Exploring consumers' behaviour towards short food supply chains

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Structured Abstract

Purpose - Investigating the drivers of consumers' behaviour towards purchasing in Short Food Supply Chains (SFSCs) and clarifying their relationships, the paper aims to test the Theory of Planned Behaviour (TPB) in order to predict the intention and the behavior under investigation.

Design - The research includes a literature review of SFSCs. To investigate all the variables (attitudes, subjective norms, perceived behavioural control and intention) underlying consumers' behaviour towards buying in SFSCs, an exploratory survey with a TPB questionnaire and a Principal Component Analysis have been carried out among university students in Italy. Using a system of simultaneous equations, the relationships among variables have been measured.

Findings - Findings illustrate that both attitudinal variables (i.e. sustainability, typicality and loyalty), subjective norms and perceived behavioural control play a key role in the consumers' intention, that has a predictive effect on behaviour instead of perceived behavioural control.

Value - This paper fulfils the purpose to explain and predict post-modern consumers' preferences towards SFSCs, in order to orient policy strategies to support SFSCs.

Keywords: Short Food Supply Chains, Theory of Planned Behaviour, Principal Component Analysis, Simultaneous Equations System

Article Classification: Research paper

Introduction

The global food system and the mainstream markets are nowadays considered more and more unsustainable (Reisch *et al.*, 2013; Forssell and Lankoski, 2015). Pursuing high production volumes, high standardization levels and low food prices, intensive agriculture and industrial food production exact heavy environmental costs because of massive food wastage and the

strong dependence from fossil energy (Mundler and Rumpus, 2012). Not to mention that, in recent years, food scandals and scares all over the world have resulted in a reduced consumer's confidence (Forbes *et al*., 2009) so that new sustainable food systems are currently required to replace the old schemes. In addition, with the introduction of modern food distribution systems, the direct link between farming-food and thus farmers-consumers vanished, the information asymmetry increased and consumer trust declined (Meyer *et al*., 2012). According to this, the turn to more sustainable farming methods and the creation of local and shorter food supply chains (SFSCs) arose in recent years, in order to meet the rising consumer's demand (Morris and Buller, 2003; Ilbery and Maye, 2005). Reconnecting farmers and consumers (Marsden *et al*., 2000), Short Food Supply Chains (SFSCs) can be considered as a sustainable alternative to global markets in terms of economical, social and environmental benefits (Brunori and Bartolini, 2013). In recent years, these innovative short circuits have increasingly gained foothold across Europe and consumers themselves play an important role in supporting these initiatives. Following this trend, also the new Common Agricultural Policy (CAP 2014-2020) will support SFSCs as one of the new six priorities of EU rural development as well as a thematic sub-programme to which address specific needs. According to this, studying consumers' behaviour towards purchasing in SFSCs becomes of primarily importance. To this end, this paper aims at investigating all the variables (i.e. attitudes, subjective norms and perceived behavioural control) underlying consumers' intention towards shopping in SFSCs. According to this, the Theory of Planned Behaviour (TPB; Ajzen, 1991) proposes a model which can measure how consumers' intention is guided from the above mentioned variables. Since intention is assumed to be the immediate antecedent of behaviour, we applied Ajzen's theory to better understand what drives consumers' choice to buy food in SFSCs, in order to improve further empirical studies on consumer's behaviour towards short chains. Nevertheless, the understanding of the factors facilitating the performance of the investigated behaviour can influence both policy makers' decisions and the whole society (as farmers marketing strategies and consumers conscious involvement in SFSCs). A pilot survey has been conducted to investigate attitudes, by means of a semantic differential and a Principal Component Analysis (PCA); Subjective Norms (SN), Perceived Behavioural Control (PBC), and Intention (I) have been also measured through some self-anchoring scales. Finally, a system of simultaneous equations has been performed to test TPB.

Literature review on short food supply chains

Representing traditional or alternative niches of food production, distribution and consumption, SFSCs play a key role in this emerging scenario, as opposite to the conventional markets. Widely investigated, short chains consist of direct relationships between producers and consumers, thus reducing the number of commercial intermediaries and food miles (Galli and Brunori, 2013). Producers recapture their value in the supply chain as a consequence, increasing their income (Verhaegen and Van Huylenbroeck, 2001; Belletti *et al*., 2010). Since producers and consumers can easily interact and share personal values and ethics, including the responsible management of common goods as environmental resources, short chains do not merely concern the economic nature of market exchange but they also generate the so-called consumers' social embeddedness that gratifies consumers in some way (Migliore *et al*., 2014). By this way, information asymmetry can be reduced and new solid loyalty and trust relationships can be built (D'Amico *et al*., 2014; De-Magistris *et al*., 2014). The existing sales schemes show a wide creativity of SFSCs: direct selling, box schemes, farmers' markets, pick-your-own, on-farm sales, consumer cooperatives, direct internet sales, community supported agriculture, and e-commerce. However, there are mainly three different categories (Renting *et al*., 2003): *"face- to-face"* initiatives (e.g. on-farm sales, farm shops, farmers' markets); *"spatially proximate"* initiatives, in which food is produced and retailed within the specific region of production; finally, *"spatially extended"* initiatives, where products are sold to consumers located outside the production area. Since SFSCs are nowadays widely perceived as a step toward sustainable agriculture, many authors (Roos *et al*., 2007; Cicatiello *et al*., 2012; Gava *et al*., 2014; Bimbo *et al*., 2015) extensively investigated all the related impacts: economic sustainability, environmental sustainability, social sustainability, the impact on human health (food quality and wellbeing), and the ethical impact. Strictly connected to organic and local food and traditional small-scale productions (Kneafsey *et al*., 2013), short chains embody a more endogenous, territorialized, ethical and ecological approach towards food products (Goodman, 2004). Re-socialising and re-spatialising food (Hallett, 2012), SFSCs can be an engine for territorial development (income growth and territorial value-added) both in rural and in peri-urban areas (Tregear *et al*., 2007; Aubry and Kebir, 2013; Knezevic *et al*., 2013; O'Neill, 2014), becoming expression of cultural capital and rural embeddedness (Hinrichs, 2000; Sage, 2003; Kirwan, 2004). In the post-modern society, SFSCs embody the consumer's "quality turn" reflecting recent developments in post-modern consumers, who increasingly look for food quality and traceability (Panico *et al*., 2014; Scozzafava *et al*., 2014; Verneau *et al*., 2014) but also tradition and transparency that are more guaranteed by short circuits in spite of global industrial production.

Data and methods

In the field of studies on consumer behaviour, different techniques have been proposed and gradually developed. The present study turns to social psychology and the Theory of Planned Behaviour (TPB) (Ajzen, 1991), proved to be a successful tool to predict and explain a wide variety of human behaviours as post-modern consumers' purchasing preferences and food choices (Verbeke and Vackier, 2005; Vermeir and Verbeke, 2008) [1]. According to the theory, three global variables (attitude towards the behaviour, Subjective Norms - SN, and Perceived Behavioural Control - PBC) contribute to the creation of the Intention (I), that is assumed to immediately precede a specific human behaviour. Besides this, TPB identifies behavioural beliefs, normative beliefs and control beliefs as reliable predictors of the above-mentioned variables. In addition, sometimes the perception of control over a performing behaviour can be an antecedent of the behaviour. In December 2014, we built a 7 open-ended questions TPB pilot questionnaire, defined taking into account Ajzen's conceptual and methodological considerations (Ajzen, 2006). We conducted a preliminary exploratory research through direct interviews. We asked to a sample of 100 university students to express their opinion about SFSCs, eliciting readily accessible variables about attitude, SN and PBC that, on the whole, produce the intention to behave. Afterwards, all the variables have been collected by means of a content analysis, identifying some item's categories through a deductive extraction (Weber, 1990; Losito, 2007), based both on the exact wording used in the answers and on SFSCs' literature through a logical-semantic approach. Based on this previous survey, a more complete exploratory analysis has been performed. In January 2015, data have been collected by carrying out a pilot questionnaire on a convenience sample (Ayala *et al*., 2013) of 120 university students (n = 120) (Cholette *et al*., 2013) from the Faculty of Agricultural Sciences at Università Politecnica delle Marche in Italy. Of all the students interviewed, the percentage of female and male respondents are nearly equal (Tab.1), 97 percent are Italian, whereas almost 53 percent are undergraduates. Approximately 65 percent live in urban areas, while 35 percent in rural areas where the territorial distribution of direct sales' practices is widespread. Finally, 56 percent of the interviewees admit to go personally grocery shopping, 15 percent are habitual consumers of organic food while 66 percent sometimes buy it.

Table 1. Sample descriptive statistics

The above mentioned questionnaire is divided into three parts: the first enclosing up to eight socio-demographic questions describing the sample; the second part investigating the annual frequency of SFSCs purchase; the last section measuring TPB variables and intention. According to the last section, a seven-point semantic differential with anchor points 1 = strongly agree to 7 = strongly disagree has been designed to measure all the attitudinal variables derived from the preliminary explorative analysis. In addition, some self-anchoring scales have been used, with anchor points 1=strongly agree to 7=strongly disagree, based on a set of statements on which interviewees had to express their level of agreement, in order to measure SN, PBC and I besides. In order to summarize the information obtained by both the semantic differential and the self-anchoring scales, a Principal Component Analysis (PCA) with orthogonal (Varimax) rotation has been consequently performed. According to correlations among items, PCA can easily condense consumers' responses from the original variety of items into a smaller set of principal dimensions that are called principal components (PC). Furthermore, according to their Cronbach's alpha coefficient, that measures the internal consistency of items in order to gauge their reliability, all the above mentioned TPB variables have been scrutinized. In addition, the annual frequency of purchasing in SFSCs has been estimated, representing the behaviour under investigation. Finally, a system of simultaneous equations has been implemented to measure the relationships among attitudes, SN and PBC on Intention (2), and between the latter and PBC on the behaviour (BEH) (1). More precisely, the structural scheme of the three-stage least squares regression here adopted can be viewed as a synthesis of Ajzen's TPB for modeling consumers' behaviour toward buying food in SFSCs. Endogenizing the intention (I) to buy in SFSCs and the annual purchase frequency (BEH) of the interviewees, the system consists of the following equations:

$$BEH_i = f\,(I_i, PBC_i) \quad (1)$$

$$I_i = f\,(S_i, C_i, T_i, L_i, SN_i, PBC_i) \quad (2)$$

where the endogenous variables are:

BEH_i = Behaviour represented by the annual frequency to purchase food in SFSCs of individual *i*

I_i = Intention to purchase food in SFSCs of the individual *i*

And the exogenous variables are:

S_i = General attitude towards the Sustainability of buying food in SFSCs, measured by a semantic differential (twelve items)

C_i = General attitude towards the Convenience of buying food in SFSCs, measured by a semantic differential (five items)

T_i = General attitude towards the Typicality's perceived added value of SFSCs products, measured by a semantic differential (three items)

L_i = General attitude towards the SFSCs' producers Loyalty, measured by a semantic differential (two items)

SN_i = Subjective Norms associated with the intention to purchase food in SFSCs of the individual *i*

PBC_i = Perceived Behavioural Control of the individual *i* associated with both the intention and the behaviour towards purchasing food in SFSCs

Empirical results and discussion

A total of 112 interviewees have given complete answers to the behavioural questions. According to attitudes (Tab.2), the interviewees have been asked to describe what they thought about buying in local SFSCs during their annual shopping. Afterwards, a PCA has recombined the original 34 items of the semantic differential into 7 principal components (PCs). Among these, results show that sustainability (S; $\alpha = 0,952$; 42,3% of total variance), convenience (C; $\alpha = 0,856$; 9,2% of total variance), and gratifying (G; $\alpha = 0,860$; 6,1% of total variance), having the eigenvalue greater than 1, together explain up to 58% of total variance. Nevertheless, some other important information emerge from the other extracted PCs, as food safety (FS; $\alpha = 0,868$), desirable (D; $\alpha = 0,843$), loyalty (L; P value = 0,790), and typicality (T; $\alpha = 0,709$), that are observed in the literature and could be interesting for further research on consumers' SFSCs shopping attitudes. According to sustainability (S), in our analysis this attitudinal variable is depicted by some 12 items expressing consumers' attitude towards health care (e.g. salubrious) but also the perceived importance of knowledge-transfer (pleasant; educational; aware; satisfying), and both the sensitivity towards the socio-environmental sustainability and ethics related to local development (e.g. ethical; sustainable; green; honest; local; important; necessary). The theme of sustainability is very important for SFSCs (Selfa and Qazi, 2005; Schmid *et al.*, 2014) and it is strictly related to the direct relationship between consumers and producers that is typical in SFSCs (Giampietri *et al.*, 2015), sparking the creation of a room for reflexive consumer praxis (Goodman and Dupuis, 2002). In fact, the direct contact involves the reciprocal interaction and dialogue exchange among the different actors, that can be engine of values sharing such as trust and ethics (La Barbera *et al.*, 2014). Participating in short circuits consumers also feel totally involved in local development so that it can be reasonably pleasant and suggestive for them. Thus, this is the theme of SFSCs embeddedness which is closely linked to reflexive consumerism (Starr,

2010; Sage, 2014), testifying the post-modern consumers' perceived importance of local development as well as socio-economic links. In addition, direct relationships also prevent information asymmetry on food safety by means of consumer' acquiring more information on the product and its production process, thus generating a consumers' knowledge-related satisfaction and a stimulus to SFSCs affiliation.

Table 2. Attitudes' Principal Component Analysis

Furthermore, convenience (C) is assessed with 5 items expressing both economic (cheap; convenient) and individual convenience (simple; easy; fast), that is linked to SFSCs' perceived ease and time saving. Finally, the third PC that is gratifying (G) lights up more emphasis on the pleasantness positive effect that consumers have as a result of their direct involvement in this kind of sustainable activities. This underlies both the playful function (fun; relaxing; suggestive) of purchasing in SFSCs and the stimulating sensation to repurchase (stimulating; dynamic). As a matter of fact, encouraging and supporting short circuits (i.e. direct selling or farmers' markets), consumers actively participate in traditional niche markets' value creation and in local products' valorization, attaining some personal gratification (Vermeir and Verbeke, 2006). Consumers' gratification also derives from the direct value exchange and social interactions that are strictly inherent in the participation in SFSCs (the so-called social embeddedness component) and that are involved in trust and loyalty creation among producers and consumers (Cembalo *et al.*, 2015). Moreover, SN and PBC have been measured by means of three questions each one (SN1, SN2, SN3 and PBC1, PBC2, PBC3 respectively), while four questions (I1, I2, I3, I4) refer to I (Tab.3). Some questions related to SN and PBC have been previously eliminated because they were not significant at all. PCA proves that both SN (α = 0,832) and I (α = 0,905) are represented by only one principal component, while PBC by two PCs and the first of them (PC1) (rho = 0,681) can be left out.

Table 3. SN', PBC' and I's Principal Component Analysis

Moreover, the frequency of their annual shopping in SFSCs (How often did you buy in local Short Food Supply Chains - SFSCs- last year?), among six different possibilities, has been asked to the interviewees. Table 4 shows that most of the interviewees (66,1%) buy in SFSCs more than one day in a month, while a very little part (6,3%) never does this.

Table 4. Annual SFSCs buying frequency

The system estimation results are listed in Table 5. As concerns the behaviour under investigation, significant coefficients for intention and PBC can be observed. While the second has negative influence on the consumers' annual SFSCs purchasing frequency, unlike the traditional approach of the TPB that considers PBC making a significant contribution to the behaviour's prediction, the first one is positively related to the investigated behaviour. According to this result, the existence of a direct relationship between consumers' intention (I) and behaviour (BEH) can be confirmed. With regard to the intention to buy food in local SFSCs, the most important attitudes influencing consumers are sustainability (S), convenience (C), typicality (T) and loyalty (L). They all are statistically significant predictors ($p<0.10$) of I and, among them, loyalty is the main determinant, proving to be very important for consumers (Gao *et al*., 2012). Nevertheless, convenience has a negative influence on I, indicating that consumers having a strong propensity to save money are less willing to buy in SFSCs (Wolf *et al*., 2005). Excluding convenience as a relevant factor to buy food in SFSCs, this also supports the idea that more attention should be paid on the other variables (as the above mentioned literature confirms), including consumers' gratification. With regards to this, although our regression doesn't show any significance, consumer's gratification deserves a prominent role to explain the investigated behaviour, proving both the post-modern consumer's new role as a leading actor in the market exchange and his refusing the passive role in the food system (DuPuis, 2000). In addition, according to Ajzen, SN is found to be an important element indicating that consumers' intention to buy in SFSCs is the result of the consideration of social pressure to perform or not perform that behaviour. According to our previous content analysis, the salient referents that approve or not consumers' engaging in the considered behaviour are mainly family and friends. Furthermore, PBC is found to predict the intention revealing that the individual perceived ease or difficulty in performing the behaviour can considerably affect intention's variance. These confirm that, as a general Ajzen's rule, the more favorable the attitudes and the subjective norms, the greater the PBC, the stronger is consumer's intention to buy in SFSCs. Since this pilot study represents the first application of TPB to SFSCs (without a supporting literature on the application of this theory to this topic), its principal aim is to determine the main variables affecting consumers' intention and therefore it can be considered as a starting point for further studies on consumer behaviour. After all these premises, we have to appreciate the coefficients with caution, considering the

limitations of such a starting research. However, although the analysis employs a sample of university students, our results can be considered on par with those of a more representative sample (Depositario et al., 2009).

Table 5. Influence of TPB's variables on behaviour (BEH) and intention (I)

Figure 1. Conceptual model for consumers' food purchase intention and behaviour

Conclusions

The purpose of this study is to suggest an empirical model to explain how consumers' intention to purchase food in SFSCs is influenced by some major variables, according to Ajzen's Theory of Planned Behaviour that here has been tested for the first time on SFSCs. Based on a previous explorative survey, this work presents a preliminary study that explores the main determinants of consumers' intention (I) and behaviour, i.e. attitudes, Subjective Norms (SN) and Perceived Behavioural Control (PBC). Data have been collected in January 2015, by carrying out a TPB questionnaire on a convenience sample of Italian university students (n=120). A semantic differential has been edited to measure attitudes, ensuing a PCA that condensed interviewees' responses into seven principal components. By means of some self-anchored scales also SN, PBC and I have been measured. As a result, sustainability, convenience and consumers' personal gratification are found to be the most significant elicited attitudes that predict the intention to buy in SFSCs, since they explain up to 58% of total variance. These components, assessed by multiple variables, include different aspects and relevant information orienting SFSCs' shopping attitudes of post-modern consumer. Additionally, some other components have been founded, as food safety (FS), desirability (D), loyalty (L) and typicality (T), stressing some precious, additional information. Finally, using simultaneous equations modeling, Ajzen's model has been empirically tested in order to prove the influence of all the variables on the intention and the behaviour under investigation. Such results (Fig.1) confirm that, among attitudes, consumers' sustainability concern, the typical nature of local food and the loyalty based on the direct-contact between producers and consumers have a significant predictive effect on the intention. On the contrary, convenience has a significant but negative effect on intention, proving that SFSCs contrast with consumers' propensity for money and extend post-modern consumer's time saving. In addition, SN and PBC are also considered to be significant predictors of the intention, and the norms above all. As concerns the behaviour under investigation, there are some evidences

about the predictive effect of the intention on the consumers' annual SFSCs purchasing frequency, unlike PBC. Overall, according to the theory, R is greater for intention than for behaviour. Our analysis collects some interesting results, although this is a pilot study: some of them are in line with the analyzed literature on the topic while some other show us a new importance and new pathways to study. This is the case of gratification: although this indirectly emerges from our regression as a result of the proved negative effect of convenience, its importance confirms in some way the active role of post-modern consumer in his purchasing choices and it seems to be a interesting attitude to scrutinize. In conclusion, TPB is found to be a good tool to predict consumers' intention towards purchasing in SFSCs. Since the intention under investigation can be considered an antecedent of the behaviour, such previous results can provide a better understanding of factors influencing consumers' preference for SFSCs instead of conventional markets, also engendering many relevant policy implications to the development of SFSCs marketing strategies. In Italy the agrifood sector is mainly dominated by large scale retail trade so the agrifood sector has to restore the direct contact between farmers and consumers, e.g. encouraging the spreading of farmers' markets, in order to increase the added value of agricultural production. According to new CAP's support to SFSCs, appropriate actions could be chosen to promote SFSCs, as tailoring communication and marketing strategies on the above mentioned attitudinal variables, among both consumers and farmers. The knowledge of the drivers of consumers' intention can manage to more proper and effective policy strategies, in order to meet the rising consumer´s demand for more sustainable alternative chains, to increase their interest towards SFSCs and their involvement in such alternative agri-food networks and finally to contribute to the social and economical territorial development, according to new CAP trajectories for the agri-food sector. In addition, these results can be helpful also for farmers to better target their products promotion on consumers' values, aiming for their sustainable role and production, reducing the negative information asymmetry (by means of an enhanced direct link with the consumer) and finally investing more in typical food varieties. Moreover, it looks interesting to see that food safety does not compare among the first components considered by consumers and this highlights how sometimes communication and policy strategies built on SFSCs' safety can misinterpret the reality, being a source of risk in case of scandals. Nevertheless, this work embodies an articulate approach that requires some other deep analysis of consumers' behaviour. Even though this is a starting consumer's analysis, on the basis of our initial results on the intention further study will better investigate the interaction between intention and behaviour. Moreover, we will also analyse consumers' behaviour towards SFSCs by

means of a more common Behavioural Economic approach (Toler *et al*., 2009) also surveying a more representative sample.

Notes

1. For a list of all the applications of the Theory of Planned Behaviour, please see the Author bibliographic file (http://people.umass.edu/aizen/tpbrefs.html)

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CATEGORIES	ITEMS	FREQUENCY	% FREQUENCY	STD. DEV.
Gender	female	51,9	46,4%	0,501
	male	60,1	53,6%	
Nationality	italians	108,9	97,2%	1,868
	strangers	3,1	2,8%	
Education	under-graduated	59,7	53,3%	1,895
	graduated	52,3	46,7%	
Residence	urban	73,3	65,4%	0,479
	rural	38,7	34,6%	
Household net income	<25.000€	40,2	35,9%	2,85
	25.000-50.000€	56,0	50,0%	
	50.000-75.000€	9,7	8,6%	
	>75.000€	6,1	5,4%	
N. of household members	1 unit	6,3	5,6%	1,682
	2 units	13,7	12,3%	
	3 units	16,9	15,1%	
	4 units	52,8	47,2%	
	5 units	14,8	13,2%	
	6 units	7,4	6,5%	
To go personally grocery shopping	yes	62,6	55,8%	0,949
	no	49,4	44,1%	
Buying organic	always	17,2	15,3%	0,88
	sometimes	73,7	65,8%	
	never	21,2	18,9%	

Table 1. Sample descriptive statistics

ITEMS	COMPONENTS						
	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6	PC 7
SUSTAINABILITY							
Pleasant	0,622	0,120	0,478	0,021	0,298	0,125	0,038
Salubrious	0,596	0,067	0,105	0,464	0,333	0,077	0,250
Ethical	0,817	0,080	0,114	0,218	0,125	0,048	0,114
Sustainable	0,767	0,198	0,033	0,158	0,109	-0,018	0,104
Satisfying	0,817	0,175	0,173	0,228	0,085	0,039	0,151
Green	0,756	0,195	0,029	0,366	0,103	-0,162	0,143
Educational	0,795	0,128	0,227	0,185	0,065	-0,007	0,148
Local	0,587	-0,058	0,056	-0,094	0,510	0,175	0,304
Aware	0,714	0,114	0,245	0,097	0,256	0,103	0,012
Important	0,759	0,133	0,128	0,024	0,305	0,347	0,021
Necessary	0,616	0,236	0,171	0,076	0,221	0,490	-0,091
Honest	0,627	0,178	0,285	0,336	0,090	0,210	0,211
CONVENIENCE							
Simple	0,147	0,818	0,248	0,046	0,011	0,101	-0,033
Cheap	0,170	0,803	-0,014	0,120	0,178	0,110	0,059
Easy	0,148	0,800	0,191	0,082	0,079	0,170	0,007
Fast	0,000	0,583	0,232	0,289	-0,230	0,386	0,037
Convenient	0,365	0,572	0,121	0,227	0,142	0,142	-0,029
GRATIFYING							
Fun	0,243	0,203	0,718	0,023	0,126	0,000	0,191
Stimulating	0,535	0,166	0,583	0,125	0,028	0,121	0,161
Relaxing	0,093	0,358	0,699	0,073	0,022	0,341	-0,002
Dynamic	0,446	0,160	0,569	0,164	-0,034	0,169	0,042
Suggestive	0,404	0,063	0,632	0,058	0,248	0,136	0,213
FOOD SAFETY							
Safe	0,438	0,217	0,019	0,711	0,129	0,177	-0,032
Healthy	0,230	0,280	0,145	0,727	0,024	0,182	0,077
Transparent	0,430	0,161	0,180	0,537	0,245	0,191	0,183
Qualitative	0,527	0,017	0,094	0,616	0,328	0,054	0,131
DESIRABLE							
Enjoyable	0,258	0,312	0,308	0,087	0,534	0,214	0,191
Good	0,472	0,149	0,211	0,254	0,664	0,050	0,032
Useful	0,431	0,074	0,232	0,211	0,644	0,107	-0,112
LOYALTY							
Frequent	0,042	0,360	0,125	0,116	0,124	0,788	0,139
Usual	0,132	0,298	0,220	0,314	0,148	0,744	0,096
TYPICALITY							
Traditional	-0,008	0,045	0,175	0,283	0,327	-0,046	0,644
Niche	0,167	-0,080	0,104	-0,030	-0,067	0,181	0,816
Typical	0,389	0,097	0,283	0,059	0,115	-0,018	0,668
Cronbach's α	*0,952*	*0,856*	*0,860*	*0,868*	*0,843*		*0,709*
P value						*0,790*	
% variance	*42,3*	*9,2*	*6,1*	*4,5*	*3,7*	*3,2*	*2,9*

Table 2. Attitudes' Principal Component Analysis

TPB VARIABLES	QUESTIONS	ITEMS	COMPONENT	
			PC1	PC2
Subjective Norms (SN)	(SN1) - Most people who are important to me approve that I prefer to buy in local Short Food Supply Chains (SFSCs) during the annual shopping.	total agree	0,893	
	(SN2) - Most people who are important to me think that I SHOULD buy in local Short Food Supply Chains (SFSCs) during my annual shopping.	should	0,849	
	(SN3) - Many people like that I buy in local Short Food Supply Chains (SFSCs) during the annual shopping.	likely	0,781	
		Cronbach's α	0,832	
Perceived Behavioural Control (PBC)	(PBC1) - Buying in local Short Food Supply Chains (SFSCs) during the annual shopping for me is POSSIBLE.	possible	0,891	0,080
	(PBC2) - If I wanted to, I could go grocery shopping in local Short Food Supply Chains (SFSCs).	totally true	0,823	-0,171
	(PBC3) - How much control do you believe to have over buying in local Short Food Supply Chains (SFSCs)?	no control	-0,049	0,976
		P value	0,681	
Intention (I)	(I1) - I intend to buy in local Short Food Supply Chains (SFSCs) for my annual grocery shopping.	likely	0,918	
	(I2) - I intend to buy in local Short Food Supply Chains (SFSCs) for my annual grocery shopping.	totally true	0,911	
	(I3) - I plan to buy in local Short Food Supply Chains (SFSCs) for my annual grocery shopping.	total agree	0,849	
	(I4) - I buy in local Short Food Supply Chains (SFSCs) for my annual grocery shopping.	totally true	0,849	
		Cronbach's α	0,905	

Table 3. SN', PBC' and I's Principal Component Analysis

QUESTION	ITEMS	FREQUENCY	% FREQUENCY
How often did you buy in local Short Food Supply Chains (SFSCs) last year?	every day	34	30,4%
	one time in a week	26	23,2%
	one time every 15 days	14	12,5%
	one time in a month	19	17,0%
	one time in a year	12	10,7%
	never	7	6,3%
	tot.	112	100,0%

Table 4. Annual SFSCs buying frequency

THREE-STAGE LEAST-SQUARES REGRESSION								
Equation	Obs	Parms	RMSE	"R-sq"	chi2	P		
BEHAVIOUR (BEH)	112	2	1.179499	0.4513	90.70	0.0000		
INTENTION (I)	112	6	.6781816	0.7254	298.38	0.0000		
Annual SFSCs purchasing frequency (BEH)							COEFFICIENTS	P-VALUE
Intention to buy in SFSCs (I)							1.010	0.000
Perceived behavioural control to buy in SFSCs (PBC)							-0.055	0.634
cons							0.021	0.944
Intention to buy in SFSCs (I)							COEFFICIENTS	P-VALUE
Sustainability (S)							0.161	0.044
Convenience (C)							-0.109	0.082
Typicality (T)							0.101	0.092
Loyalty (L)							0.283	0.000
Subjective Norms (SN)							0.486	0.000
Perceived Behavioural Control (PBC)							0.136	0.027
cons							-0.187	0.404

Table 5. Influence of TPB's variables on behavior (BEH) and intention (I)

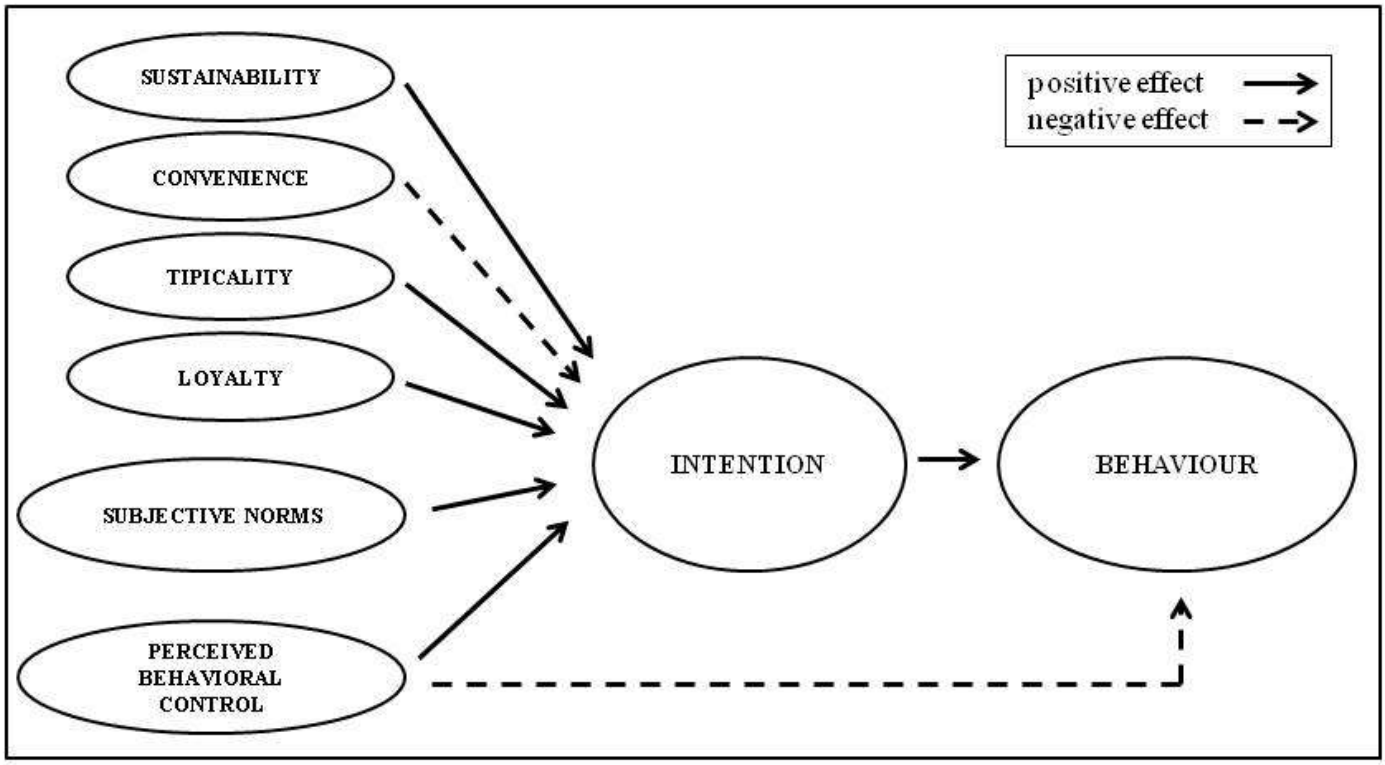

Figure 1. Conceptual model for consumers' food purchase intention and behaviour