What influences intention to purchase sustainable products? impact of advertising and materialism

Intentions to purchase sustainable products

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Abstract

Purpose – The purpose of the present study is to examine the relationship between Social and Environmental Accountability (SEA), Attitude towards Environmental Advertising (AEA), Materialism, and Intention to purchase Environmentally Sustainable Products (IPESP).

Design/methodology/approach – The study sample consists of 205 business students from two B schools in India. Data was collected through the survey method, and the moderated-mediation model was statistically tested using SPSS Process Macro software.

Findings – The findings of the study suggest that the attitude towards social and environmental accountability (SEA) is positively associated with the intention to purchase environmentally sustainable products (IPESP). Moreover, this relationship is mediated and moderated by AEA and materialism, respectively.

Practical implications – The findings of the study reveal that a consumer with low materialism and a positive attitude for both environmental sustainability and environmental advertising has higher chances of purchasing environmentally sustainable products.

Originality/value — This study contributes to the existing literature on sustainability by providing a basis for understanding the moderated-mediation mechanism, which affects the relationship between SEA and IPESP; two key variables that have not been examined in combination.

Keywords Sustainability, Moderated-mediation, Social and environmental accountability, Materialism, Environmental advertising, Intention to purchase environmentally sustainable products

Paper type Research paper

Introduction

Back in the early 70s, Meadows had predicted the collapse of the world economy by the middle of the twenty-first century. Meadows suggested that environmental constraints, as a result of over-exploitation of our natural resources, would create a crisis that the world would never be able to overcome (Meadows *et al.*, 1972). Today, these predictions seem to be turning out true. Concerned citizens have become vocal in promoting environmental sustainability practices to create awareness about the global concern of blue planet being inhabitable if the growing environmental constraints are not addressed timely (Hamid *et al.*, 2017). In today's age of rampant consumerism (Lee and Ahn, 2016), environmental sustainability ensures that the wastage of raw materials that are available to fulfill the needs of the human race should not exceed a suitable benchmark (Goodland and Daly, 1996;



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Moldan *et al.*, 2012). Research has also argued that materialism causes resource depletion, pollution, environmental decline, and waste, which can be a characteristic of nonsustainable products (Aakriti, 2020). Hence, sustainable consumption, which is not driven by materialism, becomes an important aspect of sustainable development not only to address the needs of the society existing today but also to ensure a conducive healthy living for our future generations.

In recent years, awareness of environmental sustainability has received considerable attention from scholars and practitioners (Hagenauw, 2019). The reason for an increased effort to research and practice environmental sustainability is the benefit associated with such practices for businesses. Environmentally sustainable practices of firms have become important indicators of their performance and reputation (Dangelico, 2015; Claver et al., 2007). Initiatives such as environment protection programs, promotion of renewable energy use, reduction in carbon footprints, and other efforts are being recognized and appreciated by the public (Valet, 2019). At the macro level, these efforts of corporates are helping in the expansion of the global economy. When organizations give due consideration to sustainability measures, it opens up new business markets for sustainable products (Reinecke et al., 2012). Environmental sustainability efforts allow firms to focus on innovation, such as developing cost-efficient products. Researchers in the field of sustainability have mainly focussed on the purchase intentions of eco-friendly consumers in connection with their attitude towards sustainability (Basha and Lal, 2019; Hofenk et al., 2019; Newton et al., 2015). However, the mechanisms that lead to these purchase intentions are not explored in detail. Our study focusses on answering, "What are the mechanisms through which the attitude towards social and environmental accountability (SEA) impacts the intention to purchase environmentally sustainable products (IPESP)?"

General awareness and consistent efforts of pressure groups have encouraged consumers to adopt sustainable consumption behaviors in their daily enterprises (Roser-Renouf et al., 2016). It has even compelled business organizations to invest in the production, distribution, and advertisements of such sustainable products. Not just the poor, but even the rich people of the society who were once criticized for their care-free attitude towards such concerns, have now started looking at environmental problems seriously (Ebbs, 2019). To illustrate this, it becomes essential to discuss the changes in the consumption behaviours. When it comes to product consumption, companies have started using eco-labels to differentiate their product from regular non-environmental friendly products (D'Souza et al., 2006). These eco-labels have become a quality check for the environmental friendliness of the production and consumption of the product. These eco-labels have also influenced the consumption of these products in the market as some consumers tend to prefer products that are environmentally friendly in their production, consumption, and disposal (D'Souza et al., 2006).

As expected, the number of consumers who use sustainable products has soared in recent times because of the increase in environmental advertising by companies, which has led to an increase in awareness levels of individuals, further leading to an increase in sales of such products. A recent study published in Forbes suggests that 88% of the global population prefers brands, which helped them in sustainable consumption (Townsend, 2018). Thus, sustainable consumption becomes an effective strategy to attract consumers. Studies on sustainable consumption have suggested that pro-environmental advertising helps deliver the sustainability features of products and services to the consumers and have been successful in creating a social consciousness for environmental sustainability among them (Yoon et al., 2016; Alniacik and Yilmaz, 2012).

From the discussion above, it appears that society has a major stake in bringing desirable change in protecting the environment. However, corporates play an equally important role in institutionalizing those changes (Kolk *et al.*, 2008). Scholars have suggested that giving due

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consideration to environmental concerns in their business strategies can also provide a competitive advantage to organizations (Milne *et al.*, 2006). Each organization in the digital world of today also has a brand reputation that it needs to maintain. As most businesses happen in the virtual world, where transactions are not physical, and only the trust between the consumer and supplier is the basis of business, it becomes important for brands and organizations to create a positive image of themselves (Gabisch, 2011). Having said so, not all firms are paying attention to these suggestions. The ideology of business that rests upon profit maximization has created a blindfold to prevent them from looking at long term implications of the ongoing unfailing environmental degradation. Alleged cases of corporates manipulating their reports on their environmental performance are found even after strict laws and regulations being imposed (Walker and Wan, 2012). As a result, young environmental activists such as Greta Thunberg have to fuel a fight against the corporations and governments to put necessary pressure to combat the environmental crisis (Alter *et al.*, 2019).

The motivation for developing the current study was two-fold. First, it was driven by the lack of adequate research on the role of environmental accountability, advertisements, and materialism on environmental sustainability in the literature. For example, prior studies (Young et al., 2010; Bartels and Hoogendam, 2011) have examined sustainability and its role in the buying behaviour of consumers; however, the more significant role of advertisement in this relationship has not been examined adequately. The current study has taken a consumer perspective to examine the nexus between individuals' attitude towards sustainability, advertising, and their buying behaviours in the presence of materialism. Examining attitude towards advertising is important because advertisements act as a clue for the external stakeholders (here consumers) to develop a positive image of the products and services that are advertised (Malik et al., 2013). This further guides their intention to purchase environmentally sustainable products and subsequent purchase behaviours (Malik et al., 2013). An in-depth analysis of such relationships would provide valuable insights for marketers to design their promotional strategies accordingly. Further, it would help environmental sustainability movement leaders to understand how the population could be motivated to develop a deeper sense of belongingness for Mother Nature. Second, a review of prior research on environmental sustainability indicates that the research has mainly focussed on understanding organizational level variables such as environmental indicators, financial performance, and other indicators (Ramus, 2001). At the individual level, the focus had been more on internal stakeholders such as employees (lackson et al., 2012). However, perspectives on potential employees, such as management students who could be the future managers of these organizations have not been highlighted in these studies. The objectives of the study therefore are

- To understand the effect of attitude towards environmental sustainability on the intention to purchase sustainable products.
- (2) To understand mediating and moderating mechanisms that affect the relationship between attitude towards environmental sustainability and the intention to purchase a sustainable product

Review of key constructs

Social and environmental accountability

Social and environmental accountability (SEA) has become an essential constituent for the smooth functioning and growth of the business (Al-Tuwaijri *et al.*, 2004). It has been playing an important role in shifting the approach of business from control to a value-based management approach (Pruzan, 1998). The increased interaction between organizations and

the environment has encouraged governments to promote environmental sustainability practices in the planning frameworks of business organizations (Parker, 2005). Social and environmental accountability falls under an umbrella term of corporate social responsibility or CSR. These practices are often seen as contributing to a firm's positive image (Martins and Gomes, 2019). It is important to highlight the role of environmental accountability because organizations ensure the legitimacy of their business through such a public image. However, the motivation for firms to engage in social and environmental accountable activities lies not only on the positive image but also on its positive relationship with long term financial performance of the firm (Lu and Abeysekera, 2014). Therefore; it becomes imperative for the organizations to cater to social and environmental needs in their business practices.

SEA can be more effective in bringing long-term social changes both at the organizational and societal levels, provided more research is done to understand its novices. Till now, research has been discussing the planning, implementation, and implication of SEA practices at the organizational level. However, for organizations to cater to social and environmental needs more effectively, research also has to focus on addressing consumer-related needs. For example, from the consumers' point of view, the social and environmental accountability indicators of the organization, function as key determinants of a consumer's attitude towards that organization (Fukukawa *et al.*, 2007).

Attitude towards environmental advertising

Green advertising is a reflection of a positive relationship between the environment and the products and services of that organization (Grillo *et al.*, 2008). Advertising has a crucial role in communicating the "green image" of the organization to the consumers by promoting proenvironmental actions of the organization (Grillo *et al.*, 2008). In general, green advertising focusses on creating awareness about the features of the product (or service), and how these features are helping in environment management. Further, such advertising also positively impacts the sales of the organization, especially in the sales of environmentally friendly products (Li *et al.*, 2019; Leonidou *et al.*, 2011; Easterling *et al.*, 1996; Polonsky *et al.*, 1997). This might be the reason for the exponential growth of green advertising by companies in recent years. (Leonidou *et al.*, 2011). Therefore, green advertising is a highly preferred marketing strategy for firms today.

As stated earlier, environmental or green advertising is used by organizations to support their market expansion strategies (Leonidou *et al.*, 2011; Belz and Peattie, 2009). It is a preferred strategy because organizations have to adapt themselves with the growing concerns/demands of the consumers, and the post-modern society is increasingly worried about the ecology and environmental impacts. The role of environmental advertising is not only limited to disseminating information about the environment-friendly features of the product or service (offered by the firm) but also helps firms to restructure and improve their strategies such as HR practices (hiring, selection, compensation, and performance evaluation), business expansion strategies (market share) and others (Magbool *et al.*, 2016; Baker and Sinkula, 2005).

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Cohen and Levesque (1990) have argued that individuals seek a rational balance among their beliefs, attitudes, goals, plans, intentions, commitments, and actions. Similarly, the intention to purchase environmentally sustainable products acts as a balance between the attitude towards sustainable consumption and the act of buying sustainable products. Wee *et al.* (2014) suggested that consumer's perception of sustainable products influences their behavioural intention, which results in the purchase of environmentally sustainable

products. Another study published by Kim and Chung (2011) also suggested a similar fact, where consumers' cognitive knowledge with sustainable products predicted their purchase intentions. Similar studies by Barber *et al.* (2012); Kumar, 2012; Paul *et al.* (2016); Mei *et al.* (2012); Maichum *et al.* (2016) also suggested that environmental knowledge, pro-environment behaviour leads to purchase intention of the environmentally sustainable products.

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Materialism

Materialism is the importance a consumer attaches to a product or service that he/she buys (Aakriti, 2020; Belk, 1985). At extreme, such possessions are central to the identity of the individual and often describes the whole meaning of life for such consumers. Therefore, it is not surprising that such possessions are the source of satisfaction/dissatisfaction (Ger and Belk, 1996). Research has also argued that materialism focusses on resource depletion, pollution, and waste generation, which can be a characteristic of non-sustainable production (Aakriti, 2020). In extension, researchers while analysing outcomes of materialistic behaviour has shown that the behavioural traits of materialism has a positive influence on consumers' attitude towards non-sustainable products and also on their intention to purchase environmentally sustainable products (Aakriti, 2020; Yanti et al., 2019). Over the last few decades, materialistic lifestyle has grown exponentially as a single global concept; however, there also exist differences in the manifestation of such materialistic behaviour across cultures (Cho et al., 2016; Belk, 1985). Such differences have also occurred due to individual differences in the way consumers express their materialistic behaviour (Belk, 1985).

The concept of materialism has been researched long since to understand the impact it holds onto the consumer- the social and human impact (Belk, 1985). Materialism reduces an individuals' concern for the environment (Polonsky *et al.*, 2014; Kilbourne and Pickett, 2008) and choice of product that they purchase (Kamal *et al.*, 2013) encourages non-sustainable consumption. Research has also focussed on how advertisements or promotional efforts and parental influences encourage materialistic behaviour among consumers (Goldberg *et al.*, 2003; Islam *et al.*, 2018; Belk, 1985). Therefore, it becomes important to understand the association of this concept with other variables. It becomes further important to analyze the concept of materialism because it reduces an individuals' concern for the environment (Kilbourne and Pickett, 2008).

Hypotheses

An individual's attitude towards sustainability is his/her behavioural disposition towards the use of a product that may increase/cause or reduce/prevent harm to the environment (Vermeir and Verbeke, 2006; Krystallis et al., 2012). The attitude can be in favour of or against the use of sustainable products, as the consumer has to make a few sacrifices while choosing such products or services. Further, the intention of an individual is his/her commitment to carry out certain behavioural actions (Elio and Haddadi, 2000). As per the theory of cognitive dissonance, an individual seeks consonance or consistency among his/her attitude, behaviour, and intentions (Festinger, 1957). The existence of dissonance makes an individual psychologically uncomfortable, and to avoid it, the individual desires to reduce the dissonance (Festinger, 1957). This cognitive dissonance reducing motive drives a consumer with positive SEA towards the intention to purchase sustainable products (Parguel et al., 2017). Based on this, we can assume that an individual's attitude towards sustainability will affect his/her intention to purchase sustainable products. A study conducted by Manaktola and Jauhari (2007) suggests that "the positive attitude towards green practices in the hospitality industry may lead to positive behaviour (p.373)" such as choosing a stay in the hotel that adopts such good practices in their business. Another study conducted by

Punyatoya (2015) suggested that consumers with a positive attitude towards a brand's environmental friendliness result in higher intention to buy the products of that brand. Empirical studies also suggest that willingness to accept economic sacrifices for protecting the environment positively affects the intention to buy an ecologically sustainable product (Hedlund, 2011). Based on the above arguments, we then argue that the attitude of an individual towards sustainable consumption positively affects his/her intention to purchase such products. Therefore,

H1. Individual's attitude towards the social and environmental accountability of organizations is positively as sociated with their intention to purchase environmentally sustainable products.

For consumers who are conscious about sustainable consumption, environmental advertisements are relevant as these advertisements help in spreading awareness about any new sustainable or green products launched in the market (Zhu, 2012). In other words, such consumers are expected to develop a positive attitude towards advertisements on sustainable products (Yoon and Kim, 2016). Theoretically, the Cognitive Consistency Theory (Abelson et al., 1968) suggests that people seek coherence among their attitudes, thoughts, beliefs, feelings, and values. Researchers have argued that people want their attitudes to be consistent with each other and with their behaviour. This means that if people's attitude towards an ideology diverges, they tend to align their attitudes and behaviour so that they appear rational and consistent. From this theory, we can infer that the attitude of an individual towards environmental sustainability will be positively associated with his/her attitude towards the advertisement, which carries the idea of sustainable consumption. Research in eco-labelling has found that consumers of sustainable products tend to look for information related to the environment on product labels (D'Souza et al., 2006). Another psychographic study on a large number of green consumers suggested that such consumers seek information related to environmental sustainability on the product and its advertisements; and have a positive attitude towards the message of the advertisement if it carries true intentions and is not ambiguous or misleading (Shrum et al., 1995). All these studies, along with the cognitive consistency theory, suggest that consumers who have a positive view on sustainability will also positively look at the advertisement, which talks about sustainability. Based on the above discussion, we propose our second hypothesis,

H2. Individual's attitude towards social and environmental accountability of organizations is positively associated with their attitude towards environmental advertising.

Environmental advertising creates awareness among consumers about the presence of environmentally sustainable products. This awareness invariably affects their intention to buy the product (Rahbar and Wahid, 2011). Thus, we can suggest that a positive attitude towards such communications will persuade the individual to perform the required behaviour. An empirical study conducted on Chinese consumers suggests that the attitude towards environmental advertising impacts the decision of consumers to buy a product or service (Chan, 2004). Also, the AIDA (Attention, Interest, Desire, and Action) model, looks into how an individual's attention and interest generated through advertising of sustainable consumption will affect his/her intention to follow the required behaviour. Here, the desire and action component of AIDA defines the intention of the individual towards purchasing a sustainable product (Kashima *et al.*, 1998). Also, as per the ASE (Attitude, social influence, and self-efficacy) model suggested by Vries and Mudde (1988), the attitude of an individual is an important factor in determining his/her intention towards certain behaviours. Studies on eco-labelling have also confirmed that eco-labels generate awareness within individuals and increase their interest in purchasing environmentally

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sustainable products (Thøgersen, 2000). The relationship between persuasive communication and intention to follow the communication would help us propose our third hypothesis, which is,

H3. Individual's attitude towards environmental advertising is positively associated with their intention to purchase environmentally sustainable products.

From Hypotheses 2 and 3, it can be understood that the attitude towards environmental advertising is associated with individuals' intention to purchase sustainable products and the individual's attitude towards sustainability. Hypothesis 1 states the association between an individual's intention to purchase sustainable products and an individual's attitude towards sustainability. Therefore, according to the transitivity principle, it seems logical to assume that attitude towards environmental advertising would mediate the relationship between an individual's attitude towards sustainability and their intention to purchase environmentally sustainable products. Advertising creates awareness about the product and its usage, which puts an impression of the product on the consumer's mind and makes it highly likely for the consumer to purchase it when he/she goes to the market next time.

Also, the elaboration likelihood model of persuasion (Petty and Cacioppo, 1986) suggests that people will form a positive attitude through communication. In this sense, attitude is directly affected by an individual's assessment of the communication related to a certain product or issue. This implies that when an individual possesses a positive attitude towards environmental advertising, it will reinforce their earlier attitude of sustainability, which would ultimately lead to an intention to purchase such products. Based on the above discussion, the following hypothesis can be proposed.

H4. Attitude towards environmental advertising mediates the relationship between an individual's attitude towards social and environmental accountability of organizations and individuals' intention to purchase environmentally sustainable products.

"Materialism is a consumption value relating to the importance of income, wealth, and material possessions on achieving life happiness" (Yin et al., 2018 p. 322). It has been observed that individuals who score high on materialism would look for products that would make other individuals more envious of them (Belk, 1995). Typically, such products would be purchased more on their face value, rather than on the logical functional value by materialistic individuals. Empirical studies (Richins, 1994; Richins and Dawson, 1992) have suggested that high materialism often leads to loss of a sense of belonging and connectedness with our social environment. This further promotes a more intrinsic set of value systems (favouring financial benefits over others). Similarly, a recent study on the attitude of B-school students towards CSR and sustainability observed that materialism could be a strong predictor of an individual's attitude towards such practices of firms (Kolodinsky et al., 2010). Materialism has also been argued as an insatiable quest to acquire material possessions, which leads to environmental degradation (Nepomuceno and Laroche, 2017). Further, low materialism has been found out to positively affect the environmental concerns of an individual (Joung, 2013). Also, the Environmentally Responsible Behaviour (ERB) model proposed by Hines et al. (1987) highlights the moderating effect of materialism. This model is consistent with the post-positivist paradigm of our study. This model looks at the cognitive variables of environmental behaviours. It includes components of knowledge of environmental issues, knowledge of strategies, skills for strategies, attitude, locus of control, and intention (Giuseffi, 2011). Shukor et al. (2019) extended this model to include the values of materialism and collectivism. It suggests that materialism has a negative influence on environmental beliefs. Therefore, we can assume that lower materialism will have a positive influence on environmental beliefs, which would further impact the intention to buy a product (as suggested in the original model proposed in 1986). Thus, it can be suggested that

when materialism is low, the individual will have higher intention to purchase an environmentally sustainable product and based on the above arguments, we can propose our fifth hypothesis which is,

H5. Materialism moderates the relationship between an Individual's attitude towards social and environmental accountability of organizations and their intention to purchase environmentally sustainable products such that the relationship is stronger when materialism is low.

Contextual relevance

The context of our study has some important significance to play. Our study is contextualized in the emerging markets that have grown rapidly in the last two decades (Meyer and Grosse, 2018). Studies on sustainability in the context of emerging economies are important for several reasons. First, these regions are experiencing a surge in their governments' active role in advocating the adoption of sustainability practices (Rauch *et al.*, 2016). It would be interesting to know how these practices are viewed internally by their citizens (Dögl and Behnam, 2015; Pandey *et al.*, 2020; Yadaya and Sinha, 2016).

Second, these regions account for 90% of the global under-30 population (Eghbal, 2014). The under-30 population bracket is important as a market for many organizations as consumers of this bracket are more than willing to spend their income on various products (Eghbal, 2014). As this bracket also includes consumers who have just started working and are more open to new products (Eghbal, 2014), it becomes likely to adapt them to sustainable products.

Third, many investors, especially in emerging markets, have a preference for sustainable processes and firm and board take this into account. (Pandey and Hassan, 2020). They carefully analyse the organization based on whether it comprises sustainable practices in addition to its basic day-to-day functions or not (Beal et al., 2017). Thus, it becomes essential to analyse what impacts sustainability and the individual's attitude towards it in emerging markets. For the current study, the context of India has been considered because India is one of the most promising nations among the emerging markets (Paul and Mas, 2016). As per the World Population Prospects published by the United Nations, India has the largest young population among all the countries of the world (Melorose et al., 2015). Having such a young population represents the significant share of talent that persists in the country and also the potential consumers of environmentally friendly products (Prakash and Pathak, 2017; Nguyen et al., 2018). Recently, many Indian firms have become global by expanding their businesses across major economies of the world. India has also been a key stakeholder among all the global environmental campaigns, be it the Kyoto protocol or Paris agreement. Therefore, it is worth examining the attitude and behaviour of Indian consumers who are the major drivers of policy change in the country (Timmer, 2017).

Finally, another study suggested that emerging markets have quickly adapted to sustainable practices and have also pushed themselves in doing so. The study lists five reasons for the quick adoption of sustainable practices in emerging markets – organizations in emerging markets have an immense focus on local issues and believe that they can be handled through industrial practices; emerging markets understand the competitive advantage of using sustainable practices; the focus of organizations in emerging markets is to adapt the best of the best practices of the government, i.e. indicators and measurement systems; emerging markets look at stakeholders as their partners and develop respectful relationships; finally, emerging markets are able to root sustainability in all levels of the organization. These reasons are enough to put a focal point on emerging markets (Szekely and Kemanian, 2016).

Methodology

Data collection and sampling

The study has used a cross-sectional research design for which data was collected from students of two premier business schools in India using both pen and pencil and an online survey. It has used a sample, which comprises management students who are exposed to various sustainability and ethics courses. Studying this segment of the population is important, owing to the fact that these students also represent a broader category of customers, i.e. young consumers (Hassan and Pandey, 2020). For the sample adequacy, we used the a priori sample size calculator for hierarchical multiple regression to compute the minimum required sample size. Using the anticipated effect size of 0.15, desired statistical power level of 0.8 and probability level of 0.01, the minimum required sample size was 122 (Cohen, 2013; Raudenbush and Bryk, 2002; Cohen et al., 2013; Cohen, 2013). The survey questionnaire was shared with 400 students. The final data consist of 226 students. After eliminating incomplete forms and outliers, the final sample was of 205 respondents, i.e. an overall response rate of 51.25%. The sample consisted of 110 male and 94 female participants. All the participants of the study were management students who enrolled in the bachelor's, postgraduate, and doctoral programs on management in India. The mean age of participants is 21 years with SD of 4 years.

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Measures

Different established scales were used to measure the constructs for the study. Given below are the details of the scales used. All the scales used a 7-point Likert scale in which 1 represented "strongly disagree" whereas 7 represented "strongly agree" to assess the variables. A 7-point Likert scale was used in the present study as studies have reported that such scales are more accurate, easier to use, and are in a better position to reflect the respondent's true evaluation (Nunnally and Bernstein, 1994).

Social and Environmental Accountability (SEA): SEA was measured using items from Fukukawa et al. (2007). The sample item included was "business executives should be held accountable for the effects of their decisions on a broad range of stakeholders (e.g. employees, local communities, the general public."

Intention to purchase environmentally sustainable products (IPESP): IPESP was measured using the scale by Chan (2001) for the intention to purchase environmentally sustainable product behaviour. A sample item from the scale was, "In the next 3 months, I will consider using environmentally sustainable products more because it is less polluting."

Attitude towards environmental advertising: The attitude towards environmental advertising was measured using a scale developed by Chan (2004) and used in Rahbar and Wahid (2011) and other studies. A sample item from the scale included was, "Environmental advertisement enhance my knowledge about green products."

Materialism: Materialism was measured using items from the scale by Wan et al. (2009) and Yin et al. (2018). A sample item from the scale included was, "I like to own things that impress people."

Control variables: We controlled for age (Johnstone and Lindh, 2018), gender (Dickel and Eckardt, 2020), prior exposure to sustainability (Wymer and Rundle-Thiele, 2017) and CSR training (Yes/No) (Bernal-Conesa *et al.*, 2017) in our study.

Analyses

The final sample adequacy was determined using effect size and was found to be adequate. The missing values were addressed using the guidelines suggested by Hair *et al.*, 2010; Schafer and Graham (2002); Hair *et al.* (2010). Additionally, the assumptions of regression

analysis, namely, linearity, multivariate normality, multicollinearity, and heteroscedasticity were tested prior to conducting the main analysis (Hair *et al.*, 2010). Common method bias was tested through Harman's single factor test, and the variance of one constrained factor was found to be less than 50% (Podsakoff and Organ, 1986).

The moderated-mediation model was statistically tested using SPSS Process Macro software. This model uses hierarchical regression analyses to test the hypotheses. For the mediating effect, the direct and indirect effects were computed by bootstrapping with 5,000 subsamples, and bias-corrected confidence intervals of 90%. For testing the moderating effect of materialism, the product of mean-centered materialism and attitude towards sustainability was introduced to predict purchase intention. This approach is consistent with the Aiken and West (1991) recommendations on testing moderation(see Figure. 1).

Results

Table 1 provides descriptive results, and Table 2 provides the regression analysis for the current study. The analysis of the data shows that there exists a direct positive effect of an individual's social and environmental accountability on the intention to purchase environmentally sustainable products (b = 0.396, p = 0.007) at low levels of materialism thus supporting Hypothesis 1. An individual's social and environmental accountability is a significant positive predictor of attitude towards environmental advertising (b = 0.454, p < 0.001), thus supporting Hypothesis 2. An individual's attitude towards environmental advertising is a significant positive predictor of intention to purchase environmentally sustainable products (b = 0.339, p = 0.009), thus supporting Hypothesis 3. There exist indirect effects of an individual's social and environmental accountability on the intention to purchase environmentally sustainable products through attitude towards environmental advertising (b = 0.154, BootLLCI = 0.051 and BootULCI = 0.266) thus supporting Hypothesis 4. The interaction term of an individual's social and environmental accountability and materialism is a significant negative predictor of intention to purchase environmentally sustainable products (b = -0.227, p = 0.004), thus supporting Hypothesis 5. The proposed model is thus fully supported. We plotted the relationship between SEA and IPESP at three levels of materialism in Figure 2. It can be seen that at higher levels of materialism, the relationship between an individual's belief towards sustainability and the intention to purchase environmentally sustainable products is weaker.

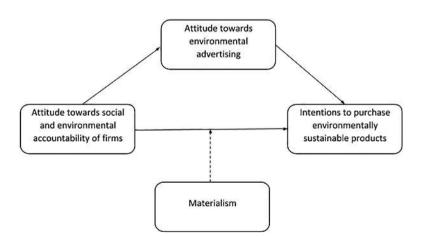


Figure 1.
Hypothesized model

Intention to use	Mean	SD	Social and environmental accountability (SEA)	Attitude towards environmental advertising (AEA)	Materialism (M)	Intention to use	Intentions to purchase sustainable products
1. Social and environmental accountability (SEA)	5.55	0.99	(0.85)				
2. Attitude towards environmental advertising (AEA)	4.81	1.12	0.34***	(0.71)			
3. Materialism (M)	4.18	1.40	-0.06	-0.11	(0.65)		
4. Intention to use	4.92	1.52	0.15*	0.22**	0.01	(0.92)	
5. Age	21.23	4.41	0.16*	0.09	-0.25***	-0.09	
Note(s) : <i>N</i> = 205 *** <i>p</i> < 0.001, *** <i>p</i> < 0 Cronbach's alpha in p							Table 1. Descriptive statistics

	Attitude towards environmental advertising	Intention to use	
Control Variable			
Age	0.001	-0.04^{+}	
Gender	0.25	0.18	
Independent Variables			
Social and environmental accountability	0.45***	0.14	
(SEA)			
Attitude towards environmental advertising (AEA)		0.34**	
Materialism (M)		-0.01	
Interaction M X SEA		-0.28**	
Adjusted R Square		0.135	
F		5.12***	
Note(S) : $N = 205$			
*** $p < 0.001$, ** $p < 0.05$, * $p < 0.01$, * $p < 0.1$			
M and SEA were mean centered prior to analysis; U	Instandardized coefficients reported		Regres

Discussion

The findings of the study are in alignment with the existing studies that green positioning by the organizations tend to be more convincing than the usual organizational strategy (Hartman *et al.*, 2009). As studies have reported that products and services from a socially responsible organization might create a sense of altruism, accomplishment, pride and a feeling of association among the consumers, which will make them feel like a socially responsible citizen (Hoefflerand Keller, 2002; Brekke *et al.*, 2003). That is why consumers prefer to give more affective and cognitive responses to such organizations that project themselves as environmentally conscious organizations compared to those who are not environmentally associated.

The study differentiates itself from the previous studies on sustainability as it is the only study that focusses on the holistic view of sustainability by using variables-social and environmental accountability (SEA), attitude towards environmental advertising (AEA),



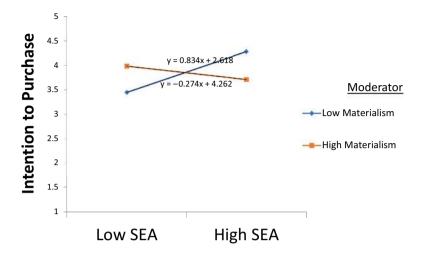


Figure 2. Interaction plot

materialism and intention to purchase environmentally sustainable products (IPESP) from a consumer-centric view. The present study has examined the relationship between social and environmental accountability and purchase intentions among experienced business students. As these students in the future will join any organization at the managerial level, it is essential to understand their sensitivity and awareness towards sustainable issues of the society and country as a whole. The study result has supported the hypothesized relationship. The findings are in line with the results of Fukuwaka et al. (2007); Marquina (2010). For instance, Fukuwaka et al. (2007), demonstrated in their study that students with high universalism have reported social and environmental accountability. Likewise, Marquina (2010) studied the impact of CSR activities of the organization by including social and environmental accountability with consumers' buying behaviour towards sustainable products and services. The study findings suggested a positive relationship between CSR activities of the organization and consumer's purchase behaviour of the products. However, the present study extends Marquina's work and discusses other psychological variables that can influence consumers' purchase attitude and behaviour. In the present study, the result findings suggested that the social and environmental accountability of the consumers towards sustainable products is significant in predicting purchase intentions.

The study also hypothesized that environmental advertising has a positive influence on consumers' purchase intentions. Further, environmental advertising was hypothesized to mediate the relationship between SEA and purchase intentions. Both hypotheses were supported. The study results are in sync with the previous studies such as Marquina (2010); Xue (2014); Hartmann *et al.* (2017). For instance, Hatman *et al.* (2017), in their study, significantly demonstrated that environmental advertising about company's CSR initiatives would improve its brand image. One of the probable reasons for such findings can be that advertisements, which are oriented towards sustainability and environments, would improve consumers' awareness towards green and sustainable, environmentally friendly products. Second, advertisements of such products are perceived to be more genuine and altruistic by the consumers, and they can easily differentiate between products and services, which are environment friendly and green compared to any other products.

In addition, the present study has hypothesized a lower degree of materialism as a moderator for consumers of environmentally sustainable products. Consumers with lower materialism can be beneficial for manufacturers of sustainable products. These consumers

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will also contribute less to environmental degradation due to their higher intention to purchase environmentally sustainable products (Nepomuceno and Laroche, 2017). The study result is in line with (Kilbourne and Pikett, 2008), where the negative relationship was hypothesized between materialism and environmental beliefs. Also, the research on materialism as a moderating variable has majorly focussed on its relationship with luxury items (e.g. Tascioglu et al., (2017). The present study findings give a different lens to the concept of materialism and see it in the context of sustainability. The result of the study suggests that the relationship between consumer's attitudes towards environmental sustainability and intention to purchase environmentally sustainable products is mediated by their attitude towards environmental advertisements. This whole mediation model is moderated by the presence of materialism. The findings of the study reveal that a consumer with low materialism and a positive attitude for both environmental sustainability and environmental advertising has higher chances of purchasing environmentally sustainable products. The key argument underlying the present study is that in order to maintain their self-image, people will not like to see themselves as reckless consumers and treasonists, who, for the sake of the desire of materials goods, will deplete the country's environmental resources at a faster pace.

Theoretical contributions

Theoretically, our study contributes to the existing literature on sustainability and marketing. Our study provides a novel approach to use the ASE (Attitude, social influence, and efficacy) model, which was introduced by de Vries and Mudde (1998). The model had been used in the area of medicine, education, and health research (Vries and Mudde, 1998; Noar et al., 2011; Kiewik et al., 2017; Yilmaz, 2016). However, our study successfully finds its attitudinal aspect applicable to study the purchase of sustainable products. The use of this model in sustainability research would effectively help us understand the purchase behaviours of consumers. Our study also extends the discussion on theories on advertising and marketing by evaluating the persuasion process involved in the case of purchase behaviours related to sustainable products. The elaboration likelihood model (ELM) framework used in our study argues the central and peripheral path for intending to purchase a sustainable product (Petty and Cacioppo, 1986). Scholars have suggested that when consumers do not have the necessary skills and ability to determine the valuation of a product, they do depend upon other clues, such as the sustainability characteristics of those products (Tian et al., 2011). Therefore, it can be expected that one's interest in environmental advertising and attitude towards sustainability practices of business would facilitate the consumer to process the value-prediction of the products. Advertisement is important because it communicates the firm's concern towards the environment, which will positively persuade the individual to purchase the product. Findings of the current study suggest how the likelihood of a consumer choosing an environmentally sustainable product is contingent on their attitude towards other aspects such as the degree of materialism, attitude towards sustainability, and environmental advertising. These interdisciplinary usage theories are consistent with past research (Soral et al., 2020).

Our study has also extended the discussion on Cognitive Consistency theory to understand how people tend to maintain consistency among their attitudes (Abelson *et al.*, 1968). The cognitive consistency theory has been used in research in the domain of corporate sustainability (Gröschl *et al.*, 2019), collaborative consumption for sustainability (Parguel *et al.*, 2017). All these studies discussed how coherence among the attitudes towards sustainability leads to the desired behaviour. We extended the similar principle of coherence among attitudes to our research in sustainable consumption. Based on the Cognitive Consistency theory, we suggest that the attitude towards sustainability will

positively affect the attitude towards environmental advertising as people will seek consistency among their attitudes towards sustainable consumption. This can greatly help future researchers to understand an individual's different aspects towards sustainability, such as environmental advertisements, environmental campaigns, green products, and green transportation.

Practical and managerial implications

The findings of the current study have some important managerial implications. An important observation of this study is that the consumers' intention to purchase environmentally sustainable products is a complex process that involves a coordinated effort of the individual self (attitude), value orientation (degree of materialism), and external influencer (advertisements). Our study suggests that any policy or promotion of environment-friendly products can be successful if individual-level attitudes and materialistic views of the consumers are taken into consideration. We recommend that marketers should focus on making sustainability advertisements more audience-centric in their approach. Such advertisements, if designed appropriately, keeping in mind the attitude of the consumers, can motivate consumers to purchase environmentally friendly products.

Another observation of this study is that the analogy of attitude with intentions in the context of sustainability can be examined in a more systematic manner if marketers indulge in evaluating the communication aspects involved in this process. The communication of any substantive sustainability claims or information on specific environmental product features shapes how we accommodate such claims in our buying decisions. Here environmental advertising is the communication element that determines the purchase behaviour. Thus, by improving this element in such a manner that consumers develop a positive attitude towards such communication, can turn the consumer into a potential buyer (Hartmann and Apaolaza-Ibáñez, 2009). Not only this, but a consumer can also later become a communication element to spread word of mouth and shape the attitude and behaviour of other potential buyers (Chen, Lin and Chang, 2014).

Also, research in sustainability has suggested that it can bring long term gains to the companies, along with the initiation of new innovative practices for production (Hart, 2005). These innovation practices not only reduce the cost of production but can also generate additional revenues by creating better products and opening opportunities to enter into new markets (Nidumolu *et al.*, 2015). Another research on two types of sustainable activities: lower-order sustainable activities which focus on reducing pollution and using other preventive measures and higher-order sustainable activities which focus on creating radical innovations (hybrid technologies) suggested that both of these activities can significantly improve the financial performance of the company. However, higher-order sustainable activities are found to reap greater financial benefits than lower-order sustainable activities (Kurapatskie and Darnall, 2013). The cross-national study conducted by Zhang and Song (2020) also suggested that sustainability first movers can get a wide range of benefits such as performance outcome advantage, quality image perception advantage, innovative leadership advantage and scale economy advantage by introducing sustainability practices in the market

The results are significant for policy formulation as well. When concern towards environmental resources are increased, the consumers' consumption and buying behaviour will change, and consumers would shift their purchase intentions and buying behaviour by buying green and sustainable by lowering their desire for materialism. Thus, the present study, by explaining the concerns/attitudes and behaviour amongst the consumers regarding their intentions to purchase sustainable products, bridges the attitude and behaviour gap in the consumer buying pattern of sustainable products, which has been explored less in an

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emerging economy like India. It may be concluded that our intention to purchase environmentally sustainable products are complicated behaviours, which are determined by our prior interactions with external factors (here advertising) and our prior notions for such external factors.

Limitation, future directions and conclusion

The current study has a few limitations. It uses a cross-sectional research design, which is prone to common method bias. Although we have statistically tested for such bias through a single factor test, a more appropriate approach could have been the collection of data at two different intervals. Another limitation of this study is the context. Our study has focussed on business students from India, which consists of non-working population and does not have purchasing power. Future research may test this relationship using cross-cultural samples to increase its generalizability.

Future research studies may also look into the moderating role of factors such as personality and value orientation in influencing the relationship between SEA and IPESP. Further, there is a possibility of examining the model from a generational perspective. There is a strong possibility that differences in generational identity may give different results from the current findings, and it is worth exploring the same. In view of this, an intentional attempt to expand the scope of social and environmental accountability (SEA), attitude towards environmental advertising (AEA), materialism and intention to purchase environmentally sustainable products (IPESP) with other factors would greatly contribute to the research in sustainability and sustainable consumption.

Young consumers, especially the digital natives, have become one of the largest consumer segments for marketers. Nevertheless, they are equally the most challenging segment to be convinced to buy any product or service without a critical evaluation of the benefits associated with that product and service (Shintaro and Taylor, 2013; Barua and Islam, 2011; Gong et al., 2004). Therefore, marketers are always on the look-out to find innovative means to promote their offerings. The literature on sustainability and green marketing suggests that in the last few years, consumers have increasingly become more aware of the environmental effects of the products and services they use or associate themselves with (Boztepe, 2012). Advertising and promotional practices can be largely credited to this awareness. Historically, advertising has been perceived to be more associated with the business. However, not very recently, this perception has changed due to the use of advertising in creating social consciousness towards some more significant social issues such as health, environmental degradation, natural rights, and others (Davis, 1994; Hartmann and Apaolaza-Ibáñez, 2009). These advertising strategies are helping citizens to better understand the substantive and associative claims of advocates of such causes. Both society and businesses have to work in harmony. It is a win-win situation when business reciprocates by giving back something good in return for what they benefit from society. A better understanding of the issue further helps in a more intense effort to practice and advocate behaviours that are socially more desirable and legitimate. Findings also suggest that by producing environmentally sustainable products for consumers with a life cycle approach, the organization can contribute to social sustainability (Weingaertner and Moberg, 2014). Further, by creating environmental advertisements for these products, the organization can increase the purchase intentions of consumers of environmentally sustainable products, which would further contribute to social sustainability.

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