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Enablers of 'Green' Society: Dissecting the Impact and Variation in Consumers' Green Adoption

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Abstract

Rapid depletion of the Earth's limited resources has created uncertainty for future generations to be able to use these resources. Deteriorating environment and costs associated with non-green activities has made it imperative that consumers adopt green products and services and make a transition towards sustainable consumption practices. It is in this context that the present work examines various antecedents or enablers for their impact on consumers' green adoption. Following the questionnaire method, data collected from 351 respondents was analyzed. Of the six antecedents so examined, the findings showed a significant positive impact of three enablers (product characteristics, market area characteristics, and social factors) but a significant negative impact of the remaining three enablers (public policy, climatic conditions, and environmental awareness) on consumers' green adoption. The study also reveal interesting insights with respect to variation in green adoption across consumers' age, income, and level of education. In conjunction with the results, the paper provides a detailed discussion of the differential impact of these enablers and outline suggestions that can be used by marketers and policy makers to devise focused strategies for different consumer groups to encourage them to embrace green offerings and be a part of a greener society.

Key Words: Drivers of Green Adoption, Environmental Awareness, Consumer Differences, Green and Sustainable Consumption.

1. Introduction

Certain global climatic events have changed the way we think about the nature. Whether it is rising sea level, extreme droughts and floods, heat and cold waves, all are directly or indirectly linked to unsustainable economic activities. The social and economic costs associated with such activities are huge and reiterate the need for a transition towards sustainability. Rapid economic growth and rising per capita personal disposable income have resulted in increase in demand for consumer goods and services and this uncontrolled rate of consumption is a major reason for accelerated depletion of natural resources. According to a report published by the International Energy Agency (IEA) in 2018, transport is responsible for 30 per cent of the global energy consumption and is the second largest source of greenhouse gas emissions. Similarly, the production and consumption of electronics and electrical equipment has grown manifolds in the last two decades, necessitating the need for the adoption of green behavior by consumers.

2. Theoretical Foundation and Literature Review

(i) The Shift towards 'Green'

Green products are significantly different from traditional products as they are high involvement, entail higher financial and psychological risks, and result in lesser carbon foot prints. Sommerfeld et al. (2017) have mentioned about global shift from traditional to sustainable sources of power generation. The case in point is the recent shift from central grid system of electricity supply model to small-scale renewable power off-grid system. Jager (2006) too had posited that mass-market uptake of cleaner energy such as residential solar rooftop system can erode the dominance of the traditional electricity supply model.

Of late, consumers have become more conscious about eco-friendly packaging options and progressively shaping their behavior. For example, switching from single-use plastic bottles to metal and bamboo made water bottles and consciously carrying reusable shopping bags to grocery stores (Cherian & Jacob, 2012). However, green buying behaviour is a result of consumers' environmental concern, knowledge and attitude (Antonies & Raaij, 1998). In this regard, Suki (2013) found that consumers demonstrate environmentally responsible behaviour based on product characteristics, features, perceived satisfaction, information gathered and green claims made through advertisements. Nath et al. (2013) too concluded that green advertisement and promotion help buyers to become more environmentally oriented. Similarly, eco-labels, certifications, logos and packaging influences consumer to buy eco-friendly products.

But, as highlighted by Ghosh (2010), there is a considerable gap between environmental concern and actual green buying behavior which is the reason for fewer green consumers in the market. In addition to aspects such as lack of financial incentives, pricing, supply chains mechanism and social structures that often act as barriers (Kowalska-Pyzalska, 2018). As posited by Caird et al. (2008), price, performance and perceived benefits of green product determines the time taken for its mass adoption. They suggested that a tailor incentive program can be introduced to encourage early adopters to shift to green products, which can be later extended to promote mass adoption. Taking it further, Agnew et al. (2018) stated that consumers' feedback influences diffusion speed of green products. The prerequisites for rapid mass adoption are attractive subsidies and financing arrangements which help reduce the high upfront capital costs.

At the same time, different individuals respond and adopt green initiatives differently. Green consumers with high environmental consciousness avoid consumption of environmentally unsafe goods and services and prefer to buy a green product even if it is expensive in comparison with traditional products (Balderjahn, 1988). This has resulted in 'green' as a dominant brand differentiator and a vital buying driver.

In fact, governments all around the world are trying to implement variety of schemes to tap maximum clean energy in order to reduce carbon emission by supplementing such schemes with financial incentives, technical assistance and public awareness programs. Policies such as low interest loans and investment subsidies aimed at increasing consumer acceptance of cleaner technologies provide a much-needed boost to green adoption. For instance, the government of Lebanon has introduced various programs to promote green technologies with the help of international funding agencies resulting increased adoption of Solar Water Heaters by households (Elmustapha et al., 2018). The study by McLeay et al. (2018) too has cited the shift towards adoption of eco-friendly transportation system in the form of electric vehicles which is supported by government policies such as incentives and subsidies. More specifically, the Malaysian government successfully achieved the target of operating five million EVs by the year 2020 (Adnan et al.,2017). But, such financial incentives, for example, low agricultural tariff rates in India have led to excessive and inefficient use of water for farming water-intensive crops, in drought prone areas leading to faster groundwater depletion (Ruet, 2003).

(ii)   The Enablers of 'Green'

A plethora of studies exist on understanding green adoption behavior of consumers and provide the basic framework of the antecedents of green adoption. For instance, while the Norm-Activation theory by Schwartz (1977) and Schwartz & Howard (1981) discusses the moral obligation that makes an individual feel responsible and behave in a specific manner; the theory of Green Consumer Behavior by Ottman (1993), Fuller (1999), Peattie (2001) and Wood & Neal (2009) provides different dimensions of green adoption by consumers, according to which a consumer can be encouraged to adopt eco-friendly products and services by offering some additional benefits such as financial incentives. Similarly, a consumer can be persuaded to purchase eco-friendly products by emphasizing the added advantage of consuming eco-friendly products over traditional ones. When the perceived benefits from consumption of green products match with the realized outcome, a consumer is most likely to go for repeat purchase.

Based on the review of theories in the domain of green marketing, the relevant factors affecting consumers' green adoption have been identified. The ensuing section provides a brief description of these factors.

Social Factors: Society and cultural affinity can bring change in the behavior of a person towards sustainable lifestyle. A consumer shows a stronger preference for products that are supported by society. Also, there is a strong neighbor effect also called "keeping up with the Joneses" on household's consumption decision. Rejikumar (2016) mentioned that individual differences, social influences, beliefs, attitudes and situational factors directly or indirectly affect purchase decision of an individual. In this regard, Liu et al. (2017) found that people with similar socio-economic and demographic background tend to cluster and green adoption then is influenced by green adoption decision of geographic neighbors. Similarly, Kowalska-Pyzalska (2018) reported a positive correlation between social influence and the willingness to display pro-environmental behaviors. Zhai & Williams (2012) stated that a person's self-image can induce him/her to act in a certain way. For example, if a person perceives himself/herself as environmentally responsible, he/she is more likely to adopt eco-friendly products and services.

Market Area Characteristics: Market area characteristics such as market size, type of competition, and options available to buyers, play an important role in deciding what kind of product or service is being sold in the market. Further, the market for eco-friendly products is still in nascent stage with only few sellers who enjoy the monopoly and practice price discrimination. As a result, people with higher income only opt for green products. With a segment of consumers who are less likely to adopt innovative products until a certain mass adoption is achieved, the size of the market exerts a considerable influence on the adoption of green products and services.

Product Characteristics: Product characteristics are understood in terms of price, performance, productivity, simplicity, compatibility, testability, observability, and perceived risk (Labay & Kinnear, 1981). According to Mills & Schleich (2009), while complexity acts as a barrier that negatively influence innovation adoption; observability exerts a positive influence on innovation adoption of innovation. However, Guagnano et. al. (1986) have found that greater familiarity with innovations make consumers less observable. According to Rogers (2003), relative advantage is an important driver of adoption that increases the likelihood of acceptance of green product. Rezvani et al. (2015) have mentioned that incompatibility negatively influences the adoption of eco-friendly products. They found that installation of extra water pipes for solar water heaters deter consumers to install it in their households and hence an incompatible innovation is most likely to be rejected by consumers irrespective of its superior performance. McLeay et al. (2018) have stated the acceptance of EVs will automatically increase if the company can simultaneously work on minimizing its perceived risk of early discharge of batteries and increasing its perceived usefulness of improved mileage in comparison to a diesel engine car.

Public Policy: Government norms and regulations are considered to be more effective in promoting pro-environmental behavior and encouraging consumers to transition to eco-friendly technologies (Yoon, 2018) and as such exert a strong influence on green adoption. For instance, government spends on renewable sources of energy (such as wind and solar power plants) encourage citizens to install small-scale solar panels at household level (Kaur, 2016). It is seen that government grants and investment subsidies to enhance residential consumers' use of renewable energy contribute to the promotion and adoption of eco-friendly technologies by citizens (Zhai & Williams, 2012; Elmustapha et al., 2018).

Climatic Conditions: Climatic conditions depend on the geographical location of a place and affect consumers' choice of consumption (Mills & Schleich, 2009). For instance, households in colder regions use much of the electricity in heating in comparison to the residents of hotter regions. Similarly, coastal regions do not experience much variation in temperature. The case in point is Queensland in Australia which is located in the tropical region. The area receives good amount of solar insolation throughout the year, resulting in a massive increase in solar PV installations from less than 1000 in 2008 to more than 400,000 in early 2016 (Agnew et al., 2018).

Environmental Awareness: Kowalska-Pyzalska (2018) considers environmental awareness as an important key to achieve large market penetration of eco-friendly products and services. An intelligently designed advertisement campaign provides reliable information to consumers and increase their understanding about the costs and benefits of adopting eco-friendly goods and services. Awareness of environmental problems makes consumers display eco-friendly behavior such as preference for electric vehicles, inclination towards public transportation, and demand for energy-efficient gadgets.

(iii)   Differences in Green Adoption Behavior across Consumer Demographics

Studies in the past have also pointed towards the variation in consumers' green adoption owing to their demographic and psychographic characteristics. For instance, Macdonald & Oates (2006) have posited that though every consumer is a potentially green consumer and prefers to consume eco-friendly products and services, reference groups and product advertisements affect their ultimate buying decision by forming favorable/unfavorable attitude towards eco-friendly products and services. Wolkomir et al. (1997) have further assessed the impact of income, education and religion on environmental awareness and suggested that religious scriptures reinforce affiliation of people with the environment. McLeay et al. (2018) stated that green consumers position themselves as trendsetters, and persuade others to adopt green behavior.

In relation to the personal or demographic aspects (including age, gender, income, level of education and profession) too, studies have analyzed and reported the influence. More specifically, Ariff et al. (2012) found a strong correlation between educations and energy-related investment decisions and stated that high-involvement with technology makes educated people adopt cleaner technologies better and faster than others.

Though previous researches have suggested the role of gender in green adoption, the views are contradictory with respect to age (e.g., Ozaki & Sevastyanova, 2011) and gender. While one group of researchers claim women to be more environmentally responsible than men, the other group of researchers claims otherwise (Kreidler & Joseph, 2009). An assessment across income groups by Jager (2006) revealed that persons with higher income have a greater financial ability to pay premium price for green products. On the other hand, higher rent of residential space and lower family income puts a barrier on the installation of solar water heaters in consumer households.

Further, different generations also have been stated to influence different levels of environmental concern and awareness. Thogersen (2011) found the younger generation to be more environmentally concerned and

responsible than the older generations. Similar argument has been given by Schuhwerk & Lefkoff-Hagius (1995), who pointed that in the present time, environmental degradation has become a prominent issue and center of discussion and younger generation is more receptive towards latest trends and tend to pick the discussions, debates, and facts and figures of recent issues in the news in comparison to the older generations.

3. Objective of the Study

The present study has been undertaken with a dual objective of (i) assessing the impact of various drivers on the adoption of green products and services by consumers, and (ii) examine the variation in consumers' adoption across demographic characteristics such as age, gender, income, education, and occupation.

4. Methodology

The study has followed a quantitative cross-sectional research design. Relevant information in the form of published government documents, official press releases and academic reports from various government departments and Ministries such as Niti Aayog, Ministry of Environment, Forests and Climate Change, Ministry of Statistics and Program Implementation, Ministry of Textiles, Ministry of Tourism, International Energy Agency (IEA) and United Nations Framework Convention on Climate Change (UNFCCC) have been referred.

A combination of snow ball and convenience sampling method has been used for collecting primary data from consumers. The residents of Delhi National Capital Region (NCR) were considered as the population and maximum efforts were taken during the sampling and data collection process to provide fair representation of sample by including respondents of different demographic characteristics.

A non-disguised structured questionnaire was used to collect the primary responses. The four sections of the questionnaire sought information related to consumers' demographics, their environmental awareness, and various drivers or antecedents identified from the literature. Adopting the measures from the previous studies (see Table 1), a five-point Likert scale (1 denoting strong disagreement and 5 denoting strong agreement) was employed to quantify the responses.

The final data set was obtained from 351 respondents who participated in the survey. The demographic profile reveal a higher number of male respondents (n=194), majorly in the age group of 30-50 years (59.8 per cent), holding graduation/master's degree (72 per cent to be holding graduation/masters' degree, employed (57.5 per cent) and belonging to the lower income group (66.7 per cent). The data so gathered was entered in SPSS 27.0 version for further analysis through statistical techniques such as step-wise multiple regression t-test, one-way ANOVA and post-Hoc (Tukey) analysis.

5. Analysis and Findings

Reliability and Validity

The computation of Cronbach alpha value for all the measures revealed a score above 0.700, thus indicating internal consistency or reliability (Malhotra & Dash, 2011). Using correlation matrix, convergent and discriminant validity was examined. While the smallest within-factor correlation greater than 0.5 indicated the presence of convergent validity; the presence of only 168 violations out of 1480 possible comparisons supported discriminant validity (Campbell & Fiske, 1959).

Table 1: Measures used in the Study

Construct	Variables	No. of Items	Source	Cronbach Alpha	Convergent Validity Test Smallest within-factor Correlations
Social Factors	• Society • Cultural Affinity • Self-Image	5	Wakjira & Ramulu, 2018	0.889	0.543
Market Area Characteristics	• Size • Competition • Availability	5	Chan et al., 2018	0.790	0.500
Product Characteristics	• Price • Productivity • Performance • Complexity • Testability • Compatibility • Perceived Risk	5	Wong & Turner, 1996	0.753	0.501
Public Policy	• Grants & Incentives • Rules & Regulations • Govt. Initiatives	4	Carberry et al., 2017	0.876	0.651
Climatic Conditions	• Geographical Suitability • Residence Characteristics	4	Mills & Schleich, 2009; Agnew et al., 2018	0.722	0.548
Environmental Awareness	• Environmental Awareness • Environmental Concern • Environmental Responsibility	6	Rejikumar, 2016	0.718	0.533
Personal Factors	• Age • Gender • Income • Education • Occupation	5	Cherian & Jacob, 2012; Rejikumar, 2016		
Green Adoption by Consumers	• Prefer to adopt green products that are less harmful • Take efforts to understand nature of damages products can cause to environment	2	Thogersen, 2011; Yazdanifard & Mercy, 2011 and Rejikumar, 2016	0.851	0.753

Source: Literature Review

Table 2: Model Summary of Stepwise Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adj. R2	F	Sig.*
		B	Std. Error	Beta					
Step1		-1.724	.212		-8.136	.000	.696	803.321	**.000**
	Market Area Characteristics	1.352	.048	.835	28.343	.000			
Step2		-1.354	.193		-7.004	.000	.758	547.974	**.000**
	Market Area Characteristics	.936	.061	.578	15.267	.000			
	Public Policy	.346	.037	.358	9.451	.000			
Step3		-.505	.179		-2.826	.005	.826	555.564	**.000**
	Market Area Characteristics	1.267	.059	.782	21.455	.000			
	Public Policy	.862	.054	.891	16.045	.000			
	Environmental Awareness	-1.043	.089	-.743	-11.761	.000			
Step4		-.732	.154		-4.760	.000	.874	606.170	**.000**
	Market Area Characteristics	1.525	.055	.942	27.655	.000			
	Public Policy	.447	.058	.462	7.650	.000			
	Environmental Awareness	-2.442	.144	-1.740	-17.010	.000			
	Product Characteristics	1.622	.142	1.298	11.465	.000			
Step5		-.702	.111		-6.337	.000	.934	999.307	**.000**
	Market Area Characteristics	1.810	.043	1.118	42.318	.000			
	Public Policy	.110	.046	.114	2.385	.018			
	Environmental Awareness	-2.853	.106	-2.033	-26.941	.000			
	Product Characteristics	2.674	.118	2.140	22.745	.000			
	Climatic Conditions	.587	.033	-.451	-17.946	.000			
Step6		.292	.091		-3.212	.001	.960	1399.452	**.000**
	Market Area Characteristics	2.094	.038	1.293	54.381	.000			
	Public Policy	.418	.051	-.432	-8.255	.000			
	Environmental Awareness	2.849	.083	-2.030	-34.412	.000			
	Product Characteristics	2.180	.098	1.744	22.302	.000			
	Climatic Conditions	-1.115	.044	-.857	-25.461	.000			

	Social Factors	1.168	.079	1.138	14.851	.000			

Source: Primary Data *sig.<0.05,

a. Dependent Variable: Green Adoption, b.   Predictors: (Constant), Market Area Characteristics
c. Predictors: (Constant), Market Area Characteristics, Public Policy, d. Predictors: (Constant), Market Area Characteristics, Public Policy, Environmental awareness, e.   Predictors: (Constant), Market Area Characteristics, Public Policy, Environmental awareness, Product Characteristics, f. Predictors: (Constant), Market Area Characteristics, Public Policy, Environmental awareness, Product Characteristics, Climatic Conditions, g.   Predictors: (Constant), Market Area Characteristics, Public Policy, Environmental awareness, Product Characteristics, Climatic Conditions, Social Factors

Impact of Drivers

The impact of six drivers' namely social factors, market area characteristics, product characteristics, public policy, climatic conditions and environmental awareness was assessed using step-wise multiple regression (see Table 2). The best model with the inclusion of all the antecedents or independent variables explain around 96 per cent variance in green adoption (R^2= .961, F= 1399.452, p < .05). In addition, product characteristics (β= 1.744) turn out to be the main predictor, followed by market area characteristics (β= 1.293), and social factors (β = 1.138). Quite interestingly, the findings reveal a negative impact of public policy (β = -.432), climatic conditions (β = -.857), and environmental awareness (β= -2.030) on consumers' green adoption.

Differences across Consumer Demographics

The variables related to gender, age, educational qualification, level of income and occupation being categorical in nature, their impact has been separately analyzed using one-way ANOVA, 2-sample unpaired t-test (for gender), and post-Hoc test (Tukey HSD).

To assess the impact of gender on consumers' green adoption, independent sample tests including Levene's Test for Equality of Variances and t-test for Equality of Means were performed. The results (Table 3) do not establish any significant difference between males and females in terms of green adoption.

The next step involved a similar analysis using one-way ANOVA to assess the influence of other demographic elements (i.e., age, income, education, and occupation) on green adoption. Contrary to the case of gender, the findings in Table 4 The findings of one-way ANOVA in Table 3 reveal a significant difference in green adoption across consumers' age (sig.=0.000), income (sig.=0.003), and education (sig.=0.037). The results did not show any significant difference across occupation (sig. =.751).

The significant difference in green adoption with respect to age, income, and educations revealed above provides impetus to conduct a detailed analysis across different categories of these demographic variables. Accordingly, the post-hoc analysis was performed for three age groups (i.e., below 30 years, 30-50 years, and above 50 years), three income groups (namely, lower income group of people earning below Rs 50000 per month, middle income group of respondents earning between Rs 50000- 2 lakhs per month, and higher income group with earnings above Rs 2 lakhs per month), and three categories of educational qualification (viz., under-graduation, graduation/masters, and professional).

As expected, post-Hoc results presented in Table 5 reveal significant variation in green adoption across different age groups, income levels, and educational categories. More specifically, it may be inferred that while consumers in the higher income group exhibit a greater likelihood to pay a premium price to buy green products and services in comparison to those in the lower income group (mean difference=-0.047, sig.=0.000) or middle-income group (mean difference= 0.011, sig.=0.000); the respondents with different level of

educational qualifications too display different level of environmental behavior i.e., under graduation and graduation (mean difference= .68, sig.= 0.000), under graduation and professionals (mean difference= .25, sig.= 0.000) and graduation and professionals (mean difference= .88, sig.= 0.004).

Table 3: Independent Sample Tests for Gender

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Green Adoption	Equal variances assumed	.248	.619	1.253	349	.211	.07665	.06119
	Equal variances not assumed	-	-	1.239	317.211	.216	.07665	.06187

Source: Primary Data, *sig.<0.05

Table 4: Results of One-Way ANOVA

Source	df	Mean Square	F	Sig.
Corrected Model	39	.404	1.279	.001
Intercept	1	739.442	2343.143	.000
Age	2	.609	1.929	**.000***
Income	2	.166	.525	**.003***
Education	2	.420	1.330	**.037***
Occupation	3	.302	.957	.751

R Squared = .138 (Adjusted R Squared = .030), *sig.<0.05

Source: Primary Data

Table 5: Post-Hoc (Tukey HSD) Comparison of Age Groups, Income, and Education Levels

Age (I)	Age (J)	Mean Diff. (I-J)	Std. Error	Sig	Income (I)	Income (J)	Mean Diff. (I-J)	Std. Error	Sig	Edu Qual (I)	Edu Qual (J)	Mean Diff. (I-J)	Std. Error	Sig.*
Below 30	30-50	.087	.172	0.000	Below 50000	Between 50000-2 Lakhs	.058	.161	.336	Under-Grad.	Grad. /Masters	.68	.155	**.000**
	Above 50	.123	.186	0.000		Above 2 Lakhs	.047	.133	.000		Professional	.25	.178	**.000**
30-50	Below 30	-.087	.172	0.000	Between 50000-2 Lakhs	Below 50000	-.058	.161	.336	Grad./Masters	Under-Grad.	-.68	.155	**.000**
	Above 50	.036	.132	0.081		Above 2 Lakhs	-.011	.172	.000		Professional	.88	.142	**.004**
Above 50	Below 30	-.123	.186	0.000	Above 2 Lakhs	Below 50000	-.047	.133	.000	Professional	Under Grad.	-.25	.178	**.000**

	30-50	-.036	.132	0.081		Between 50000-2 Lakhs	.011	.172	.000		Grad./Masters	-.88	.142	**.004**

Source: Data Analysis, *sig.<0.05

6. Discussion and Implications

The present papers makes a useful contribution to the existing body of literature by delving into consumers' green adoption behavior in detail. The work not only examines various antecedents for their impact on green adoption but also bring to the fore interesting insights with respect to differences in the same across demographic characteristics of age, income, and education. The results establish a significant impact of all six antecedents on adoption of green products and services by consumers. However, these antecedents differ in terms of their nature of impact. For instance, while the product characteristics turn out to have a strongest positive impact; public policy (β = -.432), climatic conditions (β = -.857) and environmental awareness (β= -2.030) are found to exert a significant negative influence on consumers' green adoption.

Though unexpected, the finding with respect to public policy is in conformity with some of the recent studies that have either revealed a higher capability of firm subsidy in promoting green adoption (e.g., Hong et al., 2021) or have found an insignificant impact of government's policy incentives on consumers' green consumption behavior (Shen & Wang, 2022). In the present work, there seem to be three possible reasons for having obtained a negative influence of public policy on consumers' green adoption (i) policy incentives are usually directed at encouraging firms to adopt green marketing practices (including green production and greener technologies) rather than being aimed at promoting green consumption (ii) higher price of green offerings act as a deterrent to green adoption, and (iii) different types of pro-environment behaviors (e.g., resource-saving behavior like installation of solar panels at homes and garbage recycling and, green consumption behavior like purchase of green products) are influenced by different factors and so require different kinds of policy incentives to induce green adoption by consumers. In light of the explanation outlined above, it is suggested that government and policy makers roll out specific incentives directed at inducing consumers to adopt green consumption behavior. These incentives should further provide differential advantage depending on the nature and intensity of pro-environment behavior, viz. higher subsidy for recycling or installation of solar panels in comparison to subsidy for purchase of green offerings. Policy makers should also target the garbage sorting behavior of consumers in residential areas. Since majority of garbage collectors in the urban areas are unorganized and not registered anywhere, a state-owned certified waste collector and recycler in urban areas should be set up. These registered garbage collectors can be provided with financial resources to equip themselves with best technologies for waste collection and recycling plants and should be centrally monitored according to the environmental protection standards. The recycled products and power generated from these plants will have the potential to generate profit for the government. To elicit the desired impact of policy on consumers' green adoption, it is recommended that government and industry work in-tandem through incentive policies and new product development. Needless to say, a substantial amount of incentive or subsidy would be required so that consumers' loss aversion with respect to higher price of green products and higher cost of green behavior does not adversely affect their adoption.

Similarly, the negative beta value for climatic conditions and environmental awareness implies that poor climatic conditions and lack of environment awareness induce individuals to adopt greener alternatives. As the climatic conditions and awareness levels improve, the green adoption is likely to worsen. The rationale for this is seen in the work of Kokkinen (2013) who has talked about different stages of environment awareness which begins to develop when people notice adverse and threatening changes in their surroundings and reaches the final stage where it becomes a pivotal part of peoples' everyday choices. Therefore, it can

be inferred that the negative influence of climatic conditions and environment awareness in the present study is perhaps because consumers either do not find climatic conditions to be alarming enough for them to resort to greener solutions or their transformation from awareness to behavior is affected more by other factors such as perceived cost of green adoption.

The study finds significant variation in green adoption across different age groups, income levels, and educational categories. This result opens the opportunity for marketers to develop consumer demographic profiles (age, income, and education) and create cohorts or clusters on the basis of differences in consumers' pro-environmental awareness. The differences across consumer groups may require a distinct and focused strategy to promote green adoption in accordance with the demography, awareness level, and eco-friendly features desired by the marketer's target group. For example, while a premium-priced innovative green solution can be offered to a more qualified, highly aware, high income group consumer; a different green product and incentivization program may work better for a consumer in the lower income group with initial level of environment awareness and education. In the next stage, efforts can be taken to modify consumers' buying behavior in favor of green products by aligning green products and programs with the green benefits sought by consumers and their pro-environment behaviors. Besides, as interpersonal social and cultural values also influence consumers' consumption pattern and buying decisions, organizations should conduct cross-cultural and inter-personal research before launching a green product in the market.

Further, green buying behavior is an outcome of consumer's environmental knowledge, concern and attitude that motivates him/her to consume eco-friendly goods and services (Antonies & Raaij, 1998). In the real world, consumers' cognitive-biases, heuristic approach in decision-making processes, and resistance to change due to bounded rationalities make it difficult to elicit a strong and favorable response in terms of green purchase and consumption. The study also suggests that marketers try to cultivate an 'environment intelligence quotient' (EIQ) in consumers. In broad terms, this can be understood as developing and enhancing consumers' ability to perceive, evaluate and understand the environmental issues as well as improving their willingness to take actions to protect the environment. EIQ can be reflected by displaying certain environmentally-responsible behaviors and can be measured by assessing the individual on parameters such as awareness about environmental issues, feeling of moral obligation towards environment, knowledge of different means to solve environmental issues, knowledge of different means to adapt to environmental change, and ability to control actions that are harmful for the environment.

7. Conclusion, Limitations and Future Research Directions

As societies are grappling with deteriorating ecosystem, environment management has become a central driving force behind sustenance. It is important to acknowledge the need to save the environment by becoming environmentally responsible citizen. People need to integrate green in their decision-making so as to promote sustainability. It is rightly said that 'Earth is not our asset that we have inherited from our forefathers; it is our liability that we need to repay to our next generation with interest'. In this respect, the study makes a useful contribution to the existing literature in the area of green and sustainable marketing by not only decoding the impact of various enablers of consumers' green adoption but also outlining interesting insights with respect to variation in adoption across demographics. In light of the findings, the study provides useful suggestions for all relevant stakeholders.

The current work essentially posits that consumers should not think of themselves as passive receivers of environmental benefits but must act as active contributors to environmental protection. There exists a need to strengthen the market-based mechanisms, regulations, financial incentives programs and information channels, to promote green adoption for larger good. Further, The Civil Society Organizations need to focus

on creating awareness especially amongst the informal sector and promote the use of secondary material to reduce waste. Similar role must be played by academic institutions, and NGOs to promote green adoption among people.

Despite making an effort to make this study as comprehensive as possible, there still remain some gap areas that can be addressed by subsequent studies. First, considering the feasibility of the research, only significant drivers of green adoption by consumers have been examined. There is a possibility of some other factors which may influence consumers to either adopt or reject green. In addition, there is a possibility that the presence of some factors other than green aspects provide satisfaction and affect the purchase intention of individuals due to which green products and service experience lesser demand in the market. Identification and inclusion of such factors would make the study more integrated and robust. Second, the study is based on a restrictive sample of only domestic consumers of the Delhi National Capital Region (NCR). One can expect different opinion regarding eco-friendly goods and services among consumers of different geographies, cultures, and occupations. Future researchers can mitigate this limitation by covering a larger number of consumers from diverse backgrounds and settings.

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