

**Social and environmental sustainability model on consumers' altruism,  
green purchase intention, green brand loyalty and evangelism**

**Tapan Kumar Panda**

Jindal Global Business School, OP Jindal Global University, India

Email: [tapanpanda@gmail.com](mailto:tapanpanda@gmail.com)

**Anil Kumar**

Centre for Supply Chain Improvement, The University of Derby

Kedleston Road Campus, Derby, UK, DE22 1GB

Email: [A.Kumar@derby.ac.uk](mailto:A.Kumar@derby.ac.uk)

**Suresh Jakhar**

Indian Institute of Management (IIM), Lucknow, India

Email: [suresh87jakhar@gmail.com](mailto:suresh87jakhar@gmail.com)

**Sunil Luthra**

Department of Mechanical Engineering,

Government Engineering College, Nilokheri-132117, Haryana, India

E-mail: [sunilluthra1977@gmail.com](mailto:sunilluthra1977@gmail.com)

**Jose Arturo Garza-Reyes**

Centre for Supply Chain Improvement, The University of Derby

Kedleston Road Campus, Derby, UK, DE22 1GB

E-mail: [J.Reyes@derby.ac.uk](mailto:J.Reyes@derby.ac.uk)

**Ipek Kazancoglu**

Faculty of Economics and Administrative Sciences Dept. of Business Administration,

Ege University, Izmir Turkey

Email: [ipeksavasci@gmail.com](mailto:ipeksavasci@gmail.com)

**Sonali Sitoshna Nayak**

School of Management, BML Munjal University, Gurgaon, India.

Email: [sonali.nayak.16mb@bml.edu.in](mailto:sonali.nayak.16mb@bml.edu.in)

# Social and environmental sustainability model on consumers' altruism, green purchase intention, green brand loyalty and evangelism

**Abstract:** Across the globe, the awareness for environmental degradation and its harmful effects is rapidly growing. The whole world has come together to work in the direction to protect the environment. Consumers are increasingly becoming cautious towards the impact of their consumption pattern on environment and organisations can attain a competitive edge by leveraging this cautiousness by offering them green products/brands. However, it is importance for the marketers to understand that how increasing levels of sustainability awareness impacts other factors which explain pro-environmental behaviour of customers. To fill the existing gap in the current literature in this regard, the current study aims to build a structural model which includes social and environmental sustainability awareness in measuring customer altruism, buying intention, loyalty and customer evangelism. The theoretical model extends the existing framework of the Theory of Planned Behaviour (TPB) and explores the decision-making framework regarding ethical behaviour. Through existing literature review and expert input, the indicators (variables) for each construct were recognised. After that, data was collected from 331 respondents through a structurally designed questionnaire; the hypothetical model was test using the Structural Equation Modelling (SEM) technique. The findings of the study indicate that sustainability awareness positively influence the consumer altruism which in turn enhances the consumer purchase intention, green brand loyalty and green brand evangelism and altruism can and can bridge value-action gap for green brands. Current analysis supports the view that there are significant positive associations among the identified constructs.

**Keywords:** Social sustainability, environment sustainability, altruism, customers' buying intention, customer loyalty, brand evangelist, SEM

## 1. Introduction

Tremendous economic expansion has led to the overuse and depletion of natural resources, which in turn has attracted global attention on environmental concerns (Kumar et al., 2017; Chen, 2018). The environment is constantly being damaged due to various economic activities and consumption patterns (Haake and Seuring, 2009; Shao et al., 2017). As a result, consumers

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4 are becoming more and more aware of their consumption pattern as a cause of environmental  
5 damage and their inclination towards buying sustainable offerings has and grown, they are ready  
6 to spend more on such products (Kumar et al., 2018). In fact, environment prevention has  
7 become their key concern apart from satisfying their personal needs (De Moura et al., 2012).  
8 Consumers' purchase decisions are likely to get influenced by this increasing awareness and  
9 inclination towards sustainable consumption (De Moura et al., 2012; Yadav et al., 2019).  
10 Moreover, businesses are placing much more emphasis on sustainability due to stricter  
11 environmental regulations and rising pressure from stakeholders to protect the environment  
12 (Vermeir and Verbeke, 2008; Khan and Mohsin, 2017; Kumar et al., 2018; Yadav et al., 2018).  
13 Paul et al. (2016) suggested motivating consumption of green products among customers to  
14 move towards attaining sustainability. In order to promote such products, sellers need to  
15 understand consumer preferences and decision-making process in the context of green products  
16 (Cherrier et al., 2011). Peattie and Charter (2003) indicated that each customer have divergent  
17 preferences towards different attributes of an eco-friendly product, and it is very challenging to  
18 correlate attributes of green consumer with customers' demographic characteristics. Moreover,  
19 fluctuating preferences of environmentally cautious customer has made it difficult for marketers  
20 to sell green products (Kilbourne and Pickett, 2008; Ha and Janda, 2012). Hence, consumer  
21 environmental behaviour has been of significant interest among practitioners and academicians  
22 (Cornelissen et al., 2008). Many studies investigated the link between customer purchasing  
23 intention and green behaviour (Gadenne et al., 2011; Ha and Janda, 2012; Prakash and Pathak,  
24 2017). Much of the existing literature in this area refers to the framework of theories of cognitive  
25 behaviour to explore antecedents of consumers' environmental behaviour. Consumers'  
26 knowledge of environmental matters is positively correlated to pro-environmental behaviour  
27 (Prakash and Pathak, 2017). However, environmentally cautious customers may or may not  
28 exhibit the environment saving behaviour which leads to origination of value-action gap  
29 (Gadenne et al., 2011; Prakash and Pathak, 2017; Kumar et al., 2018). Moreover, individuals are  
30 different from one another; they grasp and respond to similar types of environment-related  
31 information in highly diverse ways (Blake, 1999). Therefore, this gap cannot be bridged just by  
32 providing information (Blake, 1999; Agyeman and Angus, 2003) and gets widened under the  
33 assumption that values turn into action (Shove, 2010). Existence of 'value-action gap' points  
34 towards non-existence of any direct association between consumers' environmental belief and  
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4 their behaviour; and this is consistent with normative psychology theories of pro-environmental  
5 behaviour (Gadenne et al., 2011). Hence, there is a need to look for other factors that can explain  
6 the indirect link between consumer awareness about social and environmental awareness and pro  
7 environmental behaviour. Additionally, during times of growing competition, loyal customers  
8 put brands into a better position than their competitors. Brand evangelists not only communicate  
9 brand features as traditional marketing does, but also offer a unique personal recommendation of  
10 the brand to their colleagues, friends and families (Smilansky, 2009; Prakash and Pathak, 2017).  
11 Despite this, brand evangelism for green brands has not been explored much until now.  
12 Moreover, Paul et al. (2016) indicate country of origin as significantly important to influence the  
13 level of concern for the environment among customers and current literature has dearth of studies  
14 that investigate green product purchase behaviour of Indian customers. In a more recent study  
15 Prakash et al. (2019) have also indicated the need to investigate the pro-environmental behaviour  
16 of customers in Indian setting. Therefore, the current work attempts to answer the following  
17 question:

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19 *RQ.* How does sustainability (i.e. social and environment) awareness relate to customer's  
20 altruism, attitudinal purchase intentions, green brand loyalty and green brand evangelism?  
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24 To achieve this goal, data is collected through a survey with SEM employed to determine the  
25 relationship among constructs. This work has significant theoretical and practical contributions  
26 in the context of an emerging economy, examining the Indian growing market as a case study.

27 Current work contributes to the current literature in the following ways:

- 28 • It adds to the restricted literature on sustainable consumption in the Indian context by  
29 analysing the impact of sustainability awareness (social and environmental) on Indian  
30 consumer altruism, purchase intention, brand loyalty and brand evangelism for green  
31 brands.
- 32 • Analysis of this study offers key insights to marketers for crafting marketing strategies of  
33 green brands to optimise the effect of variables taken in the study.

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35 This paper is organized into six parts. Part 2 outlines the literature review along with the  
36 conceptual model development. Part 3 gives details about methods design process. Part 4 offers  
37 the data analysis and results. Part 5 explains the discussion and the conclusion is given in the  
38 last part.  
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6 **2. Literature Review**  
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10 **2.1 Sustainability in Indian Context**  
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12 Collaborative motivation is needed in the present day, where businesses and individuals co-  
13 create products to achieve sustainability in all aspects (Maniora, 2018). Although a business can  
14 become sustainable by its own practices and managerial decisions, it requires the support of end  
15 consumers who spread a positive word of mouth to help it flourish (Schaltegger et al., 2018). To  
16 have a holistic picture about customer needs from a sustainable perspective, it is important to  
17 strategize a business model, because mismanagement of sustainable practices can drastically  
18 impact on financial conditions (Dhaliwal et al., 2012; Shubin et al., 2017; Maniora, 2018).  
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20 From an organisational perspective, social sustainability pertains to understanding the effects of  
21 an organisation's activities on society (Young et al., 2010). The triple bottom line framework of  
22 sustainability that covers three dimensions of organisational performance. Businesses and  
23 organisations can be ethically, transparently and socially responsible (Broman and Robert, 2017).  
24 An organisation's ability to identify both social challenges and associated risks and mitigate their  
25 impact, determines its social sustainability (Testa et al., 2018).  
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27 **Recent global warming scenarios have impacted on consumption patterns and activities of**  
28 **humans, with environmental degradation now becoming a major concern (Ozaki, 2011).**  
29 **Reportedly, India is the fastest growing nation where environmental issues and improvements**  
30 **are being considered as priorities, irrespective of it being an emerging country. Various**  
31 **initiatives have been taken up by firms in recent times to increase awareness and to ensure and**  
32 **encourage people to use green products. To support these initiatives and to keep a check on air**  
33 **pollution levels, the Indian government has introduced a green tax. A study conducted by**  
34 **Unilever indicates that 88% of Indians, out of those who chose sustainable and green products,**  
35 **felt good about consuming such products. Moreover, Indian consumers' attitude to sustainable**  
36 **and green products is significantly positive, driving their purchase intention; however, policy**  
37 **makers' intervention is required to make consumers more aware about green products (Jaiswal**  
38 **and Kant, 2018).**  
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59 **2.2 Sustainability and TPB**  
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4 The literature clearly shows that various environmental problems get exaggerated by consumers’  
5 buying behaviour and that consumers have become conscious of choosing products that protect  
6 the environment (Vermillion and Peart, 2010; de Medeiros and Ribeiro, 2017). TPB (Ajzen,  
7 1991) has been used to explore the decision-making framework regarding ethical behaviour and  
8 has become one of the most widely utilized rational choice models (Chang, 1998; Ramayah et  
9 al., 2012). Consumers’ green purchase decisions also come under the umbrella of ethical  
10 behaviour (Kumar et al., 2017). TPB specifies a framework of relevant factors to explain the  
11 behaviour towards a specific issue. It permits the discovery of the influence of some other related  
12 variables that may also significantly describe that behaviour (Ajzen, 1991). This flexibility  
13 allows researchers to include additional variables and/or replace variables of the underlying  
14 theory with other variables of interest to seek further clarity in understanding the behaviour  
15 (Kumar et al., 2017). Our study extends the existing framework of TPB to examine the impact of  
16 social and ecological sustainability awareness on green brand evangelism through altruism,  
17 purchase intentions and green brand loyalty. The following section covers the hypothesis  
18 development.

## 2.3 Conceptual Framework Development

23 The conceptual hypothetical framework of this work is shown in Fig.1. The model considered six  
24 constructs, namely (1) social sustainability awareness, (2) environment sustainability awareness,  
25 (3) altruism, (4) customer attitudinal green purchase intention, (5) customer green brand loyalty  
26 and (6) customer green brand evangelism. The relationship among these constructs is explained  
27 as follows:

### 2.3.1 *Social sustainability awareness, environment sustainability awareness and altruism*

28 Literature on sustainability indicates that researchers have put less emphasis upon the social  
29 aspects of sustainability (Ahmadi et al., 2017; Kumar et al., 2017). There are several ways in  
30 which social sustainability has been defined by researchers; however, it is difficult to provide a  
31 common definition (McKenzie, 2005; Kumar et al., 2017; Stöckigt et al., 2018). **There are  
32 various dimensions of social sustainability namely health, influence, competence, impartiality  
33 and meaning-making (Missimer et al., 2017). Social sustainability in general is referred as life-  
34 enhancing condition within communities, and a process within communities that can achieve that**

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4 condition (McKenzie, 2004). Environmental sustainability focuses on upholding or improving  
5 the integrity of Earth's life supporting systems (Holdren et al., 1995). Since environmental  
6 sustainability seeks to improve human wellbeing by protecting the raw materials sources that are  
7 used to fulfil human needs, hence it is a pre-requisite for social sustainability (Goodland, 1995).  
8 Moreover, studies conducted by Florida (1996) Rothenberg et al. (2001), Marshall et al. (2005)  
9 and Johnson (2006) observed that both sustainability dimensions (social and Environmental) are  
10 associated with each other. Existing literature points that having the awareness or basic  
11 knowledge is critical for taking actions (Sanner, 1994; Radecki and Jaccard, 1999).

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19 Steg et al. (2014) have observed that relevant values play important role in activating the  
20 personal norms and feelings of having moral responsibility to save the environment. The  
21 customer's altruism is a belief that shows concern for the happiness of other human beings  
22 (Schwartz, 1977). Hence, altruistic values are likely to play decisive role in customer's efforts  
23 towards environment protection. Additionally, Nordlund and Garvill (2002) and Gifford and  
24 Nilsson (2014) have also indicated that altruistic values directly and indirectly influence  
25 consumers' personal norms concerning society, as well as environmental protection when there  
26 is problem awareness (Steg et al., 2014). Therefore, we propose the following hypotheses:  
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33 ***H<sub>1</sub>***: Awareness of social sustainability positively influences customer altruism.

34 ***H<sub>2</sub>***: Awareness of environmental sustainability positively influences customer altruism.  
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### 39 ***2.3.2 Altruism and attitudinal green purchase intention***

40 Altruism is about acting on others' behalf without expecting any benefit (Schwartz, 1977). It is a  
41 significant predictor of environmental safeguarding (Nath et al., 2014; Yadav and Pathak, 2016).  
42 Consumers with higher levels of altruism are more cautious about ecological benefits of their  
43 behaviour than the consequences for their own selves (Steg et al., 2014). Therefore, this group of  
44 consumers are more conscious about the environment. In the wake of past research (Guéguen  
45 and Stefan, 2016; Yadav and Pathak, 2016), the findings show that altruism has a significant  
46 effect on customers' green purchase intentions. Ajzen (1991) explored in his TPB model that the  
47 decision-making framework related to ethical behaviour, showing that customers' consciousness  
48 of ethical behaviours and green purchase decisions also come under the umbrella of ethical  
49 behaviour. Therefore, we hypothesise that:  
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59 ***H<sub>3</sub>***: Altruism positively impacts customers' green purchase intention.  
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### 2.3.3 *Altruism and green brand loyalty*

The joy of giving (altruism) produces psychological well-being and moral satisfaction in individuals and it is of increasing attention in the specific framework of green brands (Yadav and Pathak; 2016; De Dominicis et al., 2017). Altruistic value is found to be positively related to customer perceived value (Papista and Krystallis, 2013) because customers are likely to feel good about their purchase of green brands (Pickett-Baker and Ozaki, 2008). Therefore, they feel motivated to use environmentally friendly products (Hartmann and Apaolaza-Ibáñez, 2006). In the current environment of rapidly growing competition and where customers have a wide range of choices, keeping loyal customers helps organisations to develop. Past research highlights the significance of considering the nature of the relationship between brands and consumers (Henrique and de Matos, 2015; Menidjel et al., 2017); certain characteristics of the entities involved are key factors that define the nature of the relationship. Customer characteristics moderate the association of satisfaction they derive and their behavioural outcomes (Menidjel et al., 2017). Moreover, a satisfied customer who implicitly trusts the brand may not establish a relationship with the brand because relationships are moderated by customer traits. This work attempts to investigate whether the environmentally friendly traits of brands and customers' altruism guide the relationship formation between green brands and consumers, influencing green brand loyalty as a result. We anticipated a positive association between altruism and customers' attitudinal loyalty to green brands. Hence, we propose the following hypothesis:

***H<sub>4</sub>: Altruism positively influences customer attitudinal loyalty to green brands.***

### 2.3.4 *Altruism and green brand evangelism*

A dis-satisfied customer reaches out to more people than does a satisfied customer in sharing his/her experience. Due to technological advancements, the capability of consumers to communicate has increased exponentially (Kumar et al., 2018). The wide availability of the internet, with expedient access through tablets and mobile phones, has transformed buying habits. A growing number of customers look for and provide information about brands with the convenience of being able to post comments on forums, websites, social networking sites, etc. There is also a rising concern in modern organisations about the influence of customers' brand-directed behaviours on other customers, sales, and eventually, the valuation of firms (Becerra



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4 and Badrinarayanan, 2013). Both individual and brand-related factors influence brand-directed  
5 behavioural intentions, Badrinarayanan and Sierra (2018) indicated that in today's consumer  
6 society, it is important to know the factors that impact the consumer's altruistic values. In this  
7 study, we have anticipated that customers who are highly altruistic are likely to become  
8 evangelists for green brands because such brands help in ensuring social and environmental  
9 sustainability. Therefore, we propose:

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15 **H<sub>5</sub>: Altruism has a positive impact on the brand evangelism for green brands.**  
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### 18 19 **2.3.5 Green purchase intention, green brand loyalty and green brand evangelism**

20 Brand loyalty is defined as the extent of attachment a consumer has for a specific brand, it is  
21 considered as a significant outcome variable in existing literature (He et al., 2012; De Villiers,  
22 2015). Akturan (2018) observed an important positive association between green brand equity  
23 and purchase intention of consumers. Loyalty has been studied as attitudinal loyalty (Kressmann  
24 et al., 2006) and behavioural loyalty by measuring the frequency of buying (Romaniuk and  
25 Nenycz-Thiel, 2013). For our study, attitudinal loyalty of green brands was considered.  
26 Attitudinal loyalty concentrates on consumers' commitment to the brand. The loyalty factor  
27 depends on the type and intensity of customer buying intention (Wallin Andreassen et al., 1998).  
28 A positive buying intention is likely to make the customer loyal to the brand. It is important to  
29 note that consumer involvement with a product type has a positive impact on attitudinal loyalty  
30 toward a focal brand (Russell-Bennett et al., 2007). Therefore, we assume that purchase intention  
31 and brand loyalty are positively associated for eco-friendly products. Thus, we propose that:

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42 **H<sub>6</sub>: Attitudinal purchase intention has a positive impact on green brand loyalty.**  
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46 A strong emotional bond between a brand and a consumer leads to evangelism. The customer  
47 takes the lead in creation of this bond, not the brand. Although brands continuously try to bias  
48 customers via advertisements and/or other methods, it is the customer who chooses to hold the  
49 evangelist title (Riivits-Arkonsuo et al., 2014). It is not mandatory for customers to purchase a  
50 specific brand to become evangelists. This signals a weak or insignificant relationship between  
51 consumer buying intention and product evangelists. However, Collins et al. (2015) indicate that  
52 evangelists, who have already been customers, have a stronger purchase intention to buy the  
53 product in future as compared to non-customer evangelists. Therefore, the buying process may or  
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4 may not contribute to a positive and emotional experience (Riorini et al., 2016). We assumed that  
5 customer attitudinal buying intentions have a positive influence on brand evangelism for  
6 environmentally friendly products. Thus, the based on the above discussion we propose:  
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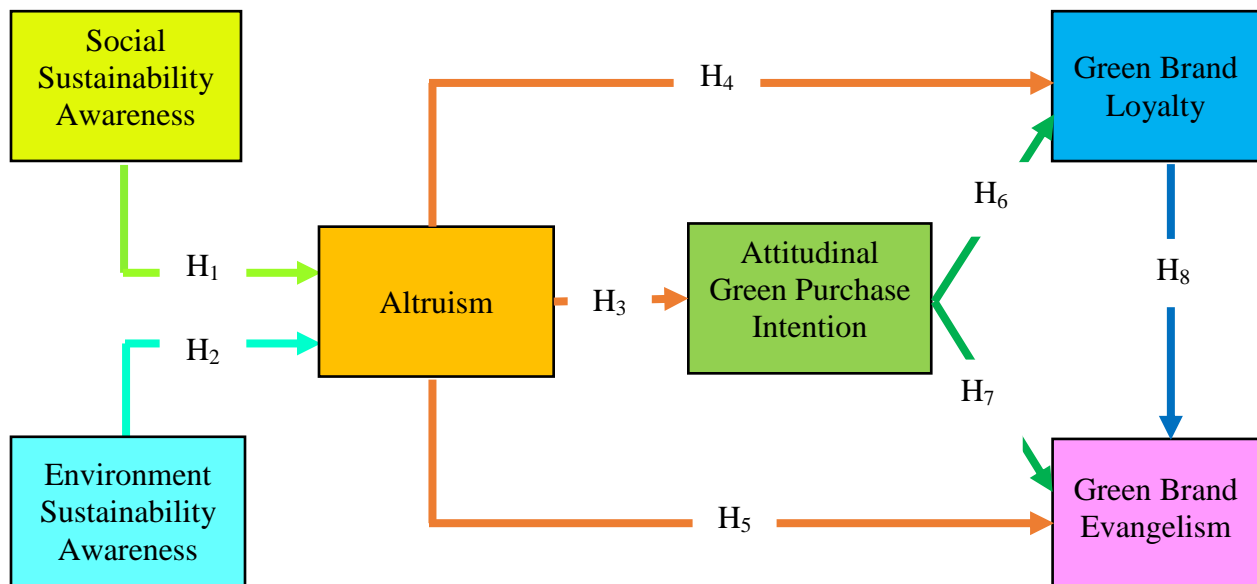
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10 **H<sub>7</sub>: Attitudinal purchase intention positively influences evangelism for green brands.**  
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### 12 13 **2.3.6 Green brand loyalty and green brand evangelism**

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15 Being eco-friendly adds value to a brand; consumers also prefer to buy green brands (Hartmann  
16 et al., 2005). Evangelism marketing aims to make buyers believe in the product or service so  
17 much that they are compelled to tell others about it. Trust plays a significant role in augmenting  
18 customer loyalty (Iglesias et al., 2010; Papista et al., 2018). Loyalty has a bigger dependency  
19 factor base than evangelism. Evangelism and loyalty both require an emotional attachment  
20 between the customer and product/brand. However, evangelism requires a much stronger bond.  
21 Therefore, we predict that a loyal customer is likely to turn into an evangelist and hypothesize  
22 the following:  
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30 **H<sub>8</sub>: Green brand loyalty exerts a positive influence on green brand evangelism.**  
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34 Based on the aforementioned hypotheses, we have developed the following conceptual  
35 framework.  
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57 **Fig.1: Conceptual framework and hypothesis**  
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### 3. Research Design

#### 3.1 Instruments and Questionnaire Designing

This empirical work is to exam the hypothesised association. Sustainability awareness is increasing among customers; therefore, knowing the customers' changing preferences is very important for the service providers (Jaiswal et al., 2018). Thus, we have conducted this study as follows. There are six constructs in the proposed model: (1) social sustainability awareness, (2) environmental sustainability awareness, (3) altruism, (4) customer attitudinal green purchase intention, (5) customer green brand loyalty and (6) green brand evangelism. The indicative variables against each of the identified constructs are listed in Table 1.

**Table 1.** Constructs and indicators

Construct	Code: Indicators	References
Social sustainability awareness	SS1: Trust in social practices SS2: Common meaning to society SS3: Accessibility of products SS4: Updating as per societal needs SS5: Safe and healthy SS6: Involvement in developing communities SS7: Positive impact on community	Nordin et al. (2010); Dempsey et al. (2011); Axelsson et al. (2013); Missimer et al. (2017); Stöckigt et al. (2018); Yong et al. (2019)
Environment sustainability awareness	ES1: Awareness of environmental changes ES2: Inclination to environmentally ethical products ES3: Growing pressure to save the environment ES4: Personal responsibility ES5: Influencing others' awareness ES6: Individual efforts ES7: Societal influence	Nordin et al. (2010); Dempsey et al. (2011); Axelsson et al. (2013); Hoek et al. (2017); Missimer et al. (2017); Boggia et al. (2018); Yong et al. (2019)
Altruism	AT1: Environmental problems - family consumption behaviour AT2: Saves energy and helps to lower electricity/water bills AT3: Societal problems' results and behaviour AT4: Willingness to help others AT5: Pollution is always a concern for me AT6: Green consumption - save future generations AT7: Consumption of green products and feeling of pride	Cleveland et al. (2005); Nath et al. (2014); Guéguen and Stefan (2016); Yadav and Pathak (2016)
Attitudinal green purchasing intention	PI1: Price of the product PI2: Proud feeling PI3: Willingness to pay PI4: Interest to buy	Liu et al. (2012); Prakash et al. (2017); Jaiswal and Kant (2018)

	PI5: Ability to purchase PI6: Societal influence PI7: Perceiving right value	
Green brand loyalty	BL1: Repeat buyers BL2: Strong Trust BL3: Constant purchase decision BL4: Emotional connection	Iglesias et al. (2011); Collins et al. (2015); Riorini et al. (2016); Papista et al. (2018); Chen et al. (2018)
Green brand evangelism	BE1: Positive word of mouth BE2: Latest information seekers BE3: Interest to influence others BE4: Perceived values BE5: Great enthusiasm	Riorini et al. (2016); Papista et al. (2018); Chen et al. (2018); Wang et al. (2018)

As per the above listed variables, a questionnaire was prepared to examine the influence of the identified factors on creating brand evangelism. The questionnaire looked into the demographic details and the initial response of respondents to green product use and ownership in its first part. In second consisted of questions about the constructs in Table 1. To observe these constructs, multiple items for each construct were included in the designed questionnaire (Malhotra and Dash, 2011). For each item in the second part of the questionnaire, responses were collected on a 5-point Likert scale, where 1 show ‘strongly disagree’ and 5 indicates ‘strongly agree’ (Hair et al., 2010). The sample questionnaire is shown in Annexure-I.

### 3.2 Sampling and Data Collection Procedures

The indicators for each construct were first identified from literature and field experts. For this, a pre-testing questionnaire was designed. A small survey of fifteen experts from industry and academia, who had ten years of experience in sustainability, green marketing and consumer prediction, was conducted to ascertain their perception and input. The main objectives of this survey were to get conceptual inputs, to remove any typing/language errors and to set the base criteria to collect data for the model. The evaluation of questionnaire has done by the respondents based on a five-point Likert scale (where 1 means ‘strongly disagree’ and 5 means ‘strongly agree’). After pre-testing some small amendments were made. **Data was collected by online survey, the participant who fulfil the below-mentioned criteria were eligible to fulfil the questionnaire. After pre-testing and discussion with these experts, the minimum criteria for selecting participants for data collection was established; they**

- must have been regular, active buyers of green products
- must have consumed green products for a minimum of at least 3-4 years
- must have been educated to at least graduate level

After setting the criteria for selection, the final questionnaire was designed and used for data collection. 340 responses were collected by our research team by using online platforms i.e. email, Facebook, LinkedIn, WhatsApp etc. Nine response data were removed for the data sheet. We observed that they were not filled properly i.e. five responses out of nine were found EXTRME missing values and four responses filled only one value for variables. Thus, the data of 331 participants was finalised for analysis. As per previous studies, the same size is good enough for the analysis (Luthra et al., 2016; Prakash et al., 2019; Yong et al., 2019). Table 2 shows the summary of respondents.

Of the participants, 65.86% are male and 34.14% are female. We set graduation qualification as the minimum criterion for selection in the hope that participants could understand the research topic well and complete the questionnaire appropriately. Out of 331, 56.50 % are graduates, 32.63 % have masters’ degrees and 10.88% have other qualifications. The current consumption patterns indicate that 27.19% of the respondents preferred using green products to normal products. However, another 26% indicated their preference for using green products in the near future. To examine the non-bias between early and late responses, a t-test has been employed (Podsakoff, 2003; Hair et al., 2010; Luthra and Mangla, 2018). No significant difference at  $p > 0.05$  was observed.

**Table 2.** Summary of respondents

Characteristics of respondents		Total	Percentage
<b>Gender</b>	Male	218	65.86
	Female	113	34.14
<b>Education</b>	Graduation	187	56.50
	Masters	108	32.63
	Others	36	10.88
<b>Age (years)</b>	21 – 25	64	19.34
	26 – 30	112	33.84
	31 – 35	101	30.51
	41 – 45	34	10.27
	> 45	20	6.04
<b>Occupation</b>	Private sector	123	37.16
	Public sector	93	28.10

	None	115	34.74
<b>Green consumption</b>	I prefer using green products	90	27.19
	I am yet to learn about green products	75	22.66
	I recommend others to buy green products	36	10.88
	I always try to buy new green products	45	13.60
	I would like to use green products in the coming days	85	25.68

#### 4. Data Analysis and Results

For analysing data, a systemic process was followed. For reliability and validity, along with Cronbach alpha, exploratory factors analysis was used to check each indicator loading of a construct and communality values. CFA was then used to confirm each indicator of the construct. The SEM was employed to examine the model. The details are provided below.

##### 4.1 Reliability Analysis

The internal reliability of the constructs for our research was examined using Cronbach alpha. The Cronbach alpha value of constructs can be considered to be reliable only if they are  $> 0.5$  (Hair et al., 2010, Malhotra and Dash, 2011). Table 3 shows that all the constructs used in this work have a Cronbach alpha value  $> 0.5$ . Hence, all constructs are confirmed to be reliable.

**Table 3.** Reliability analysis

Construct	Code	Loading	Communalities	Cronbach alpha
Social Sustainability Awareness	SS1	0.884	0.782	0.884
	SS2	0.622	0.387	
	SS3	0.757	0.573	
	SS4	0.737	0.544	
	SS5	0.673	0.453	
	SS6	0.855	0.731	
	SS7	0.839	0.703	
Environment Sustainability Awareness	ES1	0.824	0.679	0.842
	ES2	0.595	0.354	
	ES3	0.613	0.375	
	ES4	0.737	0.543	
	ES5	0.808	0.653	
	ES6	0.832	0.689	
	ES7	0.586	0.343	
Altruism	AT1	0.642	0.413	
	AT2	0.624	0.389	

	AT3	0.739	0.546	0.785
	AT4	0.722	0.521	
	AT5	0.656	0.430	
	AT6	0.671	0.451	
	AT7	0.567	0.322	
Attitudinal Green Purchasing Intention	PI1	0.688	0.446	0.794
	PI2	0.738	0.545	
	PI3	0.711	0.504	
	PI4	0.672	0.452	
	PI5	0.676	0.457	
	PI6	0.624	0.389	
	PI7	0.590	0.348	
Green Brand Loyalty	BL1	0.736	0.542	0.603
	BL2	0.713	0.508	
	BL3	0.714	0.509	
	BL4	0.529	0.280	
Green Brand Evangelism	BE1	0.814	0.662	0.888
	BE2	0.806	0.650	
	BE3	0.869	0.755	
	BE4	0.884	0.782	
	BE5	0.784	0.615	

## 4.2 Measurement of the Model

### 4.2.1 Construct and indicator reliability

Cconfirmatory Factor Analysis (CFA) was employed to estimate the model. Initial, CFA findings showed that model was not adequate model fit as per the recommended values by [Bagozzi and Yi \(1988\)](#) but after removing low standardized factor loadings as mentioned below Table 4 which in turn improved the model fit ( $\chi^2 = 820.143$ ,  $\chi^2/df = 2.412$ , GFI = 0.911, CFI = 0.941, NFI = 0.904, IFI = 0.942, TLI = 0.919, RMSEA = 0.052). The loadings of factors/constructs and variables give indicator reliability. A recommended loading of 0.7 is considered acceptable for testing purposes ([Hair et al., 2010](#)); however, even a loading  $\geq 0.5$  can be considered as acceptable ([Tenenhaus et al., 2005](#)). Table 4 shows that the loading of the identified variables is  $> 0.5$ . Hence, variables and factors/constructs are confirmed to be reliable.

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4 *4.2.1.1 Convergent validity*  
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6 The convergent validity has been assessed by using Composite Reliability (CR); Average  
7 Variance Extracted (AVE) and convergent validity can be assessed (Fornell and Larcker, 1981).  
8 The variables that measure > 0.5 are known to be convergent and valid. Table 4 indicates that all  
9 the factors/constructs have a composite reliability > 0.5 and an AVE also > 0.5 (Petljak et al.,  
10 2018). It shows the convergent validity of the proposed model.  
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15 **Table 4.** Measurement model results  
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Construct	Code	Estimates	CR	AVE
Social Sustainability Awareness (SS)	SS1	0.883	0.926	0.678
	SS2	0.850		
	SS3	0.902		
	SS4	0.867		
	SS5	0.818		
	SS7	0.731		
Environment Sustainability Awareness (ES)	ES1	0.736	0.923	0.667
	ES2	0.859		
	ES3	0.865		
	ES4	0.853		
	ES6	0.780		
	ES7	0.797		
Altruism (AT)	AT2	0.888	0.910	0.671
	AT3	0.931		
	AT4	0.779		
	AT5	0.746		
	AT7	0.734		
Attitudinal Green Purchasing Intention (PI)	PI1	0.850	0.914	0.603
	PI2	0.811		
	PI3	0.774		
	PI4	0.727		
	PI5	0.809		
	PI6	0.746		
	PI7	0.707		
Green Brand Loyalty (BL)	BL2	0.704	0.807	0.584
	BL3	0.857		
	BL4	0.722		
Green Brand Evangelism (BE)	BE1	0.878	0.867	0.621
	BE2	0.725		
	BE3	0.759		
	BE4	0.782		



\*Items deleted because of low estimate value (< 0.50) are SS6: Involvement in developing communities; ES5: Influencing others' awareness; AT1=Environmental problems - family consumption behaviour; AT6: Green consumption - save future generations; BL1: Repeat buyers and BE5: Great enthusiasm

#### 4.2.1.2 Discriminant validity

Factors/constructs are bound to differ from one another. Discriminant validity indicates the degree of differences between the factors/constructs. If the square root of the AVE exceeds the correlation value among the reflective constructs, then the model is said to satisfy all the constraints of discriminant validity (Petljak et al., 2018). Further, it is considered to be reliable and valid because the factors/constructs have a strong correlation with their own variables rather than with other constructs' variables as mentioned in Table 5.

**Table 5.** Correlation between latent variables

	<b>BE</b>	<b>SS</b>	<b>ES</b>	<b>AT</b>	<b>PI</b>	<b>BL</b>
<b>BE</b>	<b>0.788*</b>	-	-	-	-	-
<b>SS</b>	0.629	<b>0.823*</b>	-	-	-	-
<b>ES</b>	0.250	0.135	<b>0.817*</b>	-	-	-
<b>AT</b>	0.104	0.345	0.788	<b>0.819*</b>	-	-
<b>PI</b>	0.052	0.310	0.171	0.303	<b>0.777*</b>	-
<b>BL</b>	0.332	0.014	0.002	0.302	0.603	<b>0.764*</b>

\* Square root of AVE

### 4.3 Structural Model

After model confirmation through CFA, SEM was used to evaluate the relationship between latent variables. The goodness of-fit statistics showed that the proposed model satisfactorily fit ( $\chi^2 = 742.521$ ,  $\chi^2/df = 1.861$ , GFI = 0.920, CFI = 0.931, NFI = 0.912, IFI = 0.932, TLI = 0.917, RMSEA = 0.031) (Bagozzi and Yi (1988)). The value of RMSEA (0.031) also meets the suggested criteria 0.08 given by Browne and Cudeck (1992). Coefficient of determination, i.e.  $R^2$ , and goodness of fit were assessed for the identified conceptual model by using partial least square analysis.  $R^2$  and goodness of fit should be > 0.1 for a structural model to be valid (Hair et al., 2010). Table 6 gives the hypothesis, the standard path and the standard path coefficient, all of which describe the significance level of the paths.

**Table 6.** Results of partial least squares analysis

Hypothesis	Path	Estimate	Critical Ratio (t-value)	p-value	Results
H <sub>1</sub>	Social sustainability awareness -> altruism	0.385**	4.862	0.000	Supported
H <sub>2</sub>	Environmental sustainability awareness -> altruism	0.263**	2.371	0.000	Supported
H <sub>3</sub>	Altruism -> attitudinal green purchasing intention	0.413*	3.631	0.021	Supported
H <sub>4</sub>	Altruism -> green brand loyalty	0.612**	6.322	0.000	Supported
H <sub>5</sub>	Altruism -> green brand evangelism	0.231*	3.972	0.012	Supported
H <sub>6</sub>	Attitudinal green purchasing intention -> green brand loyalty	0.425**	9.236	0.000	Supported
H <sub>7</sub>	Attitudinal green purchasing intention -> green brand evangelism	0.521*	2.432	0.032	Supported
H <sub>8</sub>	Green brand loyalty -> green brand evangelism	0.702*	7.212	0.024	Supported

\*\*p < 0.001; \*p < 0.05

Table 6 illustrates that the entire hypothesis holds true and is valid. Hypotheses H<sub>1</sub>, H<sub>2</sub>, H<sub>4</sub>, H<sub>6</sub> are supported at the significance level of  $p < 0.001$  and H<sub>3</sub>, H<sub>5</sub>, H<sub>7</sub>, and H<sub>8</sub> are supported at the significance level of  $p < 0.05$ .

The cascading effect indicates that creation of product/brand evangelism is true. This will help an organisation in marketing communication activities. These results indicate that an awareness of social sustainability and environment sustainability positively influences altruism, which in turn positively influences a customer's buying intention, customer loyalty and brand evangelism for green brands. Structural model results are also shown in Fig. 2.

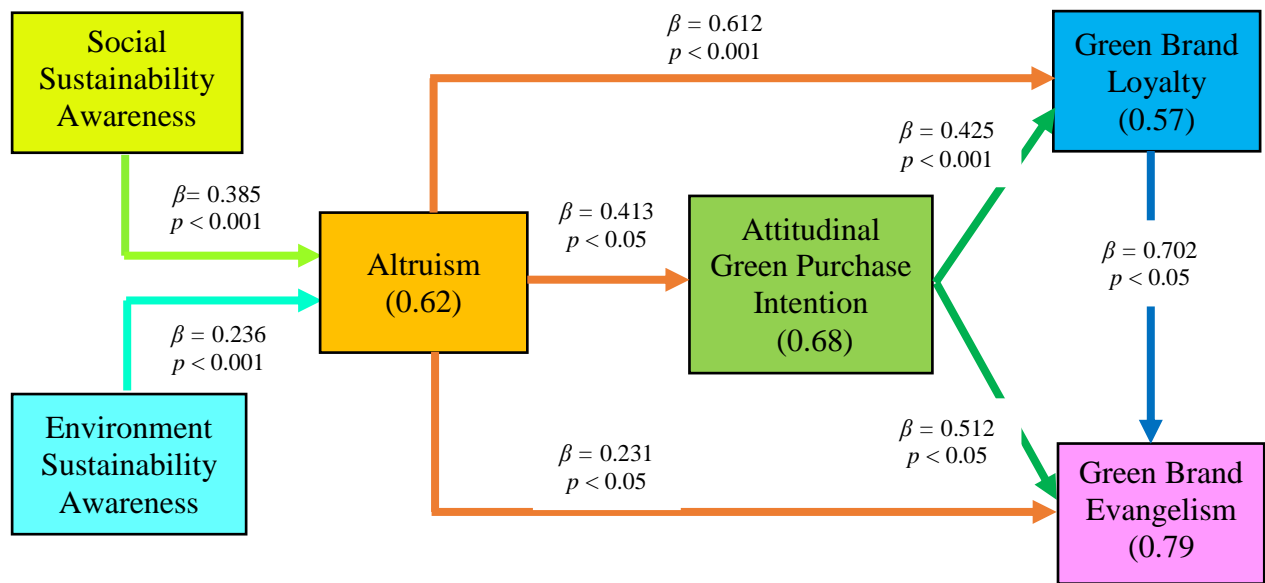


Fig. 2: Conclusive structural model result

## 5. Discussion of Findings

The results show that awareness of social sustainability has significant positive influence on altruism and supports hypothesis H<sub>1</sub> ( $\beta = 0.385$ ,  $t = 4.862$ ,  $p < 0.001$ ). In previous studies, altruism has been examined in the context of social attributes and is observed to be an important predictor for understanding consumers' consciousness about their social aspect (Nath et al., 2014). Missimer et al. (2017) suggested that social sustainability not only ensures that consumers have good health, but also improves their self-value within their social groups. Consumers' awareness of environmental sustainability is also increasing as is evident from their commitment to protecting the environment (Missimer et al., 2017; Boggia et al., 2018). Table 6 demonstrates that awareness of environmental sustainability also influence altruism, positively and supports hypothesis H<sub>2</sub> ( $\beta = 0.263$ ,  $t = 2.371$ ,  $p < 0.001$ ). However, this is to notice here that awareness for social sustainability impacts altruism more strongly than awareness for environmental sustainability. For hypothesis H<sub>3</sub> ( $\beta = 0.413$ ,  $t = 3.631$ ,  $p < 0.05$ ), the results show that altruism positively influence customers' green purchase intention, supporting the hypothesis. In literature, altruism has been examined in the context of social and environmental attributes and plays a significant role as a predictor of consumers' consciousness towards social and environmental

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4 sustainability (Yadav and Pathak, 2016) and feel motivated to use environmentally friendly  
5 products (Hartmann and Apaolaza-Ibañez, 2006). Current analysis demonstrates that altruism  
6 positively influences customer loyalty and brand evangelism for green brands, supporting  
7 hypotheses H<sub>4</sub> ( $\beta = 0.612, t = 2.322, p < 0.001$ ) and H<sub>5</sub> ( $\beta = 0.231, t = 3.972, p < 0.05$ ). This  
8 finding is in line with the observation of Collins et al. (2015) and Riorini et al., (2016). Similarly,  
9 purchase intention also found to have a positive impact on customer loyalty and brand  
10 evangelism for green brands, supporting hypotheses H<sub>6</sub> ( $\beta = 0.425, t = 9.236, p < 0.001$ ) and H<sub>7</sub>  
11 ( $\beta = 0.521, t = 2.432, p < 0.05$ ). This study analysis supports the findings of Collins et al. (2015)  
12 that evangelists have a stronger purchase intention toward the product in comparison to non-  
13 customer evangelists. A customer may or may not become brand evangelist because it is not  
14 certain that buying process will have a positive and emotional experience for the customer  
15 (Riorini et al., 2016). But producers can create a strong emotional bonding with a particular  
16 brand, possibly leading to evangelism (Riivits-Arkonsuo et al., 2014). As per the current  
17 analysis, effect of altruism on green brand loyalty is strongest and its minimum on green brand  
18 evangelism. However, altruism influences brand evangelism remarkably via green brand loyalty.  
19 Lastly, results of the current work also support hypothesis H<sub>8</sub> ( $\beta = 0.702, t = 7.122, p < 0.05$ ) that  
20 green brand loyalty has a positive impact on green brand evangelism. This finding converges  
21 with the current literature (Becerra and Badrinarayanan, 2013).  
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## 39 **5.1 Theoretical and Managerial Implications**

### 40 41 42 **5.1.1 Implication for theory**

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44 Customers' decision-making is significantly based on the information absorbed by them. In  
45 addition, they can comparatively absorb more information and are greater influenced through  
46 recommendations of trusted individuals or sources rather than by researching on their own. Be it  
47 a new product development or existing product marketing, altruism and brand evangelism play  
48 an important role in co-creating products. In this regard, our research work provides a significant  
49 implication in theory. In current literature, there is no discussion available related to social and  
50 environment sustainability awareness of customers in the setting of altruism and green  
51 purchasing intention.  
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4 In this work, a theoretical model has been developed where social and environment sustainability  
5 awareness of customers are related to altruism and green purchasing intention; this shows how  
6 these most important constructs influence the loyalty of consumers and make them brand  
7 evangelists. Literature has suggested that various environmental problems are exaggerated by  
8 consumers' buying behaviour and that consumers have become conscious of choosing products  
9 that protect the environment (de Medeiros and Ribeiro, 2017). Therefore, our theoretical model  
10 extends the existing framework of the TPB (Ajzen, 1991) and explores the decision-making  
11 framework regarding ethical behaviour (Sidique et al., 2010). The current work bridges the  
12 value-action gap by extending the framework beyond purchase intention by including green  
13 brand loyalty and green brand evangelism.  
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### 24 **5.1.2 Implication for practice**

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26 In today's competitive environment, organisations want to satisfy and retain their customers  
27 (Sidique et al., 2010; Kumar et al., 2017). Therefore, it is important to understand customer's  
28 pro-environmental purchase behaviour in order to not only meet their changing taste, preference  
29 and needs but also to attain the sustainable operations at organisational level (Kumar et al., 2017;  
30 Kumar et al., 2018; Wang et al., 2018). In this study, we have developed a theoretical model to  
31 understand the consumer buying behaviour relating to green products by investigating the  
32 association among sustainability awareness (environment and social), altruism, buying intention,  
33 loyalty and evangelism for green brands. The findings suggest that sustainability awareness  
34 positively influence customers' altruism; Customer's altruism impacts purchase intention, loyalty  
35 and evangelism for green brands, positively; purchase intention has a positive effect on loyalty  
36 and evangelism for green brands; and loyalty impacts green brand evangelism in a positive  
37 manner. Current analysis offers important insights for decision makers at various levels. For  
38 instance, government may focus more and more on spreading awareness among people about  
39 sustainability (social and environmental) issues in order to guide their purchase behaviour to  
40 align with environmental protection concerns. Similarly, marketers should also consider this  
41 finding while designing advertisements. They may highlight those features of their products  
42 which solve sustainability issues (social and environmental). Merico hair oil advertisements  
43 highlight that when customers buy their product, they contribute towards solving a social  
44 sustainability issue (education to poor children). Similarly, HUL is also spreading the awareness  
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4 that resources are not equally accessible for all and those who have the access must use them in  
5 the most appropriate manner. This way, by making the customer aware about sustainability  
6 issues (social and environmental) and by aligning the purchase of their offering with solution of  
7 the raised issues, marketers may motivate the customers to buy their green products/brands.  
8 Based on our current analyses, altruism is an important variable that bridges that value-action  
9 gap. As suggested by the results of the current study, we recommend marketers to adopt  
10 appropriate marketing communication strategies that augment the altruism in their target  
11 customers as altruism has a strong and favourable impact on actual purchase (customer loyalty)  
12 of green products/brands. Altruism is not only driving customers to buy green products/brands  
13 but also contributes towards making them evangelist for green products/brands. Therefore, by  
14 triggering altruism among potential customers, marketers may succeed in acquiring them,  
15 making existing customers buy frequently and convincing other potential customers to buy green  
16 products/brands offered by the company. This way, markets can optimise the marketing  
17 expenditure and attain a competitive advantage.  
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## 31 **6. Conclusion**

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35 This study started out with an idea to measure the impact of social and environmental  
36 sustainability awareness of customers on altruism, green purchase intention and how customer  
37 awareness impacts on their green brand loyalty and evangelism. Therefore, in this research,  
38 antecedent variables were social and environmental sustainability awareness and the consequent  
39 variable was product/brand evangelism. After studying current literature and gathering experts'  
40 inputs, measuring variables for each construct were identified. A pre-testing questionnaire was  
41 drawn up to collect opinions from field experts. Based on their input, some amendments were  
42 made and a final questionnaire was designed for data collection. We collected the data of 331  
43 respondents through a structurally designed questionnaire. The results from the data analysis  
44 revealed that all eight hypotheses constructed through the conceptual framework based on our  
45 literature review were supported by partial least square analysis. Social and environmental  
46 sustainability awareness was found to have a positive impact on customer altruism. The impact  
47 of altruism on customer buying intention, customer loyalty and product/brand evangelism is also  
48 positive, where the constructs are mediating variables.  
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4 Lastly, the impact of customer loyalty in creating product/brand evangelism was studied. The  
5 findings can help the marketers to understand customers' consciousness about social and  
6 environment factors, which in future will help them to make better marketing plans and  
7 strategies according to their needs. The study findings suggest that organisational strategies and  
8 activities as per customers' consciousness play a very important role; therefore, the developed  
9 framework can help managers adopt the most feasible and profitable activities that are  
10 environmentally friendly and economically practical.  
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### 19 **6.1 Unique Contributions**

- 20 • The study established a theoretical model where social and environment sustainability  
21 awareness constructs linked with customers' altruism and attitudinal purchase intentions,  
22 green brand loyalty and green brand evangelism; in existing literature, there is a scarcity  
23 of studies in this area.
- 24 • With the help of new contrasts i.e. social and environment sustainability awareness  
25 constructs linked with of customers' altruism, the theoretical model of the study extends  
26 the existing framework of the TPB and explores the decision-making framework under  
27 the umbrella of ethical behaviour.
- 28 • The current work bridges the value-action gap by extending the framework beyond  
29 purchase intention by including green brand loyalty and green brand evangelism.
- 30 • This is a unique study in team findings and is valuable for both customers and marketers.  
31 Opportunities for marketers and organisations can be identified by tracing gaps in their  
32 existing models and improving on them. The responsive attitude of any organisation  
33 towards society, the environment and their customer base can be critical; these are linked  
34 and organisations need to take heed of this. To gain a better position in the competitive  
35 market, gaps in the conceptual framework need to be filled.  
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52 Some limitations were encountered in this work. The data collected was limited, so the effect of  
53 many variables could not be considered. Future work should thus take account of demographic  
54 variables to understand the differences. This study is conducted from the consumer's point of  
55 view; however, it must be tested from the marketer's point of view as well. Additionally, as  
56 social media becomes the new tradition for advertising, how sustainability and the use of  
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4 sustainable and green products can be promoted using social media through these products/brand  
5 evangelists must be studied.  
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**Annexure-I**  
**SURVEY QUESTIONNAIRE**

Dear Respondent,

Greetings !!

I request you to fill up the attached questionnaire

**SECTION A: Basic Information of Respondent**

**Please select/fill in the appropriate box**

1. Name: (Optional) \_\_\_\_\_
2. Gender:  Male  Female
3. Education  Graduation  Masters  Others
4. Age:  21-25  26-30  31-35  36-40  41-45  Above 45
5. Select your occupation:  Private sector  Public sector  None
6. Experience with respect to green product (You can choose more than one) :
  - I prefer using green products
  - I am yet to learn about green products
  - I would like to recommend others to buy green products
  - I always try to buy new green products
  - I would like to use green products in the coming days
7. Email ID (optional): \_\_\_\_\_
8. Contact No. (optional): \_\_\_\_\_

**SECTION B: Rating of Variables**

Please rate your answers to the following questions in the scale of 1-5, where:

**1-Strongly Disagree 2-Disagree 3- Can't Say 4-Agree 5- Strongly Agree**

Answer the following questions based on your current purchases i.e. products you use.

S. No.	Variables	Please tick the appropriate option				
1	I am aware that organisations must be careful about implementation of social practices	1	2	3	4	5

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<b>2</b>	I am aware that similar products do not provide a common meaning to the society	1	2	3	4	5
<b>3</b>	I am aware that everyone does not have equal access to various products and services	1	2	3	4	5
<b>4</b>	I am aware that products are not updated as per societal needs	1	2	3	4	5
<b>5</b>	I am aware that products have impacts on my safety and health	1	2	3	4	5
<b>6</b>	I am aware about that some products help the developing communities	1	2	3	4	5
<b>7</b>	I am aware that some products have an operational impact on certain communities in a positive way	1	2	3	4	5
<b>8</b>	I am aware of the environmental changes the world is going through	1	2	3	4	5
<b>9</b>	I am aware of environmentally ethical products	1	2	3	4	5
<b>10</b>	I am aware about the growing pressure to change the way of living to combat the deterioration of the environment	1	2	3	4	5
<b>11</b>	I am aware about the personal responsibility towards environmental changes	1	2	3	4	5
<b>12</b>	I am aware that individuals can influence the overall environmental awareness levels	1	2	3	4	5
<b>13</b>	I am aware of that individual are making efforts to deal with environmental changes	1	2	3	4	5
<b>14</b>	I am aware that societal influence can increase individuals' environmental awareness	1	2	3	4	5
<b>15</b>	I am aware of environmental problems and always try to buy the product which is not harmful for my family's consumption	1	2	3	4	5
<b>16</b>	I believe eco-friendly products save energy and help to lower electricity/water bills	1	2	3	4	5
<b>17</b>	I am conscious about society's problems and changing behaviour	1	2	3	4	5
<b>18</b>	If needed, I am ready to show my willingness to help others	1	2	3	4	5
<b>19</b>	Pollution is always a concern for me	1	2	3	4	5
<b>20</b>	I believe in green consumption - save future generations	1	2	3	4	5