

Antecedents of Pro-Environmental Buying Behavior – An Empirical Approach

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ABSTRACT: *The purpose of this paper is to develop a more encompassing understanding of the consumers' pro-environmental buying behavior, which successively leads to green self-identity. Furthermore, the mediating effect of consumer skepticism on pro-environmental buying behavior towards green self-identity is also measured in this paper. The research design followed in this paper is an empirical research. The sample units regarded for this paper are the caretakers or parents who had a child in the last 12 months. For the purpose of sampling, a leading maternity hospitals in Coimbatore is chosen. The sampling technique enforced in this paper is Simple Random Sampling, which is a probability sampling technique. Eliminating double-barreled, misleading, and ambiguous questionnaire, 186 completed responses remained (66.66% response rate), which are utilized for further analysis. The predictive power and overall model fitness of the proposed model "Pro-Environmental Model" is tested using Structural Equation Modeling (SEM) with Maximum Likelihood Estimation. The results revealed that there is significant benevolence of Behavioral Beliefs and Emotional Beliefs towards Pro-Environmental Buying Behavior.*

Keywords: *Behavioral Beliefs, Emotional Beliefs, Pro-Environmental Buying Behavior, and Green Self-Identity*

I. INTRODUCTION

The blue-collar revolution has had an encroachment on the environmentally-friendly consumer buying behavior (Brownsword, 2008; Wyatt, 2009). The present-day growing economic agenda of India has far-flung the public support towards deforestation, global warming, fossil fuels reduction, acid rain, ozone layer depletion, and air & water pollution (Diener and Frank, 2010). Environmentally-friendly consumer buying behavior has experienced a paradigm shift from the extremely technologically innovative products (Vermeulen and Ellersiek, 2008). The environmentally friendliness of the consumer refers to the intensity to which the customer is mindful of the issues pertaining to the environment and supports to unriddle them and/or show a disposition to boost personally to their resolution (Arvanitoyannis and Kasaveti, 2008; Dunlap and Jones, 2002; Dunlap and Van, 1978; Halkier, 2001; Reijonen, 2011).

1.1 Problem Statement

In the recent past, investigators discovered that most of the consumers draw a particular consumer buying behavior in spite of being incredulous when it comes to healthcare products (Chambers, 2010). It was also ascertained that lesser degree of eco-friendly healthcare products consumption remains to be an elemental concern for the environmentalists (Joshi, Purwar, Ali, and Rajendran, 2010). Given the grandness of the environmentally-friendly consumer buying behavior mediated by skepticism towards green self-identity, it is confounding to know how only very few researchers have concentrated in this domain. Accordingly, this paper would enlighten these staggeringly authoritative but less explored attributes.

1.2 Purpose of the Study

The purpose of this paper is to develop a more encompassing understanding of the consumers' pro-environmental buying behavior, which successively leads to green self-identity. Researches witness the fact that behavioral beliefs and emotional beliefs are the most essential constituents that stamp down pro-environmental buying behavior of an individual (Follows and Jobber, 2000; Irwin, 1994; Moser, 2015; None and Datta, 2011). Consequently, this paper ascertains out the individual impingement of self-centered behavioral beliefs and altruistic behavioral beliefs towards pro-environmental buying behavior (Alexander, 2002; Forquer, Christensen, and Tan, 1985; Seymour, 2009; Zentall, 2002). Furthermore, the mediating effect of consumer skepticism on pro-environmental buying behavior towards green self-identity is also measured in this paper.

1.3 Research Questions

In this background, following unanswered questions are elicited:

- a) What is the affiliation between perceptual fluency and online shopping orientation?
- b) What is the persistency of perceptual fluency and online shopping orientation towards online gratification?

1.4 Objectives

The above listed research questions are answered using the following objectives:

- (i) To examine the impact of behavioral beliefs and emotional beliefs towards pro-environmental buying behavior.
- (ii) To explore the mediating effects of skepticism on pro-environmental buying behavior towards green self-identity.

1.5 Scope of the Study

The scope of this paper is to contrive a conceptual framework that determines the antecedents of pro-environmental buying behavior towards baby diapers. This conceptual framework would bestow to the professional apprehension of pro-environmental buying behavior in order to confess more computable green self-identity. This paper would contribute to the contemporary literature appertained to consumer buying behavior by depicting substantive information about the association of behavioral beliefs and emotional beliefs. Eventually, this paper also adds to the existing literature by hypothesizing the association between these attributes.

II. LITERATURE REVIEW & CONCEPTUAL FRAMEWORK

2.1 Behavioral Beliefs

Hopkins and Powers (2009) ascertained the role of altruistic buying behavior in interpreting motivations that consumers may exhibit towards environmentally friendly products. Hustvedt and Dickson (2009) bestowed to a better understanding of the consumers of organic products. The authors revealed that the consumers who exercised organic cotton had positive behavioral belief toward organic and sustainable agriculture. Moosmayer and Fuljahn (2010) examined the role of gender and of donation size on consumer perception, consumer goodwill toward the cause-related marketing campaign, and consumer behavioral belief toward cause-related marketing. Data from 306 students from a German University disclosed that consumer perception of firm behavior, behavioral belief, goodwill toward the cause-related marketing campaign are significant by gender. Shiau and Chau (2015) concluded that altruism, reciprocity, and reputation of motivations are significantly positive predictors of consumer trust towards eco-friendly products.

2.2 Emotional Beliefs

Chatvijit (2012) examined the relationships between attitude, product scarcity perception, buying behavior, post-purchase emotional beliefs, and product return behavior of the fast fashion consumers. The author cogitated that impulse buying behavior would negatively influence post-purchase emotional beliefs of the consumers. Chang, Yan, and Eckman (2014) investigated the direct and indirect effects of apparel store environmental features and consumers' positive emotional responses to the environment on impulse buying behavior using the Stimulus-Organism-Response model. The authors exposed a direct effect of ambient/design characteristics on consumers' emotional beliefs and direct effects of consumers' positive emotional responses to the open-air environment on purchase behavior. Xinhui and Han (2016) explored the factors influencing consumer irrational buying behavior. The authors suggested that the consumer attitude and purchase intention, the marketing promotion, and the guidance of consumer emotional belief have an evident significance on consumer irrational buying behavior.

2.3 Pro-Environmental Buying Behavior & Green Self-Identity

Kim and Moon (2012) considered the cognitive factors of the environmental behavior of Korean immigrants in the United States by focusing the environmental values, awareness, and perception to interpret the consumer's environmental concerns. The findings revealed that environmental values reflecting new environmental attitudes are positively associated with pro-environmental buying behavior. Lee et al., (2012) measured the predictors of pro-environmental behavior among the Korean consumers. The findings disclosed a strong positive correlation between preferences for environmental attributes and pro-environmental buying behaviors. Tilikidou and Delistavrou (2014) excogitated the potential components of pro-environmental buying behavior towards the size of applicable consumer segments. The authors also experimented the critical factors to portray the segment of frequent pro-environmental purchasers. The findings revealed two significant constituents - conservation and purchase towards pro-environmental buying behavior. Khare (2015) disclosed that peer influence, past green buying behavior, and green self-identity determine the green buying behavior.

2.4 Conceptual Framework

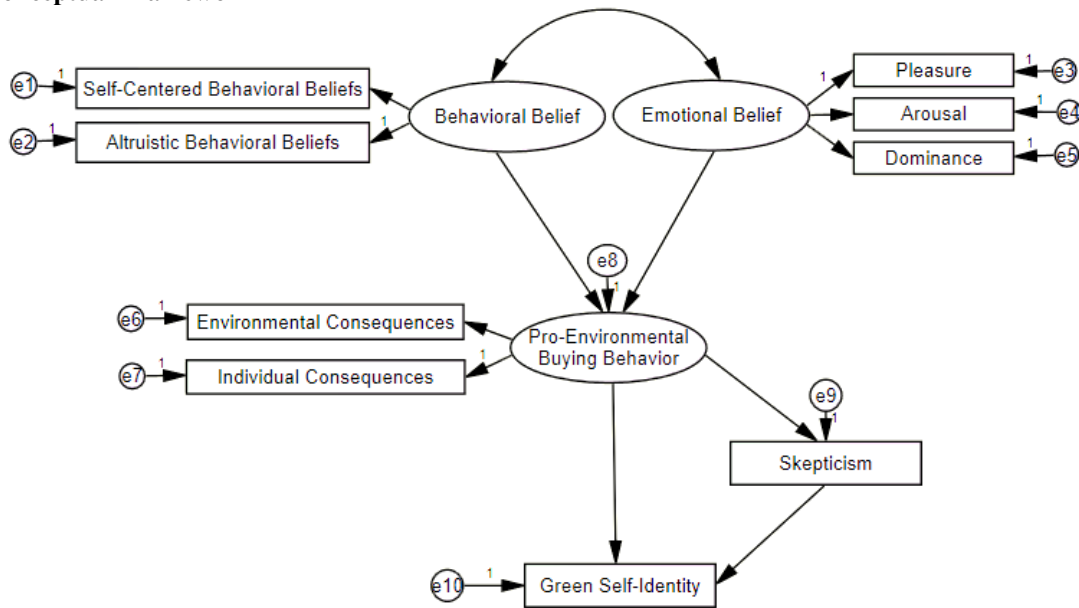


Figure 1: Conceptual Framework – “Pro-Environmental Model”

III. RESEARCH METHOD

The research design followed in this paper is an empirical research. A structured questionnaire, partially standardized and partially unstandardized research instrument, is employed to examine the developed research objectives. The degree of agreement is deliberated using a five-point Likert Scale ranging from “1-Strongly Disagree” to “5-Strongly Agree”. The Pro-Environmental Buying Behavior sub-scales are followed from “9-item Environmental Consequences Scale” proposed by Follows and Jobber (2000). The Emotional Belief sub-scales are modified from "Semantic Differential Scale" formulated by Mehrabian and Russell (1974). The items of Skepticism are modified using the "Skepticism toward Environmental Claim Items" formulated by Hustvedt (2006). The Cronbach's alpha reliability coefficients for the observed sub-scales are found to be more than 0.70, which express an excellent degree of internal consistency (Cronbach and Shapiro, 1982; Lavrakas, 2008).

The geographical area of this paper pertains to Coimbatore. The data collection process is carried out for a period of six months from January to June 2016. The sample units regarded for this paper are the caretakers or parents who had a child in the last 12 months. For the purpose of sampling, a leading maternity hospitals in Coimbatore is chosen. During the study period, total child birth in the selected maternity hospital in Coimbatore is 1014. Applying the sample size determination model, at 95% confidence level and 5% margin of error, the estimated the sample size for this paper is 279 (Krejcie and Morgan, 1970). The sampling technique enforced in this paper is Simple Random Sampling, which is a probability sampling technique. As requested by the Hospital Management, the personal identity of the maternity hospital and the caretakers or parents are not revealed, but are maintained confidential. Eliminating double-barreled, misleading, and ambiguous questionnaire, 186 completed responses remained (66.66% response rate), which are utilized for further analysis. The predictive power and overall model fitness of the proposed model “Pro-Environmental Model” is tested using Structural Equation Modeling (SEM) with Maximum Likelihood Estimation.

IV. 4. ANALYSES AND DISCUSSION

H₁: Behavioral beliefs and emotional beliefs would influence pro-environmental buying behavior

The role of Behavioral Beliefs: Self-Centered Behavioral Beliefs & Altruistic Behavioral Belief; and Emotional Beliefs: Pleasure, Arousal, and Dominance towards pro-environmental buying behavior is examined using Multiple Linear Regression analysis.

Table 1: Impact of Behavioral Beliefs and Emotional Beliefs towards Pro-Environmental Buying Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.421 ^a	.245	.231	.49110

a. Predictors: (Constant), Dominance, Self-Centered Behavioral Beliefs, Arousal, Altruistic Behavioral Beliefs, Pleasure

It is observed from Table 1 that the regression value ‘R’ is at 42.1%, the R Square value is at 24.5%, and the adjusted R Square value is at 23.1%. From the R Square value, it can be interpreted that the weighted combination of the predictor variables justifies 24.5% of the divergence of dependent variable. It can be concluded that 24.5% divergence in Pro-Environmental Buying Behavior is reported by Behavioral Beliefs and Emotional Beliefs. Therefore, it is generalized that there is significant benevolence of Behavioral Beliefs and Emotional Beliefs towards Pro-Environmental Buying Behavior.

H₂: Skepticism would significantly mediate pro-environmental buying behavior towards green self-identity

The mediating effects of skepticism on pro-environmental buying behavior towards green self-identity is measured using path analysis in IBM AMOS software.

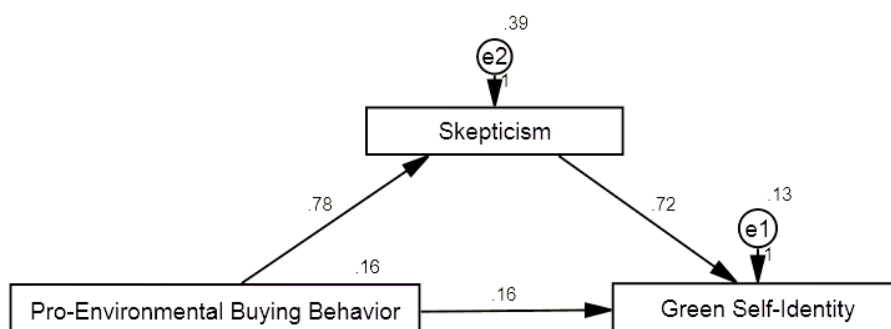


Figure 1: Mediating Effect – Path Diagram

From the above path diagram, it can be noticed that there is a significant relationship between Pro-Environmental Buying Behavior and Skepticism; Skepticism and Green Self-Identity. Hence, it can be inferred that Skepticism substantially mediates Pro-Environmental Buying Behavior towards Green Self-Identity.

Structural Equation Modeling

Principal conjectures are assumed before performing SEM for the proposed “Pro-Environmental Model” in AMOS. The Chi-Square value of the proposed model is ascertained to be significant ($p = .000$). The model fit indices are tested: CMIN/DF value of the model is 3.471 evidencing a good fit and ECVI value is 0.955 manifesting an estimable fit, The Comparative fit indices are 0.941, 0.937, 0.914, and 0.901 showing impulsive fit, absolute fit, sheer fit, and borderline fit respectively (Wang and Wang, 2013). Therefore the proposed “Pro-Environmental Model” is accepted.

V. CONCLUSION & LIMITATIONS

Empathize on the antecedents of pro-environmental consumer behavior can improve the commercializing of green products. This paper is primarily on the behavioral and emotional beliefs on the pro-environmental buying behavior. This paper adds to the developing body of research on pro-environmental buying behavior. Furthermore, the suggested conceptual framework, “Pro-environmental Model” is statistically tested using SEM. As this paper centralizes on the caretakers or parents who had a new born in Coimbatore, it may be a fact that an eminent research over other cosmopolitan civic center in India would have exhibited much generalizable results.

REFERENCES

- [1]. Alexander, J. M. (2002). Behaviorism and altruistic acts. *Behavioral and Brain Sciences*, 25(02). doi:10.1017/s0140525x02230058
- [2]. Arvanitoyannis, I., & Kasaveti, A. (2008). Consumer attitude to food packaging and the market for environmentally compatible products. *Environmentally Compatible Food Packaging*. doi:10.1201/9781439832783.ch7
- [3]. Brownsword, R. (2008). *Rights, regulation, and the technological revolution*. Oxford: Oxford University Press.
- [4]. Chambers, D. (2010). The Sutter Health Prototype Hospital Initiative. *Improving Healthcare through Built Environment Infrastructure*, 102-108. doi:10.1002/9781444319675.ch7
- [5]. Chang, H. J., Yan, R., & Eckman, M. (2014). Moderating effects of situational characteristics on impulse buying. *International Journal of Retail & Distribution Management*, 42(4), 298-314. doi:10.1108/ijrdm-04-2013-0074
- [6]. Chatvijit, S. (2012). *Exploring the Effects of Scarcity, Impulse Buying, and Product Returning Behavior in the Fast Fashion Environment Among Female Fashion Conscious Consumers* (1518212) (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (1518212)
- [7]. Cronbach, L. J., & Shapiro, K. (1982). *Designing evaluations of educational and social programs*. San Francisco: Jossey-Bass.
- [8]. Diener, B. J., & Frank, W. P. (2010). The China-India Challenge: A Comparison Of Causes And Effects Of Global Warming. *International Business & Economics Research Journal (IBER)*, 9(3). doi:10.19030/iber.v9i3.533
- [9]. Dunlap, R. E., & Jones, R. E. (2002). Environmental Attitudes and Values. *Encyclopedia of Psychological Assessment*. doi:10.4135/9780857025753.n78
- [10]. Dunlap, R. E., & Van, L. K. (1978). *Environmental concern: A bibliography of empirical studies and brief appraisal of the literature*. Monticello, IL: Vance Bibliographies.

- [11]. Follows, S. B., & Jobber, D. (2000). Environmentally responsible purchase behaviour: a test of a consumer model. *European Journal of Marketing*, 34(5/6), 723-746. doi:10.1108/03090560010322009
- [12]. Forquer, H. A., Christensen, J. L., & Tan, A. S. (1985). Utilitarian Beliefs, Hedonic Beliefs, and Behavioral Intentions Measure. *PsycTESTS Dataset*. doi:10.1037/t46210-000
- [13]. Halkier, B. (2001). Consuming Ambivalences: Consumer handling of environmentally related risks in food. *Journal of Consumer Culture*, 1(2), 205-224. doi:10.1177/146954050100100201
- [14]. Hopkins, R. A., & Powers, T. L. (2009). Development and test of new dimensions of altruistic buying behavior. *Journal of Consumer Marketing*, 26(3), 185-199. doi:10.1108/07363760910954127
- [15]. Hustvedt, G. (2006). *Consumer preferences for blended organic cotton apparel* (3215070) (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (3215070)
- [16]. Hustvedt, G., & Dickson, M. A. (2009). Consumer likelihood of purchasing organic cotton apparel. *Journal of Fashion Marketing and Management: An International Journal*, 13(1), 49-65. doi:10.1108/13612020910939879
- [17]. Irwin, J. R. (1994). Buying/Selling Price Preference Reversals: Preference for Environmental Changes in Buying versus Selling Modes. *Organizational Behavior and Human Decision Processes*, 60(3), 431-457. doi:10.1006/obhd.1994.1093
- [18]. Joshi, M., Purwar, R., Ali, S. W., & Rajendran, S. (2010). Antimicrobial Textiles for Health and Hygiene Applications Based on Eco-Friendly Natural Products. *Medical and Healthcare Textiles*, 84-92. doi:10.1533/9780857090348.84
- [19]. Khare, A. (2015). Antecedents to green buying behaviour: a study on consumers in an emerging economy. *Marketing Intelligence & Planning*, 33(3), 309-329. doi:10.1108/mip-05-2014-0083
- [20]. Kim, K., & Moon, S. G. (2012). Determinants of the Pro-environmental Behavior of Korean Immigrants in the U.S. *International Review of Public Administration*, 17(3), 99-123.
- [21]. Krejcie, R. V., & Morgan, D. W. (1970). *Determining sample size for research activities*. Emmitsburg, MD: National Emergency Training Center.
- [22]. Lavrakas, P. J. (2008). *Encyclopedia of survey research methods*. Thousand Oaks, CA: SAGE Publications.
- [23]. Lee, Y., Choi, J., Kim, M., Ahn, Y., & Katz-Gerro, T. (2012). Explaining pro-environmental behaviors with environmentally relevant variables: A survey in Korea. *African Journal of Business Management*, 6(29), 8677-8690. doi:10.5897/AJBM11.2360
- [24]. Mehrabian, A., & Russell, J. A. (1974). The Basic Emotional impact of Environments. *Perceptual and Motor Skills*, 38(1), 283-301. doi:10.2466/pms.1974.38.1.283
- [25]. Moosmayer, D. C., & Fuljahn, A. (2010). Consumer perceptions of cause related marketing campaigns. *Journal of Consumer Marketing*, 27(6), 543-549. doi:10.1108/07363761011078280
- [26]. Moser, A. K. (2015). Thinking green, buying green? Drivers of pro-environmental purchasing behavior. *Journal of Consumer Marketing*, 32(3), 167-175. doi:10.1108/jcm-10-2014-1179
- [27]. None, I., & Datta, S. K. (2011). Pro-environmental Concern Influencing Green Buying: A Study on Indian Consumers. *International Journal of Business and Management*, 6(6). doi:10.5539/ijbm.v6n6p124
- [28]. None, I., & Datta, S. K. (2011). Pro-environmental Concern Influencing Green Buying: A Study on Indian Consumers. *International Journal of Business and Management*, 6(6). doi:10.5539/ijbm.v6n6p124
- [29]. Reijonen, S. (2011). Environmentally friendly consumer: from determinism to emergence. *International Journal of Consumer Studies*, 35(4), 403-409. doi:10.1111/j.1470-6431.2010.00956.x
- [30]. Seymour, B. (2009). Altruistic Learning. *Frontiers in Behavioral Neuroscience*, 3. doi:10.3389/neuro.08.023.2009
- [31]. Shiau, W., & Chau, P. Y. (2015). Does altruism matter on online group buying? Perspectives from egotistic and altruistic motivation. *Information Technology & People*, 28(3), 677-698. doi:10.1108/itp-08-2014-0174
- [32]. Tilikidou, I., & Delistavrou, A. (2014). Pro-Environmental Purchasing Behaviour during the economic crisis. *Marketing Intelligence & Planning*, 32(2), 160-173. doi:10.1108/mip-10-2012-0103
- [33]. Vermeulen, P. A., & Ellersiek, A. (2008). The Adoption of Environmentally Friendly Products in Mature Organizational Fields. *Sustainable Innovation and Entrepreneurship*. doi:10.4337/9781848441552.00019
- [34]. Wang, J., & Wang, X. (2013). *Structural equation modeling: Applications using mplus*. Hoboken, NJ: Wiley.
- [35]. Wyatt, L. T. (2009). *The industrial revolution*. Westport, CT: Greenwood Press.
- [36]. Xinhui, C., & Han, D. (2016). A meta-analysis of consumer irrational purchase behavior based on Howard-Sheth mode. *Journal of Business and Retail Management Research*, 10(3), 69-80.
- [37]. Zentall, T. R. (2002). A potentially testable mechanism to account for altruistic behavior. *Behavioral and Brain Sciences*, 25(02). doi:10.1017/s0140525x02560052