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Consumer Buying Behavior of Organic Food with Respect to Health and Safety Concerns among Adolescents

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(Preliminary Draft)

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Abstract:

In the recent era, environmental protection has gained popularity and a paradigm shift has been observed in the consumer's dietary choices. The consumer start preferring organic foods, as they are considered as healthier and eco-friendly. The organic food consumption is widely increased in the developed countries but its adoption is still low in the developing country like Pakistan. Therefore, the purpose of this study is to examine the factors that affect the adolescent's intention to purchase organic foods in the context of Pakistan. For the purpose of the study, the data have been collected from 350 respondents and Partial Least Square Structural Equation Modeling (PLS-SEM) has been used for the analysis. The result shows that the variables ecological welfare, nutritional content, sensory appeal has a significant relationship with utilitarian and hedonic attitude. Whereas, natural content has a significant relationship with utilitarian attitude but has an insignificant relationship with hedonic attitude. On the contrary, price has a significant relationship with hedonic attitude but has an insignificant relationship with utilitarian attitude. Moreover, both the attitude (utilitarian and hedonic) has a significant relationship with consumer intention to buy organic foods. From the results, several implications can be derived for the marketers, policymakers, and the organic food retailers.

Keywords: *Organic Food Consumption, Utilitarian and Hedonic Attitude, Pakistan. PLS-SEM*

1. Introduction:

In today's era, the world is facing numerous challenges which includes destruction of natural ecosystems, increase of disease and environmental degradation (Rahnama, 2016; Yadav, 2016). Among numerous factors, the human consumption pattern is identified as one of the significant factor that contribute towards environmental degradation (Hertwich & Peter, 2009). The United Nations Millennium Development Goals (2010) emphasized on sustainable consumption in order to achieve the environmental sustainability (Marrakech Process Secretariat: UNEP, 2010). Considering the importance of environment for the survival of human being the concept of ethics in consumerism has prospered (Dowd & Burke, 2013) and considered as one of the mainstream issues (Carrington et al., 2010).

The previous literature evident that the human consumption includes abnormal and uncontrolled consumption of unnatural products, and this consumption creates various impacts on environment and thus grasp the attention of the researchers (Tobler et al., 2011; Yadav, 2016). Pino et al., (2012) stated that the environmental protection has gained popularity in recent times and a paradigm shift has been observed in the consumer's dietary choices. The consumers have start avoiding the traditionally grown foods and start preferring organic foods, as they are considered as healthier and eco-friendly (Williams & Hammitt, 2001; Rahma, 2016).

Organic foods are the food items which are free from artificial chemicals such as herbicides, antibiotics, fertilizers, pesticides and genetically modified organisms (Rana & Paul, 2017) and are not subjected to irradiation (Gad Mohsen & Dacko, 2013). It is considered healthy because it does not involve synthetic chemicals in the process of production (Suprpto & Wijaya, 2012). Grosplik, (2017) stated that organic food consumption is the symbol of ethical value system. In past literature organic food is explain my using different terminologies such as local, natural, pure and fresh (Rana & Paul, 2017).

Organic food market has rapidly increased in last few decades. In the year 1999, the sales were just 15.2\$ billion and it has been expended to 90\$ billion in the year 2016 (Statistica Website) and is expected to reach 320.5\$ billion by the year 2025 (Grand View Research, Inc). This expansion in the organic market is due to the individual concern about environmental protection and health (Bauer et al., 2013; Hwang, 2016) but also from their prioritization of various hedonic benefits of organic products (Cervellon & Carey, 2014; Hidalgo-Baz et al, 2017).

In literature, numerous factors have been identified that increases the demand of organic goods, Previous researchers have develop four type of organic food consumers (i) environmental concerned consumers (ii) food phobic consumers who are concerned about chemical residues in food (iii) humanists concerned with factory farming (iv) hedonist consumers who presumed that premium product are more better and taste better (Davies et al., 1995). The list of underlying dimensions that affect the individual willingness includes environmental concern (Stone, Barnes, & Montgomery, 1995; Riotner-Schobesberger et al., 2008); nutrition content (Magnusson et al., 2001; Hoefkens et al., 2009); price (Govindasamy & Italia, 1999; Magnusson et al., 2003); socially responsibility consumption (Antil & Bennet, 1979; Antil, 1984); health orientation (Gould, 1988; Moorman & Matulich, 1993); attitude (Davies et al., 1995; Chen, 2009), utilitarian and hedonic consumption patterns (Batra & Ahtola, 1991). Although the importance of these factors in shaping

the customers intention to purchase vary from one economy to economy (Bourn & Prescott, 2002). Most of the studies in the past has been done in the context of developed countries such as US, UK (Makatoun, 2002; Lockie et.al., 2002; Vittersø, & Tangeland, 2015) and in the context of developing countries such as China, Malaysia (Thøgersen, 2016; Yadav & Pathak, 2016) and very limitedly discuss in the context of Pakistan.

Pakistan is among one of the counties which has around 34209 hectares organic area and have 111 organic product producers area but contributes only 0.1% in overall organic industry (FiBL & IFOAM, Organics international, 2017). Similarly, the adoption of organic food consumption is quite low despite its benefits and highlights the potential of organic foods industry which can be further expanded. Thus, to take advantage of this organic food market it is of immense importance to identify those factors that affect the individual intention to buy organic foods. This study contributes to the literature in a number of ways. This study is the first attempt to investigate the factors that influences individual intention to purchase organic foods. This study contributes to the literature theoretically as well as methodologically. This study is the pioneer work in the context of Pakistan that examines the consumers' perceptions with respect to nutritional content, natural content, ecological welfare, sensory appeal, price on attitudes (utilitarian and hedonic) to purchase organic food. Second, this study modify the Stimulus–Organism–Response (S–O–R) (iii) this study examine the association by using the advance econometric technique i.e., PLS-SEM.

The layout of the study is as follows: section 2 explains the theoretical background and empirical studies. Section 3 explains the methodology, section 4 discusses the result and section 5 explains the conclusion and recommendation of the study.

2.1 Theoretical Background:

The Stimulus-Organism-Response (SOR) model is employed as the theoretical basis for this study. The model is given by Mehrabian & Russell (1974) and have three basic variables, i.e., Stimuli, organism, and response. Stimuli is considered as external to the individual, organism is the internal state arises from environmental stimuli. The final outcome is the response which is either the avoidance behavior or approach (Lee & Yun, 2015). As stated by Hempel and Hamm (2016) the model combines unobservable and observable factors. The stimuli are the observable variables while unobservable is what happens in the organism. The organic shapes the consumers attitudes and preference, the stimuli acts as an initiator which then transform behavior (Reodiger and Hamm, 2015). The consumer's physical and social environment influence unobservable factors which in return influence the stimulus evaluation and perception. Organism processes, each stimulus individually and act accordingly (Lee & Yun, 2015). In order to understand the consumers' purchase behavior the reasons that transforms stimuli into responses are important to understand (Armstrong et al., 2011).

This model ideally explains the idea underlying this study. On one hand, the stimulus are the features of organic foods (Ecological Welfare, Natural Content, Nutritional Content, Price, sensory appeals) organism is the utilitarian and hedonic attitudes and response is reflected as the consumer intention.

2.2 Hypothesis Development:

2.2.1 Ecological Welfare and Attitude:

Ecological Welfare can be defined as a concern related to the environment and the animal welfare (Weigel, 1983). In the context of organic food consumption several beliefs motives the consumer to purchase it and among which ecological welfare is the popular one (Davies et al., 1995). Makatouni (2002) stated that ecological welfare plays a significant role in shaping the consumer intention to purchase it. Lea and Worsley (2005) stated that in Australia consumers believe that organic foods are more environmentally compared to conventional foods. Padel and Foster (2005) stated that consumer purchase organic food because they consider it healthy, moreover, they further concluded that environmental protection is also a factor that shapes their attitude to purchase organic food. Honkanen *et al.* (2006) used the data of Norwegian consumers and reported that ecological welfare and attitude significantly influence the consumer intention to buy organic food. De-Magistris and Gracia (2008) reported that ecological welfare is one of the significant predictor that shapes the consumer attitude to buy organic food in Southern Italy. Tsakiridou et al., (2008) also identified ecological welfare as a driver of organic food consumption in Greek. Akaichi et al., (2012) argued environmental benefit is the important factor in explaining consumer attitudes to purchase organic foods. Xie et al., (2015) stated that the main driver that shapes the consumer attitude to buy organic foods is environmental benefits. Basha et al., (2015) study the factors that shape the consumer attitude to buy organic foods and identified environmental concern as one of the significant predictor. Higuchi and Avadi (2017) stated that in future environmental welfare is one of the factors that will shape the consumer attitude to buy organic foods. On the basis of the above discussion, the hypothesis of the study is:

H1: Ecological welfare has a significant relationship with hedonic attitude

H2: Ecological welfare has a significant influence utilitarian attitude

2.2.2: Natural Content and Attitude:

Natural content can be explained as a food that does not have artificial color or food additives. In the context of organic foods, the natural content is explained as food which has no chemical, pesticide-free no antibiotics, hormone-free (Essoussi & Zahaf, 2009). Lockie et al. (2002) reported that one of the primary reason among customers to buy organic foods is natural foods. Lockie et al. (2004) reported that naturalness' of food acts as a prime factor that motives consumer to buy organic foods. Beck, Kretzschmar and Schmid (2006) reported that the consumer preferred organic food over conventional foods because they perceived organic food more natural. Chen (2007) reported that natural content affects the customer attitude to buy organic foods in the context of Taiwan. Pieniak et al., (2009) concluded that natural conduct has a positive relationship with attitude towards traditional food consumption. Hsu et al., (2016) reported that natural content has a significant effect on consumer attitude to buy organic foods. Bryła (2015) uses the data do 1000 Polish consumers and reported that the preferences of organic food consumption depends on the natural taste. In another study by Bryła (2016), it is concluded that the natural taste is the key factor that shapes the preference of the organic foods. On the basis of the above discussion, the hypothesis of the study is:

H3: Natural content has a significant relationship with hedonic attitude

H4: Natural content has a significant influence utilitarian attitude

2.2.3 Nutritional Content and Attitude:

Nutritional content can be explained as the nutrients for e.g. Fat, protein, carbohydrate, vitamins etc. the organic foods contains. Wandel and Bugge's (1997) stated that nutritional value is one of the significant predictor in choice of fruits and vegetables. Kozup et al., (2003) stated that the consumer has a favorable attitude toward a product with nutrition information. Kihlberg and Risvik (2007) also reported that nutritional value acts as an important driver of organic food consumption. Hjelmar (2011) identified nutritional concerns as one of the significant factors that affect the consumer purchase intention towards organic foods. Tsakiridou et al., (2008) stated that in Greek consumer preference organic foods because of its nutritional content. Liu et al., (2013) reported that nutritional content is one of the reasons behind positive attitude towards organic foods in China. Paul and Rana (2012) argued that the organic food with good nutritional content is linked with its purchase. Liang (2016) reported that nutritional value has a positive effect on consumer attitude to buy organic foods. On the basis of the above discussion, the hypothesis of the study is:

H5: Nutritional content has a significant relationship with hedonic attitude

H6: Nutritional content has a significant influence utilitarian attitude

2.2.4 Price and Attitude:

Price is defined as the amount the consumer is willing to pay for a particular product. Magnusson et al., (2001) reported that price negatively influence the consumer positive attitude towards organic foods. Vindigni, et al., (2002) stated that premium is one of the significant factor that affects the organic food consumption among customers. Marian et al., (2014) reported that high price minimizes the organic food consumption compared to low and medium prices. Al-Swidi *et al.*, (2014) reported that price is one of the prime factor which the consumer consider while buying organic foods. Xie et al., (2014) concluded that one of the barrier towards organic food consumption among customers is price. Irianto (2015) reported that price does not affect the consumer attitude to buy organic foods. Chekima et al., (2016) reported that premium prices does influence the consumer intention to purchase green products. Aschemann-Witzel and Zielke (2017) identified price as one of the significant barrier that hinders the consumer attitude to buy organic foods. On the basis of the above discussion, the hypothesis of the study is:

H7: Price has a significant relationship with hedonic attitude

H8: Price content has a significant influence utilitarian attitude

2.2.5 Sensory Appeal and Attitude:

Sensory appeal is the attribute that is associated with the taste, appearance, and smell of food and have been considered as one of the significant predictor that affects the consumer choice (Steptoe et al., 1995). Magnusson et al., (2001) stated that sensory appeal is one of the significant

predictor while consumer purchasing organic food. Wandel and Bugge (1997) also reported that sensory appeal is one of the determinant that affect the consumer purchasing criteria towards organic coffee. Lockie et al., (2004) identified the motivation factors that affect the consumer choice to purchase organic food and identified sensory appeal, health, ethical and environmental concerns as the significant determinants. Januszewska et al. (2011) uses the Food Choice Questionnaire (FCQ) and reported that sensory appeal is one of the important determinant that affect the food choice in European consumers. Milošević et al., (2012) collected the data from six Western Balkan Countries (WBC) and reported that among several factors, sensory appeal is one of the most important factors that affects the consumer motivation to purchase food. Lee and Yun (2015) reported that the sensory appeal affects the consumer hedonic attitude to purchase organic foods. On the basis of the above discussion, the hypothesis of the study is:

H9: Sensory Appeal has a significant relationship with hedonic attitude

H10: Sensory Appeal has a significant influence utilitarian attitude

2.2. Attitude and Intention to Buy Organic foods:

Davis (1989) explained attitude as an individual feeling to perform the specific behavior and is dependent on the individual evaluations and beliefs. Ajzen (1991) reported that more the consumer attitude towards a behaviour the higher will be his/her attention to perform that behaviour. Holbrook and Hirschman (1982) and Batra and Ahtola (1990) stated that consumer attitude toward purchasing anything is made up of two components (i) hedonic (ii) utilitarian. Hedonic attitude is based on sensory experiences or emotional gratification related to a consumption object, whereas as Utilitarian attitude is task oriented and focus on need fulfilment aspect.

Magnusson et al., (2001) stated that if the consumer have a positive attitude towards organic foods the more will be their willingness to prefer organic foods over conventional foods. Tutunjian (2004) reported that attitude acts as one of the significant predictor that can be used to study the organic food behavior. Tarkiainen and Sundqvist (2005) explained that attitude is one of the factors that can be used to forecast consumers' intentions to purchase organic foods. Michaelidou and Hassan (2008) reported that there is positive relationship between the attitude and intention to buy organic foods. Pieniak, Aertsens, and Verbeke (2010) reported that attitude is one of the significant factors of organic food adoption. Cabuk et al., (2014) reported that there is a positive relationship between the attitude and intention to buy organic foods. They further reported that the attitude mediates the relationship between the motivational factors and intention to buy organic foods. Basha et al., (2015) stated that factors like environmental and health concern, subjective norms, lifestyle, and product shapes the consumer attitude which ultimately result in consumer intention to purchase organic foods. On the basis of the above discussion, the hypothesis of the study is:

H11: Hedonic attitude has a significant relationship with intention to buy organic food

H12: Utilitarian attitude has a significant relationship with intention to buy organic food

3. Methodology:

3.1 Measurement Instrument:

The hypotheses model of this study is depicted in figure 1 and the items of the proposed constructs are adapted from the previous literature. For this study, a 27-item questionnaire is developed and the questionnaire is chosen because it is one of the preferable ways of measuring variables that are not directly observed (Kaufmann et al., 2014). All the items of all the constructs are taken from Lee and Yun (2015). The respondents' feedback is assessed on a five-point Likert scale in which 1 means strongly disagree and 5 means strongly agree. The measurement items of the questionnaire are validated by the academician and industry expert to ensure the appropriateness.

- Insert Figure 1-

3.2 Participant and Sample Size:

After validation, the questionnaire is distributed by e-mail and in hard copy to 370 business university students. Out of 370, the usable sample was 350, the 20 responses are eliminated due to incomplete responses and missing data. The sample size is in accordance with the guidelines given by Raza and Hanif (2013), Comrey and Lee (2013), Ali et al., (2015), Raza et al., (2015), Ali et al., (2017) Sharif and Raza (2017) and Ali and Raza (2017) who consider the sample size of 50 as poor, 300 as good, 500 as very good and 1000 is considered as excellent for the purpose of factor analysis. Furthermore, each respondent participated voluntarily and also know about the objective of the study. Moreover, throughout the data collection process, the respondents are assured that the data will be kept confidential.

3.3 Demographic profile:

The demographic characteristics of the respondents are shown in table 1. The 55% of the sample is comprised of female and 45% of the sample is male and 88% of them lies in the age bracket of 18-25. Moreover, 63% of the respondents are the undergraduate students.

- Insert Table 1-

4. Data Analysis

The relationship between the variables have been analysed by applying PLS-SEM (partial least square – structural equation modelling) and the Smart-PLS software version 3.0 has been used. The PLS-SEM is preferred over other analysis technique is due to its multiple advantages. In comparison with other covariance technique it is less stringent (Ayob et al., 2017; Raza et al., 2017; Raza et al., 2018; Najmi et al., 2018; Ali et al., 2018). There is no simple size assumption and can work effectively even in small sample size (Hair et al., 2012). It can run even if there is multicollinearity between independent variables and the results are easier to interpret in comparison with other linear methods (Li & Zhong, 2017; Qazi et al., 2018; Raza et al., 2018).

PLS-SEM analysis involves two models i.e., measurement model and structural model. PLS-SEM allows to run both the models simultaneously but the models are access in stages. At first stage the measurement model is examined and then the structural model.

4.1 Measurement Model:

In measurement model the convergent validity and discriminant validity is tested (Chin, 1998). The convergent validity shows that theoretically similar variables should highly correlated with each other whereas the discriminant validity shows that theoretically different variables should show no or little correlation (Ayob et al, 2017, Raza et al., 2018). The convergent validity is assessed by looking at the values of (i) individual items reliability (ii) Cronbach's alpha (iii) composite reliability and (iv) Average variance extracted (AVE).

The reliability ensures the data validity (Nunnally, 1978), the cronbach's alpha and composite reliability confirms the data consistency and the AVE tells the change in factors. Table 2 depicts the result of measurement model and as seen from the table the individual items reliability of all the variables are greater than 0.55 satisfying the criteria given by Hair et al., (2014) and Ali et al. (2017). The Cronbach Alpha and composite value is greater than 0.7 which meets the criteria given by Nunally and Bernstein (1994) and Raza et al., (2018). The AVE column also shows the value greater than 0.5 thus meets the criteria given by Fornell and Larcker (1981) and Raza et al. (2017). Thus the above outcomes confirms that the model is convergently valid.

- *Insert Table 2-*

After the confirmation of convergent validity the discriminant validity is analyzed by looking at the values of (i) correlation matrix (ii) cross loading (iii) Heterotrait-monotrait ratio of correlations (HTMT). The correlation matrix stated that the square root of the AVE should be greater compared to the correlation with other latent factors (Fornell & Larcker, 1981). The diagonal part values should always be higher than the off diagonal values (Raza et al., 2018). Table 3 depicts the result of correlation matrix and shows that it satisfy the criteria of Fornell and Larcker (1981). Table 4 shows the result of cross-loading and as seen from the results all the variables are loaded in their relevant construct and have difference higher than 0.1, satisfying the criteria stated by Gefen and Straub (2005). Table 5 shows the result of HTMT and as seen from the result all the values are less than 0.85 thus meets the criteria given by Henseler et al. (2015). The above finding confirms the discriminant validity.

- *Insert Table 3-*

- *Insert Table 4-*

- *Insert Table 5-*

4.2 Structural Model:

As it is evident from the above discussion that the model is valid, so the hypothetical tests are performed by using the structural model. The path coefficient explains the association between the dependent and the independent variables, and R2 tells the explanatory power of the model. The result of structural model is displayed in table 6. Each path in the table represents one hypothesis

and the association between the variables are explained by looking at the coefficient value, size and prob value. The results confirms that out of 12 proposed hypothesis, 10 hypothesis are accepted.

- *Insert Table 6-*

The result shows that H₁ (Ecological Welfare has a significant influence on hedonic attitude) and H₂ (Ecological Welfare has a significant influence utilitarian attitude) is accepted as the path coefficient for H₁ and H₂ is significant ($\beta = 0.210$, $p < 0.01$), ($\beta = 0.073$, $p < 0.05$). The H₃ (Natural Content has a significant influence on hedonic attitude) is rejected as the path coefficient shows insignificant as well as negative association ($\beta = -0.006$, $P > 0.1$). Whereas the (Natural Content has a significant influence on Utilitarian attitude (H₄) is accepted because the path shows the significant association ($\beta = 0.221$, $P < 0.1$). both the hypothesis H₅ (Nutritional Content has a significant influence on hedonic attitude) and H₆ (Nutritional Content has a significant influence on Utilitarian attitude) is accepted as the path coefficient for H₅ and H₆ is significant ($\beta = 0.195$, $p < 0.05$), ($\beta = 0.464$, $p < 0.01$). The Price has a significant impact on hedonic attitude and Price has a significant impact on utilitarian attitude explains the H₇ and H₈ of the study. The result shows that H₇ is accepted ($\beta = 0.117$, $P < 0.05$) and H₈ is rejected ($\beta = 0.001$, $P > 0.1$). The H₉ and H₁₀ shows the association between the Sensory Appeal and hedonic attitude; Sensory Appeal and Utilitarian attitude respectively. Both the hypothesis are accepted as for H₉ ($\beta = 0.360$, $P < 0.01$) and H₁₀ ($\beta = 0.119$, $P < 0.05$). The last two hypothesis H₁₁ and H₁₂ depicts the impact of hedonic attitude and utilitarian attitude on intention to use organic goods. Both the hypothesis are accepted as path coefficient for H₁₁ ($b = 0.304$, $p < 0.01$) and H₁₂ ($b = 0.558$, $p < 0.01$) is significant.

The next evaluation criteria is the value of adjusted R² and as stated by Hair et al. (2011) the value of R² as 0.25 is considered weak, 0.50 as moderate and 0.70 as substantial. The adjusted R² value of this model is 0.541 indicates that the moderate amount of variance is explained by the independent variables for the dependent variable.

4.3 Discussion:

Overall, the result shows that all the constructs (ecological Welfare, Nutritional Content, Price, and Sensory Appeal) except, natural content are the significant predictors for hedonic attitude. In the case of utilitarian attitude all the construct expect price are the significant predictors.

The ecological welfare has a positive and significant relationship in developing hedonic attitude is confirmed with the study of Lee and Goudeau (2014). The reason behind this result is might be that the individual believe that using organic food is good for the human, earth and animal forms the positive feeling i.e., hedonic attitude. As stated by Aertsens *et al.*, (2009) and Elgaaied, (2012) that emotions and affective responses acts as the significant driver for the pro-environmental behavior so it can be concluded the ecological welfare directly influence hedonic attitude of an individual to use organic foods. The ecological welfare also found positive and significant association with utilitarian attitude. This is because once the consumer associate organic foods as environment friendly and animal welfare protected, this might develops functional and emotional values within the customer to buy organic foods and this

shapes its utilitarian attitude. The study of Lee and Yun (2015) also reported the same result related to ecological welfare and utilitarian attitude.

The nutritional content has a positive and significant relationship with utilitarian and hedonic attitude. The result is supported with the studies of Padel & Foster (2005) and Lee and Yun (2015). The result suggest that the evaluation of nutritional value shapes the customers utilitarian and hedonic attitudes to buy organic foods. As stated by Wertenbroc, Dhar and Khan (2005) that the food consumption is alternatively driven by utilitarian and hedonic values. Alba and Williams (2013) stated that the preference for organic products is explained by two consumption trends. The first time is hedonistic consumption in which the customer buy product for pleasure and in the second trend the customer buy organic product to gain health benefits such as nutritional content, quality, freshness etc.

The natural content has an insignificant and negative relationship with hedonic attitude but has a positive and significant and relationship with utilitarian attitude. The result affirms with the study of Pohjanheimo et al. (2010) who stated that factors like idealism, universalism are positively related to food natural ingredient (FNI) whereas hedonism is negatively linked with FNI. Thus, the result indicates that the individual belief that organic food is free from chemicals and contaminants may lead utilitarian attitude but doesn't shape utilitarian attitude to purchase organic foods.

Price has a positive and significant association with hedonic motivation whereas the association with utilitarian attitude is also positive but insignificant. The results supports by the study of Zander and Hamm (2010) and Batte et al., (2007). They argued that the consumers are willing to pay a higher price for organic food once they know about the benefits of organic products (Muhammad et al., 2015; Lim et al., 2014).

The sensory appeal is also has a significant and positive relationship with hedonic and utilitarian attitude. The result is supported by the study of Lee and Yun (2015); Zanolini & Naspetti, (2002). The outcome suggest that the sensory appeal shapes the customer attitude to buy organic foods as the organic food will give them pleasurable experience. Lockie et al, (2004) stated that organic food consumption is high in those consumers that have high sensory and emotional appeal.

The utilitarian and hedonic attitude both have a significant relationship with consumer intention to buy organic foods. The result is supported by the studies of Batra & Ahtola (1991); Lee and Goudeau (2014). The result shows that consumer first used cognitive reasoning to evaluate organic foods which develops their utilitarian attitudes and then these utilitarian give rise to hedonic attitude. It means that consumer first evaluate organic food with cognitive judgments and then evaluate the organic food emotionally. Thus, it is concluded that both the components of attitude plays an important role in organic food consumption.

5. Conclusion and Recommendations:

This study explores the factors that affect the organic food consumption in Pakistan by applying the SOR model. This study examined how the attributes such as ecological welfare, nutritional content, natural content, sensory appeal, and price lead attitudes and consumer intention to purchase organic food. Based on the investigation, the result shows that each attribute affects the

consumers' utilitarian and hedonic attitude differently. From the results, several implications can be derived for the marketers, policy makers and the organic food retailers.

It is of immense importance for the policy makers and marketers to understand consumers' psychological preferences for organic food over conventional food and adjust marketing strategies accordingly in order to increase the organic food consumption. Marketers should promote the safety and health benefits associated with organic foods by sharing scientific evidences. They should aware the customers that they have more nutritional benefits and contain less residual of chemical pesticides compared to conventional foods (Baranski et al., 2014). If the consumer perceived that the use of organic foods gives them more health and safety benefits, the more will be their willingness to use it.

Ecological motives are one of the significant predictor for organic food consumption, so the marketers should make consumers understand that organic foods are produced, packaged and label in such a manner the protect the environment and respect animal rights (Chen, 2011; Lockie et al., 2002). Because, as the consumer convinced that the organic foods adhered environmental protection, the more they may opt for organic foods. The markets should also develop those marketing strategies that promote the health benefits associated with organic foods because this builds consumer confidence in organic foods.

The retailers should also encourage the customers to purchase organic foods by explaining them the nutritional content the food contains and how consumption of this will help them to stay healthy and contributes in environmental protection. At grocery stores, the brochure containing organic food information should be available at point of sale. Moreover, the marketers should develop such advertisements for organic foods that emphasize the societal as well as the personal benefits of these products as it helps in shaping the consumers' intention to use it.

Sensory appeal also shapes the consumer organic food consumption, so grocery retailers at the point of purchase should provide cues for organic food for sensory evaluation. Such as the promotional stand or a sample product should be displayed which consumer can taste and taste. Because if the consumer is able to evaluate the sensory feature of the organic food as pleasant that most likely is their intention to buy organic foods. As stated by McCabe and Nowlis (2003), direct experience with a product plays a significant role in shaping consumers' purchase intention. As it is evident from the study that consumers are willing to pay high prices for organic foods. It is important for the retailers to understand in what scenarios the food retailers are willing to pay high prices.

Attitude one is one of the significant factors towards the long term success of organic foods. As stated by Aaker (1996) once consumer develop their attitude, it is very difficult to change it. The retailers and the markets should put considerable efforts. To develop the hedonic attitude the relators should use promotional messages which highlight that by purchasing organic food the customer can protect the environment and save animals as this eventually arouse a hedonic feeling. Another way to develop the hedonic feeling is to convince consumer that organic food consumption helps to improve their well-being for themselves and their family. To develop the utilitarian attitudes the retailer's should focus on the benefits of organic foods in advertisements, packaging, or leaflets. They should emphasize the level of vitamins, minerals, and antioxidants the

food contains. How this food is less harmful compared to conventional foods because all these measures will help in developing the positive attitude among consumers to buy organic foods.

5.1 Limitations and Future Recommendations:

This study provides managerial implications, but there are still some limitations that need to be acknowledged. In this study, we have considered potential factors that affect the consumer intention to purchase organic foods, but factors like values, personality traits, culture, trust and organic labels are ignored in the model. The inclusion of these variables could improve the predictive power of the model. The future research can examine whether these variables impacts organic food consumption or not. This study only asked recipient about broad perceptions of features and behavioral intentions toward organic and doesn't focus on specific organic product category, future research can focus on a specific product category. Similarly, this study has focused on SOR model only and other models like TBP are ignored. Moreover, this study has collected data from adolescents only, the future research can examine organic food consumption from other sub-groups of the population, to have more generalizable results. The study does not examine the moderating effect of factors like salary, gender, so this research can be extended by examining the moderating effect. The future research can also do the comparative analysis among consumers who prefer or not prefer organic food consumption.

References:

- Aaker, D. A. (1996). Measuring brand equity across products and markets. *California management review*, 38(3), 102.
- Aertsens, J., Verbeke, W., Mondelaers, K., & Van Huylenbroeck, G. (2009). Personal determinants of organic food consumption: a review. *British Food Journal*, 111(10), 1140-1167.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Akaichi, F., Nayga Jr, R. M., & Gil, J. M. (2012). Assessing consumers' willingness to pay for different units of organic milk: evidence from multiunit auctions. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie*, 60(4), 469-494.
- Alba, J. W., & Williams, E. F. (2013). Pleasure principles: A review of research on hedonic consumption. *Journal of Consumer Psychology*, 23(1), 2-18.
- Ali, M., & Raza, S. A. (2017). Service quality perception and customer satisfaction in Islamic banks of Pakistan: the modified SERVQUAL model. *Total Quality Management & Business Excellence*, 28(5-6), 559-577.
- Ali, M., Raza, S. A., & Puah, C. H. (2017). Factors affecting to select Islamic credit cards in Pakistan: the TRA model. *Journal of Islamic Marketing*, 8(3), 330-344.

- Ali, M., Raza, S. A., Puah, C. H., & Karim, M. Z. A. (2017). Islamic home financing in Pakistan: a SEM-based approach using modified TPB model. *Housing Studies*, 32(8), 1156-1177.
- Ali, M., Raza, S. A., Qazi, W., & Puah, C. H. (2018). Assessing e-learning system in higher education institutes: Evidence from structural equation modelling. *Interactive Technology and Smart Education*, 15(1), 59-78.
- Ali, M., Raza, S., & Puah, C. H. (2015). *Factors affecting intention to use Islamic personal financing in Pakistan: Evidence from the modified TRA model*. University Library of Munich, Germany.
- Al-Swidi, A., Mohammed Rafiul Huque, S., Haroon Hafeez, M., & Noor Mohd Shariff, M. (2014). The role of subjective norms in theory of planned behavior in the context of organic food consumption. *British Food Journal*, 116(10), 1561-1580.
- Antil, J. H. (1984). Socially responsible consumers: Profile and implications for public policy. *Journal of macromarketing*, 4(2), 18-39.
- Antil, J.A., & Bennett, P.D. (1979). Construction and validation of a scale to measure socially responsible consumption behaviour. In K.H. Henion II & T.C. Kinnear (Eds.), *The consumer society*. Chicago, IL: American Marketing Association.
- Armstrong, G., Kotler, P., Merino, M. D. J., Pintado, T., & Juan, J. M. (2011). *Introducción al marketing*. Pearson.
- Aschemann-Witzel, J., & Zielke, S. (2017). Can't buy me green? A review of consumer perceptions of and behavior toward the price of organic food. *Journal of Consumer Affairs*, 51(1), 211-251.
- Ayob, S. F., Sheau-Ting, L., Abdul Jalil, R., & Chin, H. C. (2017). Key determinants of waste separation intention: empirical application of TPB. *Facilities*, 35(11/12), 696-708.
- Barański, M., Średnicka-Tober, D., Volakakis, N., Seal, C., Sanderson, R., Stewart, G. B., ... & Gromadzka-Ostrowska, J. (2014). Higher antioxidant and lower cadmium concentrations and lower incidence of pesticide residues in organically grown crops: a systematic literature review and meta-analyses. *British Journal of Nutrition*, 112(5), 794-811.
- 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.
- Batra, R., & Ahtola, O. T. (1991). Measuring the hedonic and utilitarian sources of consumer attitudes. *Marketing letters*, 2(2), 159-170.
- Batra, R., & Ahtola, O. T. (1991). Measuring the hedonic and utilitarian sources of consumer attitudes. *Marketing letters*, 2(2), 159-170.
- Batte, M. T., Hooker, N. H., Haab, T. C., & Beaverson, J. (2007). Putting their money where their mouths are: Consumer willingness to pay for multi-ingredient, processed organic food products. *Food policy*, 32(2), 145-159.

- Bauer, H. H., Heinrich, D., & Schäfer, D. B. (2013). The effects of organic labels on global, local, and private brands: More hype than substance?. *Journal of Business Research*, 66(8), 1035-1043.
- Beck, A., Kretschmar, U., & Schmid, O. (2006). *Organic Food Processing-Principles, Concepts and Recommendations for the Future. Results of a European research project on the quality of low input foods*. Research Institute of Organic Agriculture FiBL, Frick, Switzerland.
- Bourn, D., & Prescott, J. (2002). A comparison of the nutritional value, sensory qualities, and food safety of organically and conventionally produced foods. *Critical reviews in food science and nutrition*, 42(1), 1-34.
- Bryła, P. (2015). The role of appeals to tradition in origin food marketing. A survey among Polish consumers. *Appetite*, 91, 302-310.
- Bryła, Paweł. "Organic food consumption in Poland: Motives and barriers." *Appetite* 105 (2016): 737-746.
- Çabuk, S., Tanrikulu, C., & Gelibolu, L. (2014). Understanding organic food consumption: attitude as a mediator. *International Journal of consumer studies*, 38(4), 337-345.
- Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2010). Why ethical consumers don't walk their talk: Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethically minded consumers. *Journal of business ethics*, 97(1), 139-158
- Cervellon, M. C., & I. Carey, L. (2014). Sustainable, hedonic and efficient: Interaction effects between product properties and consumer reviews on post-experience responses. *European Journal of Marketing*, 48(7/8), 1375-1394.
- Chekima, B., Wafa, S. A. W. S. K., Igau, O. A., Chekima, S., & Sondoh Jr, S. L. (2016). Examining green consumerism motivational drivers: does premium price and demographics matter to green purchasing?. *Journal of cleaner production*, 112, 3436-3450.
- Chen, M. F. (2007). Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: Moderating effects of food-related personality traits. *Food Quality and preference*, 18(7), 1008-1021.
- Chen, M. F. (2009). Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes, and the mediating effects of a healthy lifestyle. *British Food Journal*, 111(2), 165-178.
- Chen, M. F. (2011). The joint moderating effect of health consciousness and healthy lifestyle on consumers' willingness to use functional foods in Taiwan. *Appetite*, 57(1), 253-262.
- Comrey, A. L., & Lee, H. B. (2013). *A first course in factor analysis*. Psychology Press.

- Davies, A., Titterington, A. J., & Cochrane, C. (1995). Who buys organic food? A profile of the purchasers of organic food in Northern Ireland. *British Food Journal*, 97(10), 17-23.
- Davies, A., Titterington, A. J., & Cochrane, C. (1995). Who buys organic food? A profile of the purchasers of organic food in Northern Ireland. *British Food Journal*, 97(10), 17-23.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- de Magistris, T., & Gracia, A. (2008). The decision to buy organic food products in Southern Italy. *British Food Journal*, 110(9), 929-947.
- Dowd, K., & Burke, K. J. (2013). The influence of ethical values and food choice motivations on intentions to purchase sustainably sourced foods. *Appetite*, 69, 137-144.
- Elgaaied, L. (2012). Exploring the role of anticipated guilt on pro-environmental behavior—a suggested typology of residents in France based on their recycling patterns. *Journal of Consumer Marketing*, 29(5), 369-377.
- Essoussi, L. H., & Zahaf, M. (2009). Exploring the decision-making process of Canadian organic food consumers: Motivations and trust issues. *Qualitative Market Research: An International Journal*, 12(4), 443-459.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of marketing research*, 382-388.
- Gad Mohsen, M., & Dacko, S. (2013). An extension of the benefit segmentation base for the consumption of organic foods: A time perspective. *Journal of Marketing Management*, 29(15-16), 1701-1728.
- Gefen, D., & Straub, D. (2005). A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the Association for Information systems*, 16(1), 5.
- Gould, S. J. (1988). Consumer attitudes toward health and health care: A differential perspective. *Journal of Consumer Affairs*, 22(1), 96-118.
- Govindasamy, R., & Italia, J. (1999). Predicting willingness-to-pay a premium for organically grown fresh produce. *Journal of Food Distribution Research*, 30, 44-53.
- Grosglik, R. (2017). Citizen-consumer revisited: The cultural meanings of organic food consumption in Israel. *Journal of Consumer Culture*, 17(3), 732-751.
- Hair Jr, J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review*, 26(2), 106-121.
- Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications. *Long range planning*, 45(5-6), 320-340.

- Hempel, C., & Hamm, U. (2016). Local and/or organic: a study on consumer preferences for organic food and food from different origins. *International Journal of Consumer Studies*, 40(6), 732-741.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135.
- Hertwich, E. G., & Peters, G. P. (2009). Carbon footprint of nations: A global, trade-linked analysis. *Environmental science & technology*, 43(16), 6414-6420.
- Hidalgo-Baz, M., Martos-Partal, M., & González-Benito, Ó. (2017). Attitudes vs. purchase behaviors as experienced dissonance: The roles of knowledge and consumer orientations in organic market. *Frontiers in psychology*, 8, 248.
- Higuchi, A., & Avadi, Á. (2017). Socio-economic characteristics and attitudes of organic and non-organic consumers in Lima, Peru. *Revista de la Facultad de Agronomía*, 34(4), 518-541.
- Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic consumption: emerging concepts, methods and propositions. *The Journal of Marketing*, 92-101.
- Hjelmar, U. (2011). Consumers' purchase of organic food products. A matter of convenience and reflexive practices. *Appetite*, 56(2), 336-344.
- Hoefkens, C., Verbeke, W., Aertsens, J., Mondelaers, K., & Van Camp, J. (2009). The nutritional and toxicological value of organic vegetables: Consumer perception versus scientific evidence. *British Food Journal*, 111(10), 1062-1077.
- Honkanen, P., Verplanken, B., & Olsen, S. O. (2006). Ethical values and motives driving organic food choice. *Journal of Consumer Behaviour*, 5(5), 420-430.
- Hsu, S. Y., Chang, C. C., & Lin, T. T. (2016). An analysis of purchase intentions toward organic food on health consciousness and food safety with/under structural equation modeling. *British Food Journal*, 118(1), 200-216.
- <http://www.un.org/millenniumgoals/pdf/MDG%20Report%202010%20En%20r15%20-low%20res%2020100615%20-.pdf>
- <http://www.unep.fr/scp/marrakech/pdf/Marrakech%20Process%20Progress%20Report%20FINA L.pdf>
- <https://shop.fibl.org/CHen/mwdownloads/download/link/id/785/?ref=1>
- <https://www.grandviewresearch.com/press-release/global-organic-food-beverages-market>
- <https://www.statista.com/statistics/273090/worldwide-sales-of-organic-foods-since-1999/>
- Hwang, J. (2016). Organic food as self-presentation: The role of psychological motivation in older consumers' purchase intention of organic food. *Journal of Retailing and Consumer Services*, 28, 281-287.

- Irianto, H. (2015). Consumers' attitude and intention towards organic food purchase: An extension of theory of planned behavior in gender perspective.
- Januszevska, R., Pieniak, Z., & Verbeke, W. (2011). Food choice questionnaire revisited in four countries. Does it still measure the same?. *Appetite*, 57(1), 94-98.
- Kihlberg, I., & Risvik, E. (2007). Consumers of organic foods—value segments and liking of bread. *Food quality and preference*, 18(3), 471-481.
- Kozup, J. C., Creyer, E. H., & Burton, S. (2003). Making healthful food choices: the influence of health claims and nutrition information on consumers' evaluations of packaged food products and restaurant menu items. *Journal of Marketing*, 67(2), 19-34.
- Lea, E., & Worsley, A. (2008). Australian consumers' food-related environmental beliefs and behaviours. *Appetite*, 50(2-3), 207-214.
- Lee, H. J., & Goudeau, C. (2014). Consumers' beliefs, attitudes, and loyalty in purchasing organic foods: the standard learning hierarchy approach. *British Food Journal*, 116(6), 918-930.
- Lee, H. J., & Yun, Z. S. (2015). Consumers' perceptions of organic food attributes and cognitive and affective attitudes as determinants of their purchase intentions toward organic food. *Food quality and preference*, 39, 259-267.
- Lee, H. J., & Yun, Z. S. (2015). Consumers' perceptions of organic food attributes and cognitive and affective attitudes as determinants of their purchase intentions toward organic food. *Food quality and preference*, 39, 259-267.
- Lee, H. J., & Yun, Z. S. (2015). Consumers' perceptions of organic food attributes and cognitive and affective attitudes as determinants of their purchase intentions toward organic food. *Food quality and preference*, 39, 259-267.
- Li, Y., & Zhong, C. (2017). Factors driving consumption behavior for green aquatic products: Empirical research from Ningbo, China. *British Food Journal*, 119(7), 1442-1458.
- Liang, R. D. (2016). Predicting intentions to purchase organic food: the moderating effects of organic food prices. *British Food Journal*, 118(1), 183-199.
- Lim, W. M., Yong, J. L. S., & Suryadi, K. (2014). Consumers' perceived value and willingness to purchase organic food. *Journal of Global Marketing*, 27(5), 298-307.
- Liu, R., Pieniak, Z., & Verbeke, W. (2013). Consumers' attitudes and behaviour towards safe food in China: A review. *Food Control*, 33(1), 93-104.
- Lockie, S., Lyons, K., Lawrence, G., & Grice, J. (2004). Choosing organics: a path analysis of factors underlying the selection of organic food among Australian consumers. *Appetite*, 43(2), 135-146.
- Lockie, S., Lyons, K., Lawrence, G., & Mummery, K. (2002). Eating 'green': motivations behind organic food consumption in Australia. *Sociologia ruralis*, 42(1), 23-40.

- Magnusson, M. K., Arvola, A., Hursti, U. K. K., Åberg, L., & Sjärdén, P. O. (2003). Choice of organic foods is related to perceived consequences for human health and to environmentally friendly behaviour. *Appetite*, *40*(2), 109-117.
- Magnusson, M. K., Arvola, A., Koivisto Hursti, U. K., Åberg, L., & Sjärdén, P. O. (2001). Attitudes towards organic foods among Swedish consumers. *British food journal*, *103*(3), 209-227.
- Magnusson, M. K., Arvola, A., Koivisto Hursti, U. K., Åberg, L., & Sjärdén, P. O. (2001). Attitudes towards organic foods among Swedish consumers. *British food journal*, *103*(3), 209-227.
- Magnusson, M. K., Arvola, A., Koivisto Hursti, U. K., Åberg, L., & Sjärdén, P. O. (2001). Attitudes towards organic foods among Swedish consumers. *British food journal*, *103*(3), 209-227.
- Makatouni, A. (2002). What motivates consumers to buy organic food in the UK? Results from a qualitative study. *British Food Journal*, *104*(3/4/5), 345-352.
- Makatouni, A. (2002). What motivates consumers to buy organic food in the UK? Results from a qualitative study. *British Food Journal*, *104*(3/4/5), 345-352.
- Marian, L., Chrysochou, P., Krystallis, A., & Thøgersen, J. (2014). The role of price as a product attribute in the organic food context: An exploration based on actual purchase data. *Food Quality and Preference*, *37*, 52-60.
- McCabe, D. B., & Nowlis, S. M. (2003). The effect of examining actual products or product descriptions on consumer preference. *Journal of Consumer Psychology*, *13*(4), 431-439.
- Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology* (pp. 216–217). USA: The Massachusetts Institute of Technology.
- Michaelidou, N., & Hassan, L. M. (2008). The role of health consciousness, food safety concern and ethical identity on attitudes and intentions towards organic food. *International Journal of Consumer Studies*, *32*(2), 163-170.
- Milošević, J., Žeželj, I., Gorton, M., & Barjolle, D. (2012). Understanding the motives for food choice in Western Balkan Countries. *Appetite*, *58*(1), 205-214.
- Moorman, C., & Matulich, E. (1993). A model of consumers' preventive health behaviors: The role of health motivation and health ability. *Journal of consumer research*, *20*(2), 208-228.
- Muhammad, S., Fathelrahman, E., & Ullah, R. U. (2015). Factors affecting consumers' willingness to pay for certified organic food products in United Arab Emirates. *Journal of Food Distribution Research*, *46*(1), 37-45.
- Najmi, A., Raza, S. A., & Qazi, W. (2018). Does statistics anxiety affect students' performance in higher education? The role of students' commitment, self-concept and adaptability. *International Journal of Management in Education*, *12*(2), 95-113.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric Theory* (McGraw-Hill Series in Psychology).

- Nunnally, J.C. (1978). *Psychometric Theory*. McGraw- Hill, New York; NY
- Padel, S., & Foster, C. (2005). Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food. *British food journal*, 107(8), 606-625.
- Pieniak, Z., Aertsens, J., & Verbeke, W. (2010). Subjective and objective knowledge as determinants of organic vegetables consumption. *Food quality and preference*, 21(6), 581-588.
- Pieniak, Z., Verbeke, W., Vanhonacker, F., Guerrero, L., & Hersleth, M. (2009). Association between traditional food consumption and motives for food choice in six European countries. *Appetite*, 53(1), 101-108.
- Pino, G., Peluso, A. M., & Guido, G. (2012). Determinants of regular and occasional consumers' intentions to buy organic food. *Journal of Consumer Affairs*, 46(1), 157-169.
- Pohjanheimo, T., Paasovaara, R., Luomala, H., & Sandell, M. (2010). Food choice motives and bread liking of consumers embracing hedonistic and traditional values. *Appetite*, 54(1), 170-180.
- Qazi, W., Raza, S. A., & Shah, N. (2018). Acceptance of e-book reading among higher education students in a developing country: the modified diffusion innovation theory. *International Journal of Business Information Systems*, 27(2), 222-245.
- Rahnama, H. (2016). Effect of consumers' attitude on buying organic products in Iran. *Journal of Food Products Marketing*, 22(3), 381-397.
- Rana, J., & Paul, J. (2017). Consumer behavior and purchase intention for organic food: A review and research agenda. *Journal of Retailing and Consumer Services*, 38, 157-165.
- Raza, S. A., & Hanif, N. (2013). Factors affecting internet banking adoption among internal and external customers: a case of Pakistan. *International Journal of Electronic Finance*, 7(1), 82-96.
- Raza, S. A., Abidi, M., Arsalan, G. M., Shairf, A., & Qureshi, M. A. (2018). The impact of student attitude, trust, subjective norms, motivation and rewards on knowledge sharing attitudes among university students. *International Journal of Knowledge and Learning*, 12(4), 287-304.
- Raza, S. A., Jawaid, S. T., & Hassan, A. (2015). Internet banking and customer satisfaction in Pakistan. *Qualitative Research in Financial Markets*, 7(1), 24-36.
- Raza, S. A., Najmi, A., & Shah, N. (2018). Transferring knowledge from universities to organizations by business students: Findings from a developing country. *Journal of Workplace Learning*, 30(3), 199-215.
- Raza, S. A., Qazi, W., & Shah, N. (2018). Factors affecting the motivation and intention to become an entrepreneur among business university students. *International Journal of Knowledge and Learning*, 12(3), 221-241.

- Raza, S. A., Qazi, W., & Umer, A. (2017). Facebook is a source of social capital building among university students: evidence from a developing country. *Journal of Educational Computing Research*, 55(3), 295-322.
- Raza, S. A., Shah, N., & Ali, M. (2019). Acceptance of mobile banking in Islamic banks: evidence from modified UTAUT model. *Journal of Islamic Marketing*, 10(1), 357-376.
- Raza, S. A., Umer, A., & Shah, N. (2017). New determinants of ease of use and perceived usefulness for mobile banking adoption. *International Journal of Electronic Customer Relationship Management*, 11(1), 44-65.
- Raza, S. A., Umer, A., Qazi, W., & Makhdoom, M. (2018). The effects of attitudinal, normative, and control beliefs on m-learning adoption among the students of higher education in Pakistan. *Journal of Educational Computing Research*, 56(4), 563-588.
- Rödiger, M., & Hamm, U. (2015). How are organic food prices affecting consumer behaviour? A review. *Food Quality and Preference*, 43, 10-20.
- Roitner-Schobesberger, B., Darnhofer, I., Somsook, S., & Vogl, C. R. (2008). Consumer perceptions of organic foods in Bangkok, Thailand. *Food policy*, 33(2), 112-121.
- Sharif, A., & Raza, S. A. (2017). The influence of hedonic motivation, self-efficacy, trust and habit on adoption of internet banking: a case of developing country. *International Journal of Electronic Customer Relationship Management*, 11(1), 1-22.
- Steptoe, A., Pollard, T. M., & Wardle, J. (1995). Development of a measure of the motives underlying the selection of food: the food choice questionnaire. *Appetite*, 25(3), 267-284.
- Stone, G., Barnes, J. H., & Montgomery, C. (1995). Ecoscale: a scale for the measurement of environmentally responsible consumers. *Psychology & Marketing*, 12(7), 595-612.
- Suprpto, B., & Wijaya, T. (2012). Intentions of Indonesian consumers on buying organic food. *International Journal of Trade, Economics and Finance*, 3(2), 114-119.
- Tarkiainen, A., & Sundqvist, S. (2005). Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. *British food journal*, 107(11), 808-822.
- Thøgersen, J., Zhou, Y., & Huang, G. (2016). How stable is the value basis for organic food consumption in China?. *Journal of Cleaner Production*, 134, 214-224.
- Tobler, C., Visschers, V. H., & Siegrist, M. (2011). Eating green. Consumers' willingness to adopt ecological food consumption behaviors. *Appetite*, 57(3), 674-682.
- Tsakiridou, E., Boutsouki, C., Zotos, Y., & Mattas, K. (2008). Attitudes and behaviour towards organic products: an exploratory study. *International Journal of Retail & Distribution Management*, 36(2), 158-175.
- Tsakiridou, E., Boutsouki, C., Zotos, Y., & Mattas, K. (2008). Attitudes and behaviour towards organic products: an exploratory study. *International Journal of Retail & Distribution Management*, 36(2), 158-175.
- Tutunjian, J. (2004). Are organic products going mainstream. *Canadian Grocer*, 118, 31-4.

- Vindigni, G., Janssen, M. A., & Jager, W. (2002). Organic food consumption: A multi-theoretical framework of consumer decision making. *British Food Journal*, 104(8), 624-642.
- Vittersø, G., & Tangeland, T. (2015). The role of consumers in transitions towards sustainable food consumption. The case of organic food in Norway. *Journal of Cleaner Production*, 92, 91-99.
- Wandel, M., & Bugge, A. (1997). Environmental concern in consumer evaluation of food quality. *Food quality and preference*, 8(1), 19-26.
- Wandel, M., & Bugge, A. (1997). Environmental concern in consumer evaluation of food quality. *Food quality and preference*, 8(1), 19-26.
- Weigel, R. H. (1983). Environmental attitudes and the prediction of behavior. In N. R. Feimer and E. S. Geller (Eds), *Environmental Psychology: Directions and Perspectives*. New York: Praeger
- WERTENBROCH, K., Dhar, R., & KHAN, U. (2005). A behavioral decision theory perspective on hedonic and utilitarian choice. In *Inside consumption* (pp. 166-187). Routledge.
- Williams, P. R., & Hammitt, J. K. (2001). Perceived risks of conventional and organic produce: pesticides, pathogens, and natural toxins. *Risk analysis*, 21(2), 319-330.
- Xie, B., Wang, L., Yang, H., Wang, Y., & Zhang, M. (2015). Consumer perceptions and attitudes of organic food products in Eastern China. *British Food Journal*, 117(3), 1105-1121.
- Yadav, R. (2016). Altruistic or egoistic: Which value promotes organic food consumption among young consumers? A study in the context of a developing nation. *Journal of Retailing and Consumer services*, 33, 92-97.
- Zander, K., & Hamm, U. (2010). Consumer preferences for additional ethical attributes of organic food. *Food quality and preference*, 21(5), 495-503.

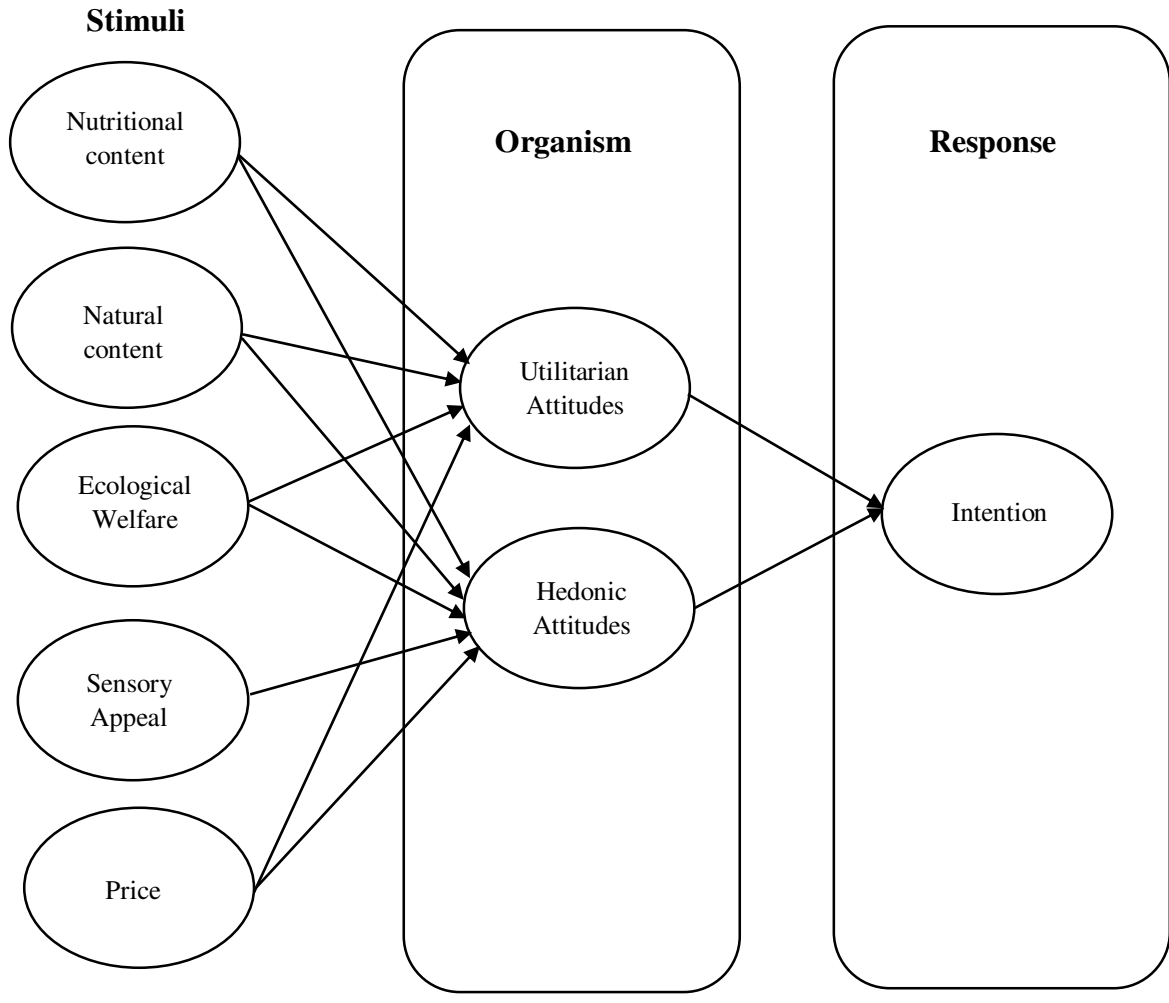


Figure 1: Conceptual Framework

**Table 1: Profile of respondents
(N=350)**

Demographic items	Frequency	Percentile
Age		
18-25	310	88%
26-30	40	12%
Gender		
Male	194	55.3%
Female	156	44.7%
Qualification		
Matric	8	2.3%
Intermediate	29	8.3%
Under Graduate	220	62.7%
Graduate	93	26.5%

Table 2: Measurement model results

Constructs	Items	Loadings	Cronbach's	Composite reliability	AVE
Ecological Welfare	Eco_1	0.744	0.734	0.833	0.556
	Eco_2	0.791			
	Eco_3	0.698			
	Eco_4	0.754			
Price	Pr_1	0.9	0.836	0.922	0.856
	Pr_2	0.949			
Sensory Appeal	Sen_1	0.814	0.865	0.907	0.711
	Sen_2	0.825			
	Sen_3	0.902			
	Sen_4	0.831			
Behavioral Intention	Beh_1	0.84	0.832	0.886	0.663
	Beh_2	0.873			
	Beh_3	0.739			
	Beh_4	0.801			
Hedonic Attitudes	Hed_1	0.905	0.568	0.815	0.69
	Hed_2	0.755			
Natural Content	Nat_1	0.782	0.767	0.863	0.678
	Nat_2	0.887			
	Nat_3	0.796			
Nutritional Content	Nut_1	0.932	0.935	0.954	0.838
	Nut_2	0.934			
	Nut_3	0.925			
	Nut_4	0.868			
Utilitarian Attitudes	Uti_1	0.872	0.881	0.927	0.808
	Uti_2	0.912			
	Uti_3	0.912			

Source: Authors' Estimation

Table 3: Correlation Matrix

	BI	ECO	HED	NAT	NUT	PR	SEN	UTI
BI	0.815							
ECO	0.497	0.747						
HED	0.411	0.317	0.834					
NAT	0.565	0.566	0.188	0.823				
NUT	0.639	0.571	0.2	0.743	0.915			
PR	0.221	0.185	0.221	0.214	0.277	0.925		
SEN	0.655	0.549	0.377	0.542	0.692	0.341	0.844	
UTI	0.611	0.53	0.186	0.673	0.755	0.231	0.599	0.899

Notes: Eco=Ecological Welfare, BI=Behavioral Intention, HED=Hedonic Attitudes, NAT=Natural Content, NUT=Nutritional Content, PR=Price, SEN=Sensory Appeal, UTI=Utilitarian attitudes. The diagonal elements (bold) represent the square root of AVE (average variance extracted)

Table 4: Loadings and Cross Loadings

	BI	ECO	HED	NAT	NUT	PR	SEN	UTI
Eco_1	0.403	0.744	0.241	0.488	0.471	0.142	0.445	0.437
Eco_2	0.408	0.791	0.245	0.453	0.456	0.176	0.465	0.442
Eco_3	0.280	0.698	0.219	0.317	0.336	0.077	0.298	0.319
Eco_4	0.379	0.754	0.242	0.412	0.429	0.147	0.413	0.369
Sen_1	0.480	0.409	0.171	0.391	0.547	0.226	0.814	0.459
Sen_2	0.458	0.461	0.324	0.424	0.531	0.279	0.825	0.457
Sen_3	0.623	0.507	0.336	0.538	0.673	0.318	0.902	0.601
Sen_4	0.623	0.467	0.410	0.454	0.568	0.312	0.831	0.487
beh_1	0.840	0.437	0.472	0.462	0.541	0.282	0.579	0.504
beh_2	0.873	0.415	0.301	0.495	0.574	0.217	0.583	0.568
beh_3	0.739	0.308	0.301	0.319	0.315	0.071	0.379	0.273
beh_4	0.801	0.432	0.253	0.525	0.588	0.106	0.547	0.573
hed_2	0.358	0.321	0.905	0.155	0.207	0.246	0.412	0.197
hed_4	0.331	0.187	0.755	0.165	0.110	0.096	0.176	0.096
nat_1	0.406	0.424	0.191	0.782	0.516	0.178	0.371	0.437
nat_2	0.566	0.522	0.162	0.887	0.763	0.179	0.565	0.707
nat_3	0.386	0.437	0.113	0.796	0.496	0.177	0.354	0.455
nut_1	0.581	0.510	0.184	0.705	0.932	0.269	0.642	0.711
nut_2	0.608	0.539	0.179	0.691	0.934	0.282	0.652	0.728
nut_3	0.613	0.539	0.201	0.687	0.925	0.267	0.645	0.703
nut_4	0.534	0.501	0.166	0.636	0.868	0.190	0.591	0.614
Pr_1	0.152	0.181	0.176	0.158	0.223	0.900	0.291	0.167
pr_2	0.243	0.165	0.226	0.229	0.283	0.949	0.334	0.249
uti_2	0.485	0.485	0.149	0.562	0.666	0.222	0.517	0.872
uti_3	0.524	0.431	0.145	0.628	0.679	0.228	0.522	0.912
uti_4	0.629	0.511	0.203	0.622	0.691	0.177	0.574	0.912

Notes: Eco=Ecological Welfare, BI=Behaviourial Intention, HED=Hedonic Attitudes, NAT=Natural Content, NUT=Nutritional Content, PR=Price, SEN=Sensory Appeal, UTI=Utilitarian attitudes.

Table 5: Heterotrait-Monotrait Ratio (HTMT) Results

	BI	ECO	HED	NAT	NUT	PR	SEN	UTI
BI								
ECO	0.615							
HED	0.588	0.464						
NAT	0.671	0.733	0.289					
NUT	0.7	0.681	0.258	0.846				
PR	0.239	0.233	0.287	0.262	0.307			
SEN	0.744	0.674	0.482	0.631	0.763	0.392		
UTI	0.682	0.649	0.243	0.784	0.83	0.264	0.678	

Notes: Eco=Ecological Welfare, BI=Behavioral Intention, HED=Hedonic Attitudes, NAT=Natural Content, NUT=Nutritional Content, PR=Price, SEN=Sensory Appeal, UTI=Utilitarian attitudes.

Table-6: Standardized regression weights for the research model

Hypothesis	Regression Path	Effect type	SRW	Remarks
H1	ECO -> HED	Direct effect	0.210***	Supported
H2	ECO -> UTI	Direct effect	0.073**	Supported
H3	NAT -> HED	Direct effect	-0.006	Not Supported
H4	NAT -> UTI	Direct effect	0.221***	Supported
H5	NUT -> HED	Direct effect	0.195**	Supported
H6	NUT -> UTI	Direct effect	0.464***	Supported
H7	PR -> HED	Direct effect	0.117**	Supported
H8	PR -> UTI	Direct effect	0.001	Not Supported
H9	SEN -> HED	Direct effect	0.360***	Supported
H10	SEN -> UTI	Direct effect	0.119**	Supported
H11	HED -> BI	Direct effect	0.304***	Supported
H12	UTI -> BI	Direct effect	0.558***	Supported

Notes: SRW = Standardized regression weight ***p < 0.01, **p < 0.05, *p < 0.10