ROLE OF UNCERTAINTY AS A MODERATOR ON CONSUMERS’ PURCHASE INTENTIONS TOWARDS ORGANIC FOOD: A COMPARATIVE STUDY

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ABSTRACT

The growing advent of the organic food market requires knowledge about how consumers’ attitudes and lack of uncertainty increase or decrease purchase intention. This study examines the factors influencing consumers’ organic food purchase intention and the moderating role of uncertainty through a cross country comparative analysis conducted in three developing countries, where lack of food safety, environmental security, and health consciousness are considered to be the growing concern towards the success of organic food. To find the factors affecting purchase intention and attitude towards products produced organically, a theoretical model was developed and tested, representing factors of health consciousness, food safety concern, environmental consciousness, and consumers’ attitude, whereas uncertainty was taken as a moderator. Hence, the current study expands the existing literature by analyzing the model to integrate individuals’ organic food usage motives to extend their purchasing intentions. The quantitative data was collected from three countries, including Pakistan (n=287), India (n=256), and China (n=354). The findings revealed that health consciousness is a significant forecaster of shaping consumers’ attitudes toward organic food and influencing their intentions towards organic food purchasing. Moreover, the findings also indicated that consumers with a higher level of uncertainty avoid purchasing organic food. The results of this study will be useful for marketing managers, scholars, and retailers to develop appropriate strategies for marketing organic food.

Keywords: Organic Food; Uncertainty; Attitude; Purchase Intention.

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INTRODUCTION
The shift in food technologies and consumers’ lifestyles are reshaping the landscape for businesses, and a noticeable shift may be observed in the ways businesses operate. For example, in countries like China, Pakistan, and India, farmers are gradually shifting farming activities from traditional (i.e., use of fertilizers and chemicals) to modern technologies (i.e., organic production). Several people prefer to use healthier food, which leads to the use of advanced technologies, which play a significant role in shaping consumers' organic food purchase intentions. However, companies can offer better services with the support of information for identifying factors that enhance consumers’ organic food purchase intentions.

To identify varying critical factors that influence consumers’ intention to buying attitude towards organic food, various scholars endeavored research studies (Iyer et al., 2016; McFadden & Huffman 2017; Le-Anh & Nguyen-To, 2020). A few scholars identified these factors as labeling and demographics (Gracia & de-Magistris 2016), while some discovered that consumers’ attitude depends on their personal values (Barbarosaa et al., 2015). Furthermore, Wu et al. (2021) found a new variable of traceability information that affects the consumers’ intention toward organic food. However, consumers’ attitude changes with perceived surroundings. In extension to this, consumers may resist the purchase intention due to the reasons like how much they can rely on the organic food certifications, etc. The main concern of consumers is to find the credible quality the organic food which they can trust. These two factors mainly affect their attitude and purchase intention. For example, incomplete and ambiguous knowledge towards organic food quality will lead to mistrust and ambiguity about the quality of the product subsequently reducing consumers’ organic food purchase decisions (Prakash et al., 2018; Tandon et al., 2020). Hence, uncertainty may moderate the relationship between consumers’ attitudes and purchase intentions. Uncertainty can help us better to understand the consumers’ attitudes and their influence on purchase intentions.

Based on the discussion above, this study aims at exploring the consumers’ purchase intentions towards organic food in emerging markets (i.e., China, Pakistan, and India) scenario, where lack of food safety, environmental security, and health consciousness are being considered the growing concern towards the success of organic food. A theoretical model is developed and tested to find the factors affecting purchase intention and attitude towards products produced organically, representing factors of health consciousness, food safety concern, environmental consciousness, consumers’ attitude, and uncertainty as a moderator. This recommended model is then investigated empirically, and the results are evaluated through PLS-SEM.
THEORETICAL FRAMEWORK

This study makes some significant contributions to the existing body of literature. First, by integrating variables, lack of food safety, environmental safety, and health consciousness to understand the factors significantly affecting purchase intention of organic food are re-established in emerging markets context, where being health conscious is considered the growing concern for the success of organic food products. Secondly, this study investigates the moderating role of uncertainty between consumers’ attitudes and purchase intentions. Thirdly, this manuscript explores the combined effect of health consciousness, food safety concerns, environmental consciousness, attitude, and uncertainty on consumers’ purchase intentions by employing PLS-SEM.

The Theory of Planned Behavior (TPB) has been frequently used by various scholars to explain and forecast the variations and development in consumer behavior due to the latest trends (Watson et al., 2014) and to explore the relationship between attitudes, values, beliefs, action, and intentions (Webb & Sheeran 2006; Chekima et al., 2016; Ajzen, 2020). Prior studies used TPB to test the organic buying behavior of consumers (Chekima et al., 2016) to describe the antecedents of consumers’ hygiene and cleaning products, clothing, and organic food intention (McFadden & Huffman 2017). TPB has also been used by Yarimoglu and Gunay (2019) to determine the factors that influence creating consumers’ intention to visit green hotels. Bosnjak et al. (2020) analyzed the further extension of the theory and explained that according to the web science database, TPB has been used by more than 4,200 researchers in various disciplines like management, health sciences, environmental sciences, and educational industry.

Previous studies proposed that there are three primary objectives of consumers to adopt the usage of organically produced products. Schleenbecker and Hamm (2013) assert that the reliability of the information, health consciousness and degree of awareness of consumers through different mediums like labels and packaging help consumers develop a positive attitude towards organic food. Further, the significance of environmental and food safety is also acknowledged as the key motive for purchasing organic food in Taiwan (Teng & Lu, 2016), India (Kushwah et al., 2019), and Pakistan (Iqbal et al., 2021). Also, several studies examined the marketing of organic products in diverse cultures and determined that consumers relate health, environment, and food safety to organic food (Hemmerling et al., 2015, Boobalan & Nachimuthu, 2020). Further, more research has explored the factors affecting this relationship, including self-determination motives (Shrestha, 2020) along with personal values (Molinillo et al., 2020) and product features as well (Le-Anh & Nguyen-To, 2020). Motivated
by the above studies, this study investigates the role of health, food safety, and environmental consciousness as the essential factors in determining consumers’ intention to purchase organic food.

The consumption of organic food can result in consuming better nutrients and fewer chemicals (Hasselbach & Roosen, 2015). Numerous studies suggest that people’s desire for natural products depends not only on but is also motivated by their desire for good health (Yadav & Pathak, 2016; Basha & Lal, 2019; Rizzo et al., 2020). For example, several food-related scandals in most developing countries affect peoples’ physical health, making people more conscious about their food. As consumers are becoming more health-conscious, health has become a crucial motivator for purchasing organic food.

Researchers recently demonstrated that due to the increased health awareness, consumers are making serious efforts to understand and investigate the manufacturing and processing procedures of organic farming (Hsu et al., 2016). For example, in China, food safety is a national issue and threatens citizens' psychological and physical health, regardless of strict laws related to food safety. The food safety concern is getting more focus in emergent economies. Studying food safety concerns could be a promising avenue.

Tandon et al. (2020) discovered another factor of environmental consciousness that works as a vital aspect of building consumers’ perception of organic products. It proposes that environmental consciousness might have an essential role in developing the purchase intention of environment-friendly food products. Smith and Paladino (2010) also highlighted the significance of environmental consciousness in the scenario of organic food as it is treated as a pro-environmental attitude. Wang et al. (2020) further investigated the concept with the mediation effect of perceived food quality between environmental consciousness and organic food purchase intention. Saraiva et al. (2021) further extended this concept by identifying that community and social economy can lead to ecological safety. A few latest researches have also addressed the relationship between consumer’ intention towards organic buying and environmental consciousness (Kushwah et al., 2019; Gupta et al., 2021; Saraiva et al., 2021). Given these findings, it can be stated that consumers are more inclined to purchase organic products when they realize the environmental concerns.

Consumers seldom rely on the claims made by an organization, especially when it is related to sustainability (Janssen & Hamm, 2012). They may feel uncertain about the issues related to organic food products like the certification authenticity and healthy food claims, etc. since
organic is based on credible quality. Therefore, trust is the key for people to buy organic food products. Previous studies have identified that perceived uncertainty negatively influences trust and organic purchase intention (Nuttavuthisit & Thøgersen, 2015; Basha & Lal, 2019; Tandon et al., 2020; Yu et al., 2021). As a trust being an essential factor for selecting a brand, consumers tend to switch to brands who present valid and authentic proofs of their claims related to sustainability and organic production. With a higher level of uncertainty, the influence of organic food will stimulate the consumer to buy others. Whereas, if they have adequate information on ingredients and production process of organic food, their level of uncertainty will be low, and they will show conscious intention to buy organic food products (Gracia & de-Magistris, 2016). The relevance of uncertainty makes it quite worthy to investigate its moderating role between consumers’ attitude towards organic products and purchasing intention.

HYPOTHESES DEVELOPMENT

Consumers contemplate health as a significant motive at the time of purchasing the food items and express their concerns related to health and food through their buying patterns. Research has identified that consumers with high health consciousness prefer to purchase organic food. Consumers who are overly cautious about the challenges related to their health are ready to give extra efforts and resources to finding and purchasing organic food products. Previous studies indicate that health is one of the critical drivers to stimulate consumers’ attitudes and intentions towards the purchasing of organic food products (Yadav & Pathak, 2016; Molinillo et al., 2020). Therefore, we suggest that:

H1a: Health consciousness impacts consumers’ attitudes toward organic food.

H1b: Health consciousness impacts consumers’ purchasing intention.

Consumers are more focusing on their health, quality of food, and the food contents of what they eat or drink (Basha & Lal, 2019; Molinillo et al., 2020). Suh et al. (2012) identified in their research that women get more conscious about their food selection to avoid pregnancy issues, food-related diseases, and other illnesses. Hence, they choose to buy chemical-free and natural food. Based on findings from several research studies, it can be established that food safety is a crucial element in predicting individuals’ readiness to shop for organic food (Michaelidou & Hassan, 2008; Shrestha, 2020). Therefore, the hypothesis is determined that:

H2a: Food safety concerns impact consumers’ attitudes toward organic food.

H2b: Food safety concerns impact consumers’ purchasing intentions.
Pagiaslis and Krontalis (2014) pointed out that environmental consciousness positively influences consumers’ intentions toward purchasing environment-friendly products (Tandon et al., 2020). Environmental consciousness had a major influence in shaping purchase intentions towards organic food products (Smith & Paladino, 2010) as the purchase of organic food products is accounted for as a pro-environmental attitude. Tregear et al. (1994) determined that consumers who choose organic food were more likely to involve in environment-friendly behavior, which indicates their interest in a sustainable environment. The evolving interest in a sustainable environment shows consumers’ growing purchase intention toward organic food products (Wang et al., 2020). Thus, the study investigates that:

\( H3a: \) Environmental consciousness impacts consumers’ attitudes toward organic food.

\( H3b: \) Environmental consciousness impacts consumers’ purchasing intention.

Yip and Janssen (2015) discovered that Chinese consumers are more conscious and have a higher purchase intention of organic food than consumers in Hong Kong. Yee et al. (2005) investigated this phenomenon and endorsed that when consumers believe that the food is manufactured and treated without chemicals, their intention to buy that product becomes positive. Moreover, most of the earlier studies have found a significant relationship between consumers' attitudes and intentions to purchase organic food (Yeon Kim & Chung, 2011; Pino et al., 2012; Basha & Lal, 2019). Consequently, it is proposed that:

\( H4: \) Consumers’ attitude impacts their purchasing intention.

Thøgersen et al. (2012) revealed uncertainty as a significant impediment in developing favorable consumer attitude towards purchasing organic food. Previous studies have explored that when consumers have detailed information about the organization, production and processing of the product, their uncertainty level reduces, and they will be more inclined to purchase such organic food products (Gracia & de-Magistris, 2016; Shan et al., 2020). Hence, it has been found that the consumers in those countries who cannot deal with food-related scandals are incredibly critical about selecting organic food. Addressing this food safety concern (Tonkin et al., 2021) tested the DOTIFS scale and concluded that in order to reduce uncertainty of consumers regarding food concerns, state has to be vigilant in implementing appropriate regulations. Thus, there is a need to investigate the moderating role of uncertainty between the link between consumers’ attitudes towards an organic product, and their purchase intention could be significant. Therefore, we hypothesize:

\( H5: \) Uncertainty moderates the relationship between consumers’ attitudes and purchase intentions.
METHODOLOGY

Measures
A measurement scale consisting of a “five-point Likert scale” is designed to evaluate all the items that range from “strongly disagree” (1) and “strongly agree” (5). The questions to assess the variable of environmental consciousness are adapted from Prakash et al. (2018), and the scale items of attitude towards organic food are adopted from Wang et al. (2013). The items for food safety concerns are adopted from Soler et al. (2002), while the items of health consciousness, uncertainty, and purchase intentions are adapted from (Jiang et al., 2019; Rashid et al., 2019; Rashid et al., 2020).

Collection of Data
To contact the maximum number of respondents from all three countries, data is collected through email, official groups, Facebook, Wechat, WhatsApp, QQ, and in-person with the support of students understanding of data collection through this kind of survey. Most of the target population respondents were approached around purchase malls and in universities. The questionnaire was forwarded to around 570 respondents in Pakistan with a response rate of 54.91%, as 313 responses were received, out of which 287 replies were used for analysis. The questionnaire was forwarded to around 540 respondents in India with a response rate of 53.88%, 291 responses received, out of which 256 responses were used for analysis. In comparison, the questionnaire was forwarded to around 650 respondents in China with a response rate of 61.08%, 397 responses received, out of which 354 responses were used for analysis. The validity and reliability of the data collected are presented below.
RESULTS

Measurement Model (All Models)

To check the reliability and validity of each hypothesis, we conducted different necessary tests: discriminate validity, the reliability of items, convergent validity, and internal consistency (Hair et al., 2011). According to Bagozzi and Yi (1988), the goodness of fit for the model the standard factor loading must be between 0.50 to 0.95, while the value of average variance extracted (AVE) is above 0.50; composite reliability is above 0.70 Fornell and Larcker (1981). The result of convergent validity shows that the value of factor loadings and Cronbach's alpha (α) were above the cut-off level of 0.7 in all three countries, and values of AVE of all variables were above the threshold of 0.5. Composite reliability was also above the threshold of 0.7 in all three countries. The results are shown in Table 1. After confirming the reliability and validity of the instrument and data, the proposed model is tested separately through the data collected from each country.

Hypothesis Testing

Pakistan

The value of SRMR was 0.063 less than the threshold value =<0.08, which shows that model has a good fit, while Chi-Square was equal to 1879.079, and NFI was equal to 0.851. The
demographic characteristics of participants in Pakistan were 73.29% male and 26.71% female. The participants’ age was 18-24 (30.25%), 25-30 (33.57%), 31-40 (31.73%), and 41-above (4.45%). Health consciousness shows significant effect on consumers’ attitude and purchasing intentions with \( H1a \beta = 0.474 \ p < .001 \), and \( H1b \beta = 0.143 \ p < .01 \). Furthermore, the findings confirms that consumers’ food safety concerns significantly related to support for their attitude \( H2a \beta = 0.202 \ p < .001 \), but insignificant effect on purchasing intentions with \( H2b \beta = 0.027 \ p < .512^{ns} \). Environmental consciousness is significantly related with consumers’ attitude and purchasing intention \( H3a \beta = 0.238 \ p < .001 \), and \( H3b \beta = 0.300 \ p < .001 \), respectively. \( H4 \) is supported by results with \( \beta = 0.240 \ p < .001 \), which means that consumers’ attitude is positively related to their purchasing intention toward organic food. The model explains that 69% of the variance is related to consumers’ attitudes, and 85% is related to purchasing intention. These results show the acceptability of our hypothesized model.

**Table 2. Model Fit Summary**

|                    | Pakistan | India | China |
|--------------------|----------|-------|-------|
| **Estimated Model**| SRMR     | 0.069 | SRMR  | 0.071 |
| \( d_{ULS} \)      | 1.532    | 1.659 | \( d_{ULS} \) | 1.709 |
| \( d_{G1} \)       | 0.879    | 0.819 | \( d_{G1} \) | 0.789 |
| \( d_{G2} \)       | 0.812    | 0.905 | \( d_{G2} \) | 0.854 |
| Chi-Square         | 1879.079 | 1958.085 | Chi-Square | 1899.081 |
| NFI                | 0.851    | 0.876 | NFI    | 0.799 |

**India**

The value of SRMR was 0.069 less than the threshold value =<0.08, which shows that model has a good fit, while Chi-Square was equal to 1958.085, and NFI was equal to 0.876. The demographic characteristics of participants in India were 61.39% male and 38.61% female. The participants’ age was 18-24 (26.18%), 25-30 (29.64%), 31-40 (34.56%), and 41-above (9.62%). Health consciousness shows significant effect on consumers’ attitude and purchasing intentions with \( H1a \beta = 0.367 \ p < .01 \), and \( H1b \beta = 0.143 \ p < .01 \ \beta = 0.207 \ p < .01 \). Furthermore, the findings confirm that consumers’ food safety concerns significantly related to support for their attitude and purchasing intentions \( H2a \beta = 0.278 \ p < .001 \), and \( H2b \beta = 0.156 \ p < .01 \), respectively. Environmental consciousness is significantly related with consumers’ attitude \( H3a \beta = 0.287 \ p < .001 \), but insignificant effect on purchasing intentions with \( H3b \beta = 0.08 \ p < .169^{ns} \). \( H4 \) is supported by results with \( \beta = 0.125 \ p < .05 \), which means that consumers’ attitude is positively related to their purchasing intention toward organic food. The model explains that 75% of the variance is related to consumers’ attitudes, and 84% is
related to purchasing intention. These results show the acceptability of our hypothesized model.

**China**
The value of SRMR was 0.071 less than the threshold value =<0.08, which shows that model has a good fit, while Chi-Square was equal to 1879.079, and NFI was equal to 0.799. The demographic characteristics of participants in China were 52.54% male and 47.46% female. The participants’ age was 18-24 (27.68%), 25-30 (31.92%), 31-40 (32.49%), and 41-above (7.91%). Health consciousness shows significant effect on consumers’ attitude and purchasing intentions with H1a β = 0.236 p < .01, and H1b β = 0.182 p < .01 β = 0.207 p < .01. Furthermore, the findings confirm that consumers’ food safety concerns significantly related to support for their attitude H2a β = 0.199 p < .05, but insignificant effect on purchasing intentions with H2b -0.018 p < .783ns. Environmental consciousness is significantly related with consumers’ attitude H3a β = 0.419 p < .001, but insignificant effect on purchasing intentions with H3b β = 0.054 p < .388ns. H4 is supported by results with β = 0.460 p < .001, which means that consumers’ attitude is positively related to their purchasing intention toward organic food. The model explains that 65% of the variance is related to consumers’ attitudes, and 84% is related to purchasing intention. These results show the acceptability of our hypothesized model.

**Table 3a. Correlations of the Variables**

| Constructs                        | Pakistan |       |       |       |       |       |
|-----------------------------------|----------|-------|-------|-------|-------|-------|
|                                   |          | 1     | 2     | 3     | 4     | 5     | 6     |
| Health consciousness              |          | 0.880 |       |       |       |       |       |
| Food safety concern               |          | 0.576 | 0.892 |       |       |       |       |
| Environmental consciousness       |          | 0.582 | 0.529 | 0.914 |       |       |       |
| Attitude towards organic food     |          | 0.489 | 0.618 | 0.409 | 0.857 |       |       |
| Uncertainty                       |          | 0.512 | 0.325 | 0.386 | 0.467 | 0.820 |       |
| Purchasing intentions             |          | 0.473 | 0.479 | 0.519 | 0.534 | 0.438 | 0.825 |

**Table 3b. Correlations of the Variables**

| Constructs                        |        | 1     | 2     | 3     | 4     | 5     | 6     |
|-----------------------------------|--------|-------|-------|-------|-------|-------|-------|
|                                   |        | 1     | 2     | 3     | 4     | 5     | 6     |
| Health consciousness              |        | 0.870 |       |       |       |       |       |
| Food safety concern               |        | 0.592 | 0.914 |       |       |       |       |
| Environmental consciousness       |        | 0.612 | 0.546 | 0.864 |       |       |       |
| Attitude towards organic food     |        | 0.427 | 0.623 | 0.439 | 0.870 |       |       |
| Uncertainty                       |        | 0.498 | 0.439 | 0.598 | 0.387 | 0.808 |       |
| Purchasing intentions             |        | 0.589 | 0.657 | 0.436 | 0.678 | 0.588 | 0.814 |
Table 3c. Correlations of the Variables

| Constructs                        | China     |
|----------------------------------|-----------|
|                                  | 1   | 2   | 3   | 4   | 5   | 6   |
| Health consciousness             | 0.850   |
| Food safety concern              | 0.653  0.852 |
| Environmental consciousness      | 0.509  0.582 0.868 |
| Attitude towards organic food    | 0.578  0.605 0.489 0.880 |
| Uncertainty                      | 0.619  0.539 0.566 0.588 0.815 |
| Purchasing intentions            | 0.654  0.598 0.658 0.581 0.699 0.839 |

*Boldface numbers are the square root of the AVE model

Table 4. Results of Hypothesized Effects (Direct & Indirect)

| Hypothesis | Pakistan |     |     |     |     |     | India |     |     |     |     |     | China |     |     |     |     |
|------------|----------|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|
|            | β        | Sig |     |     |     |     | β     | Sig |     |     |     |     | β     | Sig |     |     |     |
| H1a        | 0.474    | 0.000 | Supported |     |     |     | 0.367 | 0.000 | Supported |     |     |     | 0.236 | 0.008 | Supported |
| H1b        | 0.143    | 0.012 | Supported |     |     |     | 0.207 | 0.005 | Supported |     |     |     | 0.182 | 0.002 | Supported |
| H2a        | 0.202    | 0.000 | Supported |     |     |     | 0.278 | 0.000 | Supported |     |     |     | 0.199 | 0.038 | Supported |
| H2b        | 0.027    | 0.512 | Not Supported |     |     |     | 0.156 | 0.004 | Supported |     |     |     | -0.018 | 0.789 | Not Supported |
| H3a        | 0.238    | 0.001 | Supported |     |     |     | 0.287 | 0.001 | Supported |     |     |     | 0.419 | 0.000 | Supported |
| H3b        | 0.300    | 0.000 | Supported |     |     |     | 0.083 | 0.169 | Not Supported |     |     |     | 0.054 | 0.388 | Not Supported |
| H4         | 0.240    | 0.000 | Supported |     |     |     | 0.125 | 0.042 | Supported |     |     |     | 0.460 | 0.000 | Supported |

Moderation

The PLS multigroup analysis was applied to statistically check the moderating influence of uncertainty. Before conducting the test, the samples were divided from each of the countries into two groups, i.e., Pakistan’s higher uncertainty (n=184) and lower uncertainty (n=103), India’s higher uncertainty (n=149) and lower uncertainty (n=107), China’s higher uncertainty (n=203) and lower uncertainty (n=151). All groups were made on the bases of the average score (M=4.18) as a cutting point for each group. Few earlier studies also confirmed that PLS multigroup analysis is an effective technique to examine differences among subgroups. Results of the combined model show that path coefficient of uncertainty is β = 0.229 p < 0.01 in Pakistan, β = 0.198 p < 0.01 in India, and β = 0.327 p < 0.01 in China. The structural model for both groups was tested separately and then compared with the path coefficients across both groups. The results of MGA show a significant difference β = 0.119 p < 0.05 in Pakistan, β = 0.125 p < 0.05 in India, and β = 0.123 p < 0.05 in China, and confirm that uncertainty is significantly moderating the link between consumers’ attitude and their purchasing intentions. Furthermore, the results indicate that the path coefficients from the attitude to purchase intentions in Pakistan are 0.203** (p<0.01) in less uncertainty, while 0.187** (p<0.01) in more uncertainty, in India 0.195** (p<0.01) in less uncertainty, while 0.219** (p<0.01) in more uncertainty, and in China 0.214** (p<0.01) in less uncertainty, while 0.178** (p<0.01) in more uncertainty group. As anticipated, results show that when the consumers’ level of uncertainty
is high towards organic food products, the association between consumers’ attitudes toward organic food and their purchasing intentions will be weakened. Hence, $H_7$ is supported. The details of the above results are presented in Table 05.

| Pakistan | High Uncertainty (n=184) | Low Uncertainty (n=103) | Moderation |
|----------|--------------------------|-------------------------|------------|
| ATOF → SI | Path Coefficient $t$-statistics Standard error | Path Coefficient $t$-statistics Standard error | Path Coefficient $t$-statistics |
|          | 0.187 2.63*** 0.039 | 0.203 2.37** 0.049 | 0.119 2.01* |
| India | High Uncertainty (n=149) | Low Uncertainty (n=107) | Moderation |
| ATOF → SI | Path Coefficient $t$-statistics Standard error | Path Coefficient $t$-statistics Standard error | Path Coefficient $t$-statistics |
|          | 0.219 2.84*** 0.029 | 0.195 2.28** 0.051 | 0.125 2.18* |
| China | High Uncertainty (n=203) | Low Uncertainty (n=151) | Moderation |
| ATOF → SI | Path Coefficient $t$-statistics Standard error | Path Coefficient $t$-statistics Standard error | Path Coefficient $t$-statistics |
|          | 0.178 2.37*** 0.058 | 0.214 2.56** 0.059 | 0.123 2.07* |

*p< 0.05, **p< 0.01, ***p< 0.001, ns= non-significant

DISCUSSION AND IMPLICATIONS

The primary intention of the current study is to explore the factors affecting consumers’ purchase intentions towards purchasing organic food and the role of uncertainty as a moderator by following TPB as a theoretical base. The outcomes confirmed the role of TPB and health, environmental consciousness, and food safety concerns while forecasting consumers’ purchasing intentions toward organic food products or services in developing countries. Secondly, the findings from Pakistan, India, and China were also compared.

The findings revealed that health consciousness is a significant forecaster of shaping consumers’ attitudes towards organic food and influencing their intentions towards organic food purchasing in Pakistan, India, and China. These outcomes are aligned with (Yadav & Pathak, 2016; Molinillo et al., 2020); health consciousness positively influences consumers’ attitudes and purchase intentions toward organic food products. This shows that people perceive organic food as healthier than traditional food, while the quickly emergent middle class that is financially sound and well educated is in a position and therefore inclined to shop for organic food. For example, two big dairy companies in China, ‘Yili’ and ‘Mengniu,’ play a significant role in making and marketing organic food in China.

Food safety is related to problems of artificial additives, different chemicals, and pesticides, which is a significant cause of concern for those individuals who are more conscious about their health. This study shows that consumers’ concern about food safety does not directly influence their intentions to shop for organic food in Pakistan and China. These findings oppose
a study conducted by (Hsu et al., 2016; Iqbal et al., 2021). These findings indicate the level of consumers’ trust in local or national regulatory authorities to prioritize people’s health safety (Tonkin et al., 2021). For example, there is no central food authority in China for halal food; hence, every province follows its own standards for halal food.

Moreover, the study further establishes that participants who are aware of the significance of a sustainable environment have been found to have a strong attitude towards organic food in all three countries. These outcomes are against the findings of earlier studies (Zagata, 2012) which have found that the usage of organic food may differ from country to country. For example, Chryssohoidis and Krystallis (2005) reported no significant role of eco-friendliness in Greece, while other countries may have a considerable influence. However, the results are consistent with the findings of (Molinillo et al., 2020), who found environmental concerns of millennials in two countries.

The current study confirms that uncertainty notably weakens the link between attitude toward organic food products and purchase intentions. Such findings are aligned with earlier studies, indicating that even though purchasing organic food needs a more robust attitude than buying traditional food, a stronger feeling of uncertainty decreases the influence of consumers’ attitudes on purchase decisions towards organic food. This is because of perceived risk, and less incomplete information about organic food may negatively affect consumers’ purchase intentions (Teng & Lu, 2016). When people feel uncertain about the significance of organic food, they show less interest in purchasing decisions of organic food because they don’t have the right information and knowledge of organic food to accurately forecast the consequences of organic food.

**Implications**

This study has some theoretical enlightenment for scholars. The current study expands the existing literature by analyzing a model that integrates individuals’ organic food usage motives to extend their purchasing intentions. PLS-SEM analysis indicates a positive influence on consumers’ purchasing intentions toward organic food.

This study also has some managerial implications; first, it provides an opportunity for marketing managers to design marketing messages, highlighting the benefits of adopting organic food in three different countries. Through aggressive marketing campaigns, organizations can develop consumers’ confidence in organic food by focusing on the perceived
significance of the environment and health consciousness to strengthen consumers' attitudes towards organic food, which eventually leads them toward organic food purchase intentions. Moreover, to reduce uncertainty and increase consumers’ organic food purchasing intentions, companies should adopt a product tracking system through which consumers can systematically track products from the start of production to the shelf, including government certifications related to organic food production as organic food products market is still at its preliminary stages in China. Developing a trustworthy organic food system that provides comprehensive and reliable information is essential to enhance their trust in organic food products.

LIMITATIONS AND FUTURE STUDY DIRECTIONS

Despite extensive research, few recommendations are advised for further research based on some limitations faced. First, the variables used in this study have been measured at a single point in time. Future studies may consider the longitudinal technique to confirm the suggested framework. Second, this study did not investigate consumers’ actual purchasing behavior as this kind of data is scant in academics. Future studies may compare consumers’ purchasing intentions and actual purchasing behavior towards organic products. In order to deeply understand the trust of consumers and their level of uncertainty, future studies can focus on evaluating the change in consumer intention by implementing a new DOTIFS scale and enhancing the trust of the consumers (Tonkin et al., 2021). This model can be applied to study the organic purchase intention in a specific industry, like Tourists' site-specific intention (Gupta et al., 2021).
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