

# Self-identity and internal environmental locus of control: Comparing their influences on green purchase intentions in high-context versus low-context cultures

**Abstract:** This study empirically examines the combined effect of two crucial internal consumer predispositions, self-identity (SI) and internal environmental locus of control (INELOC), among consumers in a collectivistic culture and an individualistic culture. The study validated the extended theory of planned behaviour to predict consumers' green purchase intentions. Structural equation modelling was used to analyse primary data collected from 365 American and 408 Indian respondents. Analysis revealed differences between the two cultures. Green self-identity influenced attitude more than perceived behavioural control among American consumers, while the reverse was true for Indian consumers. Conversely, INELOC positively and significantly affected only Indian consumers' perceived behavioural control, not that of American consumers.

**Keywords:** Self-identity, Internal environmental locus of control, Green purchase intention, Individualistic culture, Collectivistic culture, Theory of planned behavior.

## 1. Introduction

In the past few decades, there has been a tactical shift in research streams underpinning consumers' eco-friendly behaviour from profiling green consumers (Roberts, 1996; Schwepker Jr and Cornwell, 1991) to understanding their predispositions to act in a pro-environmental manner (Akehurst et al., 2012; Cerri et al., 2018). Previous research and empirical evidence focusing on consumers' environmentally friendly behaviour in developing and developed nations has shown that targeting consumers with positive environmental predispositions can not only intensify environmental preservation efforts but also create and enlarge the market share of pro-environmental products (Muralidharan et al., 2016; Stern, 2000). In a recent GfK MRI's gold-standard American consumer survey, approximately 56% of consumers indicated that they are willing to pay more to use green products, and approximately half indicated that they are ready to sacrifice convenience and adopt environmentally safe products (GfK, 2017). Along similar lines, the latest Nielsen report on the sustainability landscape in India showed that the sales growth of natural products far outpaced that of non-natural products in multiple product categories with strong price resiliency (Nielsen, 2018). Hence, policymakers and marketers call for further research comparing and contrasting the effects of important

consumers' predispositions for eco-friendly buying behaviour among consumers of developed and developing nations (Ertz et al., 2016; Mufidah et al., 2018).

Among the multitude of behavioural precursors explored by researchers in the fields of sociology and psychology, self-identity (SI) has been identified as one of the strongest correlates of behavioural intention (Conner and Armitage, 1998; Sparks and Guthrie, 1998). In environmental behaviour literature, self-identity is related to purchase intention for environmentally friendly (EF) products (Van der Werff et al., 2014). The literature has also reported that self-identity influences intention in multiple behavioural contexts, further mediated by theory of planned behaviour (TPB) constructs (Ajzen, 1988) and found to affect attitude towards behaviour (ATT) and perceived behavioural control (PBC) (Rise et al., 2010).

Similarly, "environmental locus of control" (ELOC) is another important determinant, which helps to understand a consumer's perceived multifaceted control over the environment and the resultant pro-environmental behaviour (Cleveland et al., 2005; Trivedi et al., 2015). Previous studies have revealed that an individual who believes that his or her individual behaviour directly affects the well-being of the environment, an "internal environmental locus of control (INELOC)", is more environmentally concerned than an externally controlled individual (Ahn et al., 2014). Still, there is limited understanding of the role played by INELOC in conjunction with TPB constructs—namely, ATT, subjective norm (SN), and PBC—to determine intention to purchase EF products.

Although a small number of studies have established the individual effects of SI and ELOC on environmental behaviour in a piecemeal fashion (e.g. Bartels and Hoogendam, 2011; Pavalache-Ilie and Unianu, 2012), the combined effect of having a green SI and strong INELOC on purchase intention manifested through TPB variables is yet to be examined. The person with a dominant green self-identity along with a belief that one's actions can help improve environmental problems (INELOC) can be effectively targeted not only to substitute non-green products with environmentally friendly products but also to become future evangelists and advocates of a green lifestyle (Cleveland et al., 2012).

Cultural orientation is considered to be another important element that manifests itself in consumers' environmental action (Everett et al., 1994; Ignatow, 2006), and a recommendation has been to compare the differences in environmental behaviour due to the effects of collectivistic and individualistic culture (Cho et al., 2013). Among the few studies that have recently taken the cross-cultural comparison approach in this area, however, there are contradictory and conflicting findings. Although earlier studies have investigated various constructs, such as environmental concern (Muralidharan and Xue, 2016), environmental

awareness (Kaufmann et al., 2012), and environmental knowledge (Liobikienė et al., 2016), the differences between collectivistic and individualistic cultures, in terms of consumers' pro-environmental behaviour, arising from the effects of individuality-driven constructs such as self-identity and INELOC, are yet to be empirically investigated. An attempt is made to fill this gap in the environmental literature by examining the combined effects of self-identity and INELOC on consumers' green product purchase intentions in an individualistic culture (United States) and a collectivistic culture (India). With a steady increase in awareness and sensitivities towards the environment, the market for green products has been consistently expanding. Not only is this study important from a theoretical advancement perspective, but it also advances knowledge by filling an essential void in the literature. In providing strategic and empirical insights into green product consumption in different cultural contexts, this study also helps green marketers to make key business decisions.

## **2. Theoretical background**

### **2.1 Role of culture in formation of behavioural intentions**

Culture refers to a “collective programming of the mind which distinguishes one group from another” (Hofstede, 1980, p. 25). It is assumed to be inherently embedded within each individual, leading to the formation of unique intellectual traditions (Cho et al., 2013). Researchers across different domains have used the individualism-collectivism-continuum (Sivadas et al., 2008) to capture cultural variability. It is generally assumed that an individual scoring high in individualism is more “independent and self-oriented”, whereas an individual scoring high in collectivism is assumed to be “interdependent and more group-oriented” (Triandis, 1989). Collectivistic and individualistic cultural orientations strongly influence and predict differences in consumer behaviour across multiple contexts (De Mooij and Hofstede, 2002; Mattila and Patterson, 2004). A review of past literature suggests that most of the western countries are culturally individualistic, whereas the majority of the Asian countries are characterised as collectivist (Sivadas, et al., 2008).

Culture is a profound antecedent of environmental behaviour across multiple country contexts (e.g. Ignatow, 2006; Oreg and Katz-Gerro, 2006). Among studies comparing and contrasting the effect of culture on green consumer behaviour, some have reported that consumers from high-context cultures exhibit stronger environmental concern and pro-environmental behaviour (e.g. Culiberg and Elgaaied-Gambier, 2016; Trivedi et al., 2011), whereas others have reported that consumers from low-context cultures behave in a more pro-environmental way (e.g. Soyezy, 2012; Stolz et al., 2013). Ignatow's (2006) study spanning 21

countries discovered that environmental behaviour is influenced more by a distinct cultural model than the environmental concerns of an individual. Similarly, Oreg and Katz-Gerro's (2006) study examining environmental behaviour in 27 countries also noted culture as a profound determinant of pro-environmental behaviour. The current study compares and contrasts the environmental behavioural intentions of consumers in India, a largely collectivistic society (Cheah and Phau, 2011), against those of the individualistic consumers of the United States of America (McCarty and Shrum, 2001).

## 2.2 Theory of planned behaviour

The TPB (Ajzen, 1988, 1991) is a well utilised and robust theory in behavioural intention literature to explain the formation of behaviour (Armitage and Conner, 2001). Ajzen and Fishbein (1980) define behavioural intention as “the likelihood of an individual to engage in a specific behaviour”. TPB has been the preferred conceptual framework in several environmental contexts, such as organic food choice (Dean et al., 2012; Tarkiainen and Sundqvist, 2005; Thøgersen, 2010), recycling behaviour (Davies et al., 2016; Oreg and Katz-Gerro, 2006; Terry et al., 1999; Tonglet et al., 2004), and purchase intention of environmentally friendly products (Mancha and Yoder, 2015).

TPB postulates that behavioural, normative, and control beliefs shape behavioural intention (Ajzen, 1991; Ajzen and Fishbein, 1980). Behavioural beliefs refer to the attitude towards a specific behaviour. Normative beliefs are shaped by perceived expectation of important others, that is, subjective norm, whereas control beliefs refer to one's assessed ability to accomplish the behaviour in question, that is, PBC (Mancha and Yoder, 2015). Ajzen (1991) conceptualises *attitude* as “the extent to which an individual has a positive or negative evaluation of the behaviour in question”. Previous studies support attitude towards environment as the most relevant and important determinant of pro-environmental behavioural intention in both collectivistic (Albayrak et al., 2013; Chan and Lau, 2002; Hwang et al., 2000; Jang et al., 2014; Kai and Haokai, 2016; Lee, 2011; Mostafa, 2007; Perrea et al., 2014) and individualistic cultures (Cheah and Phau, 2011; Cook et al., 2002; Dean et al., 2012; Han and Kim, 2010; Laroche et al., 2002; Schwepker Jr and Cornwell, 1991; Tarkiainen and Sundqvist, 2005; Wall et al., 2007). Thus, Hypothesis 1 states the following:

**H<sub>1</sub>:** Attitude towards purchasing green products influences green purchase intention positively for both collectivistic and individualistic cultures.

Theoretical advances of the TPB indicate that social norm (SN) is another critical determinant of behavioural intention. Ajzen (1991) conceptualises SN as “the perceived social

pressure to perform or not to perform the behaviour” (p. 188). This means that the “opinion of important others” such as parents, friends, spouse, or relatives influences the behaviour of a person to perform the desired actions. In environmental behaviour, research studies have supported that perceived SN positively affects purchase intention for environmentally friendly products in both collectivistic (Albayrak et al., 2013; Chan and Lau, 2002; Jang et al., 2014; Kai and Haokai, 2016; Malhotra and McCort, 2001; Manaktola et al., 2007) and individualistic cultures (Bamberg, 2003; Cook et al., 2002; Culiberg and Elgaaied-Gambier, 2016; Dean et al., 2012; Han, 2015; Han et al., 2010; Han and Kim, 2010; Harland et al., 1999; Mannetti et al., 2004; Wall et al., 2007). Contrary to the findings of most studies, a small number of studies reported weak or no significant effect of perceived social norms on purchase intention (e.g. Paul et al., 2016; Taylor and Todd, 1995). Keeping in tandem with the findings of the majority of the studies, this study posits as follows:

**H<sub>2</sub>:** Perceived social norm influences green purchase intention positively for collectivistic cultures as well as for individualistic cultures.

PBC has been defined as “the perceived ease or difficulty of performing the behaviour” (Ajzen, 1991, p. 122), which consists of the availability of various resources (facilitating conditions) and self-confidence for performing the behaviour (self-efficacy) (Bandura, 1977). Among the three antecedents identified in the TPB, PBC is generally the most important and strongest predictor of “pro-environmental behavioural intention” in both collectivistic (Albayrak et al., 2013; Chan and Lau, 2002; Jang et al., 2014; Kai and Haokai, 2016; Malhotra and McCort, 2001; Manaktola et al., 2007) and individualistic cultures (Bamberg, 2003; Cook et al., 2002; Dean et al., 2012; Han et al., 2010; Han and Kim, 2010; Harland et al., 1999; Litvine and Wüstenhagen, 2011; Mannetti et al., 2004; Wall et al., 2007). Based on the above discussion, this study proposes the following:

**H<sub>3</sub>:** PBC influences green purchase intention positively for collectivistic cultures as well as for individualistic cultures.

Perceived social norm positively influences attitude towards environment in collectivistic (Albayrak et al., 2013; Li et al., 2009; Malhotra and McCort, 2001; Manaktola et al., 2007; Peng and Lin, 2009; Tan, 2013) and individualistic cultures (Chen and Peng, 2012; Davies et al., 2016; Han et al., 2010; Harland et al., 1999; Litvine and Wüstenhagen, 2011; Mannetti et al., 2004; Tarkiainen and Sundqvist, 2005; Wall et al., 2007), which leads to the next hypothesis:

**H<sub>4</sub>:** Perceived social norm influences attitude towards environment positively in collectivistic cultures as well as in individualistic cultures.

A review of studies revealed that, along with attitude towards environment, SN also influences PBC in an environmental context in collectivistic (Albayrak et al., 2013; Malhotra and McCort, 2001; Manaktola et al., 2007; Tan, 2013) and individualistic cultures (Davies et al., 2016; Harland et al., 1999; Litvine and Wüstenhagen, 2011; Mannetti et al., 2004; Wall et al., 2007). Thus, an additional hypothesis is proposed as follows:

**H<sub>5</sub>:** Perceived social norm influences PBC positively for collectivistic cultures as well as for individualistic cultures.

Based upon the robust foundation of the TPB to understand behavioural intention, several studies in the past have added context-specific variables to increase the estimation power and make more meaningful theoretical contributions to the green marketing literature (Conner and Armitage, 1998; Paul et al., 2016). In his original seminal work, Ajzen (1991) also asked researchers to add new variables to improve the predictive power of the TPB and suggested that the original three antecedents of TPB could be used as mediators between such additional variables and behavioural intention. Thus, adding important variables underpinning consumers' predisposition to act in a pro-environmental manner is expected to improve the predictive and explanatory power of the original TPB in collectivistic and individualistic country contexts. Several studies have focused on understanding multiple facets of consumers' environmental predisposition, its major antecedents, and consequential effects on intentions and behaviours (Raggiotto et al., 2018), providing evidence that environmental predisposition acts as a key driver forming behavioural intention to adopt green products and services (Akehurst et al., 2012). To further the understanding of the role played by consumers' environmental predisposition in shaping behavioural intention, the proposed model empirically measures the combined effect of self-identity and environmental locus of control on behavioural intention, mediated by the three key antecedents of the TPB.

### 2.3 Self-identity

In many studies, self-identity is identified as a vital construct, which consistently adds additional variance to the TPB model (Conner and Armitage, 1998; Mannetti et al., 2004; Sparks and Guthrie, 1998). Self-identity is defined as "the salient part of an actor's self which relates to a particular behaviour" (Conner and Armitage, 1998, p. 1444). Thoits and Virshup (1997) point to the three distinctive aspects of identity varying between and within various disciplines: personal identity (self-definitions of unique and idiosyncratic characteristics), role identity (self as performing a particular role), and social identity (self as a part of a social group). Self-identity has been found to be an important predictor of behavioural intention in various

contexts (Dean et al., 2012; Rise et al., 2010), and most previous studies have operationalised role identity as self-identity variables within the TPB (Mannetti et al., 2004). The relationship between self-identity and behavioural intention is valid across various behaviours ranging from health (Cook et al., 2002; Sparks and Guthrie, 1998), contraceptive usage (Fekadu and Kraft, 2001), blood donation (Charng et al., 1988), college retention decision (Biddle et al., 1987), altruism (Rapaport and Orbell, 2000), and voting (Granberg and Holmberg, 1990), among others. Identity theory explains the connection between role identity and behavioural intention (Stryker, 1968), which describes role as a specific and distinctive act that a person assumes in different social settings (Simon, 1992). Therefore, role identity refers to a number of behavioural intentions enacted by an individual in line with embedded social context (Dean et al., 2012).

Through meta-analysis, Rise et al. (2010) established how behavioural intentions formed through SI in the TPB. This study indicated that SI contributed to nine per cent increased variance in the prediction of behavioural intention. In the environmental context, it has been proven that consumers who perceive themselves as green consumers who are more environmentally friendly results in satisfaction of their self-defined needs. Barbarossa et al. (2015) studied the impact of SI on the attitude-intention relationship for electric cars in three European countries. Hinds and Sparks (2008) studied undergraduate students in the UK and found that a stronger environmental identity leads to a positive attitude towards environmental behaviour. Oliver and Lee (2010) found that green self-image strongly influences consumers' attitudes towards buying hybrid cars, and this was found to be higher among US consumers than among their Korean counterparts. Dermody et al. (2015) proved that SI exerts a greater effect on UK consumers' pro-environmental behaviour than on the pro-environmental behaviour of Chinese consumers. UK consumers score high on sustainable consumption compared to Chinese consumers. In the Indian context, Khare and Pandey (2017) and Khare (2015) report that consumers' green self-identity significantly influences organic food consumption behaviour. Mancha and Yoder (2015) also found self-identity to be an important determinant of green behavioural intention among Indian college students. Adnan et al. (2017) attempted to understand the green lifestyles of young consumers and found self-identity to be an important determinant. It has been generally reported that self-identity will have a relatively weak effect on attitude towards behaviour and PBC among Indian consumers as compared to US consumers. Thus, this study proposes the following:

**H<sub>6</sub>:** SI has a stronger effect on the attitudes of individualist consumers than on those of collectivist consumers.

**H7:** SI has a stronger effect on PBC among individualist consumers than among collectivist consumers.

#### 2.4 Internal environmental locus of control (INELOC)

Locus of control (LOC) refers to “one’s belief in his or her abilities to control the events happening in one’s life” (Rotter, 1960). LOC has been the strongest predictor of pro-environmental behaviour in marketing and environment psychology literature (Ahn et al., 2014; Bamberg and Möser, 2007; Cleveland et al., 2005). In the meta-analysis of 15 studies conducted by Hines et al. (1987), a strong correlation was reported between the LOC and pro-environmental behaviour. It is established that people with an INELOC engage more in consuming EF products than people with an external LOC (e.g. Allen and Ferrand, 1999; Schwepker Jr and Cornwell, 1991). It is generally believed that people with an internal LOC exhibit a positive attitude towards the use of EF products, as they believe that their own actions are a major determinant of environmental well-being. Conversely, those with an external LOC will demonstrate a learned helplessness, as they believe that their purchases will not make any significant environmental changes and opine that it is the responsibility of either the government or corporations (Trivedi et al., 2015).

In collectivistic cultures, Trivedi et al. (2015) found that Indian consumers with a higher LOC demonstrate positive environmental attitudes and behaviour. Boubonari et al.’s (2013) study of primary teachers in Greece reported that a higher LOC results in a positive attitude towards marine pollution issues. In a study conducted by Bodur and Sarigöllü (2005) among Turkish consumers, a significant relationship between LOC and attitude towards the environment was found. Pavalache-Ilie and Unianu (2012) surveyed undergraduate students in Romania and reported a direct influence of LOC on pro-environmental attitudes.

Studies examining similar relationships in individualistic cultures have yielded contrary results. In a study conducted in the USA by McCarty and Shrum (2001), it was found that people with higher LOC will show a positive attitude towards recycling. A study of students in the USA reported that LOC correlates with environmental activism and attitudes towards environmental conservation (Huebner and Lipsey, 1981). Overall, since it has been found that a relationship between attitudes towards the environment and LOC is prominently established in both individualistic and collectivistic societies, we assume that for INELOC also, the relation with attitude towards behaviour will be positive for both collectivistic and individualistic cultures:



**H<sub>8</sub>:** INELOC influences attitude towards purchasing green products positively for both collectivistic and individualistic cultures.

Lastly, in the absence of any previous literature, it has been hypothesised that people with higher INELOC are more likely to show increased PBC, as they will proactively look for resources that will help them to make environmentally friendly product choices and depict higher self-efficacy and confidence to perform pro-environmental actions. Considering the dearth of studies in this domain comparing the INELOC between members of collectivistic and individualistic cultures, however, the following is proposed:

**H<sub>9</sub>:** INELOC influences PBC positively for both collectivistic and individualistic cultures.

< Figure 1 >

### **3. Method**

#### **3.1 Data collection**

This study administered a cross-country survey in the United States and in India to capture green product purchase intention. Subjective knowledge about constructs fulfilled the “equivalent requirement for comparative research” (Douglas and Craig, 1983). Considering the large populations of both countries, the sampling procedure was administered considering feasibility and affordability. Using Hair et al.’s (2011) recommendations, 15 observations per item were desired, and this study used 29 items, resulting in 435 respondents (29\*15=435). In India, data were collected through an in-person survey and an online survey via e-mail and social media platforms. The e-mail appending the link to the GoogleDocs® form along with social media platforms was sent to 980 e-mail addresses, which were collected from open sources such as websites and yellow pages. As a result, 476 responses were received, of which 68 responses were removed for incompleteness and outliers, leading to 408 valid responses. An independent sample *t*-test was performed on the data collected through e-mail and in-person for 29 items. There was no statistically significant difference. This shows that both data collection methods yielded similar responses ( $p < 0.05$ ).

An e-survey was used to collect data in the US using Qualtrics®. A reusable link was shared via e-mail, social networking platforms, and Amazon M-Turk®. A total of 386 respondents provided responses, of which 21 responses were deleted to avoid missing values and the presence of outliers. With the populations of India and the US being large, random sampling was not the most feasible approach. Data were collected through convenience sampling, which has been a preferred method in diverse consumer behaviour and marketing

studies and is especially effective when the population of interest is very large (Han and Hyun, 2015).

### 3.2 The sample

The final sample consisted of 365 US respondents and 408 Indian respondents and a total of 773 respondents, which is higher than Hair et al.'s (1998) recommended value of 435 responses. Considering the requirements of structural equation modelling, the number of completed responses used for analysis was much higher than the recommended value of 400 (Boomsma, 1987). In the overall sample, 54.08% males and 45.92% females participated in the study, where a majority (56.92%) were married. Also, the sample consisted of more younger respondents (62.87% of 20-35 years of age) than middle-aged (36-50 years, 26.39%) or older individuals (50 years or older, 10.74%). Most respondents were employed full-time (52.91%). A total of 73% of respondents possessed a graduate degree or higher. In the Indian sample, 65.2% were male respondents, 62.3% were married, 66.4% were between 20 and 35 years old, 41.2% were employed full-time, and 71.3% possessed a graduate degree or higher. Meanwhile, in the US sample, 58.4% of respondents were females, 50.9% were married, 58.9% were between 20 and 35 years old, 66% were employed full-time, and 63.2% possessed a graduate degree or higher.

### 3.3 Operationalising measurement

#### 3.3.1 Independent variables

A structured questionnaire was used as an instrument for data collection. Validated scales adopted from previously published studies were used to create the questionnaire for this study. For instance, the scale measuring attitude towards purchasing green products (ATT), consisting of three items, was adopted from the work of Mostafa (2006, 2009). Subjective norms (SN), explained using four items, were adopted from a study by Dean et al. (2012), which was also validated by Chen and Peng (2012). The studies of Dean et al. (2012) and Chen and Peng (2012) were referred to for the development of the seven-item scale of PBC. The self-identity (SI) scale was adopted from Sparks and Shepherd (1992), Lee (2009), and Dean et al. (2012) and had a total of six items. A four-item scale of internal environmental locus of control (INELOC) was adopted from Cleveland et al. (2005). The study used anchors as "1=strongly disagree and 5=strongly agree" for all measurement items.

#### 3.2.2 Dependent variables

Further, a five-item scale measuring “green product purchase intention” was adopted from Chang (2013) and Taylor and Todd (1995), with anchors of “1=strongly disagree and 5=strongly agree”. All the items used in this study are mentioned in Table 1. The back translation method was used to establish linguistic equivalence between English and the Hindi questionnaire for India (Brislin, 1970).

< Table 1 >

### 3.4 Bias

Harman’s (1976) one-factor test was applied to the dataset for testing the presence of common method bias (CMB) using exploratory factor analysis (EFA). Unrotated EFA was performed on all items of attitude, self-identity, subjective norm, PBC, internal ELOC, and purchase intention. The single factor that emerged explained 39.16% of variance, which is less than the 50% threshold (Podsakoff et al., 2003). This indicates the absence of issue of any CMB. Procedure wise, multiple studies were used to adopt the measurement scales of construct to reduce the bias (Podsakoff et al., 2003).

## 4. Analysing data

Structural equation modelling (SEM) was used for analysing the data, considering its ability to assess the measurement error, compute latent constructs estimation through observed variables, estimate complex models (Stein et al., 2012) or multi-level models (MacKenzie, 2001), and, most importantly, to compare complex theoretical models across different cultures (Steenkamp and Baumgartner, 1998) over traditional multivariate techniques. For empirical analyses, SEM was used in two stages: (a) validating measurement model and (b) testing structural model.

### 4.1 Validating measurement model

The measurement model was assessed through fit statistics, performing confirmatory factor analysis (CFA) with the help of AMOS 20.0. This also yielded construct validity, estimated through the maximum likelihood method (MLE). For evaluating model adjustments to data, called model fit, the normed chi-square value, that is,  $\chi^2/DF$  should be between 2 and 5, the comparative fit index (CFI) should be above 0.9, the incremental fit index (IFI) should be above 0.9, and the root mean square error of approximation (RMSEA) should be less than 0.08 (Hair et al., 1998).

Overall, based on Hu and Bentler (1999), the aforementioned indices—such as  $\chi^2_{(309)}=1300.34$ ,  $\chi^2/DF=4.208$ , CFI=0.93, IFI=0.93, and RMSEA=0.064—indicated a good model fit after the items PBC 5, PBC 7, and INELOC1 were discarded due to lower factor loadings (<0.5). The results depicted in Table 2 also indicated that standardised estimates of all items on their respective constructs were above 0.5 and significant ( $t<0.05$ ) (Bagozzi and Yi, 1988). Cronbach Alpha and composite reliabilities values of each construct were above 0.7 (Cronbach, 1951; Nunnally, 1982). These statistical results evidenced the internal consistency of the measurement scales. Convergent validity was achieved, as all AVE values were above 0.5 (Bagozzi and Yi, 1988). All the squares of the inter-construct correlations, presented in Table 2, were lower than their respective square roots, leading to the establishment of discriminant validity (Fornell and Larcker, 1981).

<Table 2>

#### 4.2 Testing structural model

Causal relationships between the constructs were tested as per the hypotheses proposed using AMOS 20. The “maximum likelihood estimation (MLE)” method was used to compute estimates, taking PI as the dependent variable. The  $\chi^2$  statistic for this structural model was 1470.18, with *DF* of 309 ( $p<0.01$ ). This result, along with the  $\chi^2$  to *DF* ratio of 4.76, CFI of 0.92, and IFI of 0.92 with RMSEA of 0.07, suggests an acceptable model fit of this complexity tested for the sample size (Hair et al., 1998). The explanatory power of the model with INELOC and self-identity, measured in percentage of variance explained, was 68%, which was higher than the 53% explained by the TPB ( $\chi^2_{(312)}=712.35$ ;  $\chi^2/DF=5.56$ ; CFI=0.936; IFI=0.936; PNFI=0.772, and RMSEA=0.077). With regards to the structural path coefficients of the model, attitude has a positive link with PI ( $\gamma=0.20$ ,  $p<0.05$ ). Subjective norm has a positive link with PBC ( $\gamma=0.30$ ,  $p<0.05$ ) and with attitude ( $\gamma=0.23$ ,  $p<0.05$ ) but is an insignificant predictor of PI ( $p>0.05$ ). In fact, PBC also affects PI positively ( $\gamma=0.68$ ,  $p<0.05$ ). Hypotheses  $H_{1-5}$  were confirmed. For self-identity, it was found that its effect on attitude ( $\gamma =0.52$ ,  $p<0.05$ ) and PBC ( $\gamma=0.61$ ,  $p<0.05$ ) is significant and positive. Importantly, INELOC is a significant influencer of attitude ( $\gamma=0.14$ ,  $p<0.05$ ) and PBC ( $\gamma=0.06$ ,  $p<0.05$ ).

#### 4.3 Estimating model for the US and India

To test the possible moderating impact of country context, the model with US samples was tested, which received an acceptable goodness of fit ( $\chi^2_{(311)}=1272.27$ ;  $\chi^2/DF=4.09$ ; CFI=0.88; IFI=0.88; PNFI=0.745, and RMSEA=0.09). The standardised coefficients ( $\gamma$ ) of all

causal paths revealed that attitude ( $\gamma=0.10, p<0.01$ ) and PBC ( $\gamma=0.36, p<0.001$ ) have a positive influence on PI, while SN failed to influence PI ( $p>0.01$ ). SN influences attitude positively ( $\gamma=0.25, p<0.001$ ) and also affects PBC positively ( $\gamma=0.24, p<0.01$ ). Self-identity influences attitude ( $\gamma=0.52, p<0.01$ ) and PBC ( $\gamma=0.70, p<0.01$ ) positively. INELOC influences attitude positively ( $\gamma=0.13, p<0.01$ ) and is an insignificant predictor of PBC ( $p>0.05$ ).

The structural model tested for the Indian sample also found an adequate model fit ( $\chi^2_{(312)}=913.37$ ;  $\chi^2/DF=2.93$ ; CFI=0.907; IFI=0.908; PNFI=0.77, and RMSEA=0.069). Distinctively, internal ELOC was found to be an insignificant predictor of PBC and PI in the Indian context. Intention was influenced by attitude ( $\gamma=0.38, p<0.01$ ) and PBC ( $\gamma=0.43, p<0.01$ ) but was insignificant to subjective norm. Further, subjective norm positively influenced attitude ( $\gamma=0.19, p<0.01$ ) and PBC ( $\gamma=0.35, p<0.01$ ). Importantly, self-identity was found to be a significant predictor of attitude ( $\gamma=0.47, p<0.01$ ) and PBC ( $\gamma=0.42, p<0.01$ ). In fact, INELOC was found to be a significant predictor of PBC ( $\gamma=0.17, p<0.01$ ) and a weak predictor of attitude ( $\gamma=0.09, p<0.1$ ). In comparison, purchase intention for green products was higher among US consumers (R-squared = 72%) than among Indian consumers (R-squared = 53%) (see Table 3). Table 4 shows that H<sub>2</sub> was not supported for the US, India, or the total sample. Meanwhile, H<sub>9</sub> was supported for India and the total sample but was not supported for the US sample.

< Table 3 >

< Figure 2 >

## 5. Discussion and implications

Green behaviour has increasingly garnered attention in marketing research (Cornelissen et al., 2008; Sheth et al., 2011; Zhao et al., 2018). Building upon the non-volitional consumption of green products grounded on the TPB (Ajzen, 1985) and using the survey data from consumers in the US and India, this paper shows that internal consumer predispositions such as green self-identity and INELOC significantly influence consumers' green purchase behaviour across collectivist and individualistic cultures. Consumer intention is influenced by green self-identity and INELOC indirectly via attitude towards behaviour and PBC. The proposed conceptual model based on the extension of the TPB is fully supported. Among the TPB constructs, attitude and PBC influence consumer green purchase intention in both the US and India, but subjective norm does not influence purchase intention. Self-identity was found to significantly influence attitude for both countries but has a higher positive effect among US consumers, who are individualistic in nature, than among Indian consumers, who are considered

collectivist in nature. Conversely, the influence of INELOC on attitude and PBC is high among Indian consumers compared to US consumers.

### 5.1 Theoretical contributions

This study reveals intricate mechanisms through which consumers' green purchase intention differs between the US and India. This study advances the understanding of psychological variables to test the boundary conditions of green purchase intention and tests the boundary conditions of the TPB for validation. Moreover, the study's focus on two diverse cultures regarding their green PI represents an important contribution, enriching the extant literature on model validation under multiple cultural settings. This study demonstrates that SN does not play a significant role in driving PI for green products for collectivistic (Paul et al., 2016) or individualist cultures (Tarkiainen and Sundqvist, 2005).

Considering the relevant path estimates of modelled relationships for the US and India, the group conformity of US consumers becomes apparent for PBC. For green products, PBC has a stronger influence on purchase intention for US consumers than Indian consumers. Being individualistic, US consumers have higher self-efficacy towards displaying green PI, unlike Indian consumers, who are part of a collectivistic culture. The current findings suggest that attitude also acts as a central construct in forming green PI for both cultures (Khare, 2015; Taylor and Todd, 1995). Importantly for Indian consumers, attitude bears a far greater influence on PI for green products among Indian consumers than among US consumers.

Green self-identity reinforces its importance as a significant behavioural determinant of attitude and PBC. For American consumers, green self-identity has a higher influence on PBC than does attitude. Meanwhile, Indian consumers' self-identity influences attitude more than their PBC. This nuanced cross-cultural difference affecting the green purchase behaviour of consumers is an important contribution of this study, highlighting the fact that marketers should target consumers with green self-identity from a low-context culture by reinforcing their self-efficacy through creating a green marketing mix, enabling them to execute their green purchase decision making. Conversely, consumers from a high-context culture with green self-identity can be motivated to purchase green products if their positive attitudes towards environmental preservation are simply reinforced through their own consumption.

Secondly, in line with the pioneering work of Hines et al. (1987) establishing the "association between psycho-social variables and pro-environmental behaviour", this study attempted to establish the relationship between INELOC and the pro-environmental behaviour of consumers in high-context and low-context cultures. It was found that INELOC only has a

significant positive effect on Indian consumers' PBC; meanwhile, the result for consumers in the USA was not significant. This finding suggests that only Indian consumers with a higher INELOC will proactively seek resources and opportunities to consume environmentally friendly products by depicting a higher self-efficacy; meanwhile, the same does not hold true for US consumers. Similarly, INELOC will have a higher positive effect on the attitudes of Indian consumers than on those of US consumers. These findings require further exploration through detailed multi-country studies.

## 5.2 Managerial implications

Educators, researchers, and practitioners who specialise in marketing green products can use the findings of this study to understand green product consumption, enhanced due to cross-cultural settings. Findings from this study show that US consumers consider green purchase intention as volitional control, while Indian consumers have less volitional control. Green marketers, when targeting US consumers, may provide quality green products with wider choices to capture all segmental needs. Conversely, Indian consumers have fewer requisite resources, such as money, time, environmental knowledge, and opportunities to purchase green products due to lack of wider availability. For developing nations such as India, it is difficult to develop all resources and opportunities overnight while the green movement is still in its primary stage (Chan and Lau, 2002; Trivedi et al., 2015). Fine-tuned strategic efforts pertaining to green behaviours by green marketers and Indian policymakers are required to advance sustainable green consumption behaviour across the country. For instance, green marketing companies in India should encourage and participate aggressively in government initiatives such as Swachh Bharat Abhiyan, Eco-Mark, and National Programme for Organic Production (NPOP) (Sreen et al., 2018).

Green marketers in India should align marketing communications to create top-of-the-mind awareness about green products, their acquisition modes, and green choices and to enhance the perceived availability beliefs along with their logistical efficiency (Vermeir and Verbeke, 2008). Conversely, attitudes towards green purchases exert a lower level of influence than PBC. Here, green marketers should focus on increasing favourable attitudes towards the purchase of green products. For instance, attitudinal beliefs, such as ideas of green purchases, green versions, and saving energy, should be highlighted in communication campaigns for Indian audiences. The audience-intervening brand communications should tap how their green products help the environment to conserve naturally, that is, the utility of green products (Chaudhary and Bisai, 2018). Further, green companies should manufacture credible green

products and green adverts showing that the genuineness of environmental friendliness helps to adopt more green and, hence, drive towards sustainable consumption (Sreen et al., 2018).

Furthermore, the results clearly depict that important others, such as family, friends, and spouse, are not highly important influencers of green purchase behaviour; therefore, marketers should place more emphasis on individual norms, individual behaviour, and the ability to foster changes, such as attitude and PBC, to enhance green product purchases among Indian and US consumers. US consumers who identify themselves with green consumption have higher PBC; marketers should therefore make an attempt to translate this into green lifestyles. Conversely, for Indian consumers, green marketers should focus on developing favourable attitudes towards green products and green consumption. In fact, consumers who identify with green behaviour should be offered more green choices through the stressing of R&D at green product companies to transform potential consumers into a sustainable mainstream in the long run.

The current study also provides insights related to internal ELOC as the important behavioural determinants, especially among Indian consumers. Consumers with high INELOC have a more favourable attitude towards green products. Therefore, public interventions should be developed, capturing how consumers with higher INELOC reduce the detrimental impact on the environment and using them as opinion leaders to drive attitudinal change among potential green consumers. Companies are much more likely to support such campaigns as part of their corporate social responsibility (Parsa et al., 2011).

### 5.3 Limitations and future research

This research created a unique model interlinking internal consumer predispositions (self-identity and internal environmental locus of control) with constructs of the TPB to determine green purchase intention across a high-context and a low-context culture. Despite being consistent with theoretical foundations and backed by empirical evidence, the current study has limitations. First, this study included only two nations, the USA and India, to capture green purchase intention as a proxy for green purchase behaviour. Inclusion of comparable data from other nations represents an obvious direction for future research. Second, this study relies on cross-sectional data to bring forth its findings and model. Longitudinal or panel data should empirically verify the model proposed in this study for wider validity across contexts and time scales. Third, only general green products were considered in this study. Therefore, it is likely that findings for specific green products, such as green hotels, green laundry, organic products, recyclable products, and green cars, could be different. Fourth, the convenience sampling method was used to select respondents for both countries, limiting the overall generalisability



of the study. Future research may use a random selection of respondents to increase the generalisability of findings. Lastly, subjective norm fails to hold relevance in green behavioural intention studies not only for the single-country context but also for the multi-country context. Therefore, alternative operationalising of subjective norm may be more advantageous (Armitage and Conner, 2001).

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**Table 1: Sample of US and India**

Variable	Category	India		US		Total sample	
		Freq.	%	Freq.	%	Freq.	%
Gender	Male	266	65.2	152	41.6	418	54.08
	Female	142	34.8	213	58.4	355	45.92
Marital status	Single	140	34.3	128	35.0	268	34.67
	Married	254	62.3	186	50.9	440	56.92
	Divorced/Widow	14	3.4	51	13.1	65	8.41
Age	20-35 yrs	271	66.4	215	58.9	486	62.87
	36-50 yrs	112	27.5	92	25.2	204	26.39
	More than 50 yrs	25	6.1	58	15.9	83	10.74
Employment	Full-time	168	41.2	241	66.0	409	52.91
	Part-time	24	5.9	44	12.0	68	8.80
	Student	57	14.0	26	7.1	83	10.74
	Housewife	24	5.9	17	4.7	41	5.30
	Business	56	13.7	17	4.7	73	9.44
	Unemployed	79	19.4	20	5.5	99	12.81
Education	Primary/High school	91	22.3	38	10.4	129	16.69
	Diploma	26	6.4	100	27.4	126	16.30
	Graduate	100	24.5	115	31.5	215	27.81
	Post Graduate	148	36.3	96	26.3	244	31.57
	Doctorate	43	10.5	16	4.4	59	7.63
Personal income (INR)	Less than 10,000	43	10.5	61	16.7	104	13.45
	10,000 – 30,000	98	24.1	112	30.7	210	27.17
	30,000 – 50,000	126	30.9	93	25.5	219	28.33
	More than 50,000	141	34.5	99	27.1	240	31.05

**Table 2: Construct reliability and convergent validity**

Constructs	No. of items	Average Variance Extracted (AVE)	Composite Reliability	Cronbach Alpha ( $\alpha$ )
Self-identity	6	0.66	0.92	0.92
Purchase intention	5	0.70	0.88	0.90
Attitude towards green purchasing	3	0.77	0.91	0.91
Subjective norm	4	0.68	0.90	0.89
Perceived behavioural control	8	0.50	0.85	0.79
Internal ELOC	4	0.57	0.80	0.81

**Table 3: Discriminant validity of scales**

	SI	PI	AT	SN	PBC	iELOC
SI	<b>0.81</b>					
PI	0.76	<b>0.84</b>				
AT	0.43	0.42	<b>0.88</b>			
SN	0.32	0.30	0.26	<b>0.82</b>		
PBC	0.42	0.48	0.53	0.35	<b>0.70</b>	
iELOC	0.05	0.04	0.06	0.00	0.02	<b>0.76</b>

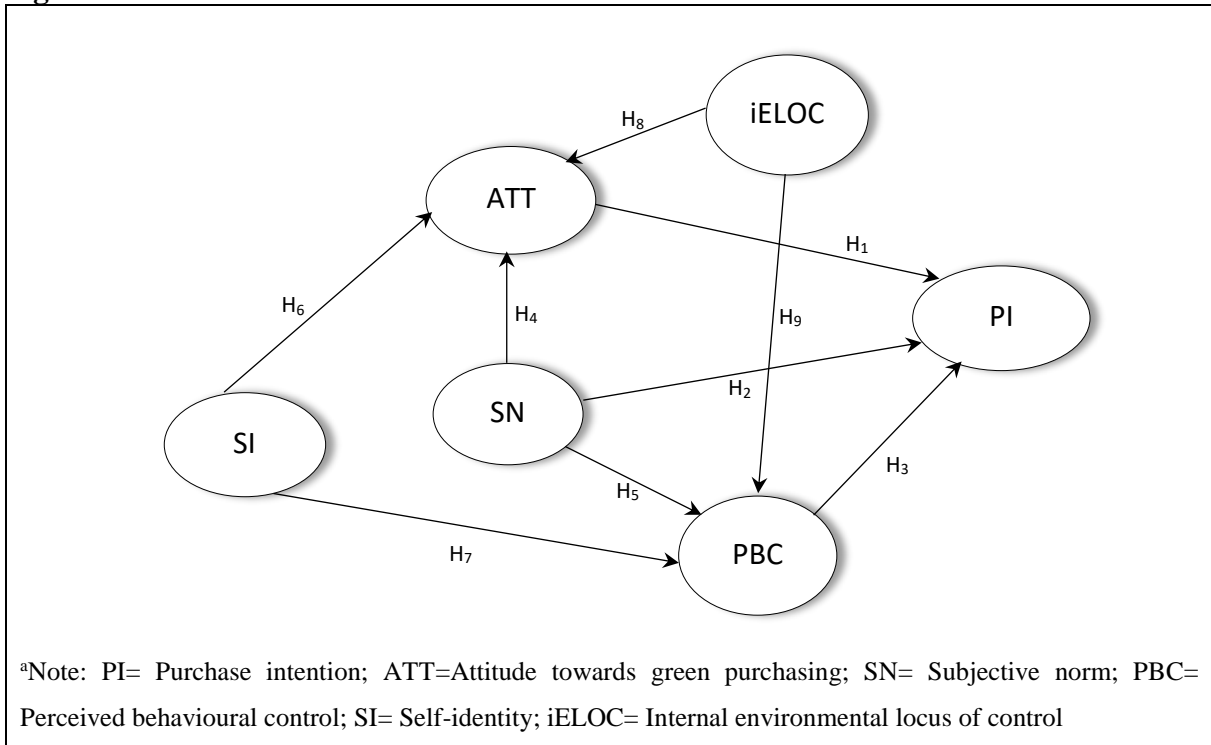
Note: diagonal values shows  $\sqrt{AVE}$

**Table 4: Standardised regression weights for total sample and country samples**

Paths	USA		India		Total Sample	
	Coefficients	t-values	Coefficients	t-values	Coefficients	t-values
ATT → PI	0.10	1.962**	0.38	6.94*	0.20	5.502*
SN → PI	----	NS	----	NS	----	NS
PBC → PI	0.77	8.949*	0.43	5.768*	0.68	10.547*
SN → ATT	0.25	4.088*	0.19	3.539*	0.23	5.67*
SN → PBC	0.24	4.500*	0.35	5.351*	0.30	7.24*
SI → ATT	0.52	8.008*	0.47	8.379*	0.52	12.09*
SI → PBC	0.70	10.054*	0.42	6.242*	0.61	11.766*
iELOC → PBC	----	NS	0.09	1.755***	0.06	1.998**
iELOC → ATT	0.13	2.724*	0.17	3.399*	0.14	4.177*
R-Square	$R^2_{PI} = 0.72$		$R^2_{PI} = 0.53$		$R^2_{PI} = 0.68$	

Note: \* $p < 0.001$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.1$

**Fig 1: Research model<sup>a</sup>**



**Fig 2: Research model – Results from Collectivist and Individualist Culture**

