

# **DOES PREMIUM PRICE MEDIATE THE CONSUMER AWARENESS AND GREEN PURCHASE INTENTION? A CONSUMER STUDY BASED ON ORGANIC FOOD, WESTERN PROVINCE - SRI LANKA**

**I.V.M.N. Premadasa,**  
Nawamalika2015@gmail.com

**P.I.N. Fernando**  
Imalif@uwu.ac.lk  
Department Of Management Sciences  
Faculty Of Management, Uva Wellassa University Of Sri Lanka

## **ABSTRACT**

*The modern consumer strives for a quality and healthy life, and that motive directs the consumer towards quality food by focusing on both environmental concern and health consciousness. Herein, this paper addresses the impact of consumer awareness of organic food on green purchase intention with the mediation effect of the premium price. A mixed research approach has been adopted and a systematic sample has been selected, whereas impact has been assessed through regression, mediation through the Barron-Kenny model, and the Sobel test. Further thematic analysis was performed to assess the green purchase intention qualitatively. The main findings revealed that both environmental concern and health consciousness positively influence green purchase intention of organic food; health consciousness is the most influential consumer awareness factor, and there was a partial mediation by the premium price. Thus, the results of the analysis concluded that there was a strong positive relationship between consumer awareness and green purchase intention. From the thematic analysis, the main themes were identified as (a) health and nutritional concern, (b) environmental concern, (c) taste, and freshness, and (d) social status. The paper concluded by providing recommendations to policymakers and marketing planners to design and initiate consumer awareness to widen the customer base and plan future strategies.*

**Keywords:** *Consumer behavior; Green Purchase Intention; Marketing; Organic Food; Premium Price*

## 1. Introduction

Food is one of the basic needs of humans as well as a crucial need for human existence without any doubt. Modern consumers strive for a healthy life and often cater to the quality of the food that they consume. Even so, the "quality" could be diverse among different communities. The consumer may be drawn to food that is produced with regard to animal welfare, environmental care, health concerns, and safety concerns if quality is prioritized (Shafie & Rennie, 2012). In this digital age, the continuous devastation of natural resources on the earth is turning the land into a concrete jungle, where ecological issues become vital and would be influential to human survival. The appearance of "go green" would create tremendous opportunities for food manufacturers to lead a healthy society by providing products and services that are expected (Neilsen, 2015). In this regard, the need for eco-friendly and green products has emerged, and there is growing interest and demand for organically produced foods globally. As a result, the vast majority of industries have shifted their marketing efforts to green marketing and green products. Among the industries, the category of "organic food" has become popular among consumers all over the world, creating a specific demand. Herein, "organic food" refers to products that avoid the use of man-made fertilizers, pesticides, growth regulators, and livestock feed additives (Department of Agriculture and Rural Affairs), and have achieved a significant place in the world economy by becoming a high revenue-based industry (Department of Agriculture and Rural Affairs). According to world statistics, more than 69.8 million hectares of organic farmland were recorded in the year 2017 around the world, and among them, more than 6.1 million hectares of farmland are represented in Asia (Department of Agriculture and Rural Affairs). According to the statistics, Sri Lanka represented about 165,553 hectares of organic agricultural land in the year 2017 (Willer & Lernoud, 2019). Accordingly, Argentina, Brazil, Dominican Republic, China, India, and Sri Lanka are the leading suppliers of organic products in the world, and accordingly, Sri Lanka became the pioneer of organically certified tea to the world market (Vidanapathirana & Wijesooriya, 2014). A vast variety of local farms produce organic vegetables, fruits, meat, eggs, milk, spices, mushrooms, and green leaves for the market to fulfill the demand of the consumers (Kurugala, 2018), thus highlighting the growing tendency for a healthy life. Processed fruits, processed vegetables, edible nuts, grains, pulses, and seeds, herbs and spices, coffee, tea, and cocoa, honey, cane sugar, and syrup, oils and fats, and essential oils are considered organic food within the local context.

Consumer awareness is a vital part of the marketing domain that links consumers with specific needs that could lead to creating demand. Consumer awareness is simply the buyer's knowledge of a particular product or service, where the value in return might be enhanced by the seller from the purchases made (Thomas, 2018). According to scholars, industrialization, intensification of agriculture, and increasing energy sources may be significant drivers of environmental degradation and health issues in the modern era (Kanianska, 2016). That leads to identifying environmental concerns and health consciousness as key determinants of consumer awareness, ultimately creating a specific demand for organic products.

In practice, organic food fetches a higher price when compared to conventional food products due to associated processing costs, and in some circumstances, consumers might perceive this premium price as a quality measure. The perception of the consumer towards "going green" might impact the green purchase intention, especially in food production, in several ways. "Green purchase intention" is defined as the internal wish, desire, and willingness of people to purchase environmentally friendly products that do no harm to the environment. Some scholars argue that concern for environmental issues may lead to increased purchase intentions about green products that are less harmful to the environment (Joshi & Rahman, 2015). Consumer awareness of green products might be complex, whereas market conditions play a dominant role in consumer awareness formation and change. As a recent trend, local consumers are also stepping towards the concept of "going green," while catering to the demand for eco-friendly developments, green products, and organic produce. Besides, the consumption of organic food will promote green entrepreneurship, which leads to a green economy. Therefore, as a result, the organic agriculture industry finds itself with enormous market opportunities worldwide.

### ***1.1 Research gap***

Consumer awareness of green products has become complex, and market conditions play a dominant role in consumer awareness formation and change. Hence, consumers in the Sri Lankan context are stepping towards the "going green concept" in terms of eco-friendly development. Organic food represents a major portion of green products. Over the last decades' consumer awareness of organic food has increased in the Sri Lankan context (Siriwardhana et al., 2017; Hapuarachchi, 2016). However, more than 55% of the consumers had an idea that organic food is something that is free from chemical pesticides and fertilizers (Siriwardhana et al., 2017). But it is beyond that, which is nutritious, healthy, and natural. This means consumers'

knowledge and awareness are diverse and they define organic food in miscellaneous ways. Thus, more than half of the consumers did not have complete awareness of organic food, and if they had had complete awareness, the purchase intention towards organic food might have changed. Organic food is apparent as eco-friendly and healthier as it contains no or fewer artificial chemicals that will damage the environment and the health of people.

As a comparison, the price of organic food is relatively high compared to conventional food prices. Some scholars argue that the high price might hinder the purchase intention, ultimately leading to a low demand for organic food (Tandon et al., 2021). The majority of scholars argue that price is a major determinant in the purchase intention of a product, and when it comes to organic foods, it will play the role of a major obstacle in the purchase decision (Curvelo et al., 2018; Ismael & Ploeger, 2020). Similarly, scholars argue the marketing mix has a positive influence on the purchase intention of organic food products (Weerasiri & Maldeniya, 2016), and organic farmers can reap the benefits of trade with a relatively high price premium along with this organic market expansion. Hence, there were several conclusions on the impact of the premium price of organic food on purchase intention, which were addressed in different markets. Most of the research has investigated the impact of consumer awareness on purchase intention of organic foods, but fewer investigations have tested the mediating impact of the premium price (Hapuarachchi, 2016; Siriwardhana et al., 2017), and this paper will fill the knowledge and empirical gaps.

Therefore, this paper addresses the impact of consumer awareness of organic food on green purchase intention with the mediation effect of the premium price. Accordingly, the research objectives are designed to fulfill the research questions that are formulated to fill research gaps. Thus, research questions have been identified as;

- I. What are the consumers' expectations behind the purchase intention of organic food?
- II. What is the impact of consumer awareness of organic food on green purchase intention with the mediation effect of the premium price?

*The research objectives have been formulated;*

- I. To ascertain the consumers' expectations behind the purchase intention of organic food.
- II. To determine the impact of consumer awareness of organic food on green

- purchase intention with the mediation effect of the premium price.
- III. To identify the most influential consumer awareness factor that would impact on green purchase intention for organic food.

## **2. Review of literature**

### ***2.1 Vital role-playing by the organic food***

The term "organic" is derived from the Greek word "bios," which refers to life or a way of life (Hamazaoui & Zahaf, 2008). Meanwhile, "organic food" is easily defined by the process, as such with the practices and ingredients used in manufacturing processes (Mie et al., 2017). According to the International Federation of Organic Agriculture Movement (IFOAM), organic agriculture consists of all agricultural systems that promote environmentally, socially, and economically sound food production. This reduces external inputs by avoiding the use of chemo-synthetic fertilizer, pesticides, and pharmaceuticals while allowing natural ways to increase yields and disease resistance. Therefore, "organic food" originates through an organic farming process. When compared with conventional food, the demand for organic food is pushed by the beliefs of consumers as being healthy, tasty, and environmentally friendly (Vigar et al., 2020). The artificial chemical pesticides that attempt to prevent insects, weeds, and other pests in conventional farming are hazardous to human beings, animals, and plants (Nicolopoulou-Stamati et al., 2016). Therefore, the objective of organic food is to maximize food productivity by identifying and addressing the health and safety issues of people, flora, fauna, and soil. According to scholars, as Sri Lanka is away from the traditional agriculture that prevailed in ancient times, it is currently experiencing many non-communicable diseases and health issues (Kapuge, 2015). However, the demand for organic food can be significantly increased as a result of increasing awareness of health, food safety and environmental concerns (Tandon et al., 2020; Hansmann et al., 2020). As such, consumer awareness plays a vital role. Consumer awareness is the initial step in creating a demand for any product, as it will provide information on the product and consumer rights. Further, consumer awareness refers to the buyer's knowledge and understanding of their rights as a customer, how products are made or grown, the safety of the product, etc. Consumer awareness of organic food means that consumers are exploring and recognizing the characteristics of organic food, such as nutritional content, organic food certifications, whether it is produced locally or imported, level of freshness, and labeling information.

Scholars highlighted several factors that influenced the level of consumer awareness

of organic food, such as socio-demographic factors and the purchase decision (Wang et al., 2019; Omar et al., 2016). Consumer awareness and experiences with organic products will be the determinants of the demand. Therefore, consumers' accountability to protect the world before making a purchasing decision is highlighted by them (Cherian & Jacob, 2012). The environment has become more polluted as a result of population growth and excessive resource consumption (Srinivas, 2015). This results in increased consumer awareness of green products and green concepts, pressure for eco-friendly technology, and public health and safety concerns (Srinivas, 2015). Some scholars argue that consumers have become more health and nutrition-conscious over time (Darian & Tucci, 2011). Therefore, most consumers tend to purchase organic food due to environmental concern and health consciousness, which can be identified as the two main factors for consumer awareness of organic food.

## ***2.2 Environmental concern***

Modern consumers are more concerned about the environment because they believe that green products help to reduce environmental damage and natural hazardousness, resulting in an eco-friendly marketplace (Ansar, 2013). An individual's susceptibility to pro-environmental behaviors, such as environmental consciousness (Mishal et al., 2017), may prevent customers from making certain purchases. Furthermore, technological advancement has led to a negative impact on the environment, and water pollution and air pollution have resulted in making consumers more environmentally conscious. Besides, people are concerned about environmental issues with the environmental belief that results in enhancing the consumer's willingness to purchase green products and reducing their negative impact on nature (Joshi & Rahman, 2015). Santosa (2020) pointed out that the younger generation has a high interest in the consumption of green products due to environmental consciousness. This leads many firms to produce environmentally friendly products. Sharma & Basal (2013) specify that industries are required to contribute to mitigating environmental issues and the green movement. Scholars have identified the cross-cultural perspective on environmental concerns within different economies (Berghlund, 2019; Knight & Messer, 2012). In a local context, conventional rice production is highly depending on chemical fertilizers and pesticides, which result in diminished soil fertility and a negative impact on flora, fauna, and other resources. However, modern consumers' purchasing decisions show a significant concern about environmental resource problems and their impact (Yue et al., 2020). Therefore, these trends and social pressure might force industries to be more environmentally friendly. Alibeli & White

(2011) developed three dimensions of environmental concern: (a) biospheric concern, (b) altruistic concern, and (c) egoistic concern.

### ***2.3 Health consciousness***

The consumer's health consciousness has a link with wellness-related food and the consideration of food security. A scholar has identified a trend toward greater concern for individual health as health consciousness (Pu et al., 2020), which creates a demand for healthy food. According to Hong (2012), health-conscious consumers exhibit strong searching behavior for information, in particular nutrients and healthy ingredients within food. Kim et al. (2013) have identified a modern consumer category as "Lifestyle of Health and Sustainability" (LOHAS) consumers with high health-conscious and environmental concerns. Herein, LOHAS consumers play a vital role by purchasing healthy and environmentally friendly products such as organic food, natural skincare, and energy-efficient household appliances (Kim et al., 2013). Natural content and nutrients could be the focus of the newly created demand for organic food. However, scholars have revealed the power of organic food as an immune booster and such cases in cancer patients (Armin et al., 2013). These medical research advancements might enhance the demand for organic foods by shaping consumer behavior without pesticides, hormones, fertilizers, antibiotics, additives, and genetically modified organisms to prevent health hazards. Gould (1998) introduced a measurement scale of health consciousness under four main dimensions; (a) health self- consciousness, (b) health involvement, (c) health alertness, and (d) health self-monitoring.

### ***2.4 Premium price for organic food***

Kotler (2005) defines price as the amount of money charged for a product or service, or simply the value perceived by the consumer (Kotler, 2005). In general, a premium price is a significantly higher price when compared to competing homogeneous products, and setting a premium price demonstrates to customers the value and quality of a product. Commonly, organic food exhibits a premium price when compared to traditional foods. According to Hamari et al. (2020), a premium price can be charged when the customer perceives better value from the marketing offer than competitive offers. According to Toni et al. (2017), the premium pricing strategy provides more value to the organization than setting discounts to lower the price and enhance sales. Even though some scholars point out that the majority of consumers are willing to pay a premium price, Suh et al. (2015) argue that the willingness to pay a premium for organic products would not exhibit green purchasing

behavior. Accordingly, the scholar explained the existence of a consumer segment with price sensitivity. Engel (2008) pointed out that within the South African market, the organic food sector is an immature market due to its low level of knowledge, low demand, and lower acceptance of premium pricing. Therefore, within some market places, premium pricing may negatively impact on the growth of the organic market and indirectly indicate the ability of the premium price to hinder the demand for organic food. According to Pawlewicz (2020), health consciousness perception might hinder the premium price, as the tendency of the younger population towards organic food is considerably higher (Santosa, 2020).

### ***2.5 Green purchase intention***

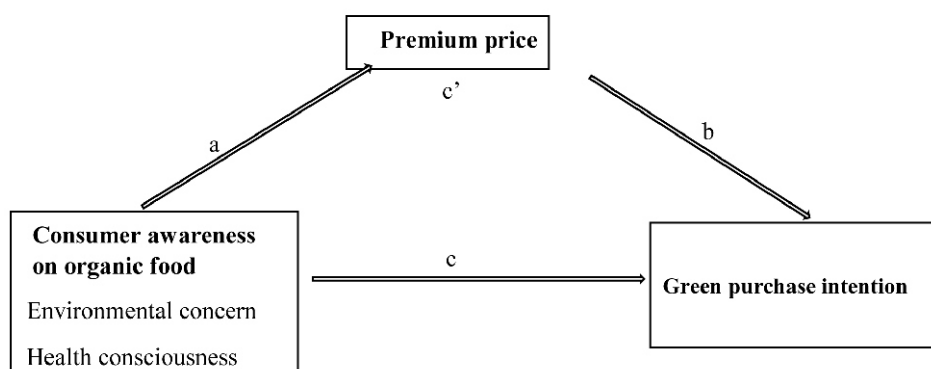
The intention of purchasing a product or service that is less harmful and hazardous to the environment is referred to as "green purchase intention." However, consumers' purchase intentions for organic food and green products might depend on different factors. Assarut & Srisuphaolarn (2010) pointed out, after environmental consciousness and obtaining green knowledge, the ultimate step is the green purchase intention of consumers, where the intention is a key persuasive predictor of green purchase behavior of consumers. In a situation where consumers are more concerned about environmental issues, they are willing to purchase green products that are less harmful to the environment (Joshi & Rahman, 2015). Based on the theory of planned behavior (Ajzen, 1991), purchase intention plays a vital role in ascertaining the actual buying behavior of the consumer as well as how the consumer's intention applies to creating marketing mix strategies. Environmental issues could lead to environmental damage and pollution (Chen, 2011), therefore highlighting the consumer perception of greener products. Moreover, scholars revealed that awareness has a direct impact on the purchasing behavior of green products and is especially evident for environmental concern and health consciousness (Abdulsahib et al., 2019). Herein the consumer awareness towards buying organic products would impact on the purchase intention of the consumers (Kaur & Bhatia, 2018). Consumer awareness and trust support in improving customer intention (Hariyanto, 2017). Scholars have pointed out the key antecedents behind consumer purchase intention, as such, the relationship between the predictors of consumer purchase intention and organic food (Smith & Paladino, 2010; Bai et al., 2019).

Scholars stated that understanding the benefits of green products might enhance the willingness to purchase green and organic food (Manveer & Ambika, 2018). And health consciousness, environmental concern, appearance consciousness, perceived

consumer behavior control, organic product buying attitude, and past experiences with organic food could be identified as the main factors. Further, the demand for green products could increase with the growing awareness of health issues, food safety, and environmental consciousness. According to Basha et al. (2015), consumer awareness and knowledge can be used to change the attitude and consumer behavior of organic food and revealed that a valuable adaptation of green awareness will influence green purchase intention (Ayodele et al., 2017). In addition, (a) customer satisfaction, (b) environmental protection, (c) consumer awareness, and (d) consumer behavior would all be positively influenced in shaping purchase intention (Zainab et al., 2017). In practice, the premium price has been deemed as one of the main reasons for negative purchase intention, but it could be a sign of the product quality. Suh et al. (2015) stated the quality signature could be responsible for setting a premium price and impact positively on the green purchase intention of organic food. Joshi & Rahman (2015) argued that consumer attitude and ecological motive have a significant positive impact on the green purchase intention of organic food, and Puspitasari et al. (2018) pointed out a positive linkage between ecological concern and green consumer purchase intention. Hoque et al. (2018) expressed views that health consciousness might not adequately predict purchase intention, but environmental concern, health consciousness, safety and quality concerns, and other factors would be vital.

Therefore, the conceptual model has been developed refer to the literature review and depicted in Figure 01.

**Figure No 1: Conceptual model**



*Source: Conceptual model developed based on the literature review*

### 3. Research method

As for the research method, a mixed research design is used, to combine the elements of qualitative and quantitative research approaches. The study is based on mainly primary data collection by catering to organic food consumers. Due to a lack of statistics for organic food consumers within the local context, the economically active population of Sri Lanka has been taken as the population. Herein, the population whose age is over 15 years would be assumed to have the financial capacity and independent decision-making ability. The western province has been taken as the sample due to a) the most economically active population (DCS, 2012), and b) the highest food consumption expenditure and the highest average income in Sri Lanka (DCS, 2016). The sample size was 384 and calculated based on the confidence level of 95% and the margin of error of 5% (Cohen, 1988).

A multi-stage sampling technique was used to select the sample. As the initial stage, the Western Province was selected as the population. Colombo, Gampaha, and Kaluthara districts were identified under the Western Province as the second stage. In the third stage, the sample size was divided proportionately to the economically active population among Colombo, Gampaha, and Kaluthara districts. Finally, data has been collected from the organic food outlets within 3 districts located in the Western Province; Good Market, Keells Super, and Arpico outlets, and the sampling unit was the organic food consumption. As for data collection methods, a survey was conducted for the quantitative analysis, and interviews were conducted for the qualitative analysis. A self-administered written questionnaire was distributed among the selected respondents. Semi-structured interviews were prepared with interview guidelines and the opinions of the interviewee were recorded. Secondary data were gathered from the good market and the Gannoruwa National Agriculture Information & Communication Centre.

A planned study conducted with a small group of participants on a small scale refers to a pilot study. In this study, a pilot test was conducted to check the validity and reliability of the questionnaire with 30 respondents from the selected locations, and a Cronbach's Alpha reliability test was conducted to check the validity and reliability. For quantitative data analysis techniques, multiple linear regression was used for impact assessment, and to check the mediation effect of the premium price, the Baron and Kenny model and Sobel test were used. SPSS software, Microsoft Excel, and the online Sobel Calculator were used as the data analysis tools. As a qualitative data analysis method, thematic analysis was used.

**3.1 Multiple regression analysis:** Multiple regression analysis is designed to measure the hypothetical, predictive, and linear relationships between one dependent and two other independent variables to predict the strength and direction of the relationship (Shiu et al., 2009). The regression equation is  $Y = a + BIX$ , where  $y$  is the dependent variable,  $a$  is constant,  $B$  is the slope of the regression line, and  $X$  is the independent variable. The researcher conducted multiple regression analyses to determine the most influential consumer awareness factor impacting on green purchase intention of organic food.

### **3.2 Baron and Kenny model:**

Adopting the Baron-Kenny model (1986) to address the objective of the study, which is to determine the extent to which consumer awareness of organic food impacts green purchase with the mediation effect of the premium price. Table 01 depicts the mediating analysis.

**Table No 1: Regression equation for each path**

| Regression Equation                                                                                               | Path    |
|-------------------------------------------------------------------------------------------------------------------|---------|
| $GPI = \beta_0 + \beta_1 CA + \varepsilon$                                                                        | c path  |
| $PP = \beta_0 + \beta_1 CA + \varepsilon$                                                                         | a path  |
| $PP = \beta_0 + \beta_1 GPI + \varepsilon$                                                                        | b path  |
| $GPI = \beta_0 + \beta_1 CA + \beta_2 PP + \varepsilon$                                                           | c' path |
| <b><i>GPI</i></b> Green Purchase Intention , <b><i>PP</i></b> Premium Price, <b><i>CA</i></b> Consumer Awareness, |         |
| <b><i>β0</i></b> Intercepts , <b><i>β1, β2</i></b> Slopes , <b><i>ε</i></b> Standard Error                        |         |

**3.3 Sobel test:** Adopted the Sobel test to identify whether the mediator carries the impact of an independent variable to a dependent variable with  $S_{ab} = \sqrt{(Sb.a)^2 + (Sa.b)^2}$

***Sb*** : Standard error of path b,      ***Sa*** : Standard error of path a,

***A*** : Coefficient of path a,      ***b*** : coefficient of path b

### **3.4 Thematic analysis:**

This is performed to analyze the qualitative data. Thematic analysis refers to the iterative process of mapping the most essential themes in data from a messy data set. This analysis is used to ascertain the consumers' expectations behind the purchase intention of organic food.

## 4. Results and Discussion

To check the reliability and validity, Cronbach's Alpha was tested and stated as 0.964, which is above the accepted ratio of 0.7. It indicates that there is excellent internal consistency among the items used in the study.

### 4.1 Multiple Regression Analysis

The regression equation is  $Y = a + B_1X$ , where y is the level of green purchase intention, a is constant, B is the slope of the regression line, X is the consumer awareness. The model summary is depicted in Table 02.

**Table No 2: Model summary and ANOVA table**

|            | R square | Adjusted A Square | Standard error of estimates |
|------------|----------|-------------------|-----------------------------|
|            | 0.691    | 0.477             | 0.474                       |
| Model      | DF       | Mean Square       | F value                     |
| Regression | 2        | 17.968            | 135.564                     |
| Residual   | 297      | 0.133             | 0.000                       |
| Total      | 299      |                   |                             |

Source: Analytical results from SPSS

According to the model summary (Table 02), the coefficient of determination (0.477). The adjusted R Square (0.474), explain approximately 47% of the variation in green purchase intention has been explained by health consciousness and environmental concern. Meanwhile, the remaining 53% variation could be explained by other factors that have not been addressed by the model. ANOVA describes the overall significant level between the variables, and accordingly, the independent variables are correlated at a significant level with the dependent variable, due to model significance. Therefore, findings reveal the model is statistically significant and all independent variables, and according to Table 03, the regression equation has been developed.

**Table No 3: Coefficient table**

| Variable      | B<br>(unstandardized coefficient) | Standard error | $\beta$<br>(standardized coefficient) | T-value | P-value |
|---------------|-----------------------------------|----------------|---------------------------------------|---------|---------|
| Environmental | 1.225                             | 0.163          | -                                     | 7.516   | 0.000   |

|                      |       |       |       |       |       |
|----------------------|-------|-------|-------|-------|-------|
| concern              | 0.273 | 0.049 | 0.288 | 5.547 | 0.000 |
| Health Consciousness | 0.388 | 0.042 | 0.480 | 9.242 | 0.000 |

Source: Analytical results from SPSS

$$Y = 1.225 + 0.273 X_1 + 0.388 X_2 + \varepsilon$$

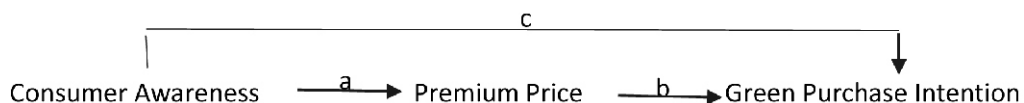
Y = Level of green purchase intention      a = Constant level of green purchase intention

X<sub>1</sub> = Environmental concern      X<sub>2</sub> = Health Consciousness      ε = Error term

From the findings (Table 3), if the health consciousness and environmental concern remain constant, green purchase intention would be 1.225 and, beta values for environmental concern and health consciousness are 0.273 (B) and 0.388 (B) respectively. Explains both environmental concern and health consciousness positively influence over green purchase intention, and the strength of the influences at a weak level, and the most influencing variable is health consciousness.

#### 4.2 Mediator Analysis – Barron and Kenny model

Mediation is the hypothesized causal chain in which one variable affects a second variable that, in turn, affects a third variable. According to the conceptual model, the premium price is the mediator that mediates the relationship between a predictor, consumer awareness, and green purchase intention. Herein, paths “a” and “b” are direct effects, and consumer awareness leads to green purchase intention through premium price, which is the indirect effect. Baron and Kenny proposed a four-step approach in which several regression analyses are conducted and the significance of the coefficients is examined at each step. A direct effect between consumer awareness and green purchase intention is observed by path “c”.



Step 1: Simple regression analysis with consumer awareness predicting green purchase intention to test for path “c” alone,  $Y = B_1X_1 + \varepsilon$  (see Table 04)

**Table No 4: Step 1**

**Table No 4: Step 1**

| Variable           | B(unstandardized coefficient) | Standard error | $\beta$ (standardized coefficient) | P-value        |
|--------------------|-------------------------------|----------------|------------------------------------|----------------|
| Consumer awareness | 1.161<br>0.674                | 0.164<br>0.042 | -<br>0.680                         | 0.000<br>0.000 |

Source: Analytical results from SPSS

Relationship between consumer awareness and green purchase intention is significant and the regression equation for the path “c” can be derived as follows;  $GPI = 1.161 + 0.674 CA + \varepsilon$

*Step 2: Simple regression analysis with consumer awareness predicting premium price to test for path “a”,  $Y = B1X1 + e$  (see Table 05).*

**Table No 5: Step 2**

| Variable           | B(unstandardized coefficient) | Standard error | $\beta$ (standardized coefficient) | P-value        |
|--------------------|-------------------------------|----------------|------------------------------------|----------------|
| Consumer awareness | 1.404<br>0.547                | 0.213<br>0.055 | -<br>0.501                         | 0.000<br>0.000 |

Source: Analytical results from SPSS

Denoted that there is a significant relationship between consumer awareness and premium price and regression equation for path “a” is as follows;  $PP = 1.404 + 0.547 CA + \varepsilon$

*Step 3: Simple regression analysis with premium price predicting green purchase intention to test the significance of path “b” alone,  $Y = B1X1 + e$  (see Table 06)*

**Table No 6: Step 3**

| Variable           | B(unstandardized coefficient) | Standard error | $\beta$ (standardized coefficient) | P-value        |
|--------------------|-------------------------------|----------------|------------------------------------|----------------|
| Consumer awareness | 2.242<br>0.432                | 0.164<br>0.046 | -<br>0.475                         | 0.000<br>0.000 |

Source: Analytical results from SPSS

The relationship between premium price and green purchase intention is significant at 0.000 and the equation for path “b” is as follows;  $GPI = 2.242 + 0.432PP + \epsilon$

It is established that zero-order relationships among the variables exist and possible or likely to observe a mediation impact between consumer awareness and green purchase intention, and according to Baron and Kenny mediation model “c” path is significant.

Step 4: Multiple regression analysis with consumer awareness and premium price predicting green purchase intention,  $Y = B_0 + B_1X_1 + B_2X_2 + e$  (see Table 07)

**Table No 7: Step 4**

| Variable  | B(unstandardized coeff.) | Standard error | $\beta$ (standardized coeff.) | P-value |
|-----------|--------------------------|----------------|-------------------------------|---------|
| Consumer  | 0.937                    | 0.171          | -                             | 0.000   |
| awareness | 0.585                    | 0.048          | 0.590                         | 0.000   |
| Premium   | 0.164                    | 0.044          | 0.180                         | 0.000   |
| price     |                          |                |                               |         |

Source: Analytical results from SPSS

Multiple regression weighted on both independent and dependent variables together when predicting premium price (c’ path) is significant, and significant difference between unstandardized coefficients of C path and C’ path amounting to  $B = 0.089$

**C’ path  $\longrightarrow GPI = 0.931 + 0.585CA + 0.164 PP + \epsilon$**

**C path  $\longrightarrow GPI = 1.161 + 0.674CA + \epsilon$**

Accordingly the relationship between consumer awareness and green purchase intention is partially mediated by the premium price.

#### **4.3 Sobel Test**

Calculate the critical ratio as a test of whether the indirect effect of the independent variable (consumer awareness) on the dependent variable (green purchase intention) through the mediator (premium price) through the calculator or equation  $S_{ab} = \sqrt{(Sb.a)^2 + (Sa.b)^2}$   $a = 0.547$ ,  $b = 0.432$ ,  $S_a = 0.055$ ,  $S_b = 0.046$

Accordingly, the indirect effect ( $a*b$ ) is equals to 0.236304 and SE is 0.03460728, then Z value (Indirect effect/ Sobel’s value) which is equals to 6.82815866.

**Figure No 2: Using Sobel test calculator**

| Input: |       | Test statistic:          | Std. Error: | p-value: |
|--------|-------|--------------------------|-------------|----------|
| a      | 0.547 | Sobel test: 6.82815866   | 0.03460728  | 0        |
| b      | 0.432 | Aroian test: 6.80998497  | 0.03469964  | 0        |
| $s_a$  | 0.055 | Goodman test: 6.84647863 | 0.03451468  | 0        |
| $s_b$  | 0.046 | Reset all                | Calculate   |          |

Source: <http://quantpsy.org/sobel/sobel.htm>

$Z = 6.82815866$ , P value = 0.0000, Standardized indirect effect ( $\beta_a \beta_b$ ) = 0.237975,  $M = (c - c')/c = 0.13205$

Therefore 13.21% controllability is established by the premium price when mediating between consumer awareness and green purchase intention.

### Qualitative Approach - Thematic Analysis

Thematic analysis has been performed to assess the qualitative aspects of purchasing organic foods. Accordingly, the summary of themes has been illustrated and main findings as narrations provided (see Table 8).

**Table No 8: Summary of the Themes**

| Parent theme                        | Child themes                                                                                  |
|-------------------------------------|-----------------------------------------------------------------------------------------------|
| Objectives of organic food purchase | Health and nutritional concern<br>Environmental concern<br>Taste & Freshness<br>Social status |

Source: personal interviews

Child theme 1: Health and nutritional concern: According to the given responses 90% of respondents' expectation behind the purchase of organic food is healthiness and nutrients considerations.

*"I try to purchase organic foods whenever I can as I concern more on my family health. So, this leads to a nutritious diet. I usually purchase organic fruits and vegetables as conventional vegetables and fruits contain many chemicals and fertilizers in their process. Organic food assures the food quality and food safety through certifications"*

*[Respondent No.1, Personal Interview 2019]*

*“I used to purchase organic food for 2 years from Good Market. Organic food helps us to prevent from diseases and have a healthy family to contribute towards a healthy generation. If I want something which is not available within the outlet I’ll let the staff know about it. They try their best to make available the organic food and other organic items according to their capacity”*

*[Respondent No.3, Personal Interview 2019]*

*Child theme 2: Environmental concern: half of the respondents have been highlighted the environmental concern as organic food consumption will protect the environment.*

*“I used to buy organic food as it indirectly contributes to environmental protection while being healthy. Because the organic food manufacturing process is free from chemicals, fertilizers, etc. At the same time, I prefer organic food like green products”*

*[Respondent No. 5, Personal Interview 2019]*

*“Organic food provides an opportunity to have a nutritious diet while contributing to protecting the environment and gives a value to the local resources while contributing to the sustainability of the country”*

*[Respondent No. 8, Personal Interview 2019]*

*Child theme 3: Taste and freshness: few respondents expressed the freshness and taste of organic foods.*

*“Organic food has a different taste that is different from conventional food. It does not have a preservative taste and able to feel the freshness” [Respondent No. 7, Personal Interview 2019]*

*“Organic foods do not feel an artificial taste when consuming organic food. It has a natural taste and able to feel the newness”*

*[Respondent No. 4, Personal Interview 2019]*

*Child theme 4: Social status: some respondents perceive the social status as a key perception of the purchase intention.*

*“Organic food is relatively having a higher price and there are very few customers within the outlet. Same time the availability is very less across the country, I feel it shows a kind of social status. However, the main aim of purchasing organic food is having a healthy life”*

*[Respondent No. 9, Personal Interview 2019]*

*“I usually purchase organic products and I know that it is not that affordable for all customers. So, purchasing organic food feel me a kind of social status”*

*[Respondent No. 5, Personal Interview 2019]*

As a summary, health and nutritional concern and environmental concern are the key factors that drive towards the purchase intention of organic food, while taste & freshness and social status can be identified as other objectives behind the purchase intention.

The first objective of the study is to ascertain the consumers’ expectations behind the purchase intention of organic food. The researcher identified four objectives of organic food purchase under the sub themes: health and nutritional concern, environmental concern, taste & freshness, and social status. Bravo et al. (2013) have identified different motives which encourage organic food consumption in Germany. Quah & Tan (2009) revealed that health conscious people regularly prefer to buy healthier food such as organic food and modern consumers’ purchasing decisions show a significant concern about environmental resource problems and their impact (Yue et al., 2020). Therefore, it can be identified that health and nutritional concern and environmental concern are the key factors driving the purchase intention of organic food.

It can be concluded that premium price partially mediates the relationship between consumer awareness and green purchase intention. According to Chrysosoidis & Krystallis (2005), regarding the willingness to pay for organic food, it was revealed that green purchase intention is determined based on environmental concern, health consciousness, safety and quality concern, and other factors (price, nutritional value, and organic certification). As environmental concern and health consciousness are two major determinants of consumer awareness, it can be stated that consumer awareness of organic food and purchase intention for organic food is partially mediated by the price.

Accordingly, health consciousness has been identified as the most influential consumer awareness factor. Brouwer & Mosak (2015) found that healthy eaters tend to purchase healthy and nutritious food items. Thus, the most influential consumer awareness factor impacting on green purchase intention of organic food is health consciousness.

## **5. Conclusion**

Healthy life and quality food pattern have become one of the priorities of the modern consumer, regardless of other marketing efforts. Therefore, this paper attempts to assess the impact of consumer awareness regarding organic food on green purchase intention and tests the mediating effect of the premium price. The research gap has been identified, objectives developed, primary data collected, and followed a mixed research approach. The sample has been drawn systematically from the western province and the data was gathered through a survey and interview method. As analysis methods, impact is assessed by regression analysis, mediation is assessed through the Barron-Kenny model and the Sobel test. Multiple regression revealed that both environmental concern and health consciousness have a positive influence on green purchase intention, and that health consciousness is the most influential consumer awareness factor that impacts on green purchase intention of organic foods. Further, the relationship between consumer awareness and green purchase intention is partially mediated by the premium price, but the effect is very low at 13.21%, as estimated by the Sobel test. From the thematic analysis, main sub themes were identified as (a) health and nutritional concern, (b) environmental concern, (c) taste & freshness, and (d) social status in relation to the purchase intention of organic foods. Among them, health and nutritional concern and environmental concern pay the key role as the main drives towards the purchase intention of organic food.

The paper reveals the relationship between consumer awareness of green purchase intention is partially mediated by the premium price of the organic food within the local market as the knowledge contribution.

### ***5.1 Recommendations and Implications***

The findings revealed the relationship between consumer awareness and green purchase intention of organic foods is partially mediated by the premium price within the Sri Lankan context. Therefore, the following key recommendations could be proposed,

- The availability of “real organic food” is questionable by many respondents and excessive demand was observed compared to the supply. Therefore domestic and international market demand can be fulfilled by popularizing the organic foods by focusing the health consciousness
- Introduce certifications for organic food quality to build trust among consumers to enhance the perception of “premium price-premium quality”
- Public relations to enhance consumer awareness of the quality and healthy life through consuming the organic produce
- Promotional campaigns via social media marketing to enhance consumer awareness., specially targeting the youth generation
- Marketing offer as a “differentiated organic food” with innovative methods and process, therefore the premium price mediation might reduce
- A wide distribution of the retail organic food outlets throughout the country; such as outlets of Good market and main supermarket chains
- Collaborative programs with the Agriculture Department to aware farming community about the novel methods, process, and other extension programs on organic produce

Study contributes significant implications for theory, practitioners and policymakers. It basically provides implications to the theory through contributing towards green marketing literature. Next, the study provides valuable implications to the practitioners by providing guidelines to understand consumer awareness and the relative importance of the premium price which leads to design strategies on organic food marketing. Further, the study will elaborate the most influencing determinants of consumer awareness of organic food in Sri Lanka which helps the policymakers, and marketing planners to design and initiate their awareness activities to widen the customer base and plan future strategies.

## ***5.2 Limitations and Directions for future research***

Generalizability is one of the key limitations of the study as it was carried in the Western Province. Hence, findings may not be represented the purchase intention of whole country. Thus, the future studies could be conducted by covering consumer segments all through the country to get a holistic picture of the concepts. At the same time findings will change along with different demographic factors, cultures and religions within the country is another limitation. Further, directions such as the demand-side factors: barriers hindering the purchase intention of organic food, and, supply-side factors: farmers' perception of organic produce and marketing could be highlighted.

The authors declare that there is no conflict of interest for this work.

## References:

- Abdulsahib, J. S., Eneizan, B., & Alabboodi, A. S. (2019). Environmental Concern, Health Consciousness and Purchase Intention of Green Products: An Application of Extended Theory of Planned Behavior. *The Journal of Social Sciences Research*, 5(4), 868-880.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Alibeli, M., & White, N. (2011). The Structure of Environmental Concern . *International Journal of Business and Social Science*, 2(4), 1-8.
- Ansar, N. (2013). Impact of Green Marketing on Consumer Purchase Intention . *Mediterranean Journal of Social Sciences*, 4(11).
- Armin , S., Chin, W., & Neda, N. (2013). Factors influencing on purchasing behavior of green food. *Journals of Human and Social Science Research* , 1(2), 93-104.
- Assarut, N., & Srisuphaolarn, P. (2010). Determinants of green product purchase intentions: The roles of environmental consciousness and product attributes. *Chulalongkorn Business Review*, 32(1), 108-122.
- Ayodele, A. A., Panama, A. E., & Akemu, E. (2017). Green Awareness and Consumer Purchase Intention of Environmentally-Friendly Electrical Products in Anambra Environmentally-Friendly Electrical Products in Anambra, Nigeria. *Journal of Economics and Sustainable Development*, 8(22), 98-112.
- Bai, L., Wang, M., & Gong, S. (2019). Understanding the Antecedents of Organic Food Purchases: The Important Roles of Beliefs, Subjective Norms, and Identity Expressiveness. *Sustainability*, 11(11), 3045.
- Basha, M. B., Mason, C., Shamsudin, M. F., Hussain , H. I., & Salem, M. A. (2015). Consumers Attitude Towards Organic Food. *Procedia Economics and Finance*, 31, 444-452.
- Berglund, T., Gericke, N., Pauw, J. B., Olsson, D., & Chang, T. (2020). A cross-cultural comparative study of sustainability consciousness between students in Taiwan and Sweden. *Environment, Development and Sustainability*, 22, 6287-6313.
- Bravo, C. P., Cordts, A., Schulze-Ehlers, B., & Spiller, A. (2013). Assessing Determinants of Organic Food Consumption Using Data from the German National Nutrition Survey II. *Food Quality and Preference*, 28(1), 60-70.
- Brouwer, A. M., & Mosak, K. E. (2015). Expanding the theory of planned behavior to predict healthy eating behaviors . *Nutrition & Food Science*, 45(1), 39-53.
- Chen, & chai. (2010). Attitude towards environmental and green products: consumer perspective . *Management Science and Engineering* , 4(2), 27-39.

- Cherian, J., & Jacob, J. (2012). Green marketing: A study of consumers attitude towards environemnt- friendly products .Asian Social Science , 8(12), 117-126.
- Cohen , J. (1988). Statistical Power Analysis for the Behavioral Sciences (Second Edition ed.). New York : Lawrence Erlbaum Associates, publishers .
- Curvelo, I. C., Watanabe, E. A., & Alfinito, S. (n.d.). Purchase intention of organic food under the influence of attributes, consumer trust and perceived value.
- Darian, J., & Tucci, L. (2011). Perceived health benefits and food purchasing decisions. *Journal of consumer maarketing*, 28(6), 421-428.
- DCS. (2012). Census of Population and Housing. Colombo: Department of Census and Statistics .
- DCS. (2016). Household Income and Expenditure Survey . Colombo: Department of Census and Statistics .
- Gould, S. (1988). Consumer Attitudes toward Health and Healthcare: A Differential Perspective. *Journal of Consumer Affairs* , 22(1), 96-118.
- Hamazaoui , E. L., & Zahaf, M. (2008). Decision making process of community organic food consumers: an exploratory study. *Journal of Consumer Marketing*, 25(2), 95-104.
- Hansmann, R., Baur, I., & Binder , C. R. (2020). Increasing organic food consumption: An integrating model of drivers and barriers. *Journal of Cleaner Production*, 275, 371-384.
- Hapuarachchi, R. (2016). Impact of health consciousness and environmental concern on attitudes and purchase intention: The organicc food market in Sri Lanka. (10), 101.
- Hariyanto , O. (2017). Green awareness and purchase intention for organic products. The 2nd Annual Applied Science and Engineering Conference (10), 1-5.
- Hoque, M. Z., Alam, M. N., & Nahid, K. A. (2018). Health Consciousness and Its Effect on Perceived Knowledge, and Belief in the Purchase Intent of Liquid Milk: Consumer Insights from an Emerging Market. *Foods*, 7(9), 150.
- Ismael, D., & Ploeger, A. (2020). The Potential Influence of Organic Food Consumption and Intention-Behavior Gap on Consumers' Subjective Wellbeing. *Foods*, 9(5), 1-20.
- Joshi, Y., & Rahman, Z. (2015). Factors Affecting Green Purchase Behaviour and Future Research Directions. *International Strategic Management Review*, 3(1-2), 128-143.

- Kanianska, R. (2016). Agriculture and Its Impact on Land - Use, Environment, and Ecosystem Services. *Landscape ecology-The influences of land use and anthropogenic impacts of landscape creation.*
- Kapuge , K. D. (2015). Dterminants of Organic Food Buying Behavior: Special Reference to Organic Food Purchase Intention of Sri Lankan Customers. *Procedia Food Science* , 6, 303-308.
- Kaur, M., & Bhatia, A. (2018). The impact of consumer awareness on buying behavior of green products . *International Journal of Scientific Reserach and Management* , 06(04), 250-255.
- Kim , M. J., Kim , C. K., & Kim, J. M. (2013). Relationships between lifestyle of health and sustainability and healthy food choices for seniors. *International Jouranla of Contemporary Hospitality Management* , 25(4), 558-576.
- Knight, K. W., & Messer, B. L. (2012). Environmental Concern in Cross-National Perspective: The Effects of Affluence, Environmental Degradation, and World Society. *Social Science Quarterly*, 93(2), 521-537.
- Kotler, P. (2005). *Marketing Management* (12 ed.). New Delhi: Prentice-Hall of India.
- Krystallis, A., & Chryssochoidis, G. M. (2005). Consumers' Willingness to Pay for Organic Food: Factors That Affect It and Variation per Organic Product Type. *British Food Journal*, 107(5), 320-343.
- Kurugala, D. G. (2018, Novemeber 05). Organic Foods. Do we eat real organic foods.
- Manveer, K., & Ambika, B. (2018). The impact of Consumer Awareness on buying behavior of green products. *International Journal of Scientific Research and Management*, 6(4), 250-255.
- Mie, A., Andersen, H. R., Gunnarsson , S., Kahi, J., Kesse-Guyot, E., Rembiałkowska, E., . . . Grandjean, P. (2017). Human health implications of organic food and organic agriculture: a comprehensive review. *Environmental Health*, 16(1), 1-22.
- Mishal, A., Dubey, R., Gupta, O. K., & Luo, Z. (2017). Dynamics of environmental consciousness and green purchase behaviour: an empirical study. *International Journal of Climate Change Strategies and Management*, 9(5), 1756-8692.
- Neilsen. (2015). *Healthy Eating Trends Around the World.* nielseninsights .
- Neilsen. (2015). *Neilsen's Global Health and Wellness Report.* Neilson Global.
- Nicolopoulou-Stamati, C., Maipas, S., Kotampasi, C., Stamatis, P., & Hens, L. (2016). Chemical Pesticides and Human Health: The Urgent Need for a New Concept in Agriculture. *Frontiers in Public Health*, 4, 148.
- Omar, N. A., Nazri, M. A., Osman, L. H., & Ahmad, M. S. (2016). The effect of demographic factors on consumer intention to purchase organic products in the

- Klang Valley: An empirical study. *Malaysian Journal of Society and Space*, 12(2), 68-82.
- Pawlewicz, A. (2020). Change of Price Premiums Trend for Organic Food Products: The Example of the Polish Egg Market. *Agriculture*, 10(2), 1-22.
- Pu, B., Zhang, T., & Qiu, Y. (2020). The Relationship between Health Consciousness and Home-Based Exercise in China during the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*, 17(16), 1-18.
- Puspitasari, N. B., Rinawati, D. I., Suliantoro, H., & Sutrisno, B. D. (2018). The Effect of Green Purchase Intention Factors on The Environmental Friendly Detergent Product (Lerak). *E3S Web of Conferences*, 73, 1-5.
- Quah, S. H., & Tan, A. K. (2009). Consumer purchase decisions of organic food products: An ethnic analysis. *Journal of International Consumer Marketing*, 22(1), 47-58.
- Santosa, W. (2020). The Attitude of Young People Towards Environmental Issues and Green Products. *International Conference on Management, Accounting, and Economy (ICMAE 2020)*, 151, 143-147.
- Shafie, F. A., & Rennie, D. (2012). Consumer Perceptions towards Organic Food. *Procedia-Social and Behavioral Sciences*, 49, 360-367.
- Shiu, E., Hair, J., Bush, R., & Ortinau, D. (2009). *Marketing Research* (1st ed.). Berkshire: McGraw- Hill Education.
- Siriwardhana, Samaraweera, & Weligamage. (2017). Consumer Awareness and preference towards Sri Lankan Organic Food Industry. *AEXTJ Agricultural Extension Journal*, 1(4), 9-11.
- Smith, S., & Paladino, A. (2010). Eating clean and green? Investigating consumer motivations towards the purchase of organic food. *Australasian Marketing Journal*, 18(2), 93-104.
- Suh, B. W., Eves, A., & Lumbers, M. (2015). Developing a model of organic food choice behavior. *Social Behavior and Personality*, 43(2), 217-230.
- Tandon, A., Jabeen, F., Talwar, S., Sakashita, M., & Dhir, A. (2021). Facilitators and inhibitors of organic food buying behavior. *Food Quality and Preference*, 88, 1-14.
- Thomas, J. (2018). What Is the Meaning of Consumer Awareness? *Legal Beagle*.
- Toni, D. D., Milan, G. S., Saviloto, E. B., & Larentis, F. (2017). Pricing strategies and levels and their impact on corporate profitability. *Revista de Administração*, 52(2), 120-133.

- Vidanapathirana , R., & Wijesooriya , N. (2014). Export Market for Organic Food: Present Status, Constraints and Future Scope. Colombo: Hector Kobbekaduwa Agrarian Research and Training Institute.
- Vigar, V., Myers, S., Oliver, C., Arellano, J., Robinson, S., & Leifert, C. (2019). A Systematic Review of Organic Versus Conventional Food Consumption: Is There a Measurable Benefit on Human Health? *Nutrients*, 12(1), 1-32.
- Wang, X., Pacho, F., Liu, J., & Kajungiro, R. (2019). Factors Influencing Organic Food Purchase Intention. *Sustainability*, 11(1), 1-18.
- Weerasiri, & Maldeniya. (2016). Factors influencing on purchase intention of organic food products in Sri Lanka. *Proceedings of the 3rd International Conference on Trends*, 45.
- Willer, & Lernoud. (2019). The world Organic Agriculture Statistic and Emerging Trends 2019. Ackerstrasse: Technology Innovation Platform Platform of IFOAM- Organic International (TIPI).
- Yue, B., Sheng, G., She, S., & Xu, J. (2020). Impact of consumer environmental responsibility on green consumption behavior in China: The role of environmental concern and price sensitivity. *Sustainability*, 12, 2074.
- Zainab, A., Darakhshan , K., & Kiran. (2017). Factors Influence Consumer Purchase Intentions in Green Marketing. *Global Journal of Human Resource Management*, 5(2), 8-20.