

## SUSTAINABILITY AND SCALABILITY OF GREEN PRODUCT PURCHASE INTENTION

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### ABSTRACT

**Objective of the study:** The purpose of the study was to examine components that influence the purchasing intention and moderating variable of consumers in purchasing green personal care products.

**Proposed Methodology:** For which a questionnaire survey was deployed to collect valid samples from a total of 226 respondents who were white collars employees having knowledge about the availability of green personal care products working in Nainital, Uttarakhand. Study was done by using multiple regression analysis on testing of the independent variables (drivers) with dependent variables (purchase intention [PI]) and hierarchical regression analysis for knowing the moderating association between drivers and purchase intention.

**Key Results:** Analysis showed that independent variables (green marketing messages [GMM] and purchase behaviour [PB]) were the prominent drivers affecting purchase intention. And independent variable (self efficacy [SE]) had moderating effect on green marketing messages and purchase intention.

**Implication of the Study:** Findings would help marketers evolve marketing plans to have a longer life cycle of their products.

**KEYWORDS:** Green Products, Purchasing Intension, Self Efficacy, Green Marketing Messages

### INTRODUCTION

From Barter to Marketing era, there has been a major transformation. It is a transformation from where the consumer was a seeker to an era where consumer is all-in-all. During this transition period many revolutions took place. The production era dictated the terms to consumers while in marketing era the consumers dictate terms to the manufacturers.

Every little wish, need, requirement of consumer was being taken care by the organisations. But as it is said "there is no free lunch in this world", the same goes true with the marketing era. The rapid consumer demand and growth required equal efforts by the organisations to meet the demand. This has led to great stress on available resources on the planet. Need for green marketing was felt when consumer forum and judicial system started raising their concerns for adverse effect on environment, rapid depletion of resources resulting in damaging human health, global warming, flash floods, depletion of ozone layer, carbon footprints, disposal of plastic waste, disposal of nuclear waste etc required movements like Green Peace etc, forced governments to place stringent rules and regulations to check this plunder of the natural resources.

While globalization process continues in its full speed across the world, this process has also brought some problems with it. Leading one of these problems is environmental problems that affect all living beings negatively. These

mentioned environmental problems have started to come to the agenda more and more in the recent years and people have started to talk these negativities. Personal care product category is an area of concern to the environment as the contents have been detected in the whole world water bodies (Environmental Protection Agency, 23 November 2011). Hence the need was then felt to analysis the importance of

On one hand we see US backing out of the Paris summit poses a major setback but countries have to be resilient, the current US government is inclined to indigenous industrialization, which means being ignorant to mother nature for some time, as the slogan of make in America and bring back all jobs to US would mean heavy industrialisation from the world's most biggest consumer base and one of the heavyweights of industrial production houses and on the other China developing its solar farm to produce green energy reducing its dependence on coal and also the operator of the plant, Panda Green Energy Group, partnered with the United Nations Development Programme (UNDP) to promote public consciousness about environment-friendly technologies and sustainable development.

All this will not come with its dark side of degrading the environment. Role of India however has been lauded by other countries as it wants to preserve the environment for future generations; International Solar Alliance (ISA) is one such example. Every nation and individual is being sensitised towards their duties and responsibilities towards environment to prevent future catastrophe. This sensitisation has led to the advent of green production, wherein companies have geared up as the next USP shall be on luring consumers on the basis of being the leader in greenification<sup>1</sup>. The dirty game of green washing should be a thing of past as the consumers are sensitised towards the environment and companies seeing this sea change are now in the process of quickly ring fencing it.

## LITERATURE REVIEW

**Christopher et al (2008)** revealed that consumers who are environmentally conscious are more likely to purchase green products. Traditional product attributes such as price, quality, and brand are still the most important attributes that consumers consider when making green purchasing decision. The results also showed that consumers who are married are more likely to health status of their family including their future generations.

**Chan Yew Ling (2013)** has suggested that the marketers need to prioritize their resources in areas that will stimulate consumers purchasing behaviour, in this case to promote the importance of protecting the environment for sustainable future and bring in more products and improving store visibility. The other important factor not to forget is the sensitivity of the green consumer (with their environmental attitudes) to the price of the product. Promotion and discount on the products is an important factor that will help to induce the purchase intention among the price sensitive consumers.

**Lindsay Richards (2013)** has suggested that, there are evidence linking environmental enthusiasm with consumer scepticism of both general and green advertising. The study indicates that environmental enthusiasts are often more sceptical of both forms of advertising, with non-enthusiasts remaining more neutral. The study provides a better understanding of both the motivators and deterrents impacting consumers' willingness to purchase green products, which were independent of one's self-labelled environmental enthusiasm. Consumers value green products and brands that are trustworthy, affordable, healthy and environmentally beneficial.

**Victoria Masi Haruna Karatu et al. (2015)** conducted an empirical study on predictors of green purchase Intention. In their research work they found that Green availability has a positive relationship with green purchase intention. It also

proved that environmental consciousness fully mediated the relationship between green price sensitivity and green purchase intention. Thus, green availability will strongly enhance green purchase intention. However, government can boost green knowledge through educative campaign programs and enforcing green agenda. Consequently, enhanced knowledge on green products will correct the biased impression on green. Principally, consumers will always desire maximum satisfaction from consuming the products they are willing to pay for in their bid to protect the environment and their well-being.

**Aindrila Biswas (2016)** conducted a research study by using ordinary least square regression and analysis of variance. The author prognosticated the importance of price and quality concern to increase market of green products. Offered value of green products coupled with green product innovation in terms of better performance, quality consideration and economical pricing strategy will increase consumer's WTP. It was also observed that WTP had a direct impact on consumer's environmental apprehension, hence environmental awareness programmes were important to make the consumers aware what all sustainable development measures the companies were taking.

**Changhyun Nam et al. (2017)** in their study on green sportswear has pointed out that awareness about green products will be significantly augmented by interacting with many consumer experience campaigns. The author has also given importance to Sale's managers to educate consumers regarding direct and indirect benefits about environmental preservation, energy conservation and human well – being through social media. Use of celebrity effects to conduct green – related campaigns has also been recommended to form consumers' favourable attitude towards green product consumption.

## ANALYSIS AND FINDINGS

In order for the data to be appropriate a factor analysis was conducted for four constructs GMM, PB, SE and PI. In table 1, 2, 3 and 4 respectively it can be seen that Kaiser-Meyer-Olkin value and Bartlett's Test of Sphericity are meeting the threshold criteria of 0.6 and  $>0.05$ , which indicate that the sample size was well accepted and there are sufficient correlation being detected in the variables (Pallant, 2005,p.182).

**Table 1**

No	Variables	KMO Value	Cronbach's Alpha
1	Green Marketing Messages	0.747	0.729
2	Purchase Behaviour	0.66	0.894
3	Self Efficacy	0.726	0.926
4	Purchase Intension	0.65	0.791

To determine the consistency of the data, Cronbach's Alpha reliability coefficient is used the thumb rule is

Cronbach's Alpha  $> 0.60$  is considered poor,

Cronbach's Alpha  $0.60$  to  $0.80$  is acceptable and

Cronbach's Alpha  $< 0.80$  is good. (Sekaran and Bougie, 2010, p.325).

Continuing with the rule of thumb the Cronbach's Alpha stated for all variables shown above in Table 1 is acceptable, good, good and acceptable respectively.

**Table 2: Hierarchical Regression Analysis on the Relationships between Independent Variables (the Drivers) and Dependent Variable (Purchase Intention) and the Influence by the Moderating Variable (Self Efficacy)**

Variable	Standardized Coefficients. Beta	Sig.	VIF
Green Marketing Message (X1)	0.538	0.000**	1.905
Purchase Behaviour (X2)	0.329	0.000**	1.433
Self Efficacy (X3)	-0.005	0.948	1.58
Interaction of X1 and X2	-0.22		1.291
Interaction of X1 and X3	-0.006		1.248
<b>Degree of Freedom</b>	5		
<b>R<sup>2</sup></b>	0.554		
<b>F</b>	19.891		
<b>Significant F Change</b>	0.002		
<b>Significant of Model, ANOVA</b>	0		

Note: significant at \*\*p<0.01; \* p<0.05

Dependent variable: Purchase Intention

It can be concluded that purchase behaviour and self efficacy were positive correlated to the green marketing messages. In short, the outcomes of the study provide valuable insight to all that interested parties to know the drivers that able to motivate the change of behaviour of the consumer in making their purchases. Integration of green marketing message with purchase behaviour however showed a negative correlation of -0.22. and the interaction of green marketing message with self efficacy also had a negative correlation of -0.006. It is suggested that the marketers need to prioritize their resources in areas that will stimulate their purchasing behaviour, in this case to promote the importance of protecting the environment for sustainable future and bring in more products. Promotion and discount on the products can be an important factor that will help to induce the purchase intention among the price sensitive consumers.

**Table 3**  
**Model Summary<sup>c</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.816 <sup>a</sup>	.666	.663	.53938	.666	222.065	2	223	.000
2	.821 <sup>b</sup>	.674	.668	.53533	.008	2.697	2	221	.070

a. Predictors: (Constant), PB, SE

b. Predictors: (Constant), PB, SE, GMM, con\_for\_env

c. Dependent Variable: PI

Analysing the R Square in table 10 value of block 1 the variables that we wish to control they account for about 66% of the variance in the outcome. Block 2 is the actual predictor variables the model as a whole explains about 67% of the variability in Purchase Intension so it is important to know that the second R Square value includes all the variables from both blocks not just in the second block so now we can incorporate all four variables so we are controlling variables

in the first block and now we are seeing what effects all variables have together in their control. So to know how much of the overall variance is explained by our predictor variable (the variables we are interested in) that is green marketing message [GMM] we need to see the R Square Change in block 2 which is .008 which is very marginal that gives us the indication that the Significance F change of .070 which should be less than .05 which in this case is not shown that there is no statistically difference in the variance explained.

Table 4

ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	129.212	2	64.606	222.065	.000 <sup>b</sup>
	Residual	64.878	223	.291		
	Total	194.091	225			
2	Regression	130.758	4	32.690	114.070	.000 <sup>c</sup>
	Residual	63.333	221	.287		
	Total	194.091	225			

a. Dependent Variable: PI

b. Predictors: (Constant), PB, SE

c. Predictors: (Constant), PB, SE, GMM, con\_for\_env

Looking at model no 2 of table 4 we need to see the sig value and this again tells us how the model as a whole is able to predict including all four variables we can see that this model is a statistically significant predictor of the outcome again  $>.000$  so this Anova model is a statistically significant predictor of purchase intention, so what we have done is that the control for two compounding variables and then we have added in our two predictor variables and now this model for controlling for compounding predictor variable is a statistically significant predictor of the outcome purchase intention in our case. The second step is to evaluate each of the independent variable so to find out how well each of the variable contribute in the final model we need to look in the coefficient table numbered 5 below

Table 5

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.724	.213		3.399	.001					
	SE	.250	.019	.932	13.391	.000	.812	.668	.518	.309	3.231
	PB	-.052	.025	-.144	-2.074	.039	.630	-.138	-.080	.309	3.231
2	(Constant)	.639	.215		2.975	.003					
	SE	.248	.019	.922	13.263	.000	.812	.666	.510	.306	3.272
	PB	-.077	.035	-.215	-2.176	.031	.630	-.145	-.084	.151	6.607
	GMM	.046	.020	.118	2.321	.021	.502	.154	.089	.573	1.745
	con_for_env	.001	.021	.002	.029	.977	.578	.002	.001	.229	4.361

a. Dependent Variable: PI

We would again focus on model 2 row; our two independent variable green marketing message and concern for environment have a Sig value of .021 and .977 indicating that green marketing message has a sig value of  $>.05$  but concern for environment

## CONCLUSIONS

It's high time that India's ambitious ISA project is not restricted to mere paper work and delivers something on ground zero. We must take a leaf out of solar farm built by China, which claims it would help in reducing carbon emissions by 2.74 million tons<sup>1</sup>.

Any new product (green) launched will bear a high price and it is entirely on the support of government, given to manufacturer for spreading the fixed cost to reduce prices and attain economy of scale speedily. As this stage is critical and any lapse would mean consumers opting, for a cheaper version (non green) that would mean impelling companies to manufacture those products (non green), which are in demand. A good amount of R&D needs to be undertaken by manufacturer with the aid of government, if they want to sustain the longevity of green product

It is seen that green marketing messages fully mediate between the consumers green purchase intension and green buying behaviour. The green marketing messages should not only be taken care of by the organizations but the government has a massive role to play in spreading awareness about the green product to protect the environment and also see the well being of future generations. A classical example from India's stand are: firstly, the Supreme court rebuking the Delhi government for excessive pollution due to vehicles and other factors and ordering them to introduce clean fuel like CNG having low sulphur content and introducing BS 4 from 1<sup>st</sup> April 2017 by banning vehicles with BS 3 norms, secondly with the release of fund from central government to Tamil Nadu Fisheries University (TNFU) which will initiate a training program for what is called Trawl fishing – a training introduced under Indo – Norwegian deep sea fishing agreement in late 60's – in order to modernize fishing sector between India and Srilanka, so that there is no adverse impact on the ecological environment as it was seen that there had been a drastic reduction in fish volume and both countries were accusing one another for destroying their marine wealth thirdly, on the Paris summit India made its stand very clear by quoting "Paris or no Paris" which clearly illustrates that India is apprehensive for the future generation and is determined to leave a climate for future generation wherein they can breathe clean air and have a healthy life, in spite of a big economy like US backing out.

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