

Factors Influencing Willingness to Pay Price Premium for Organic Food in India

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Abstract:

At present, Indian organic food market is at nascent stage, but the trend of organic food is accelerating. Price premium has been cited as the main barrier in the expansion of organic food market. This study aims to find out how much premium consumers are willing to pay and which factors influence willingness to pay. The study was conducted in National Capital Region and it was found that consumer characteristics like education & income; and consumer perceptions like concern for environment, perceived health benefits, culture & tradition positively influence willingness to pay. While, no relationship was found between taste, visual appearance, packaging & promotion, organic certification and willingness to pay price premium. Findings of this study will help organic food producers and suppliers to design suitable pricing and communication strategies.

Keywords: Willingness to Pay, Organic Food, Price Premium, India.

I. INTRODUCTION

Consumers' concern about the quality and safety of conventionally produced food has increased over the years and they are showing great attention towards organic food. The trend of organic food, which was initiated in developed countries of Europe and North America, is now expanding to developing countries like India and China [47]. Globally, retail sales of organic products [Food & Drink] have reached 80 billion US dollars [Organic Monitor report, 2014]. Although, North America and European countries generate ninety percent of sales, many of the organic products are grown in other regions, like Asia, Latin America, and Africa, and are exported to these countries. Forty percent of world's organic producers are in Asia and India ranks One on global platform with 6,50,000 organic food producers [54]. In 2015-16, total organic agricultural exports from India amounted 298 Million USD [4].

Export is one of the major drivers of growth of organic agricultural products, but with increase in awareness and rising disposable income, Indian consumers are becoming more and more conscious about their health and organic food is gaining widespread acceptability. In 2014, the size of domestic market was 0.36 Billion USD. In the recent years, exports reportedly grew between 25-30 percent, whilst domestic markets grew even faster at about forty percent [53].

This reflects the potential of organic food growth in coming years. But the likeliness of an individual to consume organic food is dependent on many factors such as awareness level, spending capacity and accessibility etc. Despite the favorable conditions, the domestic organic food market is extremely nascent [23]. Across the globe, a large number of studies have been conducted to examine consumers' buying behavior towards organic food. In India also, a number of studies have been conducted to gain insights about the factors affecting consumers' perceptions, attitude & intentions to buy or not to buy organic food. Most of the studies, like study by Chakrabarti [9], Paul & Rana [35], Sondhi [45] and Yadav and Pathak [55] found that there is tremendous potential for organic food in Indian domestic market but price was cited as one of the major barrier in the successful and accelerated adoption of organic food. Organic food commands higher price, which often ranges from 10 to 100 per cent more than the conventional food [33]. Although it was found that some consumers are willing to pay price premium but how much, was not determined in any study conducted in India. This study aims to find out the factors that influence consumers' willingness to pay higher price and how much higher price [premium] consumers are willing to pay, so that organic food can find place in mainstream market.

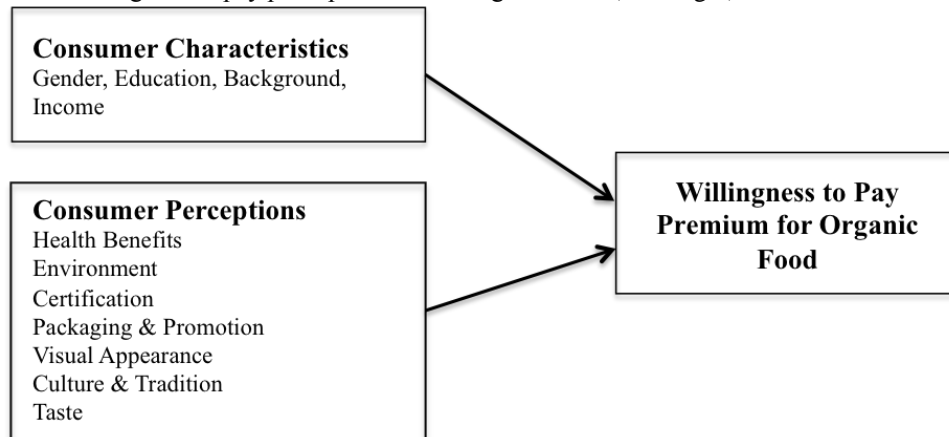
II. THEORETICAL FRAMEWORK

A. Willingness to Pay

Willingness to pay is the amount of money that an individual is willing to sacrifice to acquire a product or service. The willingness to pay function establishes the price, that an individual is willing to pay for a given level of quality at given prices, income and preferences [30]. Literature suggests that majority of consumers have positive attitude towards organic food, but few purchase it on regular basis [31]. A number of studies have cited that price premium is one of the main obstacles in the purchase of organic food [7], [49], [37], [32], [56], [42], [35]. Price premium is the additional percentage charged on organic food when compared with the price of conventional food [16]. Narayanan [33] highlighted that in India, organic food price premium ranges from 10 to 100 per cent. Some consumers are more price-sensitive and some are less. Lucas et al. [29] found that German consumers are more price-sensitive than Portugal consumers and are, on average, less willing to pay a price-premium for organic products. Consumers consider price, not

only in the context of disposable income, but also 'value for money'. They should be in a position to feel justified to pay premium through some other gains [34]. Consumer behavior can be analyzed by understanding consumer perceptions, as perceptions influence consumers in decision-making [13].

The current study focuses on Consumer Characteristics and Consumer Perceptions to identify the factors that influence consumers' willingness to pay price premium for organic food (refer fig 1).



B. Consumer Characteristics and Willingness to Pay

Consumer Characteristics refers to socio-demographic and psychographic factors (like age, gender, education, income, lifestyle, personality etc.). Customer characteristics may influence willingness to pay differentially for various product categories.

Literature suggests that organic consumers are heterogeneous in nature; some are more price-sensitive and prefer conventional products and some are less sensitive [46]. Tsakiridou et al. [50], Padel & Foster [34], Roitner-Schobesberger et al. [38], Deliana [13], found that consumers with higher education believe in the value of organic food, compared to elementary and high school graduates and are willing to pay price premium. Tsakiridou et al. [50], Padel & Foster [34], Roitner-Schobesberger et al. [38], Gracia & Magistris [18], and Shafie & Rennie [42], found that consumers with high income are willing to pay premium. Urena et al. [51] found that women have more favorable attitudes towards organic food but men are willing to pay more premium compared to women. In their study conducted in Spain, women were willing to pay 9.5% premium whereas, men were willing to pay 11.4%. Some studies had contradictory findings, like Chen et al. [10] found that female consumers in China had a higher willingness to pay for organic tomatoes compared with the males. Lockie et al. [28] found that income has very little influence over the consumption of organic food. Santhi [40] found that there exists no association between age, gender, income, education and willingness to purchase. Gil et al. [17] also pointed that consumers' socio-economic characteristics are not very relevant, infact, they found that consumers were willing to pay a higher premium for organic products in the producing region than in the consuming region [17]. Due to these contradictory findings, we aim to test the influence of consumer characteristics on willingness to pay premium for organic food.

H1: Consumer Characteristics (Gender, Education, Background & Income) positively influence willingness to pay premium for organic food products.

C. Consumer Perceptions & Willingness to pay

Consumer Perception is the assignment of meaning to stimuli received through the senses [6]. Perception is more important than reality because perceptions affect consumers' actual behavior [24]. Anderson and Narus [3] and Smith and Nagle [44] emphasized that consumers' perception of value is positively related with willingness to pay. Literature suggests that consumer perceptions of organic products vary greatly. Krystallis and Chrysohoidis [25] found that organoleptic characteristics do not constitute determinants of organic willingness to purchase. In contradiction, Gil et al. [17] found that consumers were willing to pay a premium for their organoleptic attributes. Due to these contradictory findings, we aim to test the influence of consumer perceptions [perceived health benefits, concern for environment, culture & tradition, taste, appearance, certification and promotion and packaging] on willingness to pay premium for organic food.

Studies by Kuhar and Juvancic [26], Kumar and Ali [27], Shamsollahi [43], Hughner et al. [21], Gracia & Magistris [18], Azzurra and Paola [5], Ahmad and Juhdi [2], Salleh et al. [39], found that Organic food is considered healthier and safer than conventional food, and has strongest relationship with intention to buy organic food. Paul & Rana [35] also found that, consumers think that the price of organic food is high, but they are willing to pay higher price for the healthy contents & environment friendliness. Similarly Hughner et al. [21], Pino et al. [36], Ahmad and Juhdi [2], Shamsollahi et al. [43], Kumar and Ali [27] found that concern for environment motivates consumers to buy organic food. Organic consumers view the chemicals and pesticides used in conventional food products as being environmentally harmful, and organic food is perceived as being environmentally friendly. In contradiction, Tsakiridou et al. [50] found organic food buyers are marginally more concerned about health and environment. Salleh et al. [39] also found that consumers who are increasingly concerned and realize the essentials of environmental issues do not show it in their purchase decisions. Therefore, we aim to test it with the following hypotheses:

H2: Perceived Health Benefits of organic food positively influence willingness to pay premium for organic food products.

H3: Concern for Environment positively influences willingness to pay premium for organic food products.

Consumers associate organic food with the genuineness and tastes of the past [11]. Tradition and farm income support is a powerful element for raising consumers' loyalty [21], [22]. Several studies found taste to be among the most important criterion in organic food purchase [37], [41], [5]. Magnusson et al. [32] found that Swedish consumers' most important purchase criterion for food was taste and being organic was the least important criterion. Some researchers have found that consumers are unwilling to accept the blemishes or imperfections often present in organic produce [21]. Such cosmetic defects tend to deter consumers from purchasing organic produce [48]. While Kuhar and Juvancic [26] found that consumers are often prepared to sacrifice superior visual attractiveness for organic, but wanted the taste to be better. We aim to test it with the help of following hypotheses:

H4: Culture & Tradition positively influences willingness to pay premium for organic food products.

H5: Taste positively influences willingness to pay premium for organic food products.

H6: Visual appearance of organic food positively influences willingness to pay premium for organic food products.

Essoussi and Zahaf [14] found that labeling and certification is the pre-purchase condition. Consumers are willing to pay a higher price premium for organic logo than for a generic organic label [25], [52]. But some European studies found that consumers tend to distrust certification bodies, leading them to question the genuineness of organic products [8], [28], [1]. Several studies seem to indicate that organic food has been insufficiently promoted and merchandized. Dearth of organic food promotion, and ineffective retailing strategies [merchandising and displays] negatively influence consumers [37], [12]. In a study by Hill and Lynchehaun [19] consumers claimed that packaging of organic food is subdued and preferred more "bright, modern, and colorful" packaging.

H7: Organic Certification positively influences willingness to pay premium for organic food products.

H8: Packaging and Promotion positively influences willingness to pay premium for organic food products.

III. RESEARCH METHODOLOGY

In the first step, the existing literature was studied in detail with the help of secondary data published in the form of research papers, reports and articles. This was helpful in identifying the current scenario about the organic food market and organic food consumers.

In the second step, the quantitative study was done to quantify and statistically analyze the relationships and study which factors affect consumers' willingness to pay premium for organic food and how much price premium consumers' are willingness to pay. A survey method was used to collect the primary information with the help of a structured questionnaire. The survey was targeted at organic food consumers in National Capital Region [NCR], including Delhi, Gurgaon, Faridabad & Noida. Respondents were contacted at point of purchase like weekly organic farmers' market, exclusive organic food stores and online thru organic food community pages on social media. 500 consumers were contacted for the study, however, 354 questionnaires were complete and used for analysis.

The questionnaire was divided into three sections; the first section included questions on socio-demographic factors. In the second section, some statements regarding perceived health benefits of organic food, environmental concern, promotion & packaging, certification, and taste etc. were designed on the basis of 5-point Likert scale. In the third section, questions focused on price and the extent [0%, 10%, 25%, 50% or 100%] to which consumers' are willing to pay premium.

IV. SAMPLE DESCRIPTION

Total 500 respondents participated in the survey, 354 questionnaires were completed and validated. Out of 354 respondents, 193 were males and 161 were females. 33 consumers were undergraduates, 103 graduates, 141 post-graduates and 77 professionals. 302 consumers had urban background, 47 were migrated from rural, 3 had rural background and 2 migrated from abroad. 128 respondents had monthly income more than Rs. 85000, 137 had between Rs. 42001 – Rs. 85000, 86 between Rs. 17000 – Rs. 42000.

V. DATA ANALYSIS AND RESULTS

A. Consumer Characteristics and Willingness to Pay Premium

To investigate whether Consumer Characteristics - gender [male/female]; education [undergraduates/ graduates, post graduates/professionals]; background [rural/urban] and income [high/medium/low] influence willingness to pay premium for organic food, cross tabulation and chi square statistics were performed.

Gender

Table 1, 2 show the cross – tabulation & chi-square results and indicates that there is no difference in the distribution of responses between males and females for willingness to pay price premium. The p-value 0.948 is insignificant at 10% level of significance and hence there is no association between gender and willingness to pay a premium.

Table I: Cross Tabulation [Gender & Willingness to Pay Premium]

	Gender		Total
	Male	Female	
Willing to 0%	22	18	40

pay more			
	11.4%	11.2%	11.3%
10%	69	54	123
	35.8%	33.5%	34.7%
25%	69	59	128
	35.8%	36.6%	36.2%
50%	17	18	35
	8.8%	11.2%	9.9%
>=100	16	12	28
	8.3%	7.5%	7.9%
Total	193	161	354
	100.0%	100.0%	100.0%

Table II: Chi-Square Test [Gender]

	Value	Df	Asymp. Sig. [2-sided]
Pearson Chi-Square	.724[a]	4	.948
Likelihood Ratio	.722	4	.949
Linear-by-Linear Association	.088	1	.767
N of Valid Cases	354		

a 0 cells [.0%] have expected count less than 5. The minimum expected count is 12.73.

Education

Table 3, 4 show the cross – tabulation & chi-square results and indicates that there is a difference in the distribution of responses between under graduates, graduates, post graduates and professionals for willingness to pay price premium. Specifically, the professional group is willing to pay a higher amount for organic food. Price is not a concern for 15.6 percent professionals who are willing to pay more than 100 % price premium. The p-value 0.046 is significant at 10% level of significance and hence there is association between education and willingness to pay a premium. It is also important to note that 70.9 percent of respondents are willing to pay a price premium between the range of 10 – 25 percent.

Table III: Cross Tabulation [Education & Willingness to Pay Premium]

		Education				Total
		Undergrad	Grad	Post Grad	Prof	
Willing to pay more	0%	2	19	9	10	40
		6.1%	18.4%	6.4%	13.0%	11.3%
	10%	9	37	56	21	123
		27.3%	35.9%	39.7%	27.3%	34.7%
	25%	15	32	54	27	128
		45.5%	31.1%	38.3%	35.1%	36.2%
	50%	4	10	14	7	35
		12.1%	9.7%	9.9%	9.1%	9.9%
	>=100	3	5	8	12	28
		9.1%	4.9%	5.7%	15.6%	7.9%
Total		33	103	141	77	354
		100.0%	100.0%	100.0%	100.0%	100.0%

Table IV: Chi-Square Test [Education]

	Value	Df	Asymp. Sig. [2-sided]
Pearson Chi-Square	21.329[a]	12	.046
Likelihood Ratio	20.375	12	.060
Linear-by-Linear Association	1.488	1	.222
N of Valid Cases	354		

a 3 cells [15.0%] have expected count less than 5. The minimum expected count is 2.61.

Background

Table 5, 6 show the cross – tabulation & chi-square results and indicates that there is a difference in the distribution of responses between consumers who have urban background and who have migrated from rural areas. Consumers migrated from abroad and those from rural background are very few in number and hence have been ignored. Clearly the respondents who have migrated from rural are not willing to pay more for organic food while close to 50% of Urban consumers are willing to pay 25-50% more for organic products. The p-value 0.002 is significant at 10% level of significance and hence there is a relation between Background and willingness to pay a premium.

Table V: Cross Tabulation [Background & Willingness to Pay Premium]

		Background				Total
		Urban	Migrated from rural	Rural	Migrated from abroad	
Willing to pay more	0%	28	11	1	0	40
		9.3%	23.4%	33.3%	.0%	11.3%
10%	Count	104	19	0	0	123
	% within Income	34.4%	40.4%	.0%	.0%	34.7%
25%	Count	116	11	0	1	128
	% within Income	38.4%	23.4%	.0%	50.0%	36.2%
50%	Count	31	2	2	0	35
	% within Income	10.3%	4.3%	66.7%	.0%	9.9%
>=100	Count	23	4	0	1	28
	% within Income	7.6%	8.5%	.0%	50.0%	7.9%
Total		302	47	3	2	354
		100.0%	100.0%	100.0%	100.0%	100.0%

Table VI: Chi-Square Test [Background]

	Value	Df	Asymp. Sig. [2-sided]
Pearson Chi-Square	30.922[a]	12	.002
Likelihood Ratio	25.222	12	.014
Linear-by-Linear Association	.534	1	.465
N of Valid Cases	354		

a 12 cells [60.0%] have expected count less than 5. The minimum expected count is .16.

Income

Table 7, 8 show the cross – tabulation & chi-square results and indicates that there is a difference in the distribution of responses between respondents who had monthly income more than Rs.85000, between Rs. 42001 – Rs. 85000, between Rs. 17000 – Rs. 42000 and less than 17000. The less than 17,000 income group had only 3 respondents and has been ignored due to small sample size. Close to 20% of people from lower income group are not willing to pay more for organic food. While, People from higher income group are willing to pay 25% more. The p-value [0.010] is significant at 10% level of significance and hence there is a relation between income and willingness to pay a premium.

Table VII: Cross Tabulation [Income & Willingness to Pay Premium]

			Income				Total
			Less than 17,000	17,000-42,000	42,001-85000	>85000	
Willing to pay more	0%	Count	0	15	21	4	40
		% within Income	.0%	17.4%	15.3%	3.1%	11.3%
10%	Count	2	28	41	52	123	
	% within Income	66.7%	32.6%	29.9%	40.6%	34.7%	
25%	Count	1	24	46	57	128	
	% within Income	33.3%	27.9%	33.6%	44.5%	36.2%	
50%	Count	0	12	16	7	35	
	% within Income	.0%	14.0%	11.7%	5.5%	9.9%	
>=100	Count	0	7	13	8	28	

	% within Income	.0%	8.1%	9.5%	6.3%	7.9%
Total	Count	3	86	137	128	354
	% within Income	100.0%	100.0%	100.0%	100.0%	100.0%

Table VIII: Chi-Square Tests [Income]

	Value	Df	Asymp. Sig. [2-sided]
Pearson Chi-Square	26.124[a]	12	.010
Likelihood Ratio	29.538	12	.003
Linear-by-Linear Association	.434	1	.510
N of Valid Cases	354		

a. 5 cells [25.0%] have expected count less than 5. The minimum expected count is .24.

It can be seen that there is no preference for organic food among gender, however education, background and income positively influence willingness to pay premium for Organic Food.

B. Consumer Perceptions and Willingness to Pay Premium

To investigate whether Consumer Perceptions influence willingness to pay premium for organic food, a number of statements were designed for each variable on 5 point likert scale ranging from strongly disagree, disagree, neutral, agree and strongly agree [refer Table 9]. For each variable a composite variable was created by taking the mean score. Consumers were segregated into two groups – respondents greater than 3.8 on 5 point scale were categorized as demonstrating ‘more concern’ while scores less than or equal to 3.8 were categorized as demonstrating ‘less concern’. Cross tabulation and chi square statistics were performed between two groups and willingness to pay premium.

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Perceived Health Benefits					
Organic Food is nutritious and helps to resist diseases	1	2	3	4	5
Organic Food does not contain Artificial Colors, Additives and Flavors	1	2	3	4	5
Pesticides and Fertilizers used in Conventional Food are not likely to harm the health	1	2	3	4	5
Organic Food is produced without the use of Growth Hormones	1	2	3	4	5
I buy Organic Food, as it is healthier option for me & my family	1	2	3	4	5
Concern for Environment					
Organic Farming is done in environment friendly manner	1	2	3	4	5
Organic Farming helps in reducing soil and water pollution	1	2	3	4	5
I buy Organic Food because it is environment friendly	1	2	3	4	5
Culture & Tradition					
Organic Food consumption connects with our traditions and roots	1	2	3	4	5
Organic Food helps to promote our Culture & Heritage	1	2	3	4	5
Taste					
Organic Food has Authentic Taste & Flavor	1	2	3	4	5
I buy Organic Food because it tastes better than Conventional Food	1	2	3	4	5
Visual Appearance					
I don't prefer Organic Food, if it has Spots/marks/blemishes	1	2	3	4	5
I don't prefer Organic Food, if it does not have nice shape	1	2	3	4	5
Organic Certification					
Organic Certification is not important	1	2	3	4	5
I trust Organic Certification Logos on Organic Food Packaging	1	2	3	4	5
Packaging & Promotion					
Organic Food has attractive Packaging and Labeling	1	2	3	4	5
I have complete information and awareness regarding where to buy Organic Food	1	2	3	4	5

Perceived Health Benefits

Table 10 shows that 122 respondents belonged to the category that perceives less health benefits from organic food while 232 belonged to the category that perceives high health benefits. Table 11 clearly indicates that people with high perceived health benefits are willing to pay more and in fact some are willing to pay even more than 100% while people with less perceived health benefits are willing to pay maybe just 10% higher for organic food. The p-value 0.002 [refer Table 12] is significant at 10% level of significance and hence perceived health benefits positively influence willingness to pay a premium.

Table X: Concern for health

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1.60	1	.3	.3	.3
1.80	1	.3	.3	.6
2.40	1	.3	.3	.8
2.60	5	1.4	1.4	2.3
2.80	2	.6	.6	2.8
3.00	6	1.7	1.7	4.5
3.20	5	1.4	1.4	5.9
3.40	16	4.5	4.5	10.5
3.60	43	12.1	12.1	22.6
3.80	42	11.9	11.9	34.5
4.00	48	13.6	13.6	48.0
4.20	74	20.9	20.9	68.9
4.40	39	11.0	11.0	79.9
4.60	27	7.6	7.6	87.6
4.80	22	6.2	6.2	93.8
5.00	22	6.2	6.2	100.0
Total	354	100.0	100.0	

Table XI: Cross Tabulation [Perceived Health Benefits & Willingness to Pay Premium]

			Perceived Health Benefits		Total
			less concern for health	more concern for health	
Willing to pay more	0%	Count	19	21	40
		% within conforhealthgroup	15.6%	9.1%	11.3%
	10%	Count	50	73	123
		% within conforhealthgroup	41.0%	31.5%	34.7%
	25%	Count	37	91	128
		% within conforhealthgroup	30.3%	39.2%	36.2%
	50%	Count	14	21	35
		% within conforhealthgroup	11.5%	9.1%	9.9%
	>=100	Count	2	26	28
		% within conforhealthgroup	1.6%	11.2%	7.9%
Total		Count	122	232	354
		% within conforhealthgroup	100.0%	100.0%	100.0%

Table XII: Chi-Square Tests [Perceived Health Benefits]

	Value	Df	Asymp. Sig. [2-sided]
Pearson Chi-Square	16.573[a]	4	.002
Likelihood Ratio	18.999	4	.001
Linear-by-Linear Association	11.033	1	.001
N of Valid Cases	354		

a 0 cells [.0%] have expected count less than 5. The minimum expected count is 9

Concern for Environment

Table 13 shows that a high percentage of 73.4 customers are more concerned about the environment. It can be clearly seen from Table 14 that people with high concern for environment are willing to pay more and infact are willing to pay even more than 100% while people with less concern for environment are interested in paying maybe just 10% higher for organic food. The p-value is significant at 10% level of significance that there is a relation between Concern for environment and willingness to pay a premium. Thus, we prove the hypothesis Concern for Environment positively influences willingness to pay premium for organic food.

Table XIII: Concern for Environment

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid less concern	94	26.6	26.6	26.6
more concern	260	73.4	73.4	100.0
Total	354	100.0	100.0	

Table XIV: Cross Tabulation [Concern for Environment & Willingness to Pay Premium]

	Concern for Environment		Total
	less concern	more concern	
Willing to pay 0% more	13	27	40
	13.8%	10.4%	11.3%
10%	41	82	123
	43.6%	31.5%	34.7%
25%	31	97	128
	33.0%	37.3%	36.2%
50%	4	31	35
	4.3%	11.9%	9.9%
>=100	5	23	28
	5.3%	8.8%	7.9%
Total	94	260	354
	100.0%	100.0%	100.0%

Table XV: Chi-Square Tests [Concern for Environment]

	Value	Df	Asymp. Sig. [2-sided]
Pearson Chi-Square	9.173[a]	4	.057
Likelihood Ratio	9.868	4	.043
Linear-by-Linear Association	7.011	1	.008
N of Valid Cases	354		

a 0 cells [.0%] have expected count less than 5. The minimum expected count is 7

Culture and Tradition

It can be clearly seen [refer Table 17] that there is a difference in the distribution of responses between the two groups. Almost 40% of respondents who show less interest Culture and Tradition are willing to pay 10% premium while 40% of respondents who show more interest in Culture and Tradition are willing to pay 25% more for organic food. The p-value 0.017 [refer Table 18] is highly significant at 10% level of significance and hence there is a relation between Interest in Culture and Traditions and willingness to pay a premium. Thus we can prove the hypothesis that Culture & Tradition positively influences attitude towards organic food products.

Table XVI: Culture and Tradition

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid less concern	172	48.6	48.6	48.6
more concern	182	51.4	51.4	100.0
Total	354	100.0	100.0	

Table XVII: Cross Tabulation [Culture and Tradition & Willingness to Pay Premium]

		Culture & Tradition		Total
		less concern	more concern	
Willing to pay more	0%	20	20	40
		11.6%	11.0%	11.3%
	10%	67	56	123
		39.0%	30.8%	34.7%
	25%	56	72	128
		32.6%	39.6%	36.2%
	50%	22	13	35
		12.8%	7.1%	9.9%
	>=100	7	21	28
		4.1%	11.5%	7.9%
Total		172	182	354
		100.0%	100.0%	100.0%

Table XVIII: Chi-Square Test [Culture & Tradition]

	Value	Df	Asymp. Sig. [2-sided]
Pearson Chi-Square	12.025[a]	4	.017
Likelihood Ratio	12.374	4	.015
Linear-by-Linear Association	2.782	1	.095
N of Valid Cases	354		

a 0 cells [.0%] have expected count less than 5. The minimum expected count is 13.60.

Taste

Table 20 clearly shows that there is a difference in the distribution of responses between the two groups. Interestingly people with high concern for taste are not willing to pay more for organic food while people with low concern for taste are willing to pay higher premium for organic food. This proves that taste is not a driving factor for Organic food. The p-value 0.003 is highly significant at 10% level of significance and hence there is a relation between Concern for Taste and willingness to pay a premium. Hence, we can prove that Taste influences willingness to pay premium; people with less concern for taste are willing to pay higher for organic food.

Table XIX: Taste

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid less concern	155	43.8	43.8	43.8
more concern	199	56.2	56.2	100.0
Total	354	100.0	100.0	

Table XX: Cross Tabulation [Taste & Willingness to Pay Premium]

		Taste & Flavor		Total
		less concern	more concern	
Willing to pay more	0%	8	32	40
		5.2%	16.1%	11.3%
	10%	64	59	123
		41.3%	29.6%	34.7%

25%	58	70	128
	37.4%	35.2%	36.2%
50%	17	18	35
	11.0%	9.0%	9.9%
>=100	8	20	28
	5.2%	10.1%	7.9%
Total	155	199	354
	100.0%	100.0%	100.0%

Table XXI: Chi-Square Test [Taste]

	Value	Df	Asymp. Sig. [2-sided]
Pearson Chi-Square	15.673[a]	4	.003
Likelihood Ratio	16.608	4	.002
Linear-by-Linear Association	.043	1	.836
N of Valid Cases	354		

a 0 cells [.0%] have expected count less than 5. The minimum expected count is 12.26.

Visual Appearance

Table 22 shows 68.9 % respondents were not concerned about visual appearance of organic food. Table 23 clearly indicates that there is not much difference in the distribution of responses between the two groups. Consumers with less interest and more interest in Visual appeal do not have very different responses. The p-value 0.194 [refer Table 24] is not significant at 10% level of significance and hence there is no relation between Interest in Visual Appeal and willingness to pay a premium. Thus we cannot prove the hypothesis that Visual Appeal positively influences willingness to pay premium for organic food.

Table XXII: Visual Appearance

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid less concern	244	68.9	68.9	68.9
more concern	110	31.1	31.1	100.0
Total	354	100.0	100.0	

Table XXIII: Cross Tabulation [Visual Appearance & Willingness to Pay Premium]

				Total
		less concern	more concern	
Willing to pay more	0%	22	18	40
		9.0%	16.4%	11.3%
	10%	87	36	123
		35.7%	32.7%	34.7%
	25%	91	37	128
		37.3%	33.6%	36.2%
	50%	27	8	35
		11.1%	7.3%	9.9%
	>=100	17	11	28
		7.0%	10.0%	7.9%
Total		244	110	354
		100.0%	100.0%	100.0%

Table XXIV: Chi-Square Test [Visual Appearance]

	Value	Df	Asymp. Sig. [2-sided]
Pearson Chi-Square	6.075[a]	4	.194
Likelihood Ratio	5.887	4	.208
Linear-by-Linear Association	.611	1	.434
N of Valid Cases	354		

a 0 cells [.0%] have expected count less than 5. The minimum expected count is 8.70.

Organic Certification

Table 25 shows 55 percent respondents were not concerned about organic certification. Cross tabulation results in Table 26 indicates that people with high concern in Organic Certification are willing to pay between 10-50% while people with less concern for organic certification are interested in paying less than or equal to 25% higher for organic food. The p-value 0.003 (Table 27) is significant at 10% level of significance that there is a relation between Interest in Certification and willingness to pay a premium. Thus we prove the hypothesis Organic Certification by authorized agencies influences willingness to pay premium for organic food products.

Table XXV: Organic Certification

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid less concern	197	55.6	55.6	55.6
more concern	157	44.4	44.4	100.0
Total	354	100.0	100.0	

Table XXVI: Cross Tabulation [Organic Certification & Willingness to Pay Premium]

		Certification		Total
		less concern	more concern	
Willing to pay more	0%	29	11	40
		14.7%	7.0%	11.3%
	10%	62	61	123
		31.5%	38.9%	34.7%
	25%	67	61	128
		34.0%	38.9%	36.2%
	50%	16	19	35
		8.1%	12.1%	9.9%
	>=100	23	5	28
		11.7%	3.2%	7.9%
Total		197	157	354
		100.0%	100.0%	100.0%

Table XXVII: Chi-Square Test [Organic Certification]

	Value	Df	Asymp. Sig. [2-sided]
Pearson Chi-Square	15.901[a]	4	.003
Likelihood Ratio	16.956	4	.002
Linear-by-Linear Association	.192	1	.661
N of Valid Cases	354		

a 0 cells [.0%] have expected count less than 5. The minimum expected count is 12.42.

Promotion and Packaging

Table 28 clearly shows that only 5.9 percent respondents were concerned about Promotion and Packaging. With such a small percentage of people, no clear association could be formed. The p-value 0.186 (Table 30) is not significant at 10% level of significance and hence there is no relation between Interest in Promotion and Packaging and willingness to pay a premium. Thus we cannot prove the hypothesis that Promotion & Packaging positively influences willingness to pay premium for organic food products.

Table XXVIII: Promotion and Packaging

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid less concern	333	94.1	94.1	94.1
more concern	21	5.9	5.9	100.0
Total	354	100.0	100.0	

Table XXIX: Cross Tabulation [Promotion & Packaging & Willingness to Pay Premium]

		Promotion & Packaging		Total
		less concern	more concern	
Willing to pay more	0%	37	3	40
		11.1%	14.3%	11.3%
	10%	112	11	123
		33.6%	52.4%	34.7%
	25%	124	4	128
		37.2%	19.0%	36.2%
	50%	32	3	35
		9.6%	14.3%	9.9%
	>=100	28	0	28
		8.4%	.0%	7.9%
Total		333	21	354
		100.0%	100.0%	100.0%

Table XXX: Chi-Square Test [Promotion and Packaging]

	Value	Df	Asymp. Sig. [2-sided]
Pearson Chi-Square	6.185[a]	4	.186
Likelihood Ratio	7.884	4	.096
Linear-by-Linear Association	2.451	1	.117
N of Valid Cases	354		

a 3 cells [30.0%] have expected count less than 5. The minimum expected count is 1.66.

VI. DISCUSSION

Consumer characteristics like education and income positively influence willingness to pay price premium for organic food, Professionals and Postgraduates perceive health and environment benefits of organic food and are willing to pay higher price. With increase in income, ability and willingness to spend more also increases. In this regard, our findings are in congruence with findings of Tsakiridou et al. [50], Padel & Foster [34], Roitner-Schobesberger et al. [38] and Deliana [13]. We could not find any relation between gender and willingness to pay premium, which is in contradiction with the results of Urena et al. [51] and Chen et al. [10]. Consumers who have migrated from rural areas are not willing to pay more for organic food while close to 50% of urban consumers are willing to pay premium between 25-50%. Perhaps, rural migrants are more aware of organic farming practices and consider premium over 10% as unfair.

Perceived health benefits, concern for environment, interest in culture and tradition and concern for organic certification positively influence willingness to pay. Concern for Environment had the highest percentage of consumers, followed by concern for health. This finding coincides with the findings of Paul and Rana [35], Ahmad and Juhdi [2], Shamsollahi et al. [43], Kumar and Ali [27]. 55% consumers showed less interest in certification, perhaps it could mean as a factor certification is not as important to them or they don't trust organic certification. Canavari et al. [8]; Lockie et al., [28]; Aarset et al. [1] also found that consumers distrust certifying bodies. 45% consumers who have shown interest in certification are willing to premium between 10-50%.

Taste is not a driving factor for Organic food. Interestingly people with high concern for taste are not willing to pay premium for organic food, while people with low concern are willing to pay higher. This suggests that people who are willing to pay higher for organic food are paying it because of concern for health and environment and not for taste. Most people are aware that conventional food has better taste while organic food is not tastier since it doesn't have any added preservatives. This is in contradiction with findings of Roddy et al., [37], Schifferstein and Ophuis, [41], Azzurra and Paola, [5], and Magnusson et al. [31] who found taste to be the most important factor.

Consumers showed least interest/concern for Promotion and Packaging. An overwhelming 94% of respondents said Promotion and Packaging was not a high concern for them. Visual appeal was another parameter, which did not have consumers with high concern. It suggests that people are drawn to organic food for the benefits towards health and environment. If it were only about packaging and promotion, they would have preferred foreign goods with attractive packaging. It opposes findings of Roddy et al. [37], Chrysochoidis [12] and Hill and Lynchehaun [19], who claimed that consumers prefer bright, modern and colorful packaging.

VII. MANAGERIAL IMPLICATIONS

India has considerable advantages in terms of organic farming; actions should be taken to increase domestic consumption. Findings of the present study indicate that consumers are price sensitive, highly educated professionals and belong to higher strata of urban background. As we found that a large number of respondents had high concern for environment (73%) and health (65%), approximately 40% of these consumers are willing to pay price premium of 25%.

By designing appropriate pricing and communication strategies, organic farmers and marketers can expand their market by targeting those consumers, who value and appreciate organic products. Consumers generally look for 'value for money'. They are willing to trade off something genuinely valuable with price premium. A two dimensional approach can help to achieve this objective. First, communication strategies should focus on health and environmental benefits of organic food. Willingness to pay price premium can be fostered through enhanced environmental and health awareness programs. Environmental education campaigns closely linked with daily life can help in the promotion of organic food.

Second, for appropriate pricing strategy, attempts should be made to reduce the existing gap between conventional and organic food prices. Efforts should be made to reduce marketing and distribution expenses. Producers/farmers should collaborate with other farmers and practice cooperative marketing and distribution. Producers can also sell their produce directly to the consumers through farm-gate selling or online selling, hence eliminating the intermediary expenses and margins.

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