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Is Organic Produce Costlier than Inorganic Produce? - An E-Marketing Comparison

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A B S T R A C T

Nowadays awareness in organically produced food is increasing in response to concerns about food safety and environment. Accessibility of organic produce to even remote consumers has become possible after the entry of online organic stores into retail marketing. These stores play an effective role in marketing the organic produce directly to consumer door steps thereby saving time and fuel. But still the demand for organic produce has not attained the mark where it is expected. There are several factors which affects the consumption decision of organic foods among the consumers. One such major hindrance is price. This study compares the price of organically and inorganically grown produce in online organic and conventional stores in 55 produces covering cereals, pulses, oilseeds, spices, plantation, vegetables and fruits in Coimbatore city of Tamil Nadu, India. The results indicated that price of organic produces were 63 per cent costlier than their conventional counterparts. The study has suggested for increasing the supply of organic produce by reducing the hurdles associated both in production and marketing, which in turn bring more farmers to organic farming and thereby reduce the prices of organic produce and boost up the consumer demand in the future.

Keywords

Online organic store, Consumer demand

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Introduction

Increased use of chemical fertilizers under intensive cultivation disturbed the harmony existing among soil, plant and microbial population (Ghosh, 1999). The damage caused by these fertilisers and pesticides to environment and thereby human health is irreparable. About 90 per cent of vegetables, food grains, fruits, milk, etc produced under inorganic farming system contains poisonous agro chemical residues which are harmful and unsuitable for consumption (Paroda, 2001). Under green revolution, it is a known fact that the consumption of chemical fertilizers increased seven fold, pesticides by 375 times while food production had just doubled during first 20 years of launch of green revolution in India (Palaniappan and Annadurai, 1994). In the future if the price of fossil fuel rises as they are non renewable, the cost of external chemical inputs which depend on these resources will rise further making reliance on these inputs increasingly risky.

Sustainable agriculture will be the solution to the effect caused by intensive farming to the environment. Organic farming is one such form of agriculture which enrich the soil microbial activity, improves soil fertility level and minimizes the financial and resource barriers to farming. Input costs in organic agriculture are much lower as it avoids costly external inputs like chemical fertilizers and pesticides. Lower costs reduce financial risk and avoid the need for credit and subsequent indebtness. Kavitha *et al.*, (2013) in their study on estimating the efficiency of organic farmers and Bt farmers in Tamil Nadu, India found out that no significant difference in yield between two farming situations was observed. It was also found that the cost of cultivation of organic farmers were lower than the Bt farmers by 4 per cent due to less expenses on seeds, manures, natural plant protectors and irrigation. The study indicated that higher profitability was the important feature of organic cotton farming.

Thus Ministry of Agriculture, Government of India is promoting organic farming in the country under National Project on Organic Farming, National Horticulture Mission, Technology Mission for North East and Rashtriya Krishi Vikas Yojana. National project on organic farming is implemented through National Centre of Organic Farming, Ghaziabad with six Regional Centres located at Bangalore, Bhubaneswar, Hissar, Imphal, Jabalpur, and Nagpur. The project supports organic input produc

tion infrastructure, technical capacity building of stake holders, human resource development through training, statutory quality control of organic inputs, technology development and dissemination, market development and awareness. Assistance is also provided for setting up vermi-compost units at the rate of 50 per cent of cost up to Rs. 30,000 per beneficiary. Assistance of Rs. 5 lakh is provided to a group of farmers covering an area of 50 hectares for organic farming certification. Under the Rashtriya Krishi Vikas Yojana, states are being assisted for area expansion of organic food crops, capacity building of farmers and organic input production. In spite of all these initiatives by the Government, the penetration of organic farming is very weak among Indian farmers. On the consumption side, organic food intake is still low in proportion, compared to non-organic food (Gupta and Ogden, 2009).

There are several factors which affect the purchase decision of organic food among the consumers. Bhaskaran and Hardley (2002) found out that consumers in the age group of more than 55 years tend to make preventive health decisions, because of higher health vulnerability than younger individuals. Education is an important factor of purchase motive of organic food. Consumers with higher education are more likely to buy organic food products. Gender plays an important role in the purchase decision of organic products. Women buy organic food more frequently and in larger quantity than men (Arvanitoyannis and Krystallis, 2004). Shanmuga Priya (2014) conducted a study at Coimbatore city of Tamil Nadu, India and reported that age, education, health, income, price, distance and availability were important factors in consumer preference of organic vegetables. The study also indicated that price was the major constraint faced by the consumers in making purchase decisions of organic vegetables followed by limited or inadequate supply, lack of information and inadequate organic outlets. Chandrashekar (2014), conducted a study at Mysore city of Karnataka, India and analyse the consumers perception towards organic products and the results revealed that the irregular availability of organic products was indicated as major constraint by majority of organic consumers and they view that the organic products were too expensive and were not properly certified from any organic certified agency or authority.

The review of various studies over the period has shown that most of the consumers were of the view that organic produce were more expensive and unaffordable for lower and middle income groups. Thus price of organic produce acts as a hindrance in the promotion of organic farming. Hence it necessitates a study on price comparison between organic and inorganic produce in the retail stores. In addition to stores and super markets, a variety of retail channels has emerged now. Currently online marketing is developing at a faster rate in India. The number of internet users in India is expected to reach half a billion before 2020 and 1044 billion households are expected to purchase food grocery online. At present 144 million households buy more than 5000 worth of food and groceries per month. The size of retail business in India is close to about 500 billion dollars out of which 70 % is food and grocery (HariMenon, 2016). This study aims at comparing the price of online organic and conventional grocery stores operated in Coimbatore city of Tamil Nadu.

Materials and Methods

The study was conducted in Coimbatore, the second largest city of Tamil Nadu and one among the proposed Smart cities of India. The city was selected because of the growing concern of online marketing in this district. In order to study the price comparison between organic and conventional stores, 55 produces covering cereals, pulses, oilseeds, spices, condiments, vegetables and fruits in 10 online grocery stores operated in the city was selected (Table 1).

Considering the uncertainty in price of various produces, the online price data for all the selected stores was collected on the same day during June 2017. It was observed that in most of the stores, both organic and conventional produces were available in many brand names. Hence the average price of existing brands in the selected produce was taken for analysis. Out of the online stores selected, only Big basket is engaged in both organic and conventional produce online marketing. Each of these stores announced different freebies in attracting consumers to online marketing. For example Gunam online grocery store has announced nil delivery charges for the orders above Rs.300 whereas for ISH it was above Rs. 150. Stores like ISH and B and B has announced family packages on weekly and monthly basis. While Big basket refund 10 %, if the delivery is on late.

Results and Discussion

The price difference exists between organic and conventional produce is given in Table 2. Among the pulses listed, the average difference in price was Rs 69/ kg. The difference in price was maximum for Uraddall (Rs 157.56/Kg) and Toordall (Rs114.44 /Kg) and least for Horse gram (Rs 20.95 /Kg) and Chenna brown (Rs 38.72 /kg). In case of cereals, the average difference was Rs. 23.35/Kg. The price difference was maximum for Sorghum (Rs 56.80 /Kg) and Banyard Millet (Rs.59.28/Kg). It was lesser in case of Kodo Millet (Rs. 12.13/Kg) and Rice (Rs 14.61/Kg). Whereas for Proso Millet, the price difference was negative. Among the edible oil group, the maximum difference was seen in Sunflower oil (Rs 240.19/lit), followed by Coconut oil (Rs 166.79/ lit) and it was least for Gingelly oil (Rs 138.83/lit).

The average price difference between organic and inorganic edible oil was Rs 175/ lit. In the spices group, pepper was noticed with a high price difference of Rs 418.04/Kg and Red Chilli with Rs 295.10/kg. The minimum difference was seen in Tamarind with Rs 101.55 /Kg. Among the plantation, Cardamom attracts a huge price difference of Rs 1416.20 / Kg and of all the produces listed in the table, Spices attracts more difference in price (Rs 1288/Kg).

Table.1 Conventional and organic grocery stores in Coimbatore district

S.No	Conventional Stores	Organic Stores
1	Big Basket	Big basket
2	Grocery Raja	Dhanyam
3	E-Kadai	Indian Super Heroes
4	Shop Me All	Gunam
5	Nellai Stores	B and B

Table.2 Price comparison between organic and inorganic produce

Particulars	Organic	Conventional	Price	Percentage
Pulses				
Toordall	210.44	96.00	114.44	119.21
Urad	271.56	114.00	157.56	138.21
Moong	174.25	115.00	59.26	51.53
Green gram	155.25	97.71	57.54	58.89
Fried gram	215.00	133.45	81.55	61.11
Kallaparuppu	191.80	112.62	79.18	70.30
Chenna white	215.33	161.34	53.99	33.47
Chenna brown	154.00	115.28	38.72	33.59
Raw pea nut	183.00	134.73	48.27	35.82
Green peas	139.00	80.55	58.45	72.56
Horse gram	120.00	99.05	20.95	21.15
Cow pea	172.50	114.34	58.16	50.87
Average	**183.51**	**114.51**	**69.01**	**62.23**
Cereals				
Rice	72.25	57.64	14.61	25.36
Idli rice	74.33	49.53	24.81	50.08
Wheat	63.50	38.76	24.74	63.83
Banyard millet	166.67	107.39	59.28	55.20
Fox tail	116.67	88.14	28.52	32.36
Finger Millet	80.83	47.58	33.26	69.90
Sorghum	107.00	50.20	56.80	113.13
Kodo Millet	118.80	106.67	12.13	11.38
Little Millet	130.00	112.98	17.02	15.06
Proso Millet	119.50	170.00	-50.50	-29.71
Pearl Millet	87.20	51.00	36.20	70.97
Average	**103.34**	**79.99**	**23.35**	**43.41**
Edible Oil				
Groundnut oil	303.57	148.86	154.71	103.93
Sunflower	340.00	99.81	240.19	240.65

Coconut	363.50	196.71	166.79	84.79
Gingelly oil	320.00	181.18	138.83	76.62
Average	**331.77**	**156.64**	**175.13**	**126.50**
Spices				
Coriander	352.00	158.14	193.86	122.58
Jeera	501.43	296.80	204.63	68.94
Pepper	1307.50	889.46	418.04	47.00
Mustard	250.00	91.56	158.44	173.04
Fenugreek	293.63	110.68	182.95	165.29
Tamarind	237.56	136.01	101.55	74.66
Red chilli	436.00	140.90	295.10	209.45
Average	**482.59**	**260.51**	**222.08**	**122.96**
Plantation				
Cardamom	3225.00	1808.80	1416.20	78.30
Cashew	1540.00	1104.83	435.17	39.39
Average	**3245.07**	**1956.59**	**1288.48**	**108.74**
Sugar				
Sugar	120.17	47.63	72.54	152.30
Brown sugar	113.40	65.56	47.84	72.97
Average	**116.78**	**56.59**	**60.19**	**112.64**
Fruits				
Apple	170.00	-5.71	-10.29	-5.70
Pome	157.25	110.00	47.25	42.95
Mango	119.00	127.50	-8.50	-6.67
Papaya	44.00	26.45	17.55	66.35
Banana	72.50	73.40	-0.90	-1.23
Sapota	89.50	58.00	31.50	54.31
Average	**108.71**	**95.94**	**12.77**	**25.00**
Vegetables				
Onion	31.67	20.17	11.50	57.02
Small onion	130.00	115.33	14.67	12.72
Potato	44.50	35.50	9.00	25.35
Bitter gourd	70.00	43.50	26.50	60.92
Tomato country	56.00	54.00	2.00	3.70
Tomato hybrid	53.00	44.67	8.33	18.66
Carrot	72.00	84.33	-12.33	-14.62
Lady's finger	66.80	57.67	9.13	15.84
Brinjal	79.60	66.33	13.27	20.00
Beet root	60.00	42.67	17.33	40.63
Bottle gourd	40.00	19.50	20.50	105.13
Average	**63.96**	**53.06**	**10.90**	**31.39**
Over all Average				**62.36**

The average difference in price of Sugar was Rs 60.19/ Kg and for Fruits and Vegetables it was Rs 12.77 /Kg and Rs 10.90 / Kg respectively. In the fruits group, the difference was maximum for Pomegranate with Rs 47.25 /Kg and least for Papaya Rs 17.55 /Kg. For fruits like Apple, Mango and Banana, organic fruit price was comparatively cheaper than inorganic fruits might be due to varietal difference. In case of vegetables, the maximum price difference was seen in Bittergourd (Rs 26.50/ Kg) and meager for Country Tomato (Rs 2 /Kg). For Carrot, the price difference was negative (Rs -12.33 /Kg).

On an average organic produces were 62.36 per cent costlier than inorganic produce. In some food groups, the organic produces were actually cheaper by as much as 29 per cent for Proso Millet, 5 per cent for Apple, 1 per cent for Banana and 14 per cent for Carrot.

In conclusion, the study indicates that out of the 55 produces selected in the 10 online grocery stores of Coimbatore city, with the exception of five, in general all the organic produce were costlier than inorganic produce. Reduced supply due to high certification costs involved in organic farming, inadequate transport infrastructure and lack of cold storage facilities, brings up the cost of organic produce. Though majority of the consumers aware about the wellness of the organic produce, this increased price level of organic produce acts as a hindrance in the consumption.

It is a general opinion among inorganic farmers that production ability of organic farming is lesser when compared to their conventional counterpart. This should be rectified by arranging a regular face to face meeting with successful organic farmers, imparting training in organic production methods and arranging more field visit to organic farms and successful farmer producer organisations. This will slowly changes the perception of farmers towards organic farming. Hence bringing more farmers towards organic farming through creating awareness will raise the production and bring down the price of organic produce.

Online marketing is one of the best retail marketing channel which avoids so many intermediaries between producer and consumer. Hence government should encourage those who starts organic outlets atleast for the initial period. Secondly, in the GST, all branded and packaged food produces incur tax. But in practice to differentiate their quality, most of the organic produce were branded and labeled with certification given by the certification agency. By giving tax exemption to branded organic produce, the price level of it will come down as such as to branded inorganic produce. Thus by these practices, producer is assured of a ready market, retailer encouraged in organic trading and consumer benefitted by reduced price and healthier way of life.

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