Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers

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ABSTRACT

The purpose of this empirical study is to operationalize the relationship of cognitive factors influencing on green purchase intention directly and indirectly via the mediating role of attitude towards green products which in turn investigated with green purchasing behaviour in order to validate the proposed research model in the Indian context of ecologically friendly buying behaviour. The model is based on 'attitude-intention-behaviour' and analysed by using structural equation modeling (SEM) from that data collected of 351 Indian consumers.

The findings unveiled that Green purchase intention (GPI) was significantly and directly driven by Attitude towards green products (AGP), Environmental concern (EC), and Perceived consumer effectiveness (PCE) directly and indirectly via the mediating the role of AGP however, perceived environmental knowledge (PEK) was found to be insignificant effect on both AGP and GPI in this study. Moreover the measure of GPI was found to be the fundamental predictor of Green purchase behaviour (GPB) in the model. Hence, the present model provides valuable inputs to policymakers and marketers to design from the perspective of green marketing policies and strategies in order to cope with the indigenous Indian context.

1. Introduction

Unsustainable level of consumption globally leads to severe environmental sustainability issues such as global warming, water, air and land pollution, and waste generation which drive society to change their conventional consumption patterns and purchase behaviour towards the pursuit of environmental sustainability. Consequently the phenomenon of green consumer behaviour has been evolved as a new paradigm of marketing discipline for marketers and researchers in the realm of contemporary consumer research (Ottman, 1998; Charter et al., 2002; Peattie and Belz, 2010; and Lai and Cheng, 2016). Regarding this behavioral phenomenon, numerous studies have been found in developed nations towards pro-environmental behaviour (Ottman, 1998; Kalafatis et al., 1999; Peattie and Charter, 2003; Zhao et al., 2014; and Yadav and Pathak, 2016). While in Asian developing economies like India and China etc., a few studies have been acknowledged purchasing behaviour for green products, still such literature on ecological issues and consumer research is a bit scant in the Indian context (Chan, 2001; Mostafa, 2006; Chen and Chai, 2010; Yadav and Pathak, 2016; and Kumar et al., 2017).

In the line of above discourse, Nielsen Survey (2011) on *Global*

Online Environment and Sustainability found that 86 percent of Indian consumers has shown positive attitude towards energy efficient products and appliances, followed by recyclable packaging (79%) and least impact was given to products not tested on animals (41%), and fair trade products (44%). Similarly National Geographic Society and the international polling firm Globescan brought out the report on Greendex (2010) that the top scoring consumers were in the emerging economies of India, Brazil, and China; however industrialized countries ranked at the bottom.

Moreover India has witnessed as the second fastest growing emerging economies with the highest youth population with two third population which having the below age of 35 years, educated, and self-belief in speedy action oriented generation over the world leading to a young nation known as 'YOUNGISTAN'. Thus it is clear that Indian consumers are increasingly conscious towards the benefits of sustainable practices and environmentally friendly behaviour with the characteristics of rising young segment of population and their education level, such primary indicators has opened new avenues in the field of green behavioral research in India with the equal footing of green consumerism worldwide (Jain and Kaur, 2004; Datta, 2011; Paul et al., 2016; Yadav and Pathak, 2016; and Prakash and Pathak, 2017). Despite

the fact of rising consumers' awareness and their pro-environmental behaviour for environmentally friendly products, the demand for such products is not actually found as high as expected (Lai and Cheng, 2016).

Concerning with the attitude-behaviour gap, two classical theory: TRA (theory of reasoned action) and TPB (theory of planned behaviour) purported by Fishbein and Ajzen (1975), and Ajzen and Fishbein (1980) which have been applied in a wide range of environmental behavioral studies to capture the behavioral measure of purchasing green or sustainable products including developing countries (Chan, 2001; Kim and Chung, 2011; Zhou et al., 2013; Yadav and Pathak, 2016; and Hsu et al., 2017). However, majority of the studies were found to be failed to elucidate the green purchase behaviour using by TRA and TPB approach driven with attitude, subjective norms, and perceived behavioral control, and thus found to be weaker relationship between the positive attitude towards green purchasing and the actual purchase decision (Tan, 2011; and Joshi and Rahman, 2015).

The notion is that the relevance of such behavioral measures of TRA and TPB are still questionable on its unanimous applicability in the ecological behaviour, and thus emerged an issue of debate for academia in order to address 'attitude–behaviour gap in the field of green consumer psychology. Therefore the study must be embraced with other cognitive factors to predict green purchase behaviour either using modified TRA and TPB or applying some customized approach in the view of different cultural and local settings (Chan, 2001; Chan and Lau, 2002; Akehurst et al., 2012; Joshi and Rahman, 2015; Wei et al., 2017). Concerning with the above arguments, several researchers have suggested to incorporate some other cognitive factors, viz. environmental concern, environment knowledge, and perceived consumer effectiveness etc. with the measure of environmental attitude of above classical models in order to assess purchase behaviour in the contemporary green consumer research (Straughan and Roberts, 1999; Chan, 2001; Mostafa, 2007; Kim and Choi, 2005; Tan, 2011; Kim, 2011; Paul et al., 2016; Kumar et al., 2017).

For instance Chan (2001) studied the impact of above cognitive constructs on purchase behaviour for general greener products via the mediation role of purchase intention. Roberts (1996), and Straughan and Roberts (1999) confirmed that consumer's perceived effectiveness is the single best predictor of green consumption behaviour, and consumers will purchase green products if and only if they believe that their behaviour will have positive effect on their environment. Similarly in Asian context, Kim and Choi (2005), Mostafa (2006), Kim (2011) also validated perceived consumer effectiveness with purchase behaviour for green products and they were found to be a significant impact on purchase behaviour for such products. Moreover researchers also reported that PCE is the one of the key significant subjective phenomenon after environmental concern and environmental knowledge found to be more effective factor than EC to capture the green consumerism (Roberts, 1996; Tan, 2011; Joshi and Rahman, 2015). On the contrary such behavioral relationships were a little bit accentuated and rarely tested in the Indian context (Uddin and Khan, 2016a, 2016b) parallel with the study of other Asian market settings (Kim and Choi, 2005; Mostafa, 2006).

In the light of discourse on this subject matter, it is obvious that there is a dearth of literature found to be examined the cognitive factors such as ecological concern, attitude towards green products, perceived consumer effectiveness, and environment knowledge in order to predict purchase intention and purchase behaviour for general green products, and such similar inter-relationship were nascent stage and a little bit accentuated directly and/or indirectly in the contemporary Indian context of green consumerism. Moreover the present study is the first to the best of our knowledge that the measure of perceived consumer effectiveness is validated as the antecedent of consumers' purchase intention for eco-friendly products directly and indirectly via attitude towards green products in the Indian setting.

Therefore this empirical study strives to fill the research gap by

operationalising and validating the relationship of environmental concern (EC), perceived consumer effectiveness (PCE), attitude towards green products (AGP), and perceived environment knowledge PEK with green purchase intention (GPI) both directly and indirectly via the mediating role of AGP, and further GPI investigated with green purchasing behaviour (GPB) in the present Indian indigenous setting of ecologically sustainable behaviour. Hence the present integrated model is based on 'Attitude-Intention-Behaviour' in which GPI plays a linkage role between the above four antecedents of GPI and GPB in the proposed research model by using structural equation modeling.

This paper comprises with the following sections. The 'literature review' leads to a conceptual framework for hypothesis development followed by the section of 'Methodology' and 'Analysis and Results' with the findings of the measurement model and structural model. Next the study presents a discussion about the findings, implications in the section of 'Discussion and Implications' followed by 'Limitations and Future Research' in the possible avenues for further studies.

2. Literature review and hypothesis development

2.1. Green purchase behaviour

Green purchase behaviour refers to the purchase of environmentally friendly products or sustainable products those are 'recyclable and 'beneficial' to the environment and avoiding such products which harm the environment and society (Chan, 2001; Mostafa, 2007). Consumer behaviour for green purchasing is generally evaluated in terms of their consumers' willingness or intention to purchase green products and that conscious behaviour or intention eventually transformed into their purchase decision for such products in order to benign for environmental sustainability (Joshi and Rahman, 2015). In the research of consumer behaviour, it is first unveiled by TRA (Fishbein and Ajzen, 1975) that suggests consumer behaviour is determined by intentions, incorporated with attitude and subjective norms. Subsequently TPB (Ajzen and Fishbein, 1980) utilized as the extended model of TRA comprises of perceived behavioral control with the measure of attitude and norms. Although such classical models have been widely used by several scholars alike or with some modifications in order to validate purchase intention and purchase behaviour for green products in the field of environmental behavioral research including India (Zhao et al., 2014; Paul et al., 2016; Yadav and Pathak, 2016; Prakash and Pathak, 2017; Hsu et al., 2017), the applicability of TRA and TPB as standard measures are still ambiguous as their inconsistent effectiveness in the present scenario of different local settings (Joshi and Rahman, 2015). Moreover modified behavioral measures were also adopted in a wide range of environmentally friendly products including Asian and Indian market, viz. skin care products (Hsu et al., 2017), organic products and vegetables (Kim and Chung, 2011; Zagata, 2012; Zhou et al., 2013), eco-friendly packaging (Prakash and Pathak, 2017), energy efficient products (Ha and Janda, 2012), and general green products (Chan, 2001; Chan and Lau, 2002; Chen and Chai, 2010; Lai and Cheng, 2016; Yadav and Pathak, 2016).

In particular 'general green or sustainable products' are those which are beneficial to the environment and society usually includes eco-friendly carry bags, recycled papers, herbal products, energy saving bulbs, energy efficient appliances and vehicles, and household Products etc. (Lee, 2008; Joshi and Rahman, 2015). Moreover such products adopt ecologically sound production, are recyclable and having low waste generation (Chan and Chai, 2010).

Based on the above arguments, it is apparent that consumer behaviour is not only affected by attitudinal factors, but also required some other cognitive factors such as concern, knowledge, and consumer effectiveness with the measure of attitude directly and/or in order to deal with consumers' purchase intention and their purchase behaviour for general green products (Straughan and Roberts, 1999; Chan, 2001; Mostafa, 2007; Kim and Choi, 2005; Tan, 2011; Kim, 2011; Paul et al.,