

Organic Consumer Behavior- Special reference to cereal /cereal Products in the Southern part of Tamilnadu.

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Introduction:

Consumers' interest in organic products is increasing globally. As IFOAM 2016 report, only 1.2 % of the land has been utilized in organic agriculture method. The overall organic market has achieved 89.7 billion \$ in 2016 in that, & 48.4 a billion in sales accounted for the USA and German alone. Total registered organic producer in the worldwide is 2.7 million in that India is the leading country which has 835,200 organic producers. But many of them are a small farmer, and they had shared 1.49 million hectares only. The Government of India (GOI) and the state governments have taken several steps to improve the regulatory mechanism and frame several schemes to incentivize organic farming. 2017 December, Food Standards and Safety Authority of India (FSSAI) have recognized both the certification systems (NPOP and PGS-India) valid for organic food products. From these steps, GOI has tried to create confidence in the organic products, so that, domestic consumers and export countries can trust Indian organic products. But still, the organic sector in India suffered from some unique characteristic that is the absence of proper branding, package, consumer awareness, purchasing power, and supply chain issues (Agarwal, 2018).

Mohanty, Mandal, and Rahim (2016) organic consumer most preferred product were fruits followed by vegetable and whereas cereal was the least preferred commodity. Yiridoe, Bonti-Ankomah, and Martin (2005) found that consumers are willing to pay higher premiums for organic fruits and vegetables when compared to cereals. The present study focuses on organic cereal (various kinds including flour) consumer behavior in the Cauvery delta region of Tamil Nadu.

Global organic cereal product has been increased and it has created a lot of opportunities for Indian cereal exporter. In 2008, India had imposed a ban on exporting cereal and certain other product because of scare supply, and inflationary pressure. Now, the scenario has changed with the increased supply and global demand, the Government of India had lift ban. It extends to the organic cereal market at a certain level. India is the world's second-largest producer of Rice, wheat and other cereal products (APEDA, cereal, 2018).

The USA is our top destination place of Indian cereals products. India has tried to tap the advantages of USA organic market size. According to the final estimate for the year, 2015-16 by the ministry of agriculture of India, the production of major cereals like rice, maize, and bajra stood at 104.32 million tonnes, 21.8 million tonnes and 8.08 million tonnes respectively. India is not only the largest producer of cereal as well as the largest exporter of cereal products in the world. India's export of cereals stood at Rs. 52,064.52 crore / 8,078.85 USD Millions during the year 2017-18. The present study is carried out in the Cauvery delta region of Tamil Nadu. Tamil Nadu cereal production in last two decades very beneath to its capacity, in particularly Cauvery delta region. Organic fertilizer production in India is divided into five zones, in that South zone is leading producer. It almost contribution 40% of total organic fertilizers production in India but it does not reflect in organic cereals market (State/UT-wise Production of Organic Fertilizer in Carrier based in India, 2017, community data.gov.in). Among different states in India, Madhya Pradesh is the largest producer of cereal products followed by Maharashtra, Karnataka, Uttar Pradesh, and Rajasthan. Role of the study area (Cauvery delta region included Tamil Nadu) was not in a good position even though a larger number of farmers interested in organic agricultural. Ajzen's (1985) in his Theory of Planned Behavior (TPB) said that "Attitudes toward the behavior, subjective norms with respect to the behavior, and perceived control over the behavior are determined behavioral intentions with a high degree of accuracy. In turn, these intentions, in combination with perceived behavioral control (PBC), can account for a considerable proportion of variance in behavior". Ajzen' (1991) clearly explains in his TPB, intention to buying and PBC plays a major role in determining the variance in buyer behavior. Bagozzi, Baumgartner, and Yi (1989) found that there were direct links between attitudes and behavior, intention didn't play any role in between those, if it's any influence it might be the methodological issue.

The TPB is one of the frequently applied theoretical frameworks in consumer behavior region and it has been successfully applied organic products with its original framework and some structural modification by several authors (e.g., Arvola et al., 2008; Dean, Raats, & Shepherd., 2008; Tsakiridou, Boutsouki, Zotos, & Matta ., 2008; Thøgersen, 2002 ; Teng & Wang., 2015). The present study applies TPB (with the inclusion of WTP) in order to understand organic cereals consumer behavior in the study area.

Buying Intention

Behavioral intention is defined as “a person’s intentions to perform various behaviors” Ajzen (1991). Tarkiainen and Sundqvist (2005) said that buying intention and buying behavior of organic food has a significant positive relationship with each other and they also suggest that perceived behavior control and perceived availability of organic food had no influence on the purchase intention. Aertsens, Verbeke, Mondelaers, and Van Huylenbroeck. (2009) also confirms buying behavior and purchase intention association, but they said that they work in combination with perceived behavior control. They also said that the intention is significantly influenced by the attitudes and behavior control.

H1 buying Intention positively influence of organic cereal/cereal products buyer behavior

Attitudes

Attitude defined as "an individual's positive or negative feelings (evaluative effect) about performing the target behavior"(Fishbein & Ajzen 1975, p. 216).Tsakiridou et al. (2008); Aertsens, Mondelaers, Verbeke, Buysse, and Van Huylenbroeck (2011) reports that the majority of the respondent have a positive attitude towards organic products. Tsakiridou et al. (2008); Aertsens et al. said attitude significantly influence the social norms; Gracia and Magistris (2007) positively influence both the organic purchase intention and the final decision. Magnusson, Arvola, Hursti, Åberg, and Sjoden, (2003). Health concern is the most important factor in attitude formation. In contrast to Magnusson et al., Michaelidou and Hassan (2008); Pino, Pelusu, and Guido (2012); Smith and Paladino (2009) Health consciousness was the least important motive in organic consumer attitude.

H2 Attitudes towards buying organic cereal//cereal products will positively influence buying.

Social Norms:

Social norms defined as "the person's perception that most people who are important to him think he should or should not perform the behavior in question" (Fishbein & Ajzen 1975, p. 302). Vermeir and Verbeke (2008) claim attitude and social norms are the same and not significantly differ from one and another. Bamberg and Moser (2007) said the subjective norm does not have a direct association with intention, but rather an indirect effect by influencing attitude.

H3 Social norms will positively influence the buying intention of organic cereal//cereal products consumer.

H4 Social norms will positively influence buyer behavior of organic cereal//cereal products consumer.

Health:

Health benefit has been continuing the reported as the main motive for purchasing organic products (Lea & Worsley, 2005; Gottschalk & Leistner, 2012; Paul & Rana, 2012; Magnusson et al., 2003). But in contrast, Tarkiainen and sondquist (2005) found that there is no relationship between health concern and attitude towards organic food. Gracia and Magistris (2007) made a comparative study and report that more consumers believe organic products are healthier in over conventional products.

H5 Health consciousness will positively influence attitude toward buying organic cereal//cereal products.

Environmental consciousness

Health motive refers to benefit the individual seeks to achieve for himself/herself and his / her family while consideration of the environmental motives, it was a concern for social causes (benefit to society rather than the individual) (Magnusson et al., 2003). Environmental and health concerns are strong motives to choose organic products being reported in several studies. (Tsakiridou et al., 2008; Hamzaoui Essoussi & Zahaf, 2008; Lea & Worsley, 2005). Torjusen, Lieblein, Wandel, and Francis(2001).The contract also reported, Smith and

Paladino (2009) found that consumer who is more concern about the environment has a more positive attitude towards the organic products, but those positive attitudes were not reflected in the purchase intention; it shows environment concern has failed reflected in actual purchases.

H6 Environmental consciousness will positively influence attitude toward buying organic cereal//cereal products.

Past experience

Tsakiridou et al. (2008) said that consumer previous experience with organic products seems to positively affect the future purchase decision. Individuals past experiences with other organic products have a significant impact on purchase intention for organic personal care products (Kim & Chung., 2011).

H7 organic cereal//cereal products consumers past experience positively influence the WTP price premium of organic cereal products.

H8 organic cereal//cereal products consumers past experience positively influence the organic cereal consumer buyer behavior.

Willingness to pay price premium for Organic cereals/cereal products

Tsakiridou et al., (2008) divides the respondent into two groups and said that non-buyers are not willing to pay anything more than the standard price. Yiridoe et al. (2005) most of the respondents WTP price premium reduce when the premium magnitude increases. Yiridoe et al. reported that 10% - 20% price premium of organic products is generally accepted by most of the consumers. Pandey and Sengupta (2018) High prices, restrict organic product into affluent high-class people only.

H9 Consumer WTP of the price premium for organic products will positively influence purchase intention towards buying organic cereal//cereal products

H10 Consumer WTP of the price premium for organic products will positively influence buying behavior towards buying organic cereal/.

H11. There is no significant difference among different income group and WTP towards organic cereal /cereal products

H12. There is no significant difference among different education group and buying WTP towards organic cereal /cereal products

Research methodology

Quality of behavioral studies is very much dependent on the questionnaire ability to gathering information from the respondent. The Questionnaire consists of two parts and the first part contains 9 questions and the second part contains 32 questions for measuring behavior, attitude and intention. Most of the questionnaire items were adopted from previous studies. All of them (part 2) was design in the five-point Likert scale. For measuring attitude, five items were used, in that first two from Tsakiridou et al. (2008) third item from Tarkiainen & Sundqvist (2005) and last two items from Magnusson et al. (2003). Social norm items were adopted from Ajzen (1985).

Health-conscious and environmental behavior was measured by four and five questions respective used, these items were adapted from Magnusson et al. (2003). Previous experience and WTP contains three and four questions respectively, these items were framed on the basis of the pilot study. Buyer behavior consists of three questions on the basis of cereal buying frequency and quantity consumed (cereals, cereal floor, and quantity) ranging from rare to always.

Systematic random sampling method used for primary data collection. Every 3rd person visiting the organic shop has included in the sample (except minor persons and one who never use the organic cereals) Data had collected from the southern part of Tamil Nadu. 240 responses have collected. Only 221 responses can forward to data processing stage. Rest of responses was a detective and unusable.

Measured structural equation modeling (MSEM) is one of the prominent methods to fulfill the research requirements most of the modern researchers nowadays. In demographic, income effect on WTP price premium for organic cereals was tested through Schiff post hac test which best for unequal groups of the respondent. The present study also uses MSEM. For

executing MSEM, explorative factor analysis needed to be done, to confirm loading in particular variables, and confirmative factor analysis also execute. Discriminant validity (DV), convergent validity, and Average Variance Extracted (AVE) are tested through the master validity plugin (Master Validity Tool", AMOS Plugin, Gaskin & Lim, 2016).Five questions was removed to improve the AVE and CR and only 27 items were used in MSEM.

(No validity Concerns in the data set).

Table 1

Master Validity Table

	CR	AVE	MSV	Max	BI	ATTI	SN	BB	WTP	PE	HEALTH	ENV
1	0.943	0.807	0.026	0.949	0.898							
2	0.934	0.782	0.020	0.982	-0.128†	0.884						
3	0.914	0.731	0.024	0.993	0.156*	0.043	0.855					
4	0.939	0.837	0.032	0.992	0.139*	0.042	0.116†	0.915				
5	0.914	0.781	0.020	0.938	0.067	-0.087	-0.040	0.020	0.884			
6	0.906	0.766	0.041	1.008	0.162*	-0.140*	0.007	0.180**	0.059	0.875		
7	0.868	0.710	0.045	1.003	0.119†	-0.074	0.080	-0.003	0.141*	0.199**	0.843	
8	0.865	0.705	0.045	1.027	0.161*	-0.130†	0.012	0.075	-0.008	0.201**	0.211**	0.840

Source: Primary Data, Significance of Correlations:† $p < 0.100$ * $p < 0.050$ ** $p < 0.010$
*** $p < 0.001$

Table: 2

Measured structural equation modeling (MSEM) Results

			Estimate	S.E.	C.R.	P
H6 Attitude	<---	Environmental behavior	.149	.057	2.596	.009
H5 Attitude	<---	Health conscious	.134	.057	2.350	.019
H7 WTP	<---	Previous experience	.180	.088	2.051	.040
H1 Buying intent	<---	Attitude	.094	.050	1.884	.060
H9 Buying intent	<---	WTP	.138	.050	2.745	.006
H3 Buying intent	<---	Social norms	-.120	.058	-2.062	.039
H4 Buyer behavior	<---	Social norms	.097	.063	1.530	.126
H1 Buyer behavior	<---	Buying intent	.289	.086	3.357	***
H8Buyer behavior	<---	Previous experience	-.025	.068	-.362	.718
H10Buyer behavior	<---	WTP	-.059	.054	-1.094	.274

Figure: 1

Measured Structural Equation Modeling (Standardized Estimates)

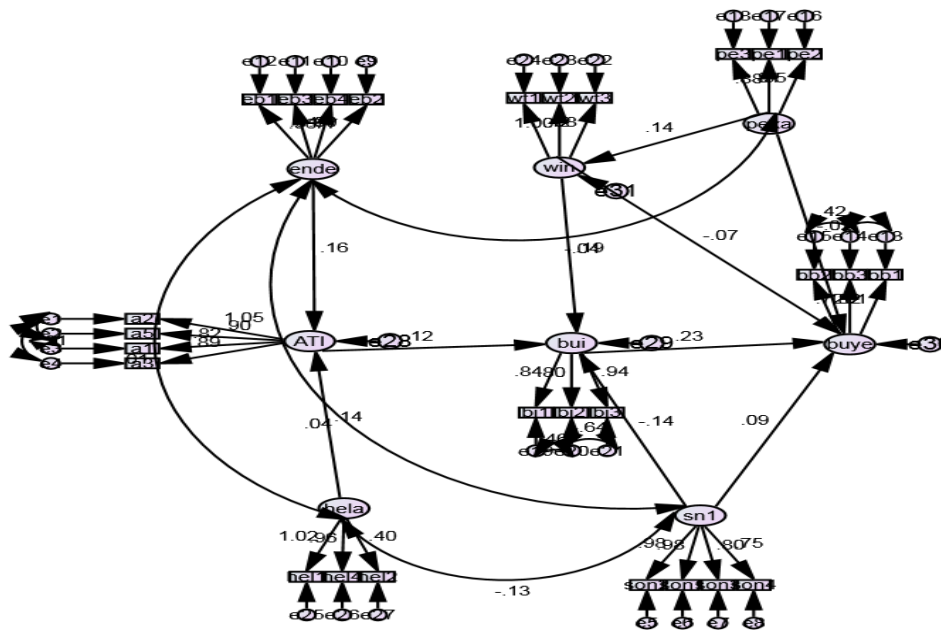


Table 3

Model fitness

Measure	Estimate	Threshold	Interpretation
CMIN	551.141	--	--
DF	303	--	--
CMIN/DF	1.819	Between 1 and 3	Excellent
CFI	0.958	>0.95	Excellent
SRMR	0.075	<0.08	Excellent
RMSEA	0.061	<0.06	Acceptable
PClose	0.014	>0.05	Acceptable

Modal fitness summary prepared by using Model Fit Measures", AMOS Plugin (by Gaskin & Lim, 2016). The present study consider five measure for model fitness and out of five, three of them Excellent fit for the analysis.

Results and interpretation:

As per our TPB based expectation, H1 and H2 were accepted. The present study suggests that attitude towards the organic cereals/cereal products significantly influence buying intent and buying intent also significantly influence buyer behavior. H1 and H2 results support previous results of Tarkiainen and Sundqvist (2005); Gracia and Magistris (2007); Aertsens et al., (2009). H3 and H4 were rejected. Social norms do not support the cereal consumer buy intention as well as buyer behavior. Indeed, the path between social norms and buying intent is negative, and it shows the buyer not getting positive supports from their surroundings.

H5 and H6 were accepted. The present study suggests that health and environmental behavior significantly influence the attitude of organic cereal consumer and these findings are inline previous studies (Lea & Worsley, 2005; Tsakiridou et al., 2008; Essoussi & Zahaf, 2009). H7 is accepted and H8 is rejected. The results suggest that past experience will positive influence the WTP price premium of organic cereal products and at the same time, it is also failed to influence buyer behavior.

H9 is accepted and H10 is rejected. As per, H9, and H10, Consumers WTP of the price premium for organic products positively influence purchase intention but failed to influence buyer behavior. The present study supports, Yin, Wu, Du, and Chen, (2010) study results which suggested the income of developing economy not supportive for the organic buyer. An analysis social demographic characters, the results reveals that education and income have a significant influence on WTP price premium of organic cereal. In this analysis, the researcher takes the education, and income of respondent as the independent variable and WTP of the organic cereal/cereal products as the dependent variable and results, the sign value .001 and .004 respectively and which are below the required $P > .05$, so H 11 and H 12 were rejected. Scheffe's Post – hoc tests multi-group comparison explains that upper- middle group respondent significantly from the other low-income group consumers and in education wise postgraduate have higher WTP compared to another group of respondents. In this analysis, the

researcher takes the education, and income of respondent as the independent variable and WTP of the organic cereal/cereal products as the dependent variable and results, the sign value .001 and .004 respectively and which are below the required $P > .05$, so H 11 and H 12 were rejected. Scheffe's Post – hoc tests multi-group comparison explains that upper-middle group respondent significantly from the other low-income group consumers and in education wise postgraduate have higher WTP compared to another group of respondents

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