Understanding the psychological benefits in organic consumerism: An empirical exploration

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ABSTRACT

This research builds on the Theory of Planned Behavior (TPB) by proposing two additional constructs: warm glow and self-expressive benefits which could further drive consumer attitude and purchase intentions in the context of organic food consumption. We employed structural equation modelling (SEM) technique with Smart PLS 3.0 (Partial Least Squares) for the analysis of the hypothesised relationships between these psychological factors and the constructs of the Theory of Planned Behavior (TPB). The theoretical model was tested with samples from India (n = 471) and the USA (n = 440) collected using Amazon's Mechanical Turk (M Turk). Results confirmed the importance of warm glow and self-expressive benefits in organic consumerism in both markets. The study makes an important contribution in adding these two constructs to the TPB and then suggests practical tips to policy makers.

1. Introduction

Consumerism has flourished over the last few decades (Jackson, 2011). However, this has come at the cost of the environment (Sodiq et al., 2019). Over the last few years, there has been considerable interest in issues surrounding organic food in both the developed (American Institute of Science, 2019) and of late, the developing world as well (Nguyen, Nguyen, Nguyen, Lobo, & Vu, 2019). The theory of planned behavior (TPB from now on) has been used widely in consumer research. For instance, research has used the TPB to predict pro-environmental behavior (Gkargkavouzi, Halkos, & Matsiori, 2019), healthy behavior (Chekima, Chekima, & Chekima, 2019), sustainable consumption (Wang & Somogyi, 2019) and eco-tourism (Liu, Wu, & Che, 2019). The TPB has also been used to predict organic food consumption (Banovic, Reinders, Claret, Guerrero, & Krystallis, 2019; Basha & Lal, 2019; González, Marquès, Nadal, & Domingo, 2019; Jeong & Jang, 2019; Prentice, Chen, & Wang, 2019).

There is also considerable research that has added some constructs to the TPB to enhance its explanatory power. For instance, research has added health consciousness (Huang, Bai, Zhang, & Gong, 2019), environmental consciousness (Yeon Kim & Chung, 2011), self-identity (Carfora et al., 2019), trust (Lobb, Mazzocchi, & Traill, 2007), food safety (Hsu, Chang, & Lin, 2016) and perceived consumer effectiveness (Emekci, 2019). In the spirit of this line of research, we propose to add

two constructs, warm glow and self-expressive benefits for the reasons outlined below. Warm glow is defined as the experiencing of intrinsic glow feel when an individual involve socially accepted common good behavior (Andreoni, 1990). "Self-expressive benefits" is defined as psychological benefits experienced by individuals when they show their self-identities to others (Lee & Workman, 2015). Environmental friendly consumption has become one of the most discussed topics in the moral behavior literature as it relates to numerous environmental positives (Hartmann, Ruby, Schmidt, & Siegrist, 2018). Consequently, consumers have started showing their concern about health and well-being, which has triggered a change in their dietary behavior (Rosenblatt, Dixon, Wakefield, & Bode, 2019).

Due to the above possibly, demand for organic food (which is healthier and eco-friendly) has been increasing over the years (Akaichi, Glenk, & Revoredo-Giha, 2019). Dietary choices of consumers are shifting slowly from conventional to organically produced food products (Hidalgo-Baz, Martos-Partal, & González-Benito, 2017). Formerly, organic consumerism was prevalent in developed countries but this is getting acceptance in developing countries too of late (Yadav & Pathak, 2016). Research has shown that the decision to purchase organic food is enthused by beliefs relating to its healthiness, good taste, benefits for the environment and the welfare of animals (Boobalan & Sulur, 2020). Recent studies show that consumers experience psychological benefits while indulging in pro-environmental behavior like buying organic

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food products (Kushwah, Dhir, & Sagar, 2019). Hitherto, research relating to explaining the psychological effects of organic food consumption has been scarce (Utter, Denny, Farrant, & Cribb, 2019). Does organic food consumption enhance one's wellbeing and health? Studies show that consumers mentioned organic food when they were asked to think about safety, health and wellbeing (González et al., 2019; Smith & Paladino, 2010). Thus, consumers may experience some psychological benefits as paybacks while consuming organic food despite its high price (Joye, Willems, Brengman, & Wolf, 2010). This may also trigger repeated consumption of organic food (Scotia, 2000). It possibly indicates the feeling of security and happiness among consumers of organic food while they indulge in organic food consumption (Basha & Lal, 2019). Hence, the broad objective of this study is to fill this gap (that there is not much research on psychological benefits in the context of organic food consumerism).

Hence, this study has been taken up to address this aforesaid gap seen in the literature, and to ascertain the psychological effects leading to consumers' preference for organic food. Further, hedonism and pleasure-seeking behavior are recognized as essential psychological drivers of consumer's adoption of organic food (Bauer, Heinrich, & Schäfer, 2013; Hoefkens et al., 2010; Zanoli & Naspetti, 2002). Findings in literature recognize two distinct psychological benefits that possibly affect the pro-environmental behavioral intentions: 1. "self-expressive benefits" derived from visible environmentally sound consumption, and 2. "warm glow" as moral satisfaction resulting from the contribution of good things to the environment (Hartmann & Apaolaza-Ibáñez, 2008; Ng, Law, & Zhang, 2011, 2018). Therefore, this study is designed to analyse the causal influence of these two psychological factors on organic consumption through use of the theory of planned behavior (TPB) and related relevant theories. This study would have both theoretical and managerial implications that we outline later.

2. Theoretical framework and hypotheses development

This paper deals with key factors determining the purchase intention of organic food items by using the Theory of Planned Behavior (Ajzen, 1991), Classical Pro-social Behavior Theory (Bergstrom, Blume, & Varian, 1986) and Signalling Theory (Morris, 1987). The TPB has been developed with three distinct factors viz. attitude (attitude towards buying), subjective norm (societal pressure on an individual's action) and perceived behavioral control (degree or extent to which consumers can control their behavior towards such activities). Many studies have used the TPB for predicting organic food purchase intention (Carfora et al., 2019; Giampietri, Verneau, Del Giudice, Carfora, & Finco, 2018), but research also suggests that various enhancements are needed (to the TPB) for a deeper understanding of the concept of organic consumerism (Nejad, Wertheim, & Greenwood, 2004). The classical pro-social behavior theory states that one's altruistic behavior motivates consumers to contribute to pro-environmental activities and also makes them feel a "warm glow" intrinsically (Nunes & Schokkaert, 2003; Ritov & Kahneman, 1997). This idea confirms the findings of earlier studies that the individual sometimes feels better while involved in eco-friendly activities (Wüstenhagen & Bilharz, 2006). In addition, based on signalling theory, the "self-expressive benefit" as a psychological benefit is experienced by an individual while engaging in socially observable consumption of environmentally friendly products (Aaker, 1999). This in turn leads them to repeated engagement in that particular behavior (Bennett & Chakravarti, 2009). Hence, this research has taken up the examination of how these psychological factors (i.e. self-expressive benefits and warm glow feel) affect the intention of going in for organic food by linking it to constructs of TPB with relevant theoretical underpinnings. Warm glow and self-expressive benefits have been used in related domains like environmental policy (Mancinelli & Zoli, 2014), health care (Aloyo, 2018), multi-media message adoption (Thorbjørnsen, Pedersen, & Nysveen, 2007), and green product consumption (Hartmann & Apaolaza-Ibáñez, 2008). Additionally, there is

one line of research that has added constructs to the TPB. For instance, Sreen, Purbey, & Sadarangani (2018) have added long term orientation, collectivism, and man nature orientation to the TPB constructs in order to predict the green purchase behavior. Hence, for the above mentioned reasons, we add the two constructs, warm glow and self-expressive benefits to the TPB. We develop hypotheses centred on the TPB and the above two constructs (warm glow and self-expressive benefits) in the context of organic food consumption below.

2.1. Self-expressive benefits

The signalling theory (Morris, 1987) and symbolic consumption offer a means to discover the psychological benefits resulting from self-expressiveness (Aaker, 2006). Signalling is the technique meant to express one's interest in something indirectly. One can also indicate his/her liking to observers by indulging in certain behavior (Depaulo & DePaulo, 1989). Consumers are also very active in the use of products that lead to societal welfare when signalling is likely (Glazer & Konrad, 1996). Individuals gain psychological benefits from the purchase of signalling potentiated products associated with pro-environmental behavior (Bennett & Chakravarti, 2009). Thus, they are willing to buy organically produced food in order to reduce environmental impacts - this sends a signal of their green credentials (Rousseau & Vranken, 2013). Also, the expectation of psychological happiness as gratification from society might induce a person to engage in pro-environmental behavior (Apaolaza, Hartmann, D'Souza, & López, 2018). By engaging in green activities (like purchasing organic food), consumers can project a socially acceptable image and gain satisfaction by getting others' appreciation through purchase of eco-friendly products (e.g. organic food). Further, perceived behavioral control (PBC) is defined as an individual's perceived ease or difficulty of performing the particular behavior (Ajzen, 1991). Perceived behavioral control deals with one's own assessment about the ability to participate in a particular behavior (Ajzen, 1991). When SEB is high for a consumer, it means that the behavior (which in case is purchase of organic food) is socially observable. If it is socially observable, it means that it is possible to indulge in that behavior. In other words, the PBC is high. Further, individuals often practice signalling in order to show their identity towards others (Berger & Ward, 2010). The act of practising signalling also means that the behavior is under their control. Based on the above posit:

H1a. Self-expressive benefits resulting from pro-environmental behavior have a positive influence on the purchase intention of organic food.

H1b. Self-expressive benefits resulting from pro-environmental behavior have a positive influence on the attitude towards organic food.

H1c. Self-expressive benefits resulting from pro-environmental behavior have a positive influence on the perceived behavioral control.

2.2. Warm glow

Classical pro-social behavior theory indicates pure altruism stimulates individuals to perform common good, which gives them an intrinsic good feeling (Bergstrom et al., 1986). According to extant research, (Andreoni, 1989, 1990), consumers experience some psychological payback when they indulge themselves in pro-environmental activities, which Andreoni called "warm glow of giving". Moral benefits gained by consumers by engaging in pro-environmental activities lead to a feeling of warm glow (Nunes & Schokkaert, 2003). Consumers consider organic food consumption an environmental friendly behavior (Kim, Njite, & Hancer, 2013). Consumers with environmentally responsible behavior gain an intrinsic warm glow feeling. As the consequence of a contribution to an environmental

common good, it can also lead to a positive attitude towards behavior (Brouwer, Powe, Turner, Bateman, & Langford, 1999). Further, warm glow is a feeling experienced by an individual when he/she indulge themselves in socially accepted behavior, which in turn affect an individual norm (e.g. healthy actives such as consuming of organic food) (Guan & So, 2016), Based on the above we state:

H2a. Warm glow feel resulting from pro-environmental behavior has a positive influence on the purchase intention of organic food.
H2b. Warm glow feel resulting from pro-environmental behavior has a positive influence on the attitude towards organic food.
H2c. Warm glow feel resulting from pro-environmental behavior has a positive influence on the subjective norm.

2.3. Attitude

Attitude is a factor that regulates one's favour or disfavour in the evaluation of a certain behavior/entity. TPB states that the intention to indulge in a certain behavior is predicted by the attitude towards that certain behavior (Fishbein & Ajzen, 1977). Recent research findings in the organic consumerism literature have shown that attitude towards organic food gets reflected in the consumer's purchase intention of organic food (Carfora et al., 2019; Chen, 2017; Giampietri et al., 2018; Menozzi, Sogari, Veneziani, Simoni, & Mora, 2017; Schmidt, 2019). Based on the above, this research posits:

H3. Attitude towards organic food has a positive influence on the purchase intention of organic food.

2.4. Subjective norm

The Theory of Planned Behavior proposes that subjective norm is the perceived social pressure to perform or not to perform any behavior. It is also one of the significant determining factors of behavioral intention (Ng, Law, & Zhang, 2018). It implies consumers' likelihood of looking for support from others, who are trusted members when they are unclear about performing a particular behavior (Bratt, 1999). Social trends have moved towards consumption of healthy food. These drifts have a strong influence on the consumer's choice to buy organic food (Hill & Lynchehaun, 2002). Thus, consumer choice regarding the purchase intention of organic food is based on the attitude and opinions of people who are important to them. Studies found that the societal influence on an individual in performing environmentally friendly behavior has a potential effect on his/her attitude towards it (Tarkiainen & Sundqvist, 2005b). Hence:

H4. Subjective norm has a positive influence on the purchase intention of organic food.

2.5. Perceived behavioral control

Ajzen (1991) describes perceived behavioral control (PBC) as the "perceived easiness or difficulty of performing a behavior, it also deals with one's own judgment about his/her ability to initiate a particular behavior". It depends on perceived barriers and ability, which influences the consumer's buying decision (Sheeran, Trafimow, & Armitage, 2003). While considering organic food, perceived barriers such as price and availability are the crucial deterrents to purchasing decisions towards it (Singh & Pandey, 2018). Studies indicate that PBC is a significant factor that causes organic food purchase intention (Tarkiainen & Sundqvist, 2005). Moreover, the ability and difficulty perceived by an individual towards a certain behavior affects his/her attitude towards such behavior (Chen, 2007). Hence:

H5. Perceived behavioral control has a positive influence on the purchase intention of organic food (Fig. 1).

3. Methodology

3.1. Data collection

A crowd sourcing platform, Amazon's Mechanical Turk (M Turk) was used for collecting responses from India (n = 471) and USA (n = 440). Research reveals that M Turk respondents are typically diverse (Paolacci & Chandler, 2014). Further, findings indicate that 50% of M Turk respondents are from USA and around 40% from India (Ipeirotis, 2010). So we collected data from these two countries (i.e. India and USA). Our use of M Turk was in line with research that has used M Turk for collecting data for behavioral studies (Chandler, Rosenzweig, Moss, Robinson, & Litman, 2019; Kim, Ghosh, Chang, Fouad, & Figueiredo, 2016; Lu et al., 2019). The demographic details of the respondents are presented accordingly in the table below (Table 1).

The above table reveals that respondents of this study consisted of both genders, single and married, with a variety of educational backgrounds, ages and occupations. Thus, our study is possibly generalizable to both East and West, developing and developed countries.

3.2. Measures

This study used standard scales. All responses were measured on a 5 point Likert scale. The details of the measures are presented in Table 2.

3.3. Data analysis

Structural Equation Modelling (SEM) technique using Smart PLS 3 was used for testing the theoretical model. This is because tests revealed that the data were non-normal and when this is the case, Smart PLS is preferred to covariance based SEM (Hair, Matthews, Matthews, & Sarstedt, 2017). Specifically, we performed the Kolmogorov–Smirnov test using SPSS to confirm the non-normality of the data, results shows that our study data did not follow the normal distribution (Frey, 2018). Further, we checked for multivariate normality by calculating the Mardia's coefficient. The value of Mardia's coefficient for the samples of India and the USA were 283.798 and 166.747, whereas the cut-off is 5 (Bentler, 2005). This too confirmed the data were non-normal. Since the assumption of multivariate normality was not met, the use of Smart PLS is appropriate and hence we used it. SEM consists of two steps: the measurement model, and the structural model (Schumacker, 2004). The validity and reliability of the conceptual model were examined by designing and analysing the measurement model. The causal relationship presumed was tested through analysis of the structural model. Subsequently, Bootstrapping with 5000 subsamples was used during hypothesis testing as suggested by Hair, Hult, Ringle, and Sarstedt (2014).

3.4. Results

Before describe the results of the PLS SEM, we tested for common method bias (CMB) that we describe below.

3.4.1. Common method bias

Harman's one-factor test was used for ensuring the absence of the common method bias issue. The first factor in the exploratory factor analysis without rotation produced 41.81% variance for India, 46.96% for USA, and 47.58% for overall sample, as well these variances are less than 50%. Hence the model is free from common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Additionally, the Variance Inflation Factor (VIF) value of each construct was seen as less than 3.3 which also confirms the absence of common method bias (Kock, 2017).

3.4.2. Measurement model results

The composite reliability (CR), convergent validity (AVE), variance inflation factor (VIF) and the item loading values of all reflective
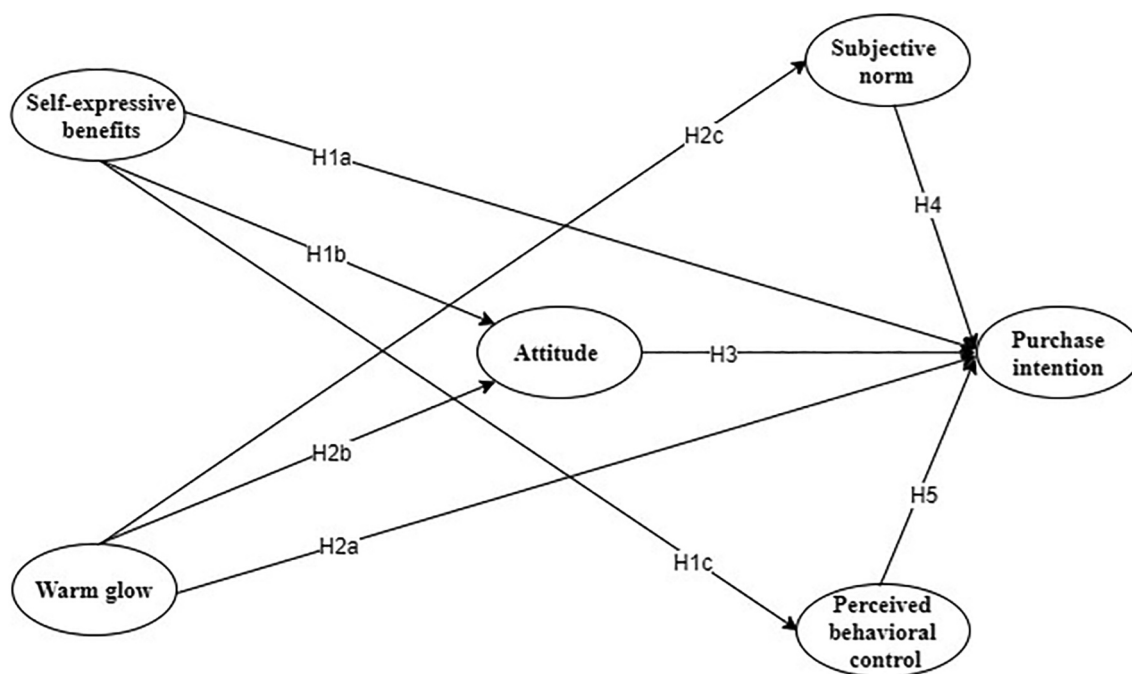
Fig. 1. Conceptual model.

Table 1
Demographic details and descriptive statistics.

Sample characteristics	India (n = 471)	USA (n = 440)
Gender (Male)	246	169
Average Age (In years)	29.4	37.1
Average number of family members	4	3
Educational Qualification	Higher Secondary = 2.5% Graduate = 53.7% Post graduate = 23.1% Higher degree = 19.5% Any other = 1.1%	Higher Secondary = 16.4% Graduate = 45.7% Post graduate = 15.2% Higher degree = 16.6% Any other = 6.1%
Marital status	Single = 53.9% Married = 45.0% Prefer not to say = 1.1%	Single = 54.5% Married = 44.1% Prefer not to say = 1.4%
Occupation	Employee = 63.5% Self-employed = 19.7% Business = 7.2% Students = 3.2% Any other = 6.4%	Employee = 59.5% Self-employed = 19.1% Business = 2% Students = 4.5% Any other = 14.8%

constructs are shown in Table 2. A model is considered a good fit when the value of Square Root Mean Residual (SRMR) is less than 0.09; the SRMR value of this model is 0.05 for the saturated and 0.07 for the estimated model. Further the Root Mean Square Error of Approximation (RMSEA) was also estimated and the value was 0.07. Thus, the data fits well with the model (Hu & Bentler, 1999).

As shown in Table 2, the standardized item loadings of all the constructs exceeded the limit 0.7 which is considered a significant loading (Henseler, Ringle, & Sinkovics, 2009) except for a few (ATT2 in attitude, PBC1, and PBC5 in perceived behavioral control, PI1 in purchase intention and WG4 in warm glow). These items (with insufficient loadings) were removed from further analysis. The composite reliability also surpassed the limit 0.7, which ensures the internal consistency of the constructs used for this study (Hair, Ringle, & Sarstedt, 2011). The issue of multicollinearity was verified using the inner and outer VIF

values. The multicollinearity between the measures of constructs was checked by inner VIF while the multicollinearity between the constructs was checked using outer VIF values. In this study, the inner and outer VIF values did not exceed the limit 5 which confirmed that multicollinearity was not an issue (Rogerson, 2001). Assessment of convergent validity was made using the average variance extracted (AVE). In this study, the AVE value of all constructs exceeded the recommended value 0.5.

As shown in Table 3, the discriminant validity of the constructs was assessed according to established convention (Fornell & Larcker, 1981). Assessing of discriminant validity was done by comparing the square root of Average Variance Extracted (AVE) of each construct with inter-construct correlation. In this study, the square root of AVE of each construct was greater than the correlation between the constructs, ensuring the existence of discriminant validity (Bagozzi & Yi, 2012). Thus, we found evidence of both convergent and discriminant validities.

3.4.3. Structural model results

The standardised regression coefficients and their significance levels for both the country samples are presented in Table 4.

The theorized relationships attitude → purchase intention (India; $\beta = 0.22$, t = 2.92/USA; $\beta = 0.40$, t = 7.97), perceived behavioral control → purchase intention (India; $\beta = 0.14$, t = 2.48/USA; $\beta = 0.21$, t = 4.85) and subjective norm → purchase intention (India; $\beta = 0.27$, t = 4.22/USA; $\beta = 0.24$, t = 4.96) were found to be positive and significant for both the samples (i.e. India and USA). As hypothesized, the relationships self-expressive benefits → perceived behavioral control (India; $\beta = 0.53$, t = 9.89/USA; $\beta = 0.33$, t = 7.10), and self-expressive benefits → attitude (India; $\beta = 0.11$, t = 1.68/USA; $\beta = 0.22$, t = 2.89) were also found to be positive and significant for both the samples (i.e. India and USA).

However, the path self-expressive benefits → purchase intention (India; $\beta = 0.12$, t = 1.54/USA; $\beta = 0.07$ t = 1.08) was not significant for both India and the USA, but it is significant for the overall sample as shown in Table 4. Further, warm glow → attitude (India; $\beta = 0.62$, t = 12.05/USA; $\beta = 0.49$, t = 6.28), and warm glow → subjective norm (India; $\beta = 0.66$, t = 19.09/USA; $\beta = 0.64$, t = 18.81) were found to be positive and significant for both the country samples, while the warm glow → purchase intention (India; $\beta = 0.10$, t = 1.22/USA;

Table 2
Measurement model results (Item loadings, VIF, AVE & CR values) – Overall.

Constructs (Author)	λ	μ (σ)	VIF	AVE	C.R.
Attitude (Wang, Wiegerinck, Krikke, & Zhang, 2013)				0.68	0.89
I prefer organic food because it is processed without any chemicals	0.84***		2.11		
I prefer organic food because it is more nutritious than non-organic food	0.80***	4.0	1.69		
I prefer organic food as it causes fewer diseases than conventional food	0.81***	(0.81)	1.76		
I prefer organic food because it is environment-friendly	0.82***		2.01		
Perceived behavioral control (Han, Hsu, & Sheu, 2010)				0.58	0.80
To buy or not to buy organic food is entirely up to me	0.80***	4.0	1.44		
I am confident that if I want, I can buy organic food	0.86***	(0.75)	1.30		
I have enough resources and time to buy organic food	0.59***		1.23		
Purchase intention (J. S. Lee, Hsu, Han, & Kim, 2010)				0.73	0.91
I intend to buy organic food	0.82***		1.99		
I am very likely to purchase organically processed food	0.87***	3.8	2.35		
The probability I would buy organic food is very high	0.86***	(0.90)	2.36		
I try to buy organic food because it is the best choice for me	0.85***		2.21		
Subjective norm (Armitage, Armitage, Conner, Loach, & Willetts, 1999)				0.62	0.89
People whose opinion I value would prefer that I should buy organic food.	0.84***		2.13		
My interaction with people about organic consumables influences me to buy organic food	0.81***		1.95		
My friends would approve of my decision to buy organic food	0.71***		1.62		
My close friends and family members would appreciate if I buy organic food	0.82***	3.9	2.07		
People around me generally believe that it is better for our health to use organic food.	0.75***	(0.80)	1.67		
Self-expressive benefits (Solomon, 2002)				0.74	0.93
I could express my environmental concern by purchasing organic food	0.85***		2.38		
By purchasing organic food, I can show myself and to my friends that I care about environmental protection	0.86***		2.76		
While buying organic food, my friends can perceive my concern about environmental issues	0.89***		3.20		
People around me observe that I am aware of ecological development while buying organic food	0.87***	3.7	3.05		
My concern about chemical hazards is noticed by people while buying organic food	0.81***	(0.95)	2.15		
Warm glow (Nunes & Schokkaert, 2003)				0.73	0.91
I feel respected while buying organic food because, it helps to protect the environment	0.87***		2.34		
I have the sense of contributing to the well-being of humanity and nature by buying organic food	0.83***		1.98		
I feel like a superior consumer by buying organic food	0.87***	3.7	2.73		
I sense that I can live healthier by consuming organic food	0.86***	(0.97)	2.61		

*** → p less than 0.001, λ → Loading, σ → Standard deviation, C.R. → Composite reliability, AVE → Average variance extracted, VIF → Variance inflation factor.

Table 3
Discriminant validity (Overall).

Constructs	1	2	3	4	5	6
1. Attitude	**0.82**					
2. Perceived behavioral control	0.45	**0.76**				
3. Purchase intention	0.67	0.50	**0.85**			
4. Self-expressive benefits	0.61	0.40	0.60	**0.86**		
5. Subjective norm	0.61	0.40	0.65	0.68	**0.79**	
6. Warm glow	0.68	0.43	0.63	0.80	0.70	**0.85**

Diagonal values represent the square root of the AVE.

β = 0.01, t = 0.88) path was found to be insignificant in the overall sample, the Indian sample and the American sample.

Apart from the above we also tested the model with the overall

sample. Except the relationship warm glow on purchase intention, all the direct hypotheses are positive and significant. Moreover, as shown in the above table (i.e. Table 4), the country type (i.e. India and USA) did not moderate the relationships posited except "self-expressive benefits to purchase intention" (βdifference = 0.20, p = 0.003). Hence, we were justified in clubbing the two countries' samples for analyses.

In other words, we tested the model for India alone, USA alone and the combined sample and found consistent results across the three. We were also justified in pooling the data of the two countries since the difference in the beta weights (between India and USA) was not significant except for SEB → PBC. Out of 9 relationships, only one was different between the two samples. Hence, we decided to pool the data.

Table 4
Structural model results (Overall/India/USA).

Path	Overall	India – β1(n = 471)	USA – β2 (n = 400)	Country difference|(β1-β2)|(P value)
ATT → PI (H3)	0.31*** [7.68]	0.22*** [2.92]	0.40*** [7.97]	0.17 (0.058) [NS]
PBC → PI (H5)	0.17*** [4.87]	0.14*** [2.48]	0.21*** [4.85]	0.07 (0.326) [NS]
SEB → ATT (H1b)	0.16*** [2.82]	0.11* [1.68]	0.22*** [2.89]	0.10 (0.297) [NS]
SEB → PBC (H1c)	0.40***[11.74]	0.53*** [9.89]	0.33*** [7.10]	0.20 (0.003)**
SEB → PI (H1a)	0.11** [1.99]	0.12 [NS] [1.54]	0.07 [NS] [1.08]	0.05 (0.627) [NS]
SN → PI (H4)	0.27*** [6.99]	0.27*** [4.22]	0.24***[4.96]	0.03 (0.695) [NS]
WG → ATT (H2b)	0.55*** 10.99]	0.62***[12.05]	0.49***[6.28]	0.12 (0.181) [NS]
WG → PI (H2a)	0.05 [NS] [0.95]	.10[NS] [1.22]	0.01 [NS] [0.88]	0.09 (0.423) [NS]
WG → SN (H2c)	0.70***[31.03]	0.66***[19.09]	0.64***[18.81]	0.01 (0.769) [NS]

SEB = Self-expressive benefits, WG = Warm glow, ATT = Attitude, PBC = Perceived behavioral control, SN = Subjective norm, PI = Purchase intention, [ ] = T statistics, NS = Not significant, () = P value.
*, **, *** denotes regression coefficient significant at 90%, 95%, and 99%.

Table 5
Indirect effect (Overall/India/USA).

Indirect path (IV → Mediator → DV)	Standardised Indirect effects		
	Overall	India	USA
SEB → ATT → PI	0.05 (0.007)	0.026 (0.105) [NS]	0.08 (0.007)
WG → ATT → PI	0.17 (0.000)	0.14 (0.006)	0.20 (0.000)
SEB → PBC → PI	0.07 (0.000)	0.07 (0.016)	0.07 (0.000)
WG → SN → PI	0.19 (0.000)	0.18 (0.000)	0.15 (0.000)

Note: SEB = Self-expressive benefits, WG = Warm glow, ATT = Attitude, PBC = Perceived behavioral control, SN = Subjective norm, NS = Not significant, () = P value.

3.4.4. Mediation results

We have also checked the mediation effect of attitude, subjective norm, and perceived behavioral control in relationship of warm glow and self-expressive benefits on purchase intention for overall, India, and the USA samples. The results of mediation analysis are presented below in Table 5.

The results of mediation analysis clearly indicate that attitude, perceived behavioral control and subjective norm act as mediators in the above relationships for both the overall sample and individual country (India and USA) samples. However, attitude doesn't seem to act as a mediator between relationship self-expressive benefits on purchase intention (βIndirect = 0.26, p = 0.105) for the Indian sample only.

Table 6 presents the values of R square (R^2), Q square (Q^2) and the Global goodness of fit (GoF) of the theoretical model. The extracted variances were 49%, 28%, and 53%, and 43% on attitude and perceived behavioral control, purchase intention, and subjective norm for India. As well 47%, 10%, 57%, and 41% for USA respectively. The predictive relevance (Q^2) of a model was gauged by the value of Q^2. The model was said to have good predictive relevance when the value of Q^2 was greater than zero (Hair et al., 2014). In this study, the theoretical model surpassed the recommended limit zero for both the country samples, thereby demonstrating good predictive relevance of the model. Additionally, the overall predictive power of the theoretical model was estimated using GoF with the formula indicated below.

$$Gof = \sqrt{\overline{AVE}} * \sqrt{\overline{R^2}}$$

When a model exhibits a GoF value greater than 0.36, its predictive power is considered good (Tenenhaus, Vinzi, Chatelin, & Lauro, 2005). This study model exhibits the GoF value of 0.53 (which is greater than the recommended limit). Hence this model had good predictive power.

4. Discussion

In line with prior work on the TPB (Carfora et al., 2019), this work also found that attitude, subjective norm, and perceived behavioral control (PBC) significantly drove behavioral intentions (in this case, to purchase organic food). Additionally, this work also revealed that self-expressive benefits and warm glow too drove intentions to buy organic food. Thus, there are psychological benefits that the consumer experiences (warm glow – feeling good after an organic purchase and self-expressive benefits – signaling to the outside world his-her green credentials) and these are major reasons that consumers buy organic food.

Table 6
R square, Q square & GoF values.

Dependent factors	R^2		Q^2		GoF
	India	USA	India	USA	
1. Attitude	0.49	0.47	0.30	0.32	0.53
2. Perceived behavioral control	0.28	0.10	0.16	0.05	
3. Purchase intention	0.53	0.57	0.30	0.44	
4. Subjective norm	0.43	0.41	0.22	0.26	

This is new to the literature. All the proposed relationships except warm glow → purchase intention were found to be significant and positive for overall, India and USA sample, as well, the relationship self-expressive benefits → purchase intention is significant for only overall sample except the country samples (i.e. India and USA). However, warm glow have a significant effect on the purchase intention of organic food indirectly through mediators such as perceived behavioral control and attitude norm for all the samples. Our work has significant theoretical and managerial contributions as well. We outline them below.

5. Theoretical contributions

Our work makes important theoretical contributions. First, it introduces the concept of psychological benefits i.e. self-expressive benefits and warm glow, to the organic food literature. Our work is one of the first, to our knowledge, that demonstrates this. In general, there is only little work that has demonstrated that psychological benefits too drive purchase of organic food. For example, a study conducted by Hwang (2016) determined that self-presentation is one psychological benefit factor that motivates consumer engagement in organic food purchase behavior. Similarly, the intrinsic glow feel predicted green electricity consumption (Menges, Schroeder, & Traub, 2005). This intrinsic glow also made individuals gain some emotional benefits while indulging in pro-social behavior like buying organic food products (Kushwah et al., 2019) Thus, while there are studies in related areas or domains that have incorporated psychological benefits, there are none in the important area of organic food. Ours, to our knowledge, is the first to make this key contribution. In general, our research adds to the work that suggests that psychological benefits drive socially good behavior (Hartig, Kaiser, & Strumse, 2007). Second, it adds to the literature on the TPB. This research shows that adding warm glow and self-expressive benefits to the TPB enhances its explanatory power. Research has added health consciousness (Huang et al., 2019), environmental consciousness (Yeon Kim & Chung, 2011), self-identity (Carfora et al., 2019), trust (Lobb et al., 2007), food safety (Hsu et al., 2016) and perceived consumer effectiveness (Emekci, 2019) to the TPB; our research adds two more constructs (warm glow and self-expressive benefits) and extends this line or inquiry. Third, this is possibly the first study to collect data using M Turk in the organic consumerism context; the advantage of this is that respondents are from two different countries (i.e. India and USA), thus possibly adding to the generalizability of the results for both developing and developed settings.

6. Managerial contributions

Our research showed that subjective norm, attitude and perceived behavioral control lead to high purchase intention for organic food. Hence, companies manufacturing organic food may devise strategies around subjective norm and perceived behavioral control. For instance, subjective norm involves "what others think of me when I buy organic food". Hence, organic food companies may in addition to highlighting the product benefits (which influences the attitude), also dwell on how trendy it is to buy organic food; alternatively, brands may play up the

societal approval that will follow when a consumer buys organic food.

For example, a few organic food ads speak of the product benefits, which influences the attitude. Consider the case of "Earth's Best organic" baby food (https://www.youtube.com/watch?v=nat5bqoMlQ8); this ad speaks about why they are better than Gerber, a leading brand of baby food internationally. While this (ads that render attitudes positive) is no doubt necessary, some brands dwell on how trendy it is to consume organic food – a case in point is Horizon organic (https://www.youtube.com/watch?v=s9KZp662bbE). The ad features young women in this business, indirectly conveying that "organic is cool".

Regarding the effect of PBC, we have the following suggestions. Organic food manufacturers may convey that consumers can easily buy organic food at an online outlet or somewhere nearby. One issue with organic food particularly in third world countries like India, is that consumers may not believe it is genuinely organic food. Hence, brands may invest in certifications. For instance, 24 Mantra, a brand of organic food in India, on its packaging states that it is certified by APEDA, USDA NOP (National Organic Programme) and the European Union standards are specified by regulation EC 834/2007. In the USA, a company US Organic prominently proclaims its USDA organic certification (https://www.us-organic.com/pages/about-us).

The main managerial contributions in our study flow from the two new constructs that we added to the TPB, warm glow and SEB. Warm glow is the personal benefit experienced by the consumer when he/she is involved in any activity for the common good. Ads may convey to consumers that they are contributing to the well-being of society i.e. consumers should feel a "warm glow" when they see the ad and buy organic food. For instance, Surf, a brand of Unilever India, in the 1990s conveyed that it was smart to buy Surf. In the West, Mercedes Benz advertises that it smart to buy a used Mercedes (https://www.mercedesbenznaples.com/blogs/694/5-reasons-a-certified-mercedes-benz-is-a-smart-buy/). Likewise, organic food companies may state something similar. Research has also showed that the main reason for product purchase are not merely product attributes, but deeply held values (Wansink, 2004). This finding dovetails well with our finding. Apart from mentioning the product attributes, brands may also highlight values like self-esteem in their ads. Finally, we also found that self-expressive benefits drove intention to buy organic food. In other words, when consumers purchase organic food, they are signalling to the world that they are environmentally conscious. Hence, organic food manufacturers may say things like "are you an environmental conscious consumer? Then buy our brand of eco-friendly wheat flour" and so on. While organic food is no doubt growing (Carfora et al., 2019), even after many years, conventional (i.e. non-organic) food continues to be the main choice for the majority of consumers in both developed (USA) and developing (India) countries (Dubé, Fatemi, Lu, & Hertzer, 2016). Hence, in order to accelerate the trend towards organic food, companies in this space may consider using warm glow (ads that show the feel-good factor while consuming organic food) and self-expressive benefits (ads that show consumers signalling to the outside world that they are green) in their ads.

7. Limitations and scope for future research

While our work has important contributions to make, it also suffers from a few limitations. First, our work used a survey. At times, it may also be useful to study organic food consumption using an experiment (Blondel & Javahéri, 2004). Future research may attempt systematically varying warm glow and self-expressive benefits and test them in more controlled settings as well. Second, this paper considered two additional constructs (self-expressive benefits and warm glow) to the TPB, future research may include additional variables like (bio-sphere value, personal moral norm and visual appeal) in the context of organic food consumption. Third, prior research with some exceptions (Al-Swidi, 2014; Vries, Dijkstra, & Kuhlman, 1988), found that there was no

correlation between subjective norms and PBC (Al-Swidi, 2014; Vries et al., 1988), but we found that the relationship between the two was significant ($\beta = 0.248^{***}$, $t = 4.838$), so future research can investigate the reason for this inconsistent finding in this line of research. Fourth, while this work collected data for India and the USA through Amazon M Turk, it was not a perfect cross-cultural study as did not hypothesised differences between countries; we also did not measure cultural dimensions for the two countries. Future work may not just replicate this work in different countries, it can also measure relevant cultural dimensions and come up with hypotheses around them. For example, would self-expressive benefits be more important in individualistic countries? Would warm glow be more important in collectivistic countries? Fifth, while we did not hypothesise the SEB-subjective relationship, we tested it statistically. We found that subjective norms lead to SEB and we also found the reverse to be true i.e. SEB lead to subjective norms. Future research can resolve the directionality of this relationship. Finally, while organic food is healthy, it is also more expensive. Hence, consumers who cannot afford it may feel distressed and may experience cognitive dissonance. It is possible, that due to the low credibility regarding the genuineness of organic food in India/developing countries (Yin, Wu, Du, & Chen, 2010), consumers may reduce this dissonance by arguing that the organic food may not be genuine. Still, future research may study this interesting issue. Thus, our work may pave the way for more research in this important area.

8. Conclusions

In sum, this work found that apart from the traditional variables like PBC, attitude and subjective norm, psychological benefits like warm glow and self-expressive benefits drove propensity to consume organic food. It offers significant theoretical and managerial pointers. This work was conducted using M Turk participants. Future work may consider the points mentioned in the previous section and extend our work.

CRediT authorship contribution statement

Kirubaharan Boobalan: Conceptualization, Methodology, Software, Formal analysis, Writing - original draft. **Geetha Sulur Nachimuthu:** Investigation, Data curation, Supervision, Methodology. **Bharadhwaj Sivakumaran:** Visualization, Data curation, Formal analysis, Methodology.

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