Volume 13 Issue 41
Originally issued as E11

Global Journal of Management and Business Research
Administration and Management
Volume 13 Issue 11 Version 1.0 Year 2013
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

A Study on Consumer Behavior towards Eco-Friendly Paper

By P. Kishore Kumar & Dr. Byram Anand
Pondicherry University, India

Abstract- The purpose of this study is to understand the variables affecting the consumer behavior while purchasing green products. Eco-friendly paper i.e. paper which is manufactured from used paper and reduces the harm to environment compared to manufacturing of traditional paper (virgin paper). The dependent factor is purchase intention and the independent factors are environmental behavior, attitude, knowledge and norms. The structured questionnaire was used collect primary data and analyzed using software package. From this research it is found that attitude and personal norms are positively influencing consumer purchase intention towards eco-friendly paper. This study helps the marketers to design strategies for sustaining in the competitive paper industry. The paper industry will have its demand in spite of latest technologies. The paper is used for different purposes like printing, writing, documentation and packaging etc. Hence the understanding consumer behavior is very important for marketers in the paper industry.

Keywords: green marketing, environment-friendly products, eco-friendly products, eco-paper, sustainability, consumer behavior, purchase intention.

GJMBR-E Classification : JEL Code: L67, M30



Strictly as per the compliance and regulations of:

© 2013. P. Kishore Kumar & Dr. Byram Anand. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction inany medium, provided the original work is properly cited.

A Study on Consumer Behavior towards Eco - Friendly Paper

P. Kishore Kumar [α] & Dr. Byram Anand [σ]

Abstract- The purpose of this study is to understand the variables affecting the consumer behavior while purchasing green products. Eco-friendly paper i.e. paper which is manufactured from used paper and reduces the harm to environment compared to manufacturing of traditional paper (virgin paper). The dependent factor is purchase intention and the independent factors are environmental behavior, attitude, knowledge and norms. The structured questionnaire was used collect primary data and analyzed using software package. From this research it is found that attitude and personal norms are positively influencing consumer purchase intention towards eco-friendly paper. This study helps the marketers to design strategies for sustaining in the competitive paper industry. The paper industry will have its demand in spite of latest technologies. The paper is used for different purposes like printing, writing, documentation and packaging etc. Hence the understanding consumer behavior is very important for marketers in the paper industry.

Keywords: green marketing, environment-friendly products, eco-friendly products, eco-paper, sustainability, consumer behavior, purchase intention.

I. Introduction

Environment concern had become the most important issue for mankind in the present world. The businesses are no exception for this issue and they are responding through environment-friendly products. Throughout this paper the terms eco-friendly products, environment-friendly products, green products mean the same and are used interchangeably. The depletion of oil resources, raw materials and pollution are making organizations to rethink about their products and services. The eco-friendly products are being introduced by modern organizations to protect the environment. Eco-friendly paper is one of the solutions to save the environment and reduce the pollution in the present world. The present study is to understand the consumer behavior and adoption intention of consumers towards the eco-friendly paper. Many products like jute bags, CFL bulbs, hybrid cars, natural soaps, eco-friendly paper, paper cups, energy saving electronic products, organic food etc are available in the market which are environment-friendly products and marketing of such products is known as "Green Marketing". The products which do not cause any kind of harm to the environment are called as green products. Eco-friendly paper is one of the green products which reduce pollution caused by consumption of paper. Paper is used for different purposes like writing, printing, packaging and newsprint etc (IPMA). Hence it is essential to think of eco-friendly paper which causes less harm to the environment. This study is aimed to understand c onsumer behavior with regard to eco-friendly paper. Eco-friendly products are not new to manufacturers and organizations like ITC, JK Paper Limited, Yash Papers Ltd have already started marketing eco-friendly paper.

II. About Eco-Friendly Paper

The paper industry is one of the oldest industries in the world and paper is an essential product for mankind. The paper is manufactured from wood pulp from pulpwood trees. The paper manufactured from wood pulp for the first time is known as "virgin paper" or "paper" (Paper). If paper is manufactured by recycling the used paper which is collected through reverse logistics and consumes less resources while production is known as eco-friendly paper. The consumption of eco-friendly paper also eliminates deforestation because pulpwood trees are not used in the production process. Less quantity of chemicals are used in production of eco-paper compared to virgin paper which is made from pulp of trees.

Some decades back when the organizations have started manufacturing eco-friendly paper the quality is low and the color of paper used to turn yellow as the paper grows old but with the latest technologies in paper industry it is hard to find any difference between virgin paper and eco-friendly paper. The organization marketing eco-friendly paper gets it certified by Forest Stewardship council (FSC). The FSC is international non-governmental organization which certifies eco-friendly paper products and also the organizations which manufacture eco-friendly paper (FSC). Every 1 ton of recyclable paper saves 17 tress, 225 kilowatts of power, 275 pounds of sulphur and 60,000 gallons of water (Khanna). The manufacturing of eco-friendly paper had become competitive advantage for organizatoins. The brands of eco-friendly paper from top organizations in the paper industry are JK Copier, Image Copier,

Author α: Part-Time research scholar in Department of Management, Pondicherry University, Karaikal Campus.
e-mail: kishore9922@gmail.com
Author σ: Assistant Professor, Department of Management Pondicherry University Karaikal Campus KARAIKAL – 609605 Pondicherry State. e-mail: byramanand_1999@yahoo.co.in

© 2013 Global Journals Inc. (US)

Double A, Bilt Copy Power, Bilt Royal Executive Paper, Andhra Millennium Copier, JK Copier Plus etc.

III. Objective of the Research

The current study is designed to understand the factors influencing purchase intention behavior of consumers while purchasing green products with special reference to eco-friendly paper. This study investigates whether consumers with environmental knowledge are having awareness on eco-friendly paper. The study also finds the influence of demographic and psychographic variables on green purchase intention of consumers. The study will also provide insights for organizations in the paper industry so that they can formulate marketing strategies to enhance the sales of eco-friendly paper.

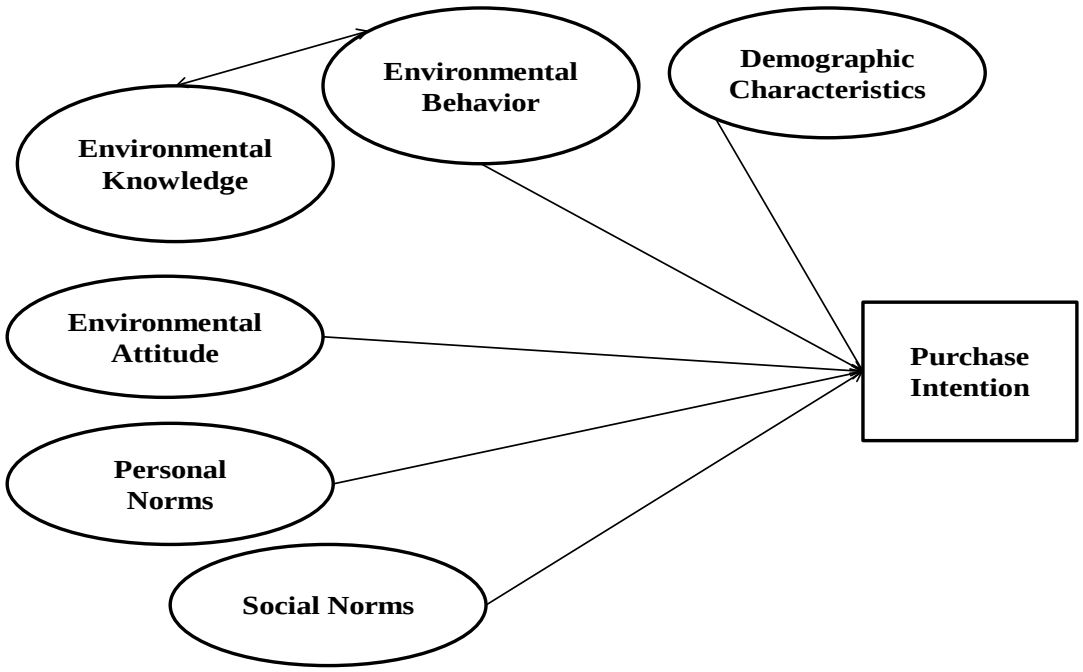
IV. Literature Review

The lack of awareness about green products, negative perceptions of green products, can be resolved by educating customers and building better products respectively (Bonini & Oppenheim, 2008). The responsibility of educating consumers is not sole responsibility of businesses but the government should play a prominent role in encouraging the consumers to adopt for eco-friendly products. Wang & Tung (2012) had conducted a study to know how life style of consumers influence their behavior towards environment-friendly products and confirmed that plan oriented consumers are having positive attitude towards green products. Chen &Chang (2012) have developed a model for understanding green purchase intentions among consumers by using four factors – green perceived value, green perceived risk, green trust and green purchase intention and stated that consumers who perceive green products are better for environment will have positive purchase intention towards green products. Murphy et.al (2010) found that consumers positive attitude towards green products is not influenced by recession. The factors for understanding consumer behavior in this research study are demographic, responsibility, information and purchasing. Paco & Raposo (2009) had conducted a survey to identify the characteristics of green consumers. The factors considered are environmentally friendly products, environmental activism, environmental knowledge, environmental concern, recycling, perception, resource saving, economic factor and skepticism towards environmental standards. Cheah & Phau (2011) had investigated the about the influence of ecoliteracy, interpersonal influence and value orientation on consumers attitude towards environmentally friendly products and stated that these factors have strong correlation with attitudes of consumers. Manaktola & Jauhari (2007) had conducted a survey to know about the consumers' attitude towards green practices of hotels and found that consumers are impressed with green practices of hotels but they are not willing to pay more for the same. The green marketing tools like eco-label, eco-brand and environmental advertisements also influence the purchase behavior of consumers and stated that trust in eco-brand and eco-label positively influence the behavior of consumers towards eco-friendly products (Rahbar & Wahid, 2011). According to Chen (2010) green brand image, green satisfaction, and green trust are important factors for building green brand equity.

The ecologically conscious consumer behavior can be briefly explained by psychographic variables like perceived consumer effectiveness rather than demographic variables. The green purchase intention may not lead to green purchase behavior (Akehurst, Afonso, & Goncalves, 2012). Raksha & Shaw (2012) had examined whether brand commitment of consumers influences the attitude of consumers towards environmental-friendly initiatives of organizations and stated that companies should do more activities to catch the attention of consumers. The consumers are more willing to pay more for green products after perceiving functional risk as important determinant (Essoussi & Linton, 2010). The advantages for adopting green products are energy reduction, material reduction, less packaging material, low emissions, and recyclable (Stevels, 2001). D'Souza et.al. (2006) had made an empirical investigation to under the green purchase intention of consumers and found that marketing mix elements like green products, product labels, packaging and product ingredients does not influence the consumer behavior but past experience with green products positively influences the green purchase intention. Jansson et.al. (2010) had conducted research on green consumer behavior and found that willingness to curtail and eco-innovation adoption are determined by values, norms, and beliefs of consumers. The personal norms of consumers have more positive influence on green consumer behavior. According to Straughan & Roberts (1999) the demographical and psychological variables can be used to understand the environment conscious consumer behavior and further stated that psychographic variables are much comfortable for explain the green consumer behavior than demographic variables. The factors which affect the green consumer behavior are altruism, environmental concern and perceived consumer effectiveness.

© 2013 Global Journals Inc. (US)

Figure I: Research Model for Consumer Behavior towards Eco-friendly Paper



V. Hypotheses

H1: There is no relationship between environmental behavior (EB) and environmental knowledge (EK) of consumers.
H2: The personal norms of consumers influence the purchase intention of eco-friendly paper
H3: The social norms of consumers influence the purchase intention of eco-friendly paper
H4: The environment-friendly attitude of consumers influences the purchase intention of eco-friendly paper.
H5: The demographic characteristics cannot be used to explain purchase intention of consumers about green products.

VI. Research Methodology

The structured questionnaire was designed to collect data. The questionnaire consists of two parts. The first part collects the demographic profile of respondents (age, gender, occupation). The second part of the questionnaire consists of six constructs with a total of 17 items. All the constructs were adopted and modified from earlier studies with regard to green consumer behavior. The content validity of the constructs is checked by personal discussions with the experts. A likert type 5-point scale with values ranging 1 for strongly disagree to 5 for strongly agree was used to measure the behavior of respondents regarding eco-friendly paper. Environmental Behavior (EB) construct consists was adopted from (Pickett-Baker & Ozaki, 2008) and one item is deleted out of four items in the construct upon the experts' suggestion. Environmental Knowledge (EK) construct was adopted from (Ha & Janda, 2012), Environmental Attitude (EA), Purchase Intention (PI) was adopted from (Soyez, 2012). The Social Norms (SN) and Personal Norms (PN) constructs were adopted from (Park & Ha, 2011). The PI is dependent variable and EC, EK, SN, PN, EA are independent variables.

The sample size is 140 and the random sampling method is implemented for collecting responses. All the respondents belong to Hyderabad, Andhra Pradesh, India. The participation by the respondents is voluntary and they are allowed to exit from the survey at any point of time. The personal data like name, contact number, email are not collected to avoid issues related to privacy of the respondents.

The SPSS Version 20 is used for analyzing the data. The statistical tools like multiple regression, correlation, and descriptive statistics were applied to test the hypothesis. The dependent variable is purchase intention (PI) and all other variables are independent variables.

VII. Data Analysis

a) Demographic Profile

Majority of the respondents belong to age group (25-34 years) i.e. 42%, followed by 25% (18-24 years), 24 % (35-50 years) and the remaining 8 % of the respondents are above 50 years. Out of 140 respondents 78 (56 %) are male and 62 (44%) are female. The respondents belong to different categories

© 2013 Global Journals Inc. (US)

of occupation (student – 24%, private employee - 58%, Govt. employee – 8%, self-employed – 2%, others – 8%).

b) Reliability

The Cronbach's alpha value for six constructs i.e. for EB, EK, EA, SN, PN, and PI are 0.69, 0.75, 0.79, 0.95, 0.76, and 0.65 respectively. All the values of Cronbach's alpha which are above 0.60 are reliable for further analysis of data (Hair, Black, Babin, Anderson, & Tatham, 2011) .

c) Hypotheses Testing and Results

H1: There is no relationship between environmental behavior (EB) and environmental knowledge (EK) of consumers.

Table 1 : Correlation between Environmental behavior and environmental knowledge

		EB	EK
EB	Pearson Correlation	1	.449**
	Sig. (2-tailed)		.000
	N	140	140
EK	Pearson Correlation	.449**	1
	Sig. (2-tailed)	.000	
	N	140	140

***. Correlation is significant at the 0.01 level (2-tailed).*

Result: There is a significant relationship between environmental behavior and environmental knowledge of consumers therefore the null hypothesis H1 is rejected.

Table 2 : Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.108	.321		.336	.738
	EA	.545	.089	.415	6.122	.000
	SN	.045	.058	.057	.778	.438
	PN	.383	.075	.402	5.078	.000

a. Dependent Variable: PI

H2: The personal norms of consumers influence the purchase intention of eco-friendly paper

Result: There is a significant relationship between personal norms and purchase intention of consumers towards eco-friendly paper (beta value = 0.402, p value = 0.000 which is less than 0.05). The multiple regression analysis results are shown in Table 2. Hence the H2 is accepted.

H3: The social norms of consumers influence the purchase intention of eco-friendly paper

Result: There is no significant relationship between social norms and purchase intention of consumers (the beta value for social norms (SN) is 0.057 and p value = 0.438 which is above accepted level i.e. 0.05) see Table 2. Hence H3 is rejected.

H4: The environment-friendly attitude of consumers influences the purchase intention of eco-friendly paper.

Result: There is significant relationship between environment-friendly attitude of consumers and their purchase intention regarding eco-friendly paper (beta value for EA is 0.415 and p value = 0.000 which is less than 0.05) see Table 2. Hence H4 is accepted.

Table 3 : Regression Analysis receptively

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.890	.321		12.120	.000
	Gender	.243	.151	.136	1.610	.110
	Age	-.087	.089	-.087	-.976	.331
	Occupation	-.077	.075	-.090	-1.019	.310

a. Dependent Variable: PI

© 2013 Global Journals Inc. (US)

H5: The demographic characteristics cannot be used to explain purchase intention of consumers about green products.

Result: The p values of gender, age and occupation are 0.110, 0.331, 0.310 which are above acceptable value i.e. 0.05. The beta values of age and occupation are negative see Table 3. Hence H5 is accepted. Therefore demographic variables do not help in understanding the purchase intention of consumers with reference to green products.

VIII. Conclusions

The purchase intention of consumers is influenced by psychographic variables. The consumers who have positive ecological behavior also possess knowledge about various green products like eco-friendly paper. The consumers are influenced by personal norms than social norms while adopting environment-friendly products like eco-paper. The consumers with positive attitude about eco-friendly paper are strong purchase intention towards the product. The consumers purchase intention towards green products cannot be identified by demographic variables. This result is consistent with earlier studies (Straughan & Roberts, 1999). The consumers are independent in decision making and not influenced by others while adopting green products.

IX. Managerial Implications

The marketers in the paper industry should formulate strategies for enhancing environmental knowledge of consumers especially eco-friendly paper. The businesses manufacturing eco-friendly paper should identify the target market by psychographic segmentation. There will be potential demand for eco-friendly paper in future because consumers are having positive attitude towards green products. The positive environmental attitude is influence in the purchase intention of consumers. Since computerization, digitalization is reducing demand for paper, the organizations in the paper industry are going to experience severe competition. The manufacturing of eco-friendly paper can be become a differentiation strategy for today's organizations in the paper industry. Hence effective psychographic segmentation of consumers can help the organization to sustain in the highly competitive paper industry.

X. Future Research

The consumer purchase intention will also be influenced by other factors like price, branding etc. Hence such factors can be included to know the impact of pricing strategies, branding strategies on purchase behavior of consumers. The future studies can also be conducted to understand how other factors like values, beliefs, past experiences of consumers with regard to green products influence the consumer behavior.

References Références Referencias

1. Akehurst, G., Afonso, C., & Goncalves, H. M. (2012). Re-examining green purchase behavior and the green consumer profile: new evidences. *Management Decision , 50* (5), 972-988.
2. Bonini, S., & Oppenheim, J. (2008). Cultivating the Green Consumer. *Stanford Social Innovation Review* , 56-61.
3. Cheah, I., & Phau, I. (2011). Attitudes towards environmentally friendly products: The influence of ecoliteracy, interpersonal influence and value orientation. *Marketing Intelligence& Planning , 29* (5), 452-472.
4. Chen, Y.-S. (2010). The Drivers of Gren Brand Equity: Green Brand Image, Green Satisfaction and Green Trust. *Journal of Business Ethics* , 307-319.
5. D'Souza, C., Taghian, M., Lamb, P., & Peretiatkos, R. (2006). Green Products and Corporate Strategy: an emperical investigation. *Society and Business Review , 1* (2), 144-157.
6. Essoussi, L. H., & Linton, J. D. (2010). New or recycled products: how much are consumers willing to pay. *Journal of Consumer Marketing , 27* (5), 458-468.
7. FSC. (n.d.). *About Us*. Retrieved November 23, 2013, from Forest Stewardship Council: https://ic.fsc.org/about-us.1.htm
8. Ha, H.-Y., & Janda, S. (2012). Predicting Consumer Intentions To Purchase Energy-Efficient Products. *Journal of Consumer Marketing , 29* (7), 461-469.
9. Hair, Anderson, Tatham, & Black. (1996). *Multivariate Data Analysis* (4 ed.). NJ: Prentice Hall.
10. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2011). *Multivariate Data Analysis* (6 ed.). Delhi: Pearson Education Inc.
11. IPMA. (n.d.). *About Paper*. Retrieved November 23, 2013, from Indian Paper Manufacturers Association: http://www.ipma.co.in/about_ipma.asp
12. Jasson, J., Marell, A., & Nordlund, A. (2010). Green consumer behavior: determinants of curtailment and eco-innovation adoption. *Journal of Consumer Marketing , 27* (4), 358-370.
13. Khanna. (n.d.). *About US*. Retrieved November 23, 2013, from Khanna Paper Mills Ltd: http://www.khannapaper.com/
14. Manaktola, K., & Jauhari, V. (2007). Exploring consumer attitude and beahvior towards green practices in the lodging industry in India. *International Journal of Contemporary Hospitality Management , 19* (5), 364-377.
15. Murphy, R., Graber, M., & Stewart, A. (2010). Green Marketing: A Study of Green Marketing on Consumer Behavior in a Period of Recession. *The Business Review , 16* (1), 134-140.
16. NAPM. (n.d.). *Recycled Paper*. Retrieved November 23, 2013, from The National Association of Paper Merchants: http://www.napm.org.uk/recycled_paper.htm

© 2013 Global Journals Inc. (US)

17. Paco, A. d., & Raposo, M. (2009). Green Segmentation: an application to the Potuguese consumer market. *Marketing Intelligence & Planning , 27* (3), 364-379.
18. Paper, J. (n.d.). *Frequently Asked Questions*. Retrieved November 23, 2013, from JK Paper Ltd: http://www.jkpaper.com/index.php?option=com_content&view=article&id=30&Itemid=31
19. Park, J., & Ha, S. (2011). Understanding pro-environmental behavior: A comparision of sustainable consumers and apathetic consumers. *International Journal of Retail & Distribution Management , 40* (5), 388-403.
20. Pickett-Baker, J., & Ozaki, R. (2008). Pro-environmental products: marketing influence on purchase decision. *Journal of Consumer Marketing , 25* (5), 281-293.
21. Rahbar, E., & Wahid, A. (2011). Investigation of green marketing tools' effect on consumers' purchase behavior. *Business Strategy Series , 12* (2), 73-83.
22. Raska, D., & Shaw, D. (2012). When is going green good for company image? *Management Research Review , 35* (3/4), 326-347.
23. Soyez, K. (2012). How national cultural values affect pro-environmental consumer behavior. *International Marketing Review* , 623-646.
24. Stevels, A. (2001). Five ways to be green and profitable. *The Journal of Sustainable Product Design* , 81-89.
25. Straughan, R. D., & Roberts, J. A. (1999). Environmental Segmentation Alternatives: a look at green consumer in the new millennium. *Journal of Consumer Marketing , 16* (6), 558-575.
26. Wang, W.-L., & Tung, L. (2012). A Study on Consumer Behavior for Green Prodcuts from a Lifestyle Perspective. *The Journal of American Academy of Business , 18* (1), 164-170.

© 2013 Global Journals Inc. (US)