Article

Influence of Altruistic Motives on Organic Food Purchase: Theory of Planned Behavior

Kirubaharan Boobalan 1, Nishad Nawaz 2,*, R. M. Harindranath 3 and Vijayakumar Gajenderan 4


Abstract: Marketing campaigns of organic food emphasize utilitarian benefits and psychological benefits as well as consumer culture to enhance environmental sustainability. In order to study the purchase intention of organic food, the authors developed a model using antecedents like warm glow, subjective norm, attitude and perceived behavioral control. This study examines the model for the Indian and the USA samples and thus integrated using three theories: Theory of Planned Behavior (TPB), Pro-Social Behavior (PSB) Theory with the interaction of Consumer Culture Theory. The model is estimated using the multi-group Partial Least Square Structural Equation Modeling (PLS-SEM) technique using R software with samples from India \( n = 692 \) and the USA \( n = 640 \). Results differ for Indian and USA samples. The expectation of the “warm glow” resulted from an environmentally friendly purchase as having a higher influence on Indian samples than that of the USA. Further, the attitude towards organic food purchase intention is stronger for US samples than the Indian, and the group difference is significant, while all the relationships that take warm glow as an antecedent have higher \( \beta \) for Indian samples. Moreover, the study found that attitude towards organic food is a major element for US subsamples, whereas subjective norm plays a major role in Indian samples to adopt organic food. Managerially, the present study suggests that a firm marketing its organic food must concentrate more on “warm glow” for Indian consumers in order to improve their market share.

Keywords: cross-cultural comparison; multi-group (India vs. USA) moderation; organic food; warm glow; Theory of Planned Behavior; Pro-Social Behavior Theory

1. Introduction

Sustainability research highlights new challenges and opportunities that exist for the earth’s welfare [1]. The consumer perception of organic food can help to understand the mindset of consumers towards the purchase of eco-friendly products and this could be different across cultures [2]. The organic and conventionally-based agricultural process impacts the ecosystem and the people differently [3]. The traditional agriculture is known to increase the soil erosion, causes water pollution, enhances greenhouse emission and threatens human health [4]. In contrast, organic farming improves soil fertility, refills cleaner water and air in the ecosystem, and it mainly comprises no toxic pesticide, which leads to enhancement of the planet and people [5]. This raised a key question: “Is organic agriculture healthier for the environment than conventional agriculture?” Undeniably, unlike organic farming, conventional cultivation practices rely more on chemical intrusions to fight pests and worms to maintain the health of the plants. However, it affects the environment and people who consume it [4]. For instance, a study conducted by Niu [5] revealed that the conventional agricultural method mostly uses chemical pesticides, which contain a huge amount of Emamectin Benzoate that causes damage to human DNA and
lung cells, but organic-based agriculture never causes this. Further, Mulla [6] found that organophosphate presence in synthetic pesticides was an enemy to weeds and pests of crops. Meanwhile, it slowly kills organisms, such as plants, fish and birds, collapsing the biodiversity. However, organic-based agriculture helps to preserve biodiversity more naturally than conventional types without harming the environment and the people. The growth of organically produced food products increases only upon the consumers’ demand, and, also, the agricultural process will change to organic-based when the demand for organic products increases [7], which leads to sustainability, protecting the people and environs. The study want to determine the motivating factors for organic food consumption and further want to test the difference between Indian and the USA.

The contribution of this research includes the analyzing of psychological benefits (e.g., pleasure-seeking behavior) that arise from pro-environmental behaviors (e.g., buying of eco-friendly products like organic food). The research using psychological benefits in organic consumption is scarce to date [8]. Further, González [9] and Smith [10] found that consumers habitually mentioned organically produced food products if they think about environmental safety as well as human well-being. It indicates that consumers will experience some emotional benefits while consuming organic food rather than conventionally produced food products [11], and urges the consumers towards repeat purchases [12]. Therefore, this study identified a distinct psychological factor (i.e., warm glow) that motivates the consumers to participate in environmentally friendly behaviors (e.g., buying organic food). The “warm glow” is nothing but the emotional reward experienced by a person while doing good to the environment, and it was termed by the scholar Andreoni [13]. Similarly, Hartmann [14] and Ma and Burton [15] found that expectation of warm glow feeling from eco-friendly activities is a key factor that triggers consumers to buy eco-friendly products. Further, TPB (Theory of Planned Behavior) has also been widely used to understand the consumer’s adoption of organic food e.g., [16–21]. Additionally, many studies have added novel factors to TPB to enhance its predictive power e.g., [22–24]. The present study used warm glow as an antecedent to TPB factors for predicting the purchase intention of organic food by integrating the Theory of Pro-social Behavior and the Theory of Planned Behavior.

Notwithstanding the above, studies like Boobalan and Sulur [23] have discussed the effect of emotional rewards on organic consumption, but they missed studying the cultural-related aspects (e.g., cross-cultural comparisons). Since culture is a sensible concept in any behavioral research, this also should be taken into account [24]. For instance, as known, the trust in organic foods positively influences the purchase of organic foods [25]. However, Boobalan and Sulur [23] have discovered trust-related perceptual differences towards organically produced food products between the east and west. Studies have used variables, such as response efficacy, food safety, natural content, social approval, etc., along with the variables of TPB. The closest to the study is the study performed by Boobalan et al. (2021) [26], where the authors have tested the relationships between warm glow—attitude, warm glow—subjective norm, and subjective norm—purchase intention, but in this research, it went beyond by testing these relationships across samples of contrasting cultures (Indian and USA) [27,28]. In sum, this study has added a novel contribution to the extant literature in organic consumption by investigating the effect of emotional benefits (i.e., warm glow) on organic consumption based on country effects.

2. Theoretical Framework and Hypothesis Development

According to Pro-Social Behavior Theory [29], the altruistic behavior of an individual could induce his/her interest in engaging in any behavior that benefits society. Wüstenhagen and Bilharz’s [30] study revealed that people found feeling the “warm-glow” while performing pro-environmental activities like buying eco-friendly products. The warm glow is nothing but the satisfaction derived from “doing good” [13,31]. Additionally, consumers with environmental-related behaviors will experience an intrinsic warm glow feel from that [32], which could impact their attitude and behavior [33]. As well, Farrow [34] found
that the emotional reward derived from any pro-social activity favorably affects individual norm and behavior. The authors have developed the model by linking the warm glow factor to the TPB factors (i.e., attitude, perceived behavioral control, and subjective norm) initially. This study is somewhat similar to our latest study [26], where we established relationships between warm glow—subjective norm and warm glow—attitude, but not tested for multi-group moderation to evaluate the structural invariance. Further, the consumer culture theory states that consumer’s culture that differs according to one’s culture is the key element that runs behind every consumption made by the people, and it helps to create specific product campaigns to achieve market goals [29]. Hence, the conceptual model (Figure 1) was finally structured by integrating Pro-Social Behavior Theory, the Theory of Planned Behavior, and Consumer Culture Theory (i.e., cross-cultural comparison—India and USA).

![Conceptual model](image_url)

**Figure 1.** Conceptual model.

### 2.1. Warm Glow

Individuals’ immersion in pro-environmental-related activities paves the way for them to experience a warm glow feeling [35]. Nunes and Schokkaert [36] also found that consumers could procure a huge extent of emotional reward when they buy/consume eco-friendly products (i.e., organic food buying). Consequently, the expectation of the warm glow feeling from the engagement of eco-friendly or organic food product consumption could affect the attitude towards that product [32]. In addition to the above, the gain of emotional reward will be high for any individual while his/her activities were recognized by the people who encircled them [37]. Moreover, one can experience some emotional
rewards like a warm glow feeling by gesturing his/her identity as doing good to the
environment and others [38]. However, people’s dependency on emotional rewards from
society followed habitually in collectivistic culture (e.g., India) than individualistic (e.g.,
USA), which leads them to engage in that particular behavior repeatedly along with a good
attitude [39]. It indicates the significant effect of warm glow on attitude while consuming
eco-friendly products such as organic food, and this effect will be higher for collectivistic
culture (i.e., India) compared to the individualistic culture (i.e., USA). Hence, we posit the
following hypotheses:

H1a. Consumer’s expectations of warm glow feeling from buying organic food are positively
correlated with attitude towards it.

H1b. The relationship between warm glow and attitude might be stronger for Indian samples than
in the USA.

Moreover, perceived behavioral control (PBC) combines two components, namely, the
internal PBC and external PBC [40]. Additionally, it is the main key determining factor to
predict behavioral intention, as per the theory of planned behavior [41]. Further, emotional
reward (e.g., warm glow) is the intrinsic feeling that might affect the internal state of an
individual [42]. Besides, Batra [43] found that people in collectivistic culture (e.g., India)
care more about what others think of them, unlike people in an individualistic culture (i.e.,
USA). Due to that, the gratification received by an individual from others will directly
affect his/her internal PBC [37]. Hence, this study expects that the warm glow feel on
PBC will be higher for Indian consumers than the USA. The above arguments lead to the
following hypotheses:

H2a. Consumers’ expectations of a warm glow feel from buying organic food are positively correlated
with their perceived behavioral control.

H2b. The relationship of warm glow and perceived behavioral control might be stronger for Indian
samples than USA.

Guan and So [44] indicate that psychological paybacks such as the expectation of
intrinsic good feeling commonly came from performing socially accepted behavior that
leads to affect an individual’s norm. Further, people living in collectivistic cultures would
be affected by emotional-based societal credits such as appreciation, recognition, and
obligation. Moreover, it is shaping their norm to engage in a particular behavior that makes
them feel good intrinsically [45]. The subjective norm is a societal pressure experienced by
an individual towards engaging any behavior [41]. However, although this type of external
emotional intrusion happened in an individualistic culture, the strength of its influence is
meagre compared to people living in a collectivistic culture setting [46]. Based on the above
premises, we posit the following hypotheses:

H3a. Consumers’ expectations of warm glow feeling from buying organic food are positively
 correlated with the subjective norm.

H3b. The relationship between warm glow and subjective norm might be stronger for Indian
samples than the USA samples.

2.2. Attitude

The theory of planned behavior by Ajzen [41] indicates that attitude is the predis-
position to act in favor or disfavor towards some behavior. As well, the studies like
Eldesouky [47] and Tsakiridou [48] summarized that prior studies found consistently that
attitude of organic food consumers positively influence their purchase intention. Further, or-
ganic food price is a key obstacle for consumers having low purchase ability [49]. Likewise,
an individual’s purchasing power is inversely proportional to the attitude towards any
consumption [50]. Further, the purchasing power of peoples in India is very low compared
to the people of USA [51]. Based on the above, we formulate the following hypotheses:
**H4a.** Consumers’ attitude towards organic food is positively correlated with purchase intention.

**H4b.** The relationship between consumers’ attitudes towards organic food and purchase intention might be stronger for USA consumers than for Indian.

### 2.3. Perceived Behavioral Control

Perceived behavioral control (PBC) refers to an individual’s assessment of his/her ability to perform an advised behavior [52]. Further, it is the key factor that has been employed for upgrading the Theory of Reasoned Action (TRA) to Theory of Planned Behavior (TPB) [41]. Additionally, it is an important factor that influences behavioral intention towards organic food [53,54]. Besides, PBC measures people’s risk-taking behavior; for instance, the PBC for an individual will be high when he/she has a high ability to undertake risk in any purchase/consumption. Meanwhile, the level of uncertainty avoidance (i.e., involvement in risky behaviors) of India [39] is lower than the USA [45,55]. It indicates that, unlike peoples in an individualistic culture like the USA, people in a collectivistic culture like India would not involve in premium-priced products as they need to avoid financial risk because they have only enough resources for survival [56]. As known, the category of organic food is still in the premium-priced product type [57]. Hence, we postulate the following hypotheses:

**H5a.** Consumers’ perceived behavioral control is positively correlated with purchase intention towards organic food.

**H5b.** The relationship between perceived behavioral control and purchase intention might be stronger for USA consumers than Indian consumers.

### 2.4. Subjective Norm

As discussed, the subjective norm is the societal pressure that is exerted on an individual in performing an advised behaviour [58]. Additionally, it is the key predicting factor in organic consumption and other related contexts [59,60]. Further, according to Hofstede’s study, the role of societal effect will be high for collectivistic culture (i.e., India) compared to individualistic culture (e.g., USA) [61]. Additionally, unlike people in individualistic countries, the people in collectivistic countries more valued the other’s opinions while indulging themselves in any consumption [62]. It indicates that one’s norm in a collectivistic culture such as India was built by the people taking care of them. However, people in individualistic cultures such as the USA make their norms; also they show less importance to others’ opinions regarding any decision [63]. Based on the above, we posit the following hypotheses:

**H6a.** Consumers’ subjective norm is positively correlated with purchase intention towards organic food.

**H6b.** The relationship between subjective norm and purchase intention might be stronger for Indian samples than the USA samples.

### 3. Methodology

#### 3.1. Data Collection

Amazon’s Mechanical Turk (MTurk)—a crowdsourcing platform for market research, was used for accumulating responses from India (n = 700) and USA (n = 700). Finally, 692 and 640 data points were screened for further analysis from India and USA. The respondents of MTurk belong to divergent cultures and represent large workforces from many countries, including USA and India, respectively [64]. The demographic profile of respondents is presented in the Table 1.
Table 1. Demographic profiles and descriptive statistics.

<table>
<thead>
<tr>
<th>Sample Characteristics</th>
<th>India</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male = 57% and female = 43%</td>
<td>57%</td>
<td>63%</td>
</tr>
<tr>
<td>Average age (in years)</td>
<td>29.76</td>
<td>36</td>
</tr>
<tr>
<td>Average number of family members</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Educational qualification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Secondary =2.5%</td>
<td>Higher Secondary = 18.4%</td>
<td></td>
</tr>
<tr>
<td>Graduate = 55.5%</td>
<td>Graduate = 42.8%</td>
<td></td>
</tr>
<tr>
<td>Post graduate = 21.5%</td>
<td>Post graduate = 15.3%</td>
<td></td>
</tr>
<tr>
<td>Higher degree = 19.7%</td>
<td>Higher degree = 15.9%</td>
<td></td>
</tr>
<tr>
<td>Any other = 0.9%</td>
<td>Any other = 7.5%</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single = 53.3%</td>
<td>Single = 50.5%</td>
<td></td>
</tr>
<tr>
<td>Married = 46%</td>
<td>Married = 48.1%</td>
<td></td>
</tr>
<tr>
<td>Prefer not to say = 0.7%</td>
<td>Prefer not to say = 1.4%</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee = 62.1%</td>
<td>Employee = 58.6%</td>
<td></td>
</tr>
<tr>
<td>Self-employed = 21%</td>
<td>Self-employed = 18%</td>
<td></td>
</tr>
<tr>
<td>Business = 8.2%</td>
<td>Business = 2.7%</td>
<td></td>
</tr>
<tr>
<td>Students = 2.9%</td>
<td>Students = 6.1%</td>
<td></td>
</tr>
<tr>
<td>Any other = 5.8%</td>
<td>Any other = 14.7%</td>
<td></td>
</tr>
</tbody>
</table>

3.2. Measures

This study questionnaire consists of the Theory of Planned Behavior constructs and the warm glow variable. The study has adopted five constructs from the literature. The attitude is measured with 4 items; perceived behavioral control is measured with 3 items; purchase intention with 5 items; subjective norm with 5 items and warm glow with 4 items. These items are available in Table 2. The measures for these constructs were adopted from prior studies and are presented in Table 2. The 5-point Likert scale has the weights of strongly disagree as 1, strongly agree as 5, and neutral as 3, and these were used to measure the variables. The demographic details such as age, gender, educational qualification, marital status, and family size are presented as the final part of the questionnaire. The age is collected as the number of years, and the family size is collected by the number of members. We coded the gender as male = 1 and female = 2. Similarly, we coded educational qualification, marital status, and occupation.

Table 2. Measurement model results (Item loadings, VIF, AVE and CR values).

<table>
<thead>
<tr>
<th>Constructs (Author)</th>
<th>( \lambda ) (India/USA)</th>
<th>( \mu ) (India/USA)</th>
<th>VIF (India/USA)</th>
<th>AVE (India/USA)</th>
<th>( \alpha ) (India/USA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude [65]</td>
<td>0.85 **/0.85 **</td>
<td>0.72 **/0.83 **</td>
<td>4.13/3.85</td>
<td>0.62/0.70</td>
<td>0.86/0.90</td>
</tr>
<tr>
<td>I prefer organic food because it is processed without any chemicals (ATT1).</td>
<td>0.72 **/0.83 **</td>
<td>4.13/3.85 (0.66/0.93)</td>
<td>2.46/2.27</td>
<td>0.62/0.70</td>
<td>0.86/0.90</td>
</tr>
<tr>
<td>I prefer organic food because it is more nutritious than non-organic food (ATT2).</td>
<td>0.74 **/0.83 **</td>
<td>4.05/4.00 (0.65/0.81)</td>
<td>1.99/1.19</td>
<td>0.57/0.59</td>
<td>0.80/0.82</td>
</tr>
<tr>
<td>I prefer organic food as it causes fewer diseases than conventional food (ATT3).</td>
<td>0.82 **/0.82 **</td>
<td>4.05/4.00 (0.65/0.81)</td>
<td>1.99/1.19</td>
<td>0.57/0.59</td>
<td>0.80/0.82</td>
</tr>
<tr>
<td>I prefer organic food because it is environment-friendly (ATT4).</td>
<td>0.82 **/0.82 **</td>
<td>4.05/4.00 (0.65/0.81)</td>
<td>1.99/1.19</td>
<td>0.57/0.59</td>
<td>0.80/0.82</td>
</tr>
<tr>
<td>Perceived behavioral control [66]</td>
<td>0.82 **/0.82 **</td>
<td>4.05/4.00 (0.65/0.81)</td>
<td>1.99/1.19</td>
<td>0.57/0.59</td>
<td>0.80/0.82</td>
</tr>
<tr>
<td>To buy or not to buy organic food is entirely up to me (PBC1).</td>
<td>0.74 **/0.88 **</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am confident that if I want, I can buy organic food (PBC2).</td>
<td>0.71 **/0.57 **</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have enough resources and time to buy organic food (PBC3).</td>
<td>0.71 **/0.57 **</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2. Cont.

<table>
<thead>
<tr>
<th>Constructs (Author)</th>
<th>λ (India/USA)</th>
<th>μ (σ) (India/USA)</th>
<th>VIF (India/USA)</th>
<th>AVE (India/USA)</th>
<th>α (India/USA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase intention [67]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I intend to buy organic food (PI1).</td>
<td>0.78**/0.91**</td>
<td>4.10/3.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am very likely to purchase organically processed food (PI2).</td>
<td>0.77**/0.79**</td>
<td>2.06/2.19</td>
<td>0.59/0.77</td>
<td>0.87/0.94</td>
<td></td>
</tr>
<tr>
<td>The probability I would buy organic food is very high (PI3).</td>
<td>0.79**/0.90**</td>
<td>0.68/1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I try to buy organic food because it is the best choice for me (PI4).</td>
<td>0.78**/0.91**</td>
<td>0.59/0.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am willing to buy organic food despite their higher prices (PI5).</td>
<td>0.72**/0.88**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People whose opinions I value would prefer that I should buy organic food (SN1).</td>
<td>0.72**/0.83**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My interaction with people about organic consumables influence me to buy organic food (SN2).</td>
<td>0.73**/0.80**</td>
<td>4.17/3.61</td>
<td>2.15/1.95</td>
<td>0.53/0.61</td>
<td>0.85/0.88</td>
</tr>
<tr>
<td>My friends would approve of my decision to buy organic food (SN3).</td>
<td>0.70**/0.69**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My close friends and family members would appreciate it if I buy organic food (SN4).</td>
<td>0.76**/0.81**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People around me generally believe that it is better for our health to use organic food (SN5).</td>
<td>0.74**/0.75**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warm glow [36]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel respected while buying organic food because it helps to protect the environment (WG1).</td>
<td>0.81**/0.87**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have the sense of contributing to the well-being of humanity and nature by buying organic food (WG2).</td>
<td>0.81**/0.85**</td>
<td>4.04/3.50</td>
<td>2.63/2.04</td>
<td>0.63/0.73</td>
<td>0.87/0.91</td>
</tr>
<tr>
<td>I feel like a superior consumer by buying organic food (WG3).</td>
<td>0.81**/0.85**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I sense that I can live healthier by consuming organic food (WG4).</td>
<td>0.81**/0.83**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** = p < 0.05, λ = loading, σ = standard deviation, α = composite reliability, AVE = average variance extracted, VIF = variance inflation factor.

3.3. Data Analysis

We found that the value of the critical ratio of Mardia’s coefficient is quite high (>7) for both—Indian and the USA sample, which indicates the data collected is non-normal [68]. Hence the Partial Least Square Structural Equation Modeling (PLS-SEM) will be an appropriate statistical tool [69,70]. Thus, the model is estimated using PLS-SEM [71], and the R software is employed. In general, the SEM estimation consists of two sequential stages: measurement model estimation (i.e., examination of validity and reliability), followed by structural model evaluation (i.e., examination of hypothesized relationships). The bootstrapping (resampling method) procedure is employed to estimate the structural model, and the number of resamples used is 5000 as recommended by Hair [69].

The study is cross-sectional, and hence common method bias (CMB) would be a likely issue with the data. To mitigate the CMB to an extent, we adopted two strategies—during the preparation of the questionnaire (pre hoc) and statistical evaluation (post hoc) [72]. During the pre hoc stage, we removed certain ambiguous questions, given some information about each construct, etc., to minimize the CMB. The study performed two statistical tests to assess the extent of CMB. Harman’s one-factor test was used. Harman’s one-factor test is performed using the exploratory factor analysis without rotation in SPSS software. In this study, the first factor produced only 42.57% of the variance in Indian samples and 44.82% for USA samples. In both cases, the variance obtained was less than the cut-off value of 50%. Thus, our data will not be affected much due to CMB [73]. Besides,
we found that the variance inflation factor (VIF) value of each item was less than 3.3, which again confirms the absence of CMB [74].

4. Results

The results of the analysis are presented concurrently according to the country type. As well, the demographic details of the samples from India and USA are presented in Table 1.

4.1. Measurement Model Results

The results of the measurement model are presented in Tables 2 and 3, which includes the construct’s composite reliability, variance inflation factor, convergent validity, and item loadings for both the country samples (Table 2). Also the discriminant validity was performed for India and USA sample using Heterotrait-Monotrait Ratio (HTMT) is presented in Table 3.

Table 3. Discriminant validity (HTMT values).

<table>
<thead>
<tr>
<th>Constructs</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Warm glow</td>
<td>1</td>
<td>0.64</td>
<td>0.31</td>
<td>0.63</td>
<td>0.57</td>
</tr>
<tr>
<td>2. Attitude</td>
<td>0.72</td>
<td>1</td>
<td>0.32</td>
<td>0.59</td>
<td>0.67</td>
</tr>
<tr>
<td>3. Perceived behavioral control</td>
<td>0.64</td>
<td>0.65</td>
<td>1</td>
<td>0.31</td>
<td>0.42</td>
</tr>
<tr>
<td>4. Subjective norm</td>
<td>0.69</td>
<td>0.64</td>
<td>0.59</td>
<td>1</td>
<td>0.59</td>
</tr>
<tr>
<td>5. Purchase intention</td>
<td>0.64</td>
<td>0.63</td>
<td>0.59</td>
<td>0.64</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Lower triangular matrix is HTMT values for Indian samples, and upper triangular matrix is HTMT values for USA samples.

The standardized loadings of measures in their respective latent constructs have surpassed the limit 0.7 and are significant at a 5% confidence level, which is considered good for the measurement model suggested by Henseler [67]. However, the item ATT2 in attitude, WG4 in the warm glow, and PBC1 and PBC2 in perceived behavioral control do not have any substantial loading on their respective constructs, so they are removed from further analysis. The value of AVE for all the latent constructs has exceeded the limit 0.5, which indicates the presence of convergent validity [66]. Further, the composite reliability of all the constructs has passed the value 0.7, which indicates the presence of internal consistency of the constructs [69]. The absence of multicollinearity was checked by seeing the value of VIF (variance inflation factor). In this study, all the constructs have VIF values less than 5, which indicates study constructs are free from multicollinearity issue [67].

The model’s discriminant validity was assessed by using the Heterotrait-Monotrait Ratio method (HTMT) as suggested by Henseler [65]. Table 3 shows the discriminant validity for both the country samples (i.e., India and USA). The values in the upper triangular matrix represent the results of discriminant validity assessment performed with the USA sample, and the lower triangular matrix represents the results of discriminant validity assessment with the Indian sample. Both the sample results (i.e., India and USA) were below the value of 0.85 (refer to Table 3), which indicates the presence of discriminant validity. Therefore, enough evidence was found for the presence of convergent and discriminant validity in this study.

4.2. Structural Model Results

The standardized coefficient of each item and the multi-group moderation results (i.e., India vs. USA), along with its respective significance level, are presented in Table 4.

The direct hypotheses are supported for both the group samples (Indian and USA), and the moderating hypotheses are significant for all the relationships except one (refer to Table 4). The relationship between warm glow and attitude (H1a) is positive and significant for both subsamples, and the path difference between Indian and USA subsamples is also significant (H1b). The warm glow–perceived behavioral control relationship (H2a) is also significant for both country samples, and their path difference between subsamples is
significant (H2b), too. Similarly, direct (H3a) and the moderation hypotheses (H3b) between warm glow–subjective norms are significant. The path between attitude and purchase intention is supported for direct and (H4a) moderation hypotheses (H4b). The direct hypothesis (H5a) for perceived behavioral control and purchase intention is supported. However, the moderating hypothesis (H5b) is insignificant (p > 0.1). Finally, the direct (H6a) is supported and the moderating hypothesis (H6b) connecting subjective norm–purchase intention is marginally supported (p < 0.1).

Table 4. Structural model results (multi-group moderation).

<table>
<thead>
<tr>
<th>Structural Paths</th>
<th>Direct Effects</th>
<th>Moderation Effects (i.e., India vs. USA)</th>
<th>Hypotheses Supported/Not Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate ($\beta_1$)</td>
<td>Estimate ($\beta_2$)</td>
<td>Difference in Estimates</td>
</tr>
<tr>
<td>WG $\rightarrow$ ATT</td>
<td>0.720 **</td>
<td>0.646 **</td>
<td>0.074 **</td>
</tr>
<tr>
<td>WG $\rightarrow$ PBC</td>
<td>0.644 **</td>
<td>0.311 **</td>
<td>0.332 **</td>
</tr>
<tr>
<td>WG $\rightarrow$ SBN</td>
<td>0.699 **</td>
<td>0.633 **</td>
<td>0.065 **</td>
</tr>
<tr>
<td>ATT $\rightarrow$ PIN</td>
<td>0.281 **</td>
<td>0.461 **</td>
<td>0.179 **</td>
</tr>
<tr>
<td>PBC $\rightarrow$ PIN</td>
<td>0.202 **</td>
<td>0.196 **</td>
<td>0.006 **</td>
</tr>
<tr>
<td>SBN $\rightarrow$ PIN</td>
<td>0.343 **</td>
<td>0.257 **</td>
<td>0.086 *</td>
</tr>
</tbody>
</table>

WG = warm glow, ATT = attitude, PBC = perceived behavioral control, SBN = subjective norm, PIN = purchase intentions, NS = not significant, ** $p < 0.05$; * $p < 0.1$; a = direct hypothesis, b = moderation hypothesis.

Table 5 shows the resulted R square ($R^2$), Q square ($Q^2$), and the goodness of fit (GOF) values of the hypothesized model. This study model has four endogenous variables (i.e., attitude, perceived behavioral control, subjective norm, and purchase intention), and the variances extracted ($R^2$) were 51.9% (India) and 41.7% (USA) in attitude, 41.5% (India) and 9.7% (USA) in perceived behavioral control, 52% (India) and 55% (USA) in purchase intention, and 48.9% (India) and 40.1% (USA) in the subjective norm.

Table 5. R square, Q square values, and GOF values.

<table>
<thead>
<tr>
<th>Dependent Factors</th>
<th>$R^2$ (India/USA)</th>
<th>$Q^2$ (India/USA)</th>
<th>GOF (India/USA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attitude</td>
<td>0.519/0.417</td>
<td>0.322/0.293</td>
<td>0.535/0.502</td>
</tr>
<tr>
<td>2. Perceived behavioral control</td>
<td>0.415/0.097</td>
<td>0.239/0.057</td>
<td></td>
</tr>
<tr>
<td>3. Purchase intention</td>
<td>0.520/0.550</td>
<td>0.309/0.428</td>
<td></td>
</tr>
<tr>
<td>4. Subjective norm</td>
<td>0.489/0.401</td>
<td>0.264/0.244</td>
<td></td>
</tr>
</tbody>
</table>

Note: $R^2$ = coefficient of determination, $Q^2$ = predictive relevance, GOF = goodness of fit.

Further, the predictive relevance of the conceptual model was measured by the value of $Q^2$, and it should be greater than zero, as suggested by Hair [75]. In this study, the values of $Q^2$ were 0.322 (India) and 0.293 (USA) for attitude, 0.239 (India) and 0.057 (USA) for perceived behavioral control, 0.309 (India) and 0.428 (USA) for purchase intention, and 0.264 (India) and 0.244 (USA) for subjective norm; also, they were found to have good predictive power since the values exceeded zero. Besides, the goodness of fit (i.e., estimating the overall predicting power of the conceptual model) for the model was determined by using the below formula:

$$GOF = \sqrt{AVE} \times \sqrt{R^2}$$
Any model would be mentioned to have good predicting power if the GOF value of the model surpassed the limit of 0.36 as recommended by Tenenhaus [76]. In this study, the model’s GOF was 0.535 for India and 0.502 for the USA, which indicates the hypothesized conceptual model had good predictive power.

5. Discussion

In this study, the attitude of perceived behavioral control and the subjective norm are significantly related to the purchase intention of organic food, which is in line with the results of prior studies in the organic consumption context [77–79]. Further, this work has found that the factor “warm glow feel” that resulted from engaging in any pro-social activities like buying of organic food significantly affected the constructs of TPB (i.e., attitude, perceived behavioral control and subjective norm). These findings were also in line with the study conducted by Boobalan [26]. Besides, the country type (i.e., India and USA) significantly moderates the relationship attitude → purchase intention, but this relationship is stronger for USA compared to India, also in line with the study conducted by Boobalan [23]. Likewise, the relationship subjective norm → purchase intention moderated by country type was marginally supported, but this path relationship was stronger for India than USA [39]. However, the relationship between perceived behavioral control and purchase intention is not moderated by the country type, which contradicted the expected assumptions, and also in line with the results of Boobalan [23]. In addition to the above, the new findings of this study are (i) it has discovered the existence of a positive relationship between warm glow and perceived behavioral control (i.e., warm glow → perceived behavioral control), and (ii) it revealed the significant moderation effect of the factor “country type” (i.e., India vs. USA) on the relationship between warm glow and the constructs of TPB (i.e., warm glow → attitude, warm glow → perceived behavioral control, and warm glow → subjective norm); these three findings are in agreement with the proposed assumptions. In sum, this study has added a few novel findings to the existing literature in the organic consumption context.

6. Theoretical Contribution

This work has added significant theoretical contributions to the existing literature in organic consumption; also it outlined well. This is the first work that has integrated two theories (i.e., Pro-Social Behavior Theory and Theory of Planned Behavior) and tested with the interaction of Consumer Culture Theory across the country (cross-cultural comparison—India and USA). However, this theory integration coincides with the study performed by Boobalan [26], but they have not added Consumer Culture Theory which will be more helpful in understanding the culturally-related aspects of organic food product purchase carried out by the consumers. Further, it has found a factor (i.e., warm glow) which affects consumers most who are living in developing countries (e.g., India) compared to people living in developed nations (i.e., USA). For instance, according to the results of multi-group moderation, the factor “warm glow” significantly affects the constructs of TPB for both samples (i.e., India and USA), but the effect of each relationship (i.e., warm glow → attitude, warm glow → perceived behavioral control, and warm glow → subjective norm) is high for India compared to USA. Additionally, it has introduced a significant novel relationship, “warm glow → perceived behavioral control” to the organic food literature, which was not hypothesized or statistically tested before.

6.1. Policy Implications

From the results, this research work has framed well operative global policies for promoting organically produced food products. Primarily, both the consumers of India and the USA have been influenced by the attitude, subjective norm, and perceived behavioral control towards the purchase intention of organic food. However, the factor “consumer’s attitude” in USA plays a key role in predicting organic food purchase intention compared to India, which shows their individuality in making decisions towards any product purchase.
Therefore, the marketers should concentrate on attitudinal factors when they wish to trade organically produced food products to a developed culture such as the USA. For instance, “Attitude eco-friendly diapers”—a bio-degradable baby diaper manufacturing company that uses only organic cotton [80], advertise that “our nappies were made with organic cotton, it helps to enhance environmental sustainability”—this helps them to create a good attitude towards their products in a consumer’s mind. Further, according to the results, the subjective factor norm affects the consumer most in a collectivistic culture such as India than people in an individualistic culture such as the USA. It indicates the strength of peer influence is higher in any product purchase in India rather than the USA. Hence, marketers of organic food should concentrate on “social groups” while selling in a collectivistic culture such as India. For instance, the product Tablemate promotion strategies in India always show the line “all your neighbors have bought our product” [81]. Beyond all, as shown in the results, the warm glow element affects the subjective norm, attitude, and perceived behavioral control that leads to the purchase intention of organic food for both country samples (i.e., India and USA), but these effects are more for India than the USA. This indicates both the developing and developed countries need this warm glow effect while in product purchase, however, consumers from developing countries such as India are affected more by the “warm glow feel”. Therefore, the marketers should employ this factor (i.e., warm glow) while devising campaigns of organic food products for India compared to developed nations such as the USA. For instance, Ali Tezer [82], in their results of five consecutive experimental studies found that consumers often experience a warm glow feeling while using any product that associates with an environmentally-friendly appeal. One of the experiments resulted that participants who listened to music on headphones described as environmentally-friendly said they enjoyed the music more than participants who used more traditional headphones. Participants also said they would be more likely to purchase those green headphones. Hence, promoting organic food and its natural benefits will induce consumers to adopt organic food that ensures the safety and sustainability of the environment as well as human health.

6.2. Limitations and Future Scope

The study has made some significant contributions, and it has a few limitations. This research is cross-sectional, and hence causal relationships found may have to be tested again using other methodologies such as experimental design. Likewise, the conclusions of this study are limited only to two country samples (i.e., India and USA), which can cover cultural aspects such as developing/developed nations, individualistic/collectivistic culture, and eastern/western countries. Therefore, the researchers are also advised to show concern on other untested effects of cultural values such as universalism versus particularism, specific versus diffuse, and neutral versus emotional, etc. The future cross-cultural studies may help in generalizing the results, which could be useful to evolve strategies for organic food companies [83]. Besides, this study found a factor (i.e., warm glow) that has a higher influence on consumer’s adoption of organic food in India while compared to USA. Therefore, future studies in cross-cultural organic consumption should extend this research work by incorporating unaccounted variables that affect US consumers to adopt organic food.

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