteria consumers use to evaluate food is “product quality” (Grunert, 2005; Steenkamp, 1997), which is an overall evaluation measure. It represents attributes associated with a product/product category, which eventually determines product choice (Grunert, 1997). Distinction is made between intrinsic and extrinsic quality (Olson and Jacoby, 1972; Szybillo and Jacoby, 1974), with the former often evaluated from inferred physical characteristics of the product, e.g. freshness from colour; extrinsic quality is a non-physical attribute.

In the context of local food, “intrinsic product quality” incorporates specific characteristics that provide benefits to individuals through consumption (Chambers *et al.*, 2007). From a position of self-interest, it is logical that shoppers are motivated through the gratification of functional benefits associated with local food. Indeed, consumers consider that by purchasing local food, they are obtaining a higher quality product, which is fresher (Chambers *et al.*, 2007; La Trobe, 2001; Zepeda and Deal, 2009), tastier (Chambers *et al.*, 2007; Weatherell *et al.*, 2003), more flavoursome (La Trobe, 2001) and natural (Megicks *et al.*, 2012; Winter, 2003), when compared to non-local alternatives. It is therefore proposed that local food is more frequently purchased by those consumers to whom intrinsic product quality is important. Hence:

H1a. There is a positive relationship between intrinsic product quality and past use of local food.

Local support

Research using “local support” as a model construct suggests that consumers are more motivated to buy local food because they recognise and witness the influence their support has on local suppliers, retailers and the wider community. This consequently translates into positive buying intentions and use (Hu *et al.*, 2012). Such motivations are linked to consumer ethnocentrism, with previous research finding it to be a prevalent factor behind the purchasing of local (and British) food. This is mainly because consumers perceive that not doing so *might* put native or local people out of work and damage the economy as a result (Chambers *et al.*, 2007; Steenkamp and de Jong, 2010). Furthermore, the act of belonging to a “group”, i.e. the local community, and supporting their values further strengthens this underpinning, with Shimp and Sharma (1987, p. 280) postulating that “consumer ethnocentrism gives the individual a sense of identity, feelings of belongingness, and [...] an understanding of what purchase behaviour is acceptable or unacceptable to the in-group”. This is in keeping with social identity theory in which a sense of pride is felt by being part of a community (Tajfel and Turner, 1979). This feeling continues to determine who someone is and what they become.

The importance of local support may also relate to the recent resurgence of an anti-consumption, pro-sustainability attitude, in which consumers perceive themselves as immersed in a co-optation process, and thus behave in a way that demonstrates

support for people involved in the production and selling of local food (Darby *et al.*, 2008). In their study of community-supported agriculture (CSA), Thompson and Coskuner-Balli (2007) use co-optation theory to explain how a threatened product, firm or sector can stabilise itself. In this theory, people co-operate with farms and other suppliers to provide them with increased stability despite, in many cases, being imposed with fewer practical conveniences (e.g. less choice, higher prices, only seasonal supply, etc.).

Given the aforementioned reasoning, it is therefore considered that those consumers who support their local community are also likely to purchase local food more frequently; hence, the following relationship is proposed:

H1b. There is a positive relationship between local support and past use of local food.

Moderating effects of values on the relationships between local food attributes and past use

Values are defined as “concepts or beliefs about desirable end states or behaviours that transcend specific situations, guide selection or evaluation of behaviour or events” (Schwartz and Bilsky, 1987, p. 551). Motivations are closely linked to values, in that the latter is the criteria used to select and justify behaviour (Freestone and McGoldrick, 2008). Indeed, Schwartz (1994) pointed out that values underlie actions. In the context of local food purchasing, Zepeda and Deal (2009) found shoppers to be motivated by values (as well as beliefs and the creation of norms), with these being driven by community concerns as well as health concerns.

Drawing upon this work, two specific values that have potential to explain variation in shopping behaviour in this context, particularly when used as moderators of purchase behaviour, are:

- (1) health consciousness; and
- (2) local identity.

The model proposes that behavioural choices are the product of the interplay between salient attributes of the choice object (in this case local food) and personal values (Gutman, 1982; Steenkamp and de Jong, 2010). Each value is briefly introduced before specific hypotheses are postulated.

Health consciousness

Jayanti and Burns (1998) recognised “health consciousness” to be the extent to which a person integrates health concerns into their daily activities. Health-conscious consumers are aware of, and concerned with, their personal health and the health of those around them. Consequently, they are ready to assess health-related actions in terms of their anticipated effect and are motivated to engage in healthy behaviours and prevent ill health through avoiding unhealthy practices (Gould, 1988). Steptoe *et al.* (1995) confirm that health consciousness is a key determinant of food purchase behaviour. Consumers displaying higher health consciousness tend to adopt healthier eating habits, avoid foods perceived to have a detrimental effect on health and seek products thought to enhance well-being. It is also thought to be a factor influencing attitudes towards certain products.

“Intrinsic product quality” is linked directly to the desire to acquire a positive personal outcome from food consumption. In so doing, it is closely tied to perceptions that local food is free from preservatives and chemicals, natural and wholesome – all attributes considered to deliver health benefits (Khan and Prior, 2010; La Trobe, 2001; Tregear and Ness, 2005). An inextricable link between “intrinsic product quality” and “health consciousness” is consequently implied. It is therefore proposed that the positive effect of intrinsic product quality is likely to be greater for those exhibiting higher levels of health consciousness (*intrinsic product quality* × *health consciousness* [$IPQ \times HC$]), as local food is normally associated with health and well-being, perhaps owing to its popularity amongst health food stockists and specialists (Zepeda and Leviten-Reid, 2004). Thus, it is hypothesised that:

- H2. The positive effect of intrinsic product quality on past use of local food will become stronger as health consciousness increases.

Local identity

Research in the environmental psychology literature has recognised a deep connection between locational attitudes and someone’s self-identity (Proshansky *et al.*, 1983). This concept, referred to as “place identity”, can be operationalized at different spatial levels. For instance, “local identity”, which determines an individual’s connection with a local area, is important in forging consumer decisions (Kotler and Gertner, 2002).

Furthermore, literature exploring the symbolic role of consumption finds commodities to mediate and communicate “personal, social and cultural meaning” (Jackson, 2005). It assists in constructing and maintaining an identity, with the consumption of certain foods becoming an act through which people express their personal and group identity (Birch *et al.*, 2004). Indeed, Dilley (2009) found the purchasing of local food came to signal one’s belonging to a group of like-minded individuals. Similarly, Zepeda and Deal (2009) discovered that being part of a local food community was a notable aspect of one’s [local organic shoppers] identity.

Previous research (Bonaiuto and Bonnes, 2000; Proshansky *et al.*, 1983) establishes positive relationships between local identity and an individual’s desire to support a wide range of stakeholders in their community. Of particular significance is the effect local identity has on someone’s preference to support local food producers, including farmers, manufacturers and retailers through having extended relationships and reciprocal exchanges (Broadbridge and Calderwood, 2002; Home, 2002; Miller and Kean, 1997). This follows a plethora of work in a range of fields spanning cause-related marketing, sponsorship and philanthropy, which suggests that behaviour is more likely to be positive (i.e. favourable) when a personal identification between the consumer and entity exists (Barone *et al.*, 2000; Sargeant, 1999). Given that “local support” has been identified as driving food buyers’ societal and community motives (Darby *et al.*, 2008), it is proposed that the effect on behaviour (i.e. past use) will be amplified when a person identifies more closely with the community they inhabit (*local support* × *local identity* [$LS \times LI$]). Consistent with this argument it is hypothesised that:

- H3. The positive effect of local support on past use of local food will become stronger as local identity increases.

Moderating effects of personal characteristics/situational variables on the relationships between local food attributes and past use

Three binary variables (*gender*, *age* and *location*) are proposed as additional moderators within the model. These correspond with those mentioned in earlier studies regarding local food purchasing (Megicks *et al.*, 2012; Weatherell *et al.*, 2003). In these studies, *post hoc* profiling of clusters revealed variation in those personal characteristics (*gender*, *age*) and the situational variable (*location*). However, to date, these have not been considered as potential causes of moderation. The rationale for their inclusion is now explained.

Gender

Research has explored the significant differences between men and women in the context of shopping behaviour (Fischer and Arnold, 1990; Grewal *et al.*, 2003; Memery *et al.*, 2012; Raajpoot *et al.*, 2008). Understanding how these differences manifest can be explained from several theoretical standpoints, including sociological, psychological or a mixture of both perspectives (Noble *et al.*, 2006). A sociological theory with significant relevance in this context is Self-Constraint Theory (Cross and Madson, 1997). It proposes that a person self-defines as either independent of others or interdependently *with* others. This explains much about how the person engages with the world around them. Cross and Madson (1997) argued that women construct their self as interdependent – enjoying connectedness and interpersonal affiliations with other groups sharing similar interests. They also experience a greater sense of *community*. Men, on the other hand, exhibit greater independence. They neither seek connectedness nor embed themselves within the community to the same extent as women. It follows that women are more motivated to engage with individuals, groups and organisations within the community they belong. In the context of local merchants, Noble *et al.* (2006) found support for the assertion that women display stronger loyalty to businesses closer to where they live. Similarly, women often exhibit greater desire to socialise than men, particularly in the context of shopping (Campbell, 1997), and are ultimately concerned by communal-level issues (Cross and Madson, 1997). It follows that an inclination towards supporting those present and working within the local community is akin to the interdependent self-construal concept and is likely to be a greater determinant of behaviour in women than in men. As such, it is proposed that:

H4. The positive effect of local support on past use of local food is stronger for women.

Age

Theories pertaining to aging and consumer behaviour are well established within the marketing literature (Gunter, 1998; Mason and Bearden, 1978; Moschis, 1992). Whilst gerontology has afforded some useful insight about older consumers, the most relevant theory, in this context, comes from psychology. Socioemotional Selectivity Theory (SST) addresses the impact that time has on the types of goal people pursue – particularly social goals (Carstensen, 1992). Older people, who tend to have a more limited time horizon perspective, place a greater value on the present. This establishes itself in a variety of ways, but especially in health provisioning and socialization (Drolet *et al.*, 2010). In this regard, older people value food and health products considered as

beneficial in contributing to their sustained well-being (Angell *et al.*, 2012). Although there is limited research that directly compares younger and older consumers in this regard, it is the present-orientated perspective that engenders a likely stronger motivation toward food products with properties allowing older people to remain active. Given the association that local food has with health and nutrition (Chambers *et al.*, 2007; La Trobe, 2001; Zepeda and Deal, 2009), it is therefore proposed that:

H5a. The positive effect of intrinsic product quality on past use of local food is stronger for older consumers.

Socioemotional selectivity theory also posits that older people place a higher value on social encounters of a familiar kind (Fredrickson, 1995). As part of the theory, the narrower time horizon perspective suggests that building upon relationships that have the potential to be extended is much more attractive than having a breadth of social encounters (Drolet *et al.*, 2010). Past research has shown that older people seek out relationships with people that share common characteristics – particularly with those of a similar age, e.g. shop assistants (Lumpkin, 1985). This is also likely to be true when the connection is community. What is more, older people, as a result of their more limited time horizon, tend to place a higher value on brand loyalty (Lambert-Pandraud *et al.*, 2005) and see the shopping environment as an opportunity to build personal relationships with other people, staff and companies (Angell *et al.*, 2012, 2014). As a result, it is proposed that:

H5b. The positive effect of local support on past use of local food is stronger for older consumers.

Location

An important stream of research in sociology has been the role ecological influences (e.g. urbanisation, density and transience) have on community attachment and involvement (Fischer *et al.*, 1977; Hunter, 1974; Sampson, 1988; Theodori, 2004). Kasarda and Janowitz (1974) put forward two models of community attachment. The first of these is the Linear-Development Model. The concept underlying this theory is that population size and density are direct influences on social behaviour. Greater population size and density translates into fewer opportunities for kinship and meaningful relationships. It follows that “urbanisation” results in lower social participation in local affairs and corresponds with limited affectional ties to the community (Kasarda and Janowitz, 1974). The authors put forward a second theory named the Systemic Model that proposes the length of time residing in an area is more important in determining community attachment. Sampson (1988) also found the latter to be a strong cause of local kinship, but found strong support for the proposition that increased urbanisation leads to a reduction in local friendship ties and collective attachment. In keeping with this stream of research, this study proposes that people living in rural (rather than urban) areas feel a greater sense of collective attachment, which then translates into a stronger responsibility to producers, retailers and more generally the local community. As such:

H6. The positive effect of local support on past use of local food is stronger for rural consumers.

Methodology

Survey participants

Data were collected through an online survey instrument by means of an interlocking quota sample. This was established using regional location, age and gender as criteria. Respondents were resident in England, and filtered through several questions to ensure compliance with the study's requirements, i.e. over 18 years of age; sole/joint responsibility to purchase food/drink in the household. In total 1,223 questionnaires were collected, representing a 15 per cent response rate.

Measures

In total, six scales were chosen from previous research based on a combination of their substantive suitability and prior performance (Table II). Intrinsic product quality (six items) and local support (three items) were adapted from Megicks *et al.* (2012). Health consciousness represents a nine-item scale borrowed from the research of Gould (1990). Local identity (three items) was based on the scale originally used in the study by Williams and Roggenbuck (1989). Each used a seven-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. The dependent variables ("past use" and "future intentions" to purchase) were the same as in the Megicks *et al.* (2012) study. The "past use" measure incorporated two items asking respondents how regularly, in the past three months, they had bought local food on a scale of 1 = not very often to 7 = very often. Similarly the "future intentions" measure had two items but asked respondents how likely they were to purchase locally produced food in the next fortnight (1 = not at all likely to 7 = very likely). These measures were chosen, as they cover both immediate past and intended future behaviour and hence do not require respondents to access long-term memory in giving a response. In keeping with the definition of "local food" identified above, respondents were initially provided with the objective definition (before answering scale item questions) that "local food must be grown or produced within 30 miles of where *you* live". Respondents determined themselves whether their purchases were within this 30-mile radius.

Analysis and results

Sample characteristics

Table I presents the sample composition across five variables: gender, age, socio-economic status (SES), highest education level and location type. In total, 63 per cent of the sample was female; 34 per cent were aged 55 years Plus; 44 per cent ($n = 534$) were in SES groups A-C1, with the remaining respondents in C2-E. Most people had, at the minimum, a secondary school education (11-16 years) – 39 per cent. In total, 339 (28 per cent) had a university education at either undergraduate or postgraduate level. The majority of the sample ($n = 801$; 66 per cent) comprised urban dwellers, with the remaining 34 per cent living in rural areas within England. The latter was calculated by asking respondents to self-classify themselves into one of the following categories: inner city, major town centre, suburban area (city or major town), small country/market town, rural countryside/village. Urban residents were coded from the first three categories, rural dwellers from the latter two. This was similar to the method used by Tregear and Ness (2005).

Table I.
Sample
characteristics

Variable	Frequencies	(%)
<i>Gender</i>		
Male	448	37
Female	775	63
<i>Age (years)</i>		
18-24	125	10
25-34	233	19
35-44	244	20
45-54	210	17
55+	411	34
<i>Socio-economic status</i>		
A	143	12
B	103	8
C1	288	24
C2	299	24
D	283	23
E	107	9
<i>Highest education level</i>		
Primary education	10	1
Secondary education	483	39
College education (A-Levels)	253	21
College education (HND/HNC)	138	11
University education (undergraduate)	258	21
University education (postgraduate)	81	7
<i>Location</i>		
Urban	801	66
Rural	422	34
Total	1,223	100

Measurement model

To assess the congeneric properties of the scales, each construct was incorporated into a measurement model and submitted to a confirmatory factor analysis (CFA). The robust maximum likelihood estimation procedure in Mplus 6.2 was used (Muthén and Muthén, 2010). The fit of the initial CFA model was good by conventional standards: $\chi^2 = 632.21$, $df = 260$, $p < 0.01$; comparative fit index (CFI) = 0.98; Tucker–Lewis index (TLI) = 0.98; and root mean square error of approximation (RMSEA) = 0.03 (Anderson and Gerbing, 1988; Hu and Bentler, 1999). The measurement model is presented in Table II.

The average variance extracted (AVE) approach suggested by Fornell and Larcker (1981) was used to investigate whether convergent and discriminant validity was satisfactory. The AVE method (Table II) requires that a minimum of 50 per cent of overall variance in indicator items be explained by the latent construct. Discriminant validity, via the same approach, measures whether the square root of the AVE score is higher than the correlation between that factor and other constructs in the model. The factor correlations and square-root AVE scores are shown in Table III. All constructs

Measure	Standardized factor loading	Standard errors
<i>Intrinsic product quality (AVE; CR)</i>		
<i>(1 = strongly disagree; 7 = strongly agree)</i>		
	(0.69; 0.92)	
IQ1. I buy local produce because it is free from preservatives	0.87	0.01
IQ2. I buy local produce because it is free from chemicals	0.85	0.01
IQ3. I buy local produce because it is natural	0.88	0.01
IQ4. I buy local produce because it is wholesome	0.86	0.01
IQ5. I buy local produce because it has a good appearance	0.77	0.02
IQ6. I buy local produce because it lasts longer	0.76	0.02
<i>Local support (AVE; CR)</i>		
<i>(1 = strongly disagree; 7 = strongly agree)</i>		
	(0.81; 0.91)	
LS1. Local produce supports local producers	0.90	0.01
LS2. Local produce supports local retailers	0.89	0.01
LS3. Local produce supports the local community	0.91	0.01
<i>Health consciousness (AVE; CR)</i>		
<i>(1 = strongly disagree; 7 = strongly agree)</i>		
	(0.70; 0.95)	
HC1. I reflect about my health a lot	0.82	0.01
HC2. I am very conscious about my health	0.89	0.01
HC3. I am alert to changes in my health	0.85	0.01
HC4. I am usually aware of my health	0.83	0.02
HC5. I take responsibility for the state of my health	0.82	0.02
HC6. I am aware of the state of my health as I go through the day	0.84	0.02
HC7. I am generally attentive to my inner feelings about my health	0.86	0.01
HC8. I am constantly examining my health	0.78	0.02
HC9. I am very involved with my health	0.85	0.01
<i>Local identity (AVE; CR)</i>		
<i>(1 = strongly disagree; 7 = strongly agree)</i>		
	(0.81; 0.92)	
LI1. I identify strongly with this local area	0.90	0.01
LI2. I am very attached to this local area	0.89	0.02
LI3. This local area means a lot to me	0.91	0.01
<i>Past Use (AVE; CR)</i>		
<i>(1 = not very often; 7 = very often)</i>		
	(0.85; 0.92)	
U1. How often have you bought local food/drink for use at home in the past 3 months?	0.91	0.01
U2. During the past 3 months, I have bought local food/drink for use at home	0.93	0.01
<i>Future Intentions (AVE; CR)</i>		
<i>(1 = not at all likely; 7 = very likely)</i>		
	(0.85; 0.92)	
I1. Do you intend to buy local food/drink to use at home in the next fortnight?	0.94	0.01
I2. How likely/unlikely is it that you will buy local food/drink to use at home in the next fortnight?	0.90	0.01

Table II.
Measurement model

Table III.
Factor correlation
matrix

Factor	1	2	3	4	5	6
Intrinsic product quality	1 (0.83)					
Local support	0.71	1 (0.90)				
Health consciousness	0.47	0.45	1 (0.84)			
Local identity	0.40	0.45	0.36	1 (0.90)		
Past use	0.55	0.58	0.32	0.38	1 (0.92)	
Future intentions	0.60	0.64	0.39	0.40	0.89	1

Notes: All correlations significant at the $p < 0.01$ level; square-root AVE scores are displayed in parentheses

exhibit sufficient convergent and discriminant validity. The composite reliability (CR) for each scale ranged from 0.80 to 0.95 – all above the recommended threshold suggested in the extant literature (Hair *et al.*, 2010).

Structural equation modelling

To test each hypothesis, three stages of analysis were implemented. In the first stage, the independent variables were specified as direct effects in determining *past use*. Next (Stage 2), the hypothesised latent interaction effects were integrated into the model ($IPQ \times HC$ and $LS \times LI$). To confirm that the latent interactions improved the overall fit of the model, the Satorra–Bentler chi-squared statistic was used to formally test any change in the model's explanatory power. In Stage 3 of the modelling procedure, multi-group structural equation modelling (MGSEM) was used to establish whether selected attributes differed by hypothesised (binary) personal characteristics/situational variable (i.e. gender; age; location). Each of these stages of analysis will now be elaborated.

Stage 1

First a model was specified in which each of the product attributes (*intrinsic product quality*; *local support*) was a direct antecedent of *past use*. A path was included between *past use* and *future intentions* to purchase local food – although this was not one of the focal relationships for interpretation. This is labelled as *Model 1* in Table IV. As expected, the relationship between *past use* and *future intentions* was positive and significant ($\beta = 0.90$; $p < 0.01$). Significant effects were also found between *intrinsic product quality* ($\beta = 0.33$; $p < 0.01$) and *local support* ($\beta = 0.49$; $p < 0.01$) with *past use*. This confirms *H1a* and *H1b* to be correct.

Stage 2

Following Stage 1, a model was specified to incorporate the hypothesised latent interaction effects using selected consumer *values*. It is worth noting that each of the proposed latent moderators were also included as direct antecedents to allow the models to be compared in a nested framework.

Path	Model 1	Model 2	Model 3	Motives to purchase locally-produced food
<i>Direct effects</i>				
Use → Int	0.90 (0.02)**	0.90 (0.02)**	0.90 (0.02)**	
IPQ → Use	0.33 (0.05)**	0.30 (0.05)**	0.30 (0.05)**	
LS → Use	0.49 (0.05)**	0.45 (0.05)**	0.45 (0.05)**	
HC → Use		0.02 (0.04)	0.01 (0.04)	
LI → Use		0.14 (0.04)**	0.15 (0.04)**	
<i>Two-way interactions</i>				
IPQ* HC			-0.01 (0.02)	
LS * LI			0.04 (0.02)*	
<i>Model fit</i>				
Log-likelihood	-23199.42	-42676.54	-42680.19	
AIC	46484.98	85527.08	85536.38	
Adjusted BIC	46568.09	85693.29	85706.45	
Notes: Model 1 = direct effects model with local food attributes; Model 2 = direct effects model with local food attributes and values; Model 3 = interaction effects model; unstandardized coefficients; ** $p < .01$; * $p < .05$				1221
				Table IV. Structural equation models

To test each of the hypotheses, two separate latent regression models were specified following a nested approach. This involved specifying the direct effects model as a baseline against the research model with interaction parameters. The LMS algorithm in Mplus 6.2 was used to estimate the interactions in the model (Klein and Moosbrugger, 2000). This type of estimation is referred to as a distribution-analytic approach, predominantly because it explicitly models the distribution of the latent outcome variables and their manifest indicators in the presence of latent nonlinear effects. This is different to other “product-indicator” approaches (Wen *et al.*, 2010), which model the latent interaction by specifying separate latent variables. One of the benefits of the LMS approach is that it calculates robust standard errors to correct for the non-normality that naturally occurs when specifying interactions between latent constructs. This provides more reassurance to researchers aiming to achieve results with a limited likelihood of bias.

In running this model, each of the proposed moderators (*health consciousness*; *local identity*) was included as additional direct effects to Model 1 (see Model 2 in Table IV). *Local identity* was found to have a significant influence on *past use* ($\beta = 0.14$; $p < 0.01$).

The next step was to analyse whether the research model with interaction effects (Model 3; Table IV) provided a better fit to the data than the baseline model (Model 2). Owing to the fact that overall fit statistics had yet to be established within the LMS method, the log-likelihood values for each model were compared. The Satorra–Bentler-scaled chi-square test (Satorra and Bentler, 2001) suggested that the inclusion of interaction effects in Model 3 significantly improved fit ($\Delta \chi^2_{SB}(2) = 6.18, p < 0.05$). As shown in Table IV, the inclusion of interaction effects revealed the statistically significant path for $LS \times LI$ ($\beta = 0.04$; $p < 0.05$). This confirms the acceptance of $H3$. The interaction effect between *intrinsic product quality* and *health consciousness* ($IPQ \times HC$) was not supported by the data. $H2$ was therefore rejected.

Stage 3

In the final stage of analysis, the conceptual model was further disseminated by exploring if hypothesised personal characteristics/situational variables (*gender*, *age*, *location*) played a moderating role. The results of this exercise are found in Table V. For each moderator, two steps were used. First, an overall chi-square difference test was conducted for gender, age and location. Equality constraints were imposed on all paths expected to differ as a result of the moderation. Next, this was compared with the general non-restricted model. In this framework, the null hypothesis assumes that moderator variables have no influence on paths within the model. When the change in chi-square statistic is significant, a moderating presence is confirmed. Two of the four proposed moderations were found to be significant. As such, *older* (55 years plus) and *female* shoppers purchase local food more often as a consequence of *local support* (i.e. the need to support local producers, local retailers and the local community). *H4* and *H5b* were thus supported. No support was found for *H5a* ($IPQ \times Age$) or *H6* ($LS \times Location$). Whilst rural consumers exhibited the larger coefficient in terms of the relationship between *local support* and *past use* ($\beta^{rural} = 0.56, p < 0.01$; $\beta^{urban} = 0.44, p < 0.01$), this difference was not found to be statistically significant ($\Delta\chi^2 = 0.41, 1df, p > 0.05$). Similarly, the relationship between *intrinsic product quality* and *past use* is not influenced by *age* ($\Delta\chi^2 = 0.82, 1df, p > 0.05$).

Table VI provides a summary of the outcomes from the tested hypotheses.

Discussion and implications

Local food has become a “hot topic” within the marketing and agricultural literatures in recent years. Certainly, research suggests a move towards local food being more

Paths tested	Gender		χ^2	$\Delta\chi^2$
	Male (n = 448)	Female (n = 775)		
LS → USE	0.39 (0.07)**	0.58 (0.07)**	385.74	4.11 (1df)* $\Delta\chi^2 = 4.11 (df = 1)^*$

Paths tested	Age		χ^2	$\Delta\chi^2$
	Young (< 55 years) (n = 812)	Old (55+ years) (n = 411)		
IPQ → USE	0.39 (0.06)**	0.21 (0.08)**	408.70	0.82 (1df)
LS → USE	0.40 (0.06)**	0.67 (0.09)**	405.43	4.09 (1df)* $\Delta\chi^2 = 6.86 (df = 2)^*$

Paths tested	Location		χ^2	$\Delta\chi^2$
	Urban (n = 801)	Rural (n = 422)		
LS → USE	0.44 (0.06)**	0.56 (0.08)**	378.04	0.41 (1df) $\Delta\chi^2 = 0.41 (df = 1)$

Table V. Multi-group analysis Notes: Unstandardized coefficients; ** $p < 0.01$; * $p < 0.05$

Hypothesis	Outcome
<i>H1a</i> . There is a positive relationship between intrinsic product quality and past use of local food (IPQ → Use)	Supported
<i>H1b</i> . There is a positive relationship between local support and past use of local food (LS → Use)	Supported
<i>H2</i> . The positive effect of intrinsic product quality on past use of local food will become stronger as health consciousness increases (IPQ × HC → Use)	Not supported
<i>H3</i> . The positive effect of local support on past use of local food will become stronger as local identity increases (LS × LI → Use)	Supported
<i>H4</i> . The positive effect of local support on past use of local food is stronger for women (LS × Gender → Use)	Supported
<i>H5a</i> . The positive effect of intrinsic product quality on past use of local food is stronger for older consumers (IPQ × Age → Use)	Not supported
<i>H5b</i> . The positive effect of local support on past use of local food is stronger for older consumers (LS × Age → Use)	Supported
<i>H6</i> . The positive effect of local support on past use of local food is stronger for rural consumers (LS × Location → Use)	Not supported

important than other twenty-first-century trends, such as organic and Fairtrade (Mintel, 2012). Understanding how consumers make decisions pertaining to local food therefore represents an important contribution to the shopping behaviour and, specifically, shopping motivation literature. The current study builds upon existing research within this domain. From this, a model elaborating on previous conceptualisations of motivation is presented. In so doing, the study draws upon theories from marketing, psychology and sociology to hypothesise how consumer *values* and *personal characteristics/situational variables* explain (previously) unobserved heterogeneity in the model.

Theoretical implications

Testing of the model revealed that local food attributes (*intrinsic product quality; local support*) were responsible for explaining *past use*. This is in line with previous research (Chambers *et al.*, 2007; Weatherell *et al.*, 2003). The significant effect of *intrinsic product quality* was expected, as local food is thought to be of higher quality relative to other types of produce (e.g. conventional and intensively produced foods). It can be inferred from this result that consumers *do* exercise self-interest when making purchase decisions concerning local food. This is perhaps an intuitive application of rational utilitarianism, as food is a basic human need, critical to energy supply and long-term health (Rozin, 2005). It also intimates that attaining *quality* is a property making local food attractive to consumers.

A strong positive direct effect between *local support* and *past use* was also found. This relationship actually had a larger unstandardized coefficient than the same path using *intrinsic product quality*. This suggests the significance that consumers place in supporting people operating in their local community. Indeed, the result not only enforces the findings of previous studies (Darby *et al.*, 2008; Hu *et al.*, 2012; Roininen *et al.*, 2006) but also highlights the unusual situation in which consumer behaviour is driven to a greater extent by altruism than by satisfying self-interest.

Moderation effects: values

It follows that whilst the direct effects provide support for previous research in this domain, the study's primary contribution comes from *unpicking* these relationships through looking at potential sources of heterogeneity in consumer responses/motivations. Introducing these moderating effects, through consumer *values*, offers deeper exploration of consumer motivations. This approach is in keeping with contemporary research in the context (Steenkamp and de Jong, 2010). Despite predicting two latent interaction effects between $IPQ \times HC$ and $LC \times LI$, only the latter was found to be significant. The latent interaction between IPQ and HC on *past use* was expected to amplify in situations in which the respondent exhibited higher levels of HC (Tregear and Ness, 2005; Weatherell *et al.*, 2003). However, findings from this investigation cannot support this assertion. A potentially enlightening study by Roininen *et al.* (2006) explored a range of characteristics associated with different types of food using a qualitative laddering technique. Although local produce was not associated as being "high in fat", it was also not thought to be as healthy as organic or conventionally manufactured foods. As such, highly health-conscious consumers may be directed towards alternative food products than those produced locally. This is an interesting finding in its own right, as it evidences a break away from the commonly held health conscious stereotype of the typical local food consumer.

The moderating effect of *local support* with *local identity* is equally interesting. It was predicted that higher levels of identity with a local area would amplify the effect *local support* had with *past use*. This hypothesis was accepted. At higher levels of *local identity*, the support people have for their local area consequently resulted in enhanced levels of behaviour (i.e. *past use*). This is important because it shows that encouraging people to support their local area – retailers, producers and the wider community – has the potential to drive sales *but* can be further optimised if that person *feels* more strongly connected to his or her community. This is less easily accomplished from a marketing perspective with decades of sociology research contemplating the components of community attachment (Kasarda and Janowitz, 1974). Nonetheless, it does pinpoint an area that marketers can draw upon when attempting to drive sales.

Moderation effects: personal characteristics/situational variables

In addition to analysing how *values* may moderate relationships within the model, inquiries also establish how personal characteristics (*age*; *gender*) and the situational variable, *location*, played a role in determining *past use*. Previous research has proposed that differences may influence behaviour between different *types* of consumer (Megicks *et al.*, 2012; Weatherell *et al.*, 2003). It was proposed that *gender*, *age* and *location* would all moderate the relationship between *local support* and *past use*. Female and older respondents were found to exhibit a stronger relationship between the two variables than male and younger respondents. From this, it can be concluded that Self-Constructual and Socioemotional Selectivity Theories are an appropriate lens for explaining this. Support is not found for the moderating influence of *location*. Also predicted was that the *local support* \rightarrow *past use* parameter would be stronger for rural shoppers. For this, the sociological Linear Development Model was used to underpin the hypothesis (Kasarda and Janowitz, 1974). In this theory, urbanisation is thought to dilute the need for meaningful community attachment and relationships. Sampson (1988) also found this concept to hold. However, as mentioned in the conceptual section of this paper, both studies put forward a second explanation for

attachment, which, to some degree, may explain the results of this investigation. Kasarda and Janowitz (1974) felt that community attachment could be experienced in *urbanised* areas, although, at the time, it was rare, and rural areas were more likely to exhibit community spirit. The authors suggested this *could* be the result of increasing residential transience. Urban areas have historically seen a greater turnover in community residents, hindering the opportunity to build local relationships. Nonetheless, as Johnson and Scott (1997) point out, rural communities have also been changing. They have witnessed a greater influx of (previously) urban dwellers looking for a second house or retirement home. The so-called concept of *localisation* has further narrowed the bridge between locations. These changes may explain why significant differences are not observed in the empirical model.

It was also proposed that *intrinsic product quality* would be a more important driver of *past use* for older respondents. Again, the established Socioemotional Selectivity Theory was drawn upon to explain this effect. The narrower time horizon perspective that older people experience was predicted to heighten the importance placed in the *intrinsic* aspects of local food. This concept has been explored in previous studies with older consumers (Angell *et al.*, 2012; Gunter, 1998; Mason and Bearden, 1978). However, no support was found for this hypothesis. A possible explanation for this is, once again, the narrowing in perspective between younger and older people. The assumption that older people were more likely to focus on *IPQ* is perhaps less substantiated in modern day society than it was in the past. Widespread initiatives in both the UK and the USA (and elsewhere in the world) have focused on educating people about healthy eating and living (e.g. The Children and Young People's Health Outcomes Forum; WHO Europe; and the CDC). These have tended to be geared more towards younger people with an emphasis on promoting dietary control (e.g. five portions of fruit and vegetables per day). Nonetheless, it would be necessary to continue measuring this relationship over time. It has been suggested that a re-definition of "older age" is required to take account of changes in longevity (higher average death age). It might also be that ageing in the twenty-first-century onsets later in life than the commonly employed threshold of 55 years (Moschis *et al.*, 2004).

Practitioner implications

Managerially, the findings of this research have implications for suppliers, manufacturers, retailers and marketers of local food. The research provides empirical evidence of the relative importance of both intrinsic product quality and local support in food choice. Assessing the relativity of coefficient estimates suggests that the main branding messages of those promoting local food should focus on both these *attributes*. One line of promotion would be to emphasise the importance of supporting local businesses *and* the wider community. The altruistic nature of shoppers in terms of being supportive of local farmers, food producers and the wider community can act as a platform to maximise sales of existing products and for developing new products through this intangible dimension. This is already being utilised through farmers markets, farm shops and food box schemes. For instance, there are increasing opportunities for supplier cooperatives to work closely with manufacturers and retailers in developing appropriate marketing and branding activities that focus on both the tangible food benefits and other community advantages. There is also scope for local retailers to heighten awareness of their support for local business by providing details of the sourcing of produce locally. Given the salience of higher *local identity* in further amplifying positive consumer behaviours, marketers would also be wise to create and

strengthen bonds between those living in the community. One strategy that has worked very successfully in creating local “co-optation” is the development of CSA initiatives (Thompson and Coskuner-Balli, 2007). These schemes aim to connect farmers and the community with local land. An example is “Chagfood” based in Chagford, Devon, UK, which has three acres of land devoted to producing vegetables for the local area. The community can volunteer in various roles including farming and packing boxes, receiving a weekly share of the harvest for their membership (Soil Association, 2013). It should also be remembered that both *older* and *female* consumers *might* respond more receptively to issues highlighting the importance of supporting the local community, which could be used for segmentation purposes.

Practitioners working in this market would also be wise to focus their marketing around the *intrinsic product quality* of locally produced foods, e.g. superior freshness, being wholesome and being free from chemicals. At one level, where natural produce, such as fruit, vegetables and meat, is being marketed, this is likely to be implicit; for manufactured food products, this may need to be made explicit through a coherent branding, packaging and labelling strategy. These strategies may emphasise individual benefits that are derived from local food consumption, particularly in terms of how they relate to provenance, food safety and health benefits. However, it is important that they do not focus too strongly on messages that promote outcomes which health conscious consumers might naturally seek, such as low calorie content, low-fat, etc., as this would be wasteful and potentially counterproductive in such narrowly defined markets – especially as no moderating role for this *value* was found. This research study serves to highlight that motivations to purchase local food are heterogeneous and therefore striking a balance or targeting specific markets is a challenge marketers in this area need to surmount.

Limitations and further research

This study is not without its limitations, which provide avenues for further research. The research is undertaken in a specific setting; hence, any generalizability of its findings to different contexts should be treated with caution. It does however provide the opportunity for the analysis to be replicated in other countries to ascertain whether consumers behave similarly.

The study is also limited by the fact that, whilst it includes key drivers of local food buying, it does not include any barriers in the proposed model. These clearly exist and require consideration where trade-offs are made between the positive motives for buying and factors that may inhibit purchase such as price, availability and inconvenience. Indeed, exploring other potential moderators in the model (e.g. personality characteristics, socio-demographics) would provide further clarity and represent a promising extension to the study.

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