Consumer Behavior towards Organic Food in Select Areas of Dhaka North: A Willingness to Pay Approach

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Introduction

Bangladesh has achieved the status of self sustainability in terms of food production.

It is the high time that Bangladesh should go for food quality rather than quantity and move towards organic food production and consumption.

Background

Current Scenario of organic Farming in Bangladesh – Poor

Method Chosen for the study - Willingness to pay method
Justification of the Study

• Bangladesh has achieved the middle income status: right time to move towards organic food over inorganic food products

• The use of chemical fertilizers and pesticides increases the risk of developing cancer in adults and children and adversely affects fetal brain development

• Use of artificial fertilizers depletes the organic matter of soil, reduces water holding capacity and make them more subject to erosion

• Only a few researches have been published on consumer behavior and their willingness to pay towards organic food
Research Questions

1. What is the present level of awareness among the people on organic food products in the selected areas of Dhaka North?

2. How much price premium are they willing to pay for organic food consumption?

General Objectives

To assess the present level of awareness among the people on organic food products in the selected areas

To determine how much price premium they are willing to pay
Specific objectives

• To explore the relationship between demographic information and consumer willingness to pay towards organic food

• To assess consumer knowledge, perception and awareness towards organic food

• To identify how much price premium the consumers are willing to pay for organic food products

• To determine the present status of availability of organic food
Literature Review

According to Andersen (2007), organic food products are those that are environmentally sound, free from pesticides and chemical fertilizers, do not contain genetically modified organisms and are not processed using irradiation, industrial solvents or chemical food additives.

The trend of organic food was initiated in developed countries such as Europe and North America and now expanding to developing countries like India, Nepal, Thailand, Malaysia, and Vietnam (Gumber & Rana, 2017).

Thatte et al. (2016), found that level of education and knowledge about organic food is directly related and also consumers with higher income are willing to pay the price premium for organic food products.

Consumer behavior and organic food consumption in Dhaka city- Low Lack of knowledge, unreliable certification, Price premium and insufficient supply of organic food are the main barriers.
Consumer Characteristics, Perception and Willingness to Pay for Organic Food

**Consumer Characteristics**
- Age
- Gender
- Education
- Income
- Expenditure

**Consumer Perception**
- Health Benefits
- Environment
- Taste
- Visual Appearance
- Certification
- Packaging & Promotion

Affects

**Willingness to Pay for Organic Food**

Research Methodology

Areas Selected

Objectives of the Study

Sample Selected

Questionnaires Developed

Primary Research Completed through Survey Questionnaire and interview

Secondary Research

Demographic Information of the Respondents Analyzed

Knowledge and Awareness level of Respondents toward Organic Food Assessed

Present Status of Availability and Service of Organic Food Products Analyzed

Consumers Willingness to pay towards organic food products determined
The formula for calculating the sample size is as follows:

\[ n = \frac{Z_{\alpha}^2 P(1-P)}{d^2} \]

\[ n = \frac{(1.96)^2 (0.5) (0.5)}{(0.05)^2} \]

\[ = 384.16 \approx 384 \]

Where
- \( n \) = sample size
- \( Z \) = \( Z \) statistic for a level of confidence
- \( P \) = expected prevalence
- \( d \) = precision

For the level of confidence of 95%, \( Z \) value is 1.96. Since there are no previous studies done in these areas, the prevalence value is taken to be 50%. Therefore, \( P \) is 0.5 and \( d = 0.05 \) in proportion of one. The sample size results to 384. However, due to time constraint, a total of 120 respondents were recorded.
Table 1: Demographic Information of the Respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number of Respondents (Total=120)</th>
<th>Number of respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>51</td>
<td>42.5</td>
</tr>
<tr>
<td>Female</td>
<td>69</td>
<td>57.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Group (In years)</th>
<th>Number of Respondents</th>
<th>Number of respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 - 30</td>
<td>47</td>
<td>39.2</td>
</tr>
<tr>
<td>31 - 45</td>
<td>46</td>
<td>38.3</td>
</tr>
<tr>
<td>46 - 60</td>
<td>21</td>
<td>17.5</td>
</tr>
<tr>
<td>Above 60</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>
Figure 1: Educational background of the respondents

Figure 2: Occupational background of the respondents
Figure 3: Monthly Income of the Respondents in BDT

Figure 4: Monthly expenditure of the respondents in BDT
60% (N=72) have the knowledge that organic food refers to those food products which are produced without synthetic fertilizers and pesticides and 70% of the respondents heard the term from internet, books, newspapers, magazines etc. Other 40% do not have the exact idea about the term organic.

Consumers motives behind buying organic food

- 73.3% (N=88) said organic food contains more food value

- 61.6% (N=74) thinks organic products are more healthy

- 58.3%, N=70 consumers said they are more tasty

- 81.6%, N=98) believes organic farming method is less harmful for the environment
Figure 5: Buying Habit of the Respondents

Figure 6: Practice of Buying Organic Food Products among the Respondents
# Table 2: Percentage of frequently purchased organic food products

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Number of organic product buyers</th>
<th>Number of organic product buyers (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>15</td>
<td>12.5</td>
</tr>
<tr>
<td>Vegetables</td>
<td>66</td>
<td>55</td>
</tr>
<tr>
<td>Fruits</td>
<td>64</td>
<td>53.3</td>
</tr>
<tr>
<td>Fish</td>
<td>25</td>
<td>20.8</td>
</tr>
<tr>
<td>Meat</td>
<td>10</td>
<td>8.3</td>
</tr>
<tr>
<td>Tea</td>
<td>27</td>
<td>22.5</td>
</tr>
<tr>
<td>Others (Juice, honey, mustard oil, Pulse)</td>
<td>7</td>
<td>5.8</td>
</tr>
<tr>
<td>I don't buy</td>
<td>23</td>
<td>19.1</td>
</tr>
</tbody>
</table>
There should be a certification by government agencies. I buy without certification. I buy if the shopkeepers declare it organic.

Figure 7: Importance of certification of organic food products

Figure 8: Importance of certification logo on organic food products
Figure 9: Identification of supply of organic food products in market

Figure 10: Suggestion for improving the availability of organic food
Figure 11: Consumers willingness to pay for organic food products

Figure 12: Percentage of price premium consumers willing to pay
### Summary of Research Findings and Recommendations

<table>
<thead>
<tr>
<th></th>
<th>Level of Education (%) (Bachelors' and Masters)</th>
<th>Level of Income (%) (20,000-above100,000)</th>
<th>Level of Expenditure (%) (20,00-100,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>84.8</td>
<td>73.3</td>
<td>80</td>
</tr>
<tr>
<td>Relationship with organic consumption</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Secondary</td>
<td>89.1</td>
<td>75.6</td>
<td>81</td>
</tr>
<tr>
<td>Relationship with organic consumption</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>

Sources: Iqbal, (2015); Gumber & Rana, (2017); Meyer, (2017)

Most of the people only understand and buy organic vegetables and fruits but have less knowledge about organic fish, meat, rice, pulse and other products.

Lack of government certification is one of the major reasons for the lower consumption of organic food products.
Certification of Organic Food Products

**Government Sector**
- Develop a reliable authoritative body
- Generate an authentic certificate for organic food products
- Establish organic and inorganic product market independently
- Ensure optimum price for organic products
- Create more awareness among general people

**Private Sector**
- Invest more in organic farming
- Establish more organic superstores
- Encourage all superstores to sell organic products and label them
- Arrange organic food festival monthly

**Consumer**
- Make people aware about the harmful impacts on health and environment from inorganic food products
- Spread more knowledge about the benefits of organic products
- People who have better knowledge are willing to pay price premium
Price premium is another factor which affects the willingness to pay of consumers towards organic food products. The majority of the consumers would like to pay only 5-10% price premium and none of them are willing to pay more than 30% price premium.

Consumers claimed the lack of availability while the superstore authority claimed the lack of demand, both are further responsible for lower consumption in the selected areas.

Form literature, it has been seen that there are gap exist about consumer behavior and their willingness to pay towards organic food in Bangladesh.
Consumers' demand and willingness to pay can be fostered through:

• Organizing health and environmental awareness programs

• Generating authentic certification by the government body

• Ensuring appropriate price policy

Bangladesh has considerable advantages in terms of organic farming and we should garb this opportunity and move towards organic food consumption
References


Thank You!