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Consumer's attitude towards organic food products: analysis on organic food consumers

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Abstract

Organic food consumers have come to distrust conventional products and have taken a greater interest in food safety and changing their buying habits related to organic food products. (David L. Ortega and David L. Tschirley, 2017). FSSAI (Food Safety, and Standards Authority of India) driven organic package food sector has grown very fast in the last decade in India; the land devoted to organic production methods has increased by 150 times. The manufacturers of organic packaged food products and Indian organic food retailers are getting ready for a big wave in organic food consumption (D. Anthony Miles, 2017). The efforts from the ministry of agriculture and human welfare department to boost Organic food production must be accompanied by the development of a national action plan to increase productivity in India. (FSSAI, annual report 2017-18). The current research is an exploratory study to examine the Indian consumer's attitude towards organic food products. The research survey is carried out through telephone interviews across different cities in India among organic food consumers, the response from consumers concludes that there is a higher level of price premium perception regarding organic food products and Indian consumer perceive that only vegetables and fruits are organically processed and remaining all consumable food items have less significance in the organic food market.

Keywords: *Organic products, food quality, consumer behavior, action plan, Agricultural initiatives, and marketing*

1. Introduction :

The organic packaged food products market is growing at a fast rate. A joint study by ASSOCHAM-EY (Association of Chambers and Earnest & Young, March 26, 2018) reveals that the market size for Indian organic packaged food is expected to cross INR 871 million by 2021 from INR 533 million in 2016, growing at a rate of 17%. The substantial growth of this organic food sector is attributed to an expanding urban population base, rising health concerns, growing consumer spending on organic food products and deterioration of food quality (Hikaru Hanawa Peterson and Xianghong Li, 2017). There is no other agricultural and livestock product group that has registered this growth rate in the year 2017.

Indian tropical climate offers favorable conditions for the development of organic farming, which successfully combines environment-friendly, economic and social wellbeing. (David L. Ortega and David L. Tschirley, 2017). India is the fourth country in the world after the United States, China, and Great Britain, regarding organic production, having experienced significant growth in the last decade (Charles S. Tapierot, 2017); However, the consumption level in India is still low, and around 85-90% of the production is destined to exports (Brandon H. Lee, 2018) consequently, domestic demand has to be fulfilled.

The growing interest in organic food products corresponds to different types of behavior. The food scares in the year 2016 on Nestle Maggi noodles (Erika Fry-Fortune, April 26, 2016) lead to a higher level of anxiety about the quality of food consumption that the current generation is going through, because of under-regulated operations by

FSSAI (Food, Safety, and Standards Authority of India). These events have driven the consumers to search for a safer food product, where quality is guaranteed (Charles S. Tapierot, 2017) and organic products are categorized within this section. With the progress in society, there is a shift in the values. The priority has moved from materialistic value growth to a 'non-materialistic' trend. This tendency is an "attitude" of consumer that count on higher levels of income and spend a higher share of their wallet on healthier food products (D. Anthony Miles, 2017).

2. Literature Review

The land dedicated to organic production in India reached 665,055 hectares in the year 2017, which indicates a notable increase since 2016, only 485,079 hectares where registered. (FSSAI, annual report 2017-18). This means an increase of 37% of the organic land in one year.

The industrial activity, related to organic farming is firmly established, with more than 1,200 FSSAI approved auditors and processing quality assurance agencies are being operational in India performing audits across organic food processing companies. Regarding the problems that this organic packaged food sector in India faces, FSSAI has classified them in two sections: problems at the first stages (production level) and problems at the second stage (marketing and distribution levels).

With respect to the problems at the production level, one of the impediments in the growth of this sector is the small size of the agricultural plots. The organic farming community does not deal with the big supply of organic seeds required for their farming and this fact makes the Indian organic market a weak one. The plots and the production are fragmented over India, and therefore the rural village panchayat associations in this sector would be fundamental to develop the industry and to improve the commercialization of organic food products. (Darshan Punia, & N. Khetarpaul, 2018).

There are a few challenges in commercialization, one is the lack of a defined distribution channel for organic products. The major market of the organic product is from specialized stores like 24 Mantras; an organic shop, and less from large supermarkets or hypermarkets. Another relevant issue is that these products are not always available, although this situation is gradually improving due to increasing demand (Park T. A and L. Lohr, 2018). The absence of stringent regulatory policies and effective market regulation in organic food processing presents a greater problem at commercialization level, as consumers are confused and lack of information on the attributes and benefits of the organic food products (Park T. A and L. Lohr, 2018). To promote this organic packaged food sector, the Indian ministry of agriculture and farming, Food Safety, and Standards Authority of India (FSSAI) has published a strategic plan (FSSAI, annual report 2017-18) as part of National Program for Organic products (NPOP).

The objective of the action plan from the ministry of agriculture and farming (FSSAI 2016-17 Annual report) is to reach a balanced development of the organic packaged food sector through the promotion of the organic production and supply of organically processed food products, as well as the evolution of the organic food consumption. The Indian market is not yet sufficiently mature, and this type of initiative will surely boost the organic food consumer market.

3. Organic Food Consumer Analysis

3.1 Research Methodology

To have a general understanding of the consumers' attitude, the habits and the knowledge of the Indians for organic products, A pilot study with 56 consumer visiting 24-mantra stores in December third week of 2017 was done in Bengaluru to assess the attitude relevant questions and feedback from retailers were considered like "More" Hypermarket (Aditya Birla group) and D-Mart stores owned by Radhakishan Damani in India. A survey Questionnaire of 28 questions was used to conduct a telephonic interview for a total of 512 consumers visiting 24 Mantra Organic food retailers across different cities in India.

Cronbach's alpha score in SPSS (Statistical package for social science) is used to measure the internal consistency of the Questionnaire, to find out how closely related a set of questions in the survey. Cronbach's alpha function for all the 28 number of questions was conducted to find out the average inter-correlation among the questions. The Alpha Score of 83.9% achieved in Reliability test results. The alpha coefficient for the 28 items is 0.839, suggesting that the items have relatively high internal consistency. (Note that a reliability coefficient of 0.70 or higher is considered "acceptable" in most social science research situations – Ken Black, 12th Edition of Multi-Variate Analysis).

Eigen Value of 2.7 was achieved using Exploratory Factor Analysis in SPSS 21 version. Eigen-value

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for the first factor is quite a bit larger than the Eigen-value for the next factor (2.7 versus 0.54). Additionally, the first factor accounts for 67% of the total variance. This suggests that the scale items are unidimensional. After screening every survey result only 481 answers scripts were considered for the analysis.

A survey of organic food consumers visiting Organic 24-mantra stores in India was conducted. The interviews, which reached a total number of 481 respondents were carried out by telephone from Jan 20th to Feb 15th, 2018. Respondents were at least 18 years of age and covered all the age ranges. The survey was carried out throughout India, dividing the respondents based on states using cluster analysis. In addition, the interviews were conducted in different organic stores based on the sales velocity of organic food purchase.

From a qualitative research standpoint, the margin of maximum error, calculated for an infinite universe, has a level of meaning of 95.5% and in the most unfavorable hypothesis, p=q=50% is of 3.46%. The sample is selected based on the respondents understanding of the difference between organically produced products and conventional products and those who are buying organic food products for personal consumptions for at least six months. In addition, the survey tried to evaluate the perception of organic products regarding their price. The questionnaire was divided into different sections: in the first place, several questions were asked about the consumer demographic characters (Gender, age, studies, social status, etc.). In the second place, the questions focused on learning about the habits of the people with regards to organic product consumption as well as the profile of the consumer of organic food products.

3.2 Demographic and Socio-Economic Distribution

According to gender in the survey, the distribution of the interviewed respondents was made up of 42.6% men (205 interviews) and 57.4% women (276 interviews). Regarding the age, the consumers were divided into four age groups: from18 to 24 years old, from 25 to 44 years old, from 45 to 64 years old and over 65 years old. The age distribution in the sample is shown in figure 1. About 11.4% of the people were between 18-24 years old, 36.6% were between 25-44 years old, 29.2% were between 45-64 years old, and 22.8% of all the consumers were over 64 years old.

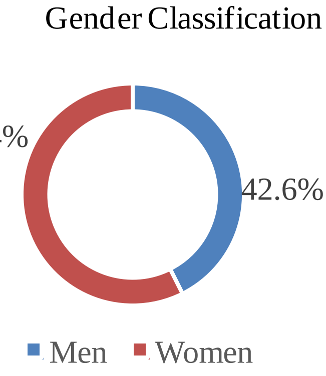

Figure 1: Gender classification as per survey results

Regarding the consumers' social class, the respondents belonged to a middle class (46.2% of total), Economically challenged social class (27.3%) and a high social class (26.5%) status as per the classification is given by Socio-economic statistics published by Survey of India department in the year 2017. In relevance to the education level, 56.3% of the people are graduates, 23.1% had completed their High school education and 20.6% were holding Masters and above degree.

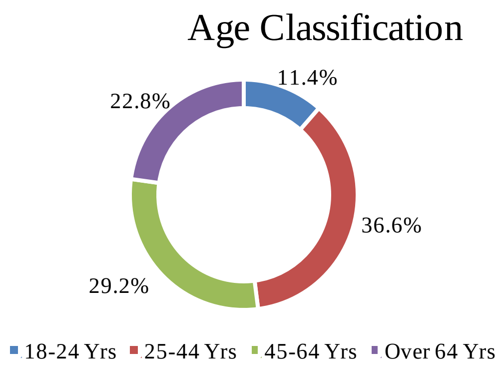

Figure 2: Age classification as per survey results

The greatest number of interviews corresponded to residents from a medium size Area (between 50K and 500K households), with a percentage of 38.3% of the respondents surveyed. The less frequent answers belonged to premium class residents (towns with more than 500K households) with a percentage of 21.8% of the answers.

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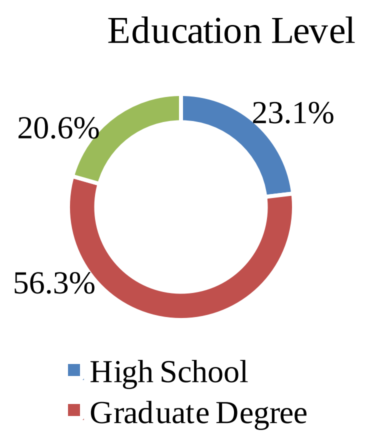

Figure 3: Education level of the Interviewed respondents

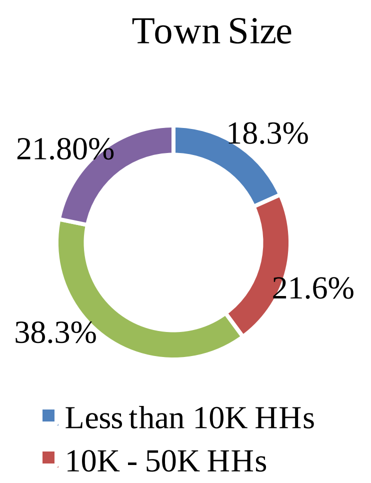

Figure 4: Town size of the Interviewed respondents

3.3Awareness of Organic Food Products among Indian Consumers

An imperative challenge for the Indian organic market is that Indian consumers' lack of awareness about organic food products, that leads to lower consumption levels. The current study explores the deficiency and how this problem can be solved using the research study. The Indian market is not yet sufficiently mature, especially if it is compared with countries like USA, China, and Great Britain. In these developed western countries, the government strongly backs the organically packaged food sector and the demand of the consumers supports increasing sales and substantial development of its distribution system. (Charles S. Tapierot, 2017).

By contrast, in India, there is a lack of information about the whole production and distribution chain. In addition, there is a general confusion between the terms 'organic', 'biologic', and 'ecological', (Park T. A and L. Lohr, 2018). The FSSAI law allows the term 'bio' for products coming from conventional agriculture' since the term that refers to organic agriculture is 'eco'. This problem may be solved soon since actions have been taken from NPOP (National program for organic food products) regulation Committees on Organic Agriculture farmers and FSSAI (Food safety and standards authority of India) is taking the necessary steps to achieve misinterpretations of labels on organic food products sold in India (FSSAI, annual report 2017-18).

In the current survey, the consumer was asked about the knowledge of organic products. The research paper has already explained that one of the problems for introducing these products to the Indian consumer is the ignorance they show explaining both (D. Anthony Miles, 2014), what organic products are and the difference between conventional and organic products.

To the questions of whether they knew, what organic products are, 62.1% of the people interviewed answered that they did, while 37.9% of the people did not know about them. Of all the people who affirm they knew the difference between organic and conventional products, there is a group of consumers that, when explaining what organic products are, gave an erroneous definition. This reveals the fact that the real knowledge of the organic products is inferior to what we were considering, that is, that truly only 56.7% of the consumer know organic products, instead of 60.4% (Figures 5 and 6).

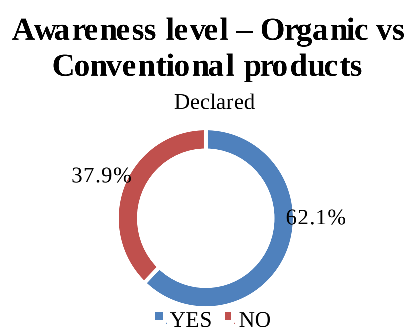

Figure 5: Perceived awareness level of interviewed respondents on organic vs Conventional products

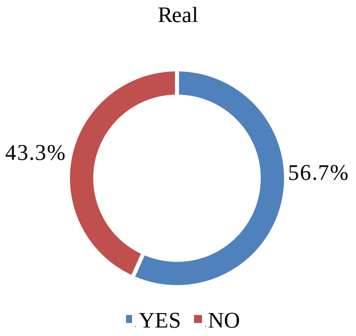

Figure 6: Actual awareness level of interviewed respondents on organic vs Conventional products

Among the interviewed people who claimed to know about organic products, there was no relevant difference between men and women. According to age, the group of 25 to 44 years is the one that declares, to great extent they know about organic products, whereas those who deny being able to recall them are the interviewed people whose ages are 65 years and over.

This social classes that claim to know about organic products belong to high and upper middle classes, whereas the greater percentage of ignorance was found to be in the interviewed people of the low and lower middle class. By the size of the town, those interviewees living in the largest towns (more than 500,000 inhabitants) are those who register greater affirmations, followed by interviewees from towns between 10,000 and 50,000 inhabitants. The inhabitants of the smallest towns (fewer than 10,000 inhabitants) are those that show less knowledge of what organic products are.

In summary, the profile of the person with the clearest perception of organic products in India corresponds to a young individual (man or woman) from middle to high social class, who lives in a large town. Regarding the different definitions of what organic products are, results are shown in Figure 7.

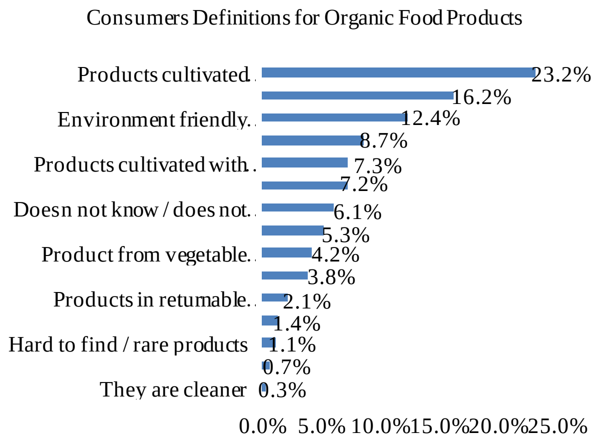

Figure 7: Consumers definition for Organic Food Products

Among the definitions given, there are two of them that should be highlighted: a high number of interviewees (23.2%) mention that organic products are those cultivated without synthetic pesticides (a right answer), while 16.2% defined organic products like natural products without preservatives and artificial colors (incomplete answer, although it was accepted). Invalid answers that have not been considered to compute the real knowledge of organic products include 'healthy food or low-fat food', 'they are cleaner, products come in recyclable containers', or 'Genetically Modified products.

3.4 Consumption of Organic Food Products in India

In most cases, the selection of a product is influenced by the budget whereupon it is counted and by the cost of the perception of the expected quality of a certain product. In this respect, three generic product categories have been identified: the 'search' products, the experience, products and the confidence and credibility products, While the two first categories refer to extrinsic or intrinsic qualities that are identifiable after the consumption, the confidence and credibility' goods have qualities that can only be detected partially after the consumption.

In this case, as consumers are not able to judge the intrinsic qualities of the product, they will mainly base their selection on the indications of the producer. The organic products clearly belong to this category, as, at first, it is virtually impossible to distinguish a product coming from this type of agriculture farming compared to the one coming from the conventional systems and where consumer confidence in the product is fundamental.

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To avoid a poor ethical conduct of the producers and to reduce the lack of confidence of the consumers, the products that belong to the category of 'confidence and credibility' require that confidence is guaranteed by the mark of the manufacturer or a 'seal of quality' emitted by the competent regulatory organization recognized by the Government of India.

In India, the control system applied to organic food products is based on the FSSAI regulation 2015. Organic food operators are inspected by both private and public control and certification bodies. However, the public organizations or Regulation committees on organic Agriculture are the most extended. The organic products that are supported by the control and certification bodies are clearly identified by these bodies' warranty logo, and they may also exhibit the FSSAI logo.

In the current study, when asked about the consumption of organic products, 52.3% of the people interviewed affirmed that they consume or have consumed organic products, and 47.7% denied having consumed them.

These are not the real results, since after asking them which the origin of the organic products was, we realized many people had not consumed 'real' organic products (for example, food from their own farm without being organic producers), so the percentage of the real consumption is lower than just 39.4% of the people seem to have consumed organic products (figures 8 and 9).

The people that had consumed 'real' organic products bought them in specialized shops, in supermarkets, that is, places where organic products are sold, or also were produced by themselves as organic producers.

Consumption level – Declared vs Real

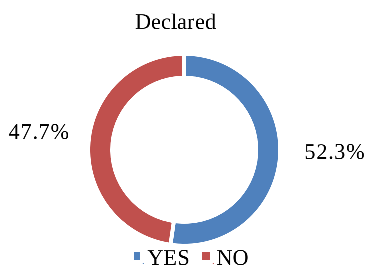

Figure 8: Declared consumption of organic products

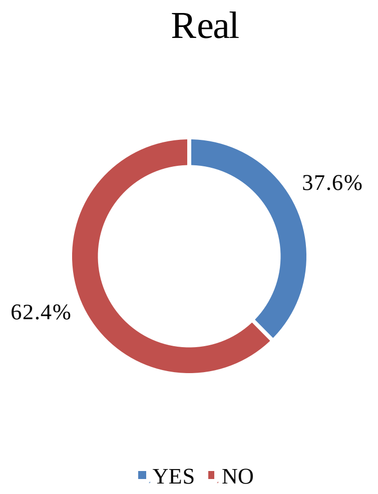

Figure 9: Real consumption of organic products

Regarding gender biases, there is a difference since the number of men that consume organic products is slightly greater than the number of women that declare they consume these products, with respect to the age groups, those that declare themselves as regular consumers of organic products are consumers between 25 and 44 years old. On the other hand, the less frequent consumers are the youngest ones, aged between 18 to 24 years old (which is consistent with the statistics that people that belong to this age level are the less frequent shoppers: they allege that they are not the ones who do the daily shopping)

The main reasons for not consuming organic products, which are shown in figure 10, can be summarized as follows:

In the first place, lack of knowledge of these products and lack of confidence in what they are buying. In this section we may include answers such as 'I do not know about them, I am not informed', 'they may have some chemical component', or 'I am not sure if I have consumed them, the lack of confidence is especially acute in older people and in people that belong to low or medium-low classes.

In the second place, the absence of these products in the consumers' frequently visited shops. This section includes answers like 'They are hard to find, or they are not easily available'. This answer was ratified by a high percentage of women, and, by residents of smaller towns. In addition, the answer 'I did not have the opportunity to buy them'

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was given by middle-aged residents in populated areas.

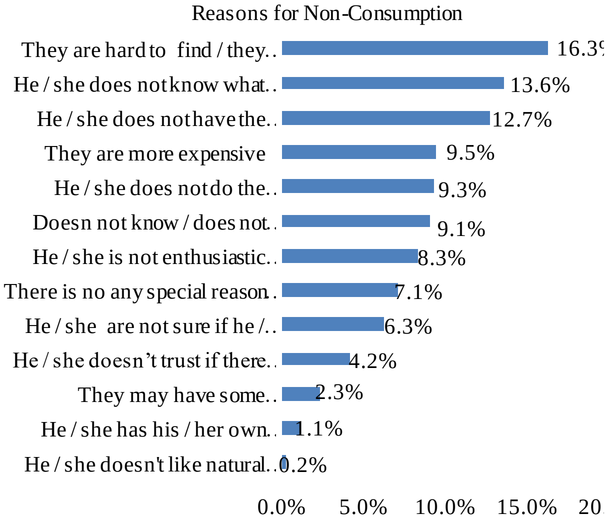

Figure 10: Reasons for non-consumption of organic products

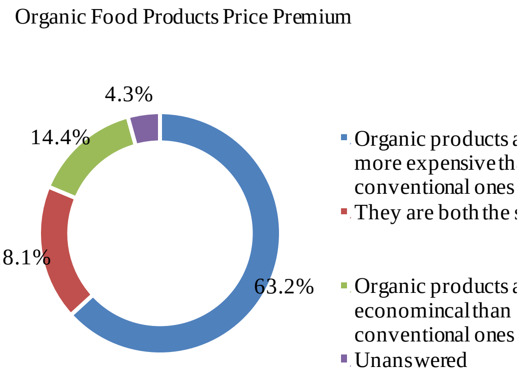

Figure 12: Perception about price difference between organic and conventional products

Regarding the age groups, the interviewees between 25 and 44 years old, followed by the people between 45 and 64 years old, are the once that consider organic products to be much more expensive than conventional ones. About social classes, the higher the social class, the higher the perception of organic products as more expensive products. (63.2% of the people interviewed that belonged to a high class claimed that organic products were more expensive).

3.5 Organic Products most Frequent Purchases

To know the consumption habits of the people interviewed, only those who had declared themselves as consumers of these products were asked about the type of organic products they purchased. Results are shown in figure 11.

Of the people interviewed that admitted that they are consuming organic products for at least six months, 27.25% of them confirmed that they consumed fresh fruits and green vegetables. This answer was declared at the same level by men and women. The age group data was very significant: 84.9% of the interviewees between 45 and 64 years declare to consume organic fresh fruits and vegetables. Furthermore, the social status is important, since 91% of the organic product consumers that claim to belong to a lower class express that they often consume fresh fruits and vegetables.

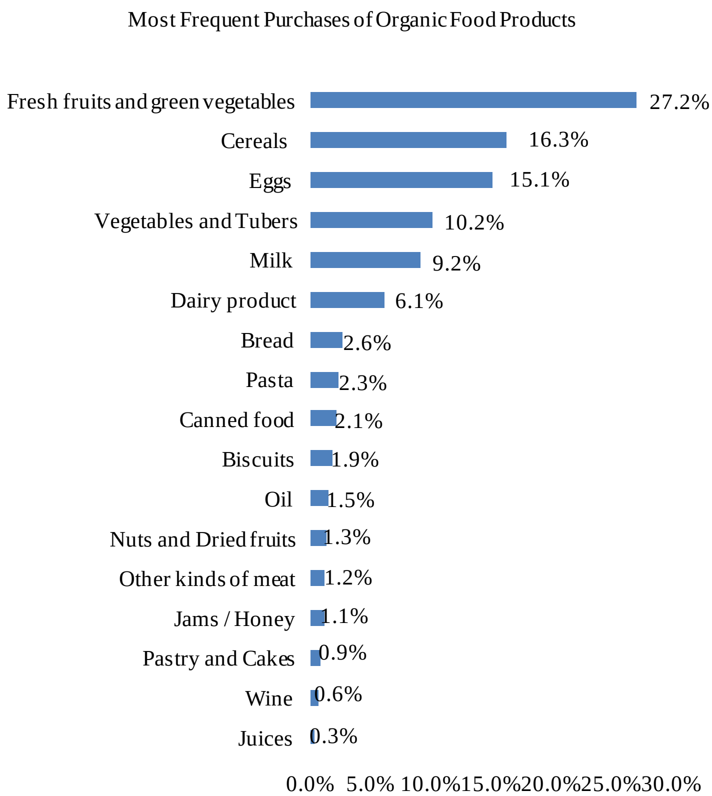

Figure 11: Most frequent purchases of organic products

The remaining consumed products are located at a great distance from fruits and green vegetables. The distribution is as follows: cereals and legumes (16.3% of the people consumers them), eggs (15.1% of the people), vegetables and tubers (10.2%), milk (9.2%), dairy products (6.1%), bread (2.6%), pasta (2.3%), Canned food (2.1%), biscuits (1.9%), oil (1.5%), nuts and dried fruits (1.3%), jams and honey (1.1%), other kinds of meats (turkey, rabbit, etc.) 1.2%, wine (0,6%), pastry and cakes (0.9%), juices (0.3%).

3.6 Organic Food Products Purchased from most Frequent Stores

According to the study conducted by India's regulatory body FSSAI in 2018, (FSSAI, annual report 2017-18), two main commercialization models of organic products can be identified across India: Model A, in which most of the sales are made through hypermarkets and supermarkets. Model B; in which the sales are made mainly through specialized stores like 24 mantras organic shop. The organic stores of different cities in India that fall under Model A percentages of sales are higher than the stores which apply to Model B.

Model A; cities in India like Delhi, Mumbai, Bengaluru and Kolkata have a percentage of organic products of organic products sales corresponding to 1.5% of the agriculture and food market, while the cities like Nagpur, Mangalore Dharamshala and Surat that correspond to Model B reach a percentage of sales of 0.6% of the organic packaged food market.

The fact is that, as soon as the distribution channels change, the organic products available at hypermarkets decrease, resulting in lower information about organic food to the consumer. The growing organic market in India faces the future with great expectations and great potential of consumers.

3.7 Organic Food Products Price Premium

Indian consumers do not find the price premium of organic products over conventional once as the most influencing factor when deciding about the purchase. When they were asked to reason for not consuming these products, the difference in price was situated in fourth place in their response.

The survey results give an estimation of the difference in the price of organic products compared to conventional ones. In general, people perceived organic products as being more expensive than conventional ones (63.2% of the people interviewed gave this answer). Only 18.1% of the respondents thought the price was approximately the same, and 14.4% said organic products were economical cheaper than products coming from conventional farms.

The opinion of consumers varies depending on the consumers. A percentage of 33.6% of them said organic products are 'a little bit more expensive' than regular products, 28.3% declare they are simple 'expensive and 31.4% manifested organics as 'more expensive'. It is remarkable that only 6.7% of the people interviewed said organic products were 'A lot more expensive than conventional ones.

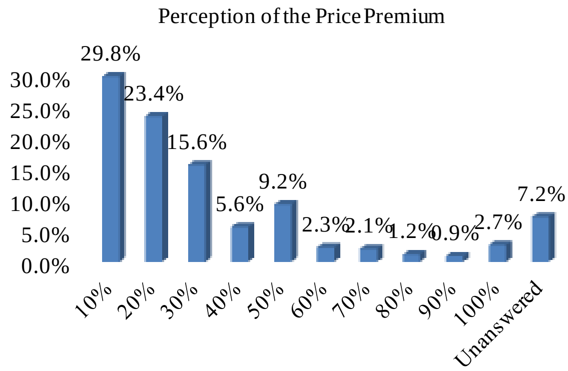

Figure 13: Perception of the Price Premium

The distribution of answers is shown in figure 13. The average price premium between organic and conventional products declared by the interviewees is highly variable. A percentage of 29.8% of the people interviewed estimated the price premium is around 10%. Also, 23.4% of the consumers estimated it is around 20% and 15.6% of the people said the price premium is 30%. Only 9.2% of the interviewed people estimate a price premium like that obtained in the results of the last research project prepared by the FSSAI in 2015, which is average a 50% with respect to conventional food products.

4. Findings

The survey results confirm that a great percentage of the people admitted they bought organic products, directly from the producer: of directly from the farm, also, some people admitted they had their own organic vegetable garden. Consumers answered they bought organic products in supermarkets or hypermarkets (23.6%), followed by the purchases in specialized stores (16.4%), herbal stores (4.6%) and small shops (2.6%). Of the people interviewed those admitted consuming organic products, 27.2% of them confirmed that they consumed fresh fruits and vegetables. This answer was declared at the same level by men and women.

The age group data was very significant: 37.6% of the interviewees between 45 and 64 years declare to consume organic fresh fruits and vegetables. Furthermore, the social status is important, since 27.2% of the organic product consumers that claim to belong to a lower economy class express that they often consume fresh fruits and green vegetables.

5. Conclusions and Recommendations

Indian consumer's lack a real understanding of the concept of organic food products. Without any doubt, consumers show increasing concerns about food safety and the preference for natural, chemical-free products. However, they are unaware of the existence of organic products of their own value. So, consumers must be educated on the concept of organic food. Besides, the high percentage of people, who doubt that they have consumed organic food is astonishing. That means organic products as per the current study show that consumers are not clearly identified the organic food products and their health benefits during their daily shopping, i.e. merchandising of these products must be strongly enhanced.

The study results show that these are problems that do not have a very difficult solution. To solve this lack of knowledge and confidence, an effort by the ministry of agriculture and FSSAI authority of India, by the producers and by the distributors must be made to show the consumer what organic products are and what their benefits by undergoing regulatory audits for organic shops every six months. Also, a unified organic food quality logo at a national level would be a good way to increase the consumer's awareness of organic food products as compared to the ones coming from conventional agriculture farms.

The Indian government through its Ministry of Agriculture and Farming should conduct promotional campaigns destined to the organic food consumers, but also support the organic food sector by clarifying a few burning subjects like the denomination 'bio', which in India can be applied to products that do not come from organic farms. However, in India, the future of the organic sector is very promising, and researchers should focus on publishing more article information on the challenges that restrain the development of the organic food market.

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