

**A STUDY OF CONSUMER PURCHASE INTENTION  
OF GREEN PRODUCTS WITH SPECIAL FOCUS  
ON GREEN RETAILING IN UTTAR PRADESH**

**Thesis**

**SUBMITTED TO  
DEPARTMENT OF RURAL MANAGEMENT  
SCHOOL OF MANAGEMENT STUDIES  
BABASAHEB BHIMRAO AMBEDKAR UNIVERSITY, LUCKNOW**



**FOR THE AWARD OF THE DEGREE OF  
Doctor of Philosophy  
in  
MANAGEMENT**

**Supervisor  
Prof. M.S. KHAN**

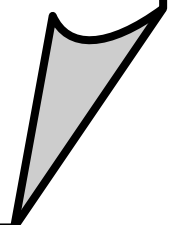
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**2022**




*Dedicated to  
My Beloved Parents*



## DECLARATION

I hereby declare that the thesis entitled “**A STUDY OF CONSUMER PURCHASE INTENTION OF GREEN PRODUCTS WITH SPECIAL FOCUS ON GREEN RETAILING IN UTTAR PRADESH**” submitted by me under the supervision of **Prof. M.S Khan**, Department of Rural Management & Head, Department of Commerce, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow for the award of the degree of **Doctor of Philosophy in Management**. No part of this thesis has been previously submitted in part or full for the award of any degree or diploma to this university or any other university. Further, I declare that the material embodied in the work is based on original research work and the indebtedness to others has been duly acknowledged at relevant places. I also declare that the thesis is essentially free from all kinds of plagiarism.

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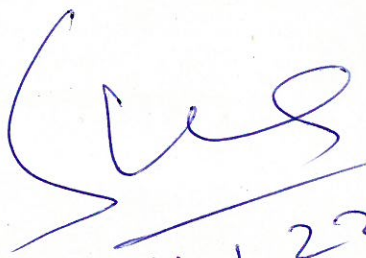
## CERTIFICATE

This is to certify that the thesis entitled “A STUDY OF CONSUMER PURCHASE INTENTION OF GREEN PRODUCTS WITH SPECIAL FOCUS ON GREEN RETAILING IN UTTAR PRADESH”, Submitted by Ms. Vandana Singh is an original research work and has not been previously submitted in part or full for the award of any other degree or diploma to this or any other university.

The thesis submitted to Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow satisfies all the requirements as stipulated in the *Master of philosophy (M.Phil.)*/*Doctor of Philosophy (Ph.D.) regulations amended in 2017* and it is fit for submission and evaluation for the award of the degree of Doctor of Philosophy of the university.

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**Vandana Singh**

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## PREFACE

World is facing many natural calamities these days. Floods, earth quacks, wild fires, climate change, melting of polar caps etc. are few of them. These calamities may be natural but cause of these is not natural its, human. We, are the one who are responsible for all these drastic environmental changes. Our consumption habits are sole reason for all that. We are not consuming the resources of the earth in a manner that it should be. Our consumption habits are irresponsible towards earth and that's why we are facing these environmental issues. Resources of earth are limited and if we will not act responsible towards the fact then it will create problems, as we are seeing in terms of climate change. The only solution to the problem is responsible consumption of resources of earth. Responsible consumption is also part of SDG 12 according to UN. Responsible consumption includes two things: 1.) Consumption of those products which will cause less harm to environment 2.) Change in manner of consumption. In short, we need to change, what we are consuming and how we are consuming because this is only thing, we can change another solution of stopping consumption will not be possible for us. My thesis deals with both the aspect. For first part, green products are the solution. Green products are those, when consumed cause less harm to environment than conventional products. Their environmental impact is less negative than conventional products. For second part, there is a concept of green retailing. Management of retail business with green practices, is known as green retailing. Retailers assist in consumption of products. They can help in managing manner of consumption of consumer. In, India awareness about green products is increasing. More and more consumers are leaning towards green products. Most of the consumers want to purchase green products but they are purchasing it. That is the problem for Indian consumers regarding green products. They have purchase intention but their purchase intention is not converting into purchase decision. There is a gap between consumer purchase intention and consumer purchase decision. That's why I have introduced the concept of green retailing because retailers are the most important link between consumer and manufacturer. They have the power to influence both consumer and the manufacturer. The gap between consumer purchase intention and consumer purchase decision can be removed by retailers' assistance. And why green retailing not retailing because it will be easy for the retailers to convince consumer for purchasing green products if they itself, are following green practices. Simple old logic behind that is "practice before you preach". How can retailers ask their consumers to purchase green products if they did not believe on the idea of being green? So, my thesis is in three

parts: first part deals with consumer purchase intention of green products. Second part deals with relating consumer purchase intention with consumer purchase decision through green retailing. Third part presents real life scenario of green clothing products to test the results of the analysis. Questionnaire was prepared and data was collected through survey method to test the hypothesis. All of data analysis is done on SPSS and AMOS 23. Data of 500 respondent is analysed. For the analysis of the first objective (Which factor affects the consumer purchase intention of green products) EFA, CFA and SEM was performed on the data. Five factors named ATB, PBC, SN, WP and EC were tested against the hypothesis and direct linear relationship has been found between PI and ATB, PBC, WP and EC. No, linear relationship has been found between PI and SN. For second objective (What the various dimension of green retailing that affect the purchase intention of green products), EFA was performed on the 16 items of green retailing in the questionnaire and three dimensions has been derived. That were: green packaging and eco-labels (GREP), Green communication (GCOM) and green retailing practices (GP). For third objective (Does green retailing enhances the consumer purchase intention of green products), mediation has been performed on the data and partial mediation has been derived. It means green retailing plays partial mediating role between consumer purchase intention and consumer purchase behaviour. I tested my findings and all the factors are highly correlated with consumer purchase intention when I have taken the scenario of green clothing products. So, in simple words it can be summarized that ATB, PBC, WP and EC affect consumer purchase intention for green products. So, companies should focus on these factors while marketing their green products as well as green retailing plays mediating role between Consumer purchase intention and consumer purchase behaviour. So, retailers should adopt green retailing practices. We can also link factors of consumer purchase intention with dimensions of green retailing. Like ATB can be linked with green communication. It means for increasing ATB companies should focus on their communication skills. PBC and WP can be linked to green retailing practices as it included availability of products, rewards, store environment etc. and EC can be enhanced through eco-labels and green packaging as if, companies want to attract environmentally concerned consumers towards their products, then they should adopt eco-labels and green packaging which give clear message of greenness. At last, it can be summarized that being green is not a choice today, it is a necessity because if we will not be able to improve our consumption habits then we will not be able to answer future generations for our actions. Their future depends on the changes that we make today.

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## LIST OF ABBREVIATIONS

<b>Short form</b>	<b>Full form</b>
AMOS	analysis of a moment structures
ATB	Attitude towards behaviour
AVE	Average variance extracted
BCI	Better cotton initiative
BEE	Bureau of Energy Efficiency
CFA	Confirmatory factor analysis
CFC	Chlorofluorocarbon
CFI	Comparative fit index
CII	Confederation of Indian Industry
CMIN/DF	Minimum discrepancy per degree of freedom
CNG	compressed natural gas
COVID-19	Coronavirus disease
CR	Composite reliability
CSR	Corporate social responsibility
EC	Environmental concern
EFA	Exploratory factor analysis
EPR	extended producer responsibility
EU	European Union
F&B	Food and beverage
FICCI	Federation of Indian Chambers of Commerce and Industry
FMCG	Fast moving consumer goods
FSSAI	Food Safety and Standards Authority of India
GC	Green clothing products
GCOM	green communication
GDP	Gross Domestic Product
GFI	Goodness-of-fit
GHG	Greenhouse gas
GR	Green Retailing
GREP	green packaging and eco-labels
GRP	green practices
GSCM	Green supply chain management

H&M	Hennes & Mauritz
HRD	Human resource development
HVAC	heating, ventilation, air conditioning
IEBF	India Brand Equity Foundation
IFFCO	Indian Farmers fertilizers cooperatives limited
ISO	Indian standard organization
KMO	Kaiser-Meyer-Olkin
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
MRF	Madras Rubber Factory
OECD	Organisation for Economic Co-operation and Development
ONGC	Oil and Natural Gas Corporation Limited
ORGI	Office of the Registrar General & Census Commissioner
P&G	Proctor and gamble
P. G	Post graduate
PBC	Perceived behavioural control
PD	Purchase decision
PI	Purchase Intention
PVC	(Polyvinyl chloride)
RMR	root means square residual
RMSEA	Root mean square error of approximation
SDGs	Sustainable Development goals
SEM	Structured equation modelling
SME	Small Medium enterprise
SN	Subjective norms
SPSS	Statistical Package for the Social Sciences
TRA	Theory of reasoned action
U. G	Under graduate
U. P	Uttar Pradesh
WEF	World economic forum
WHO	World health organization
WP	Willingness to pay



*Chapter 01*  
*Introduction*



# **A STUDY OF CONSUMER PURCHASE INTENTION OF GREEN PRODUCTS WITH SPECIAL FOCUS ON GREEN RETAILING IN UTTAR PRADESH**

## **CHAPTER- 01**

### **INTRODUCTION**

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#### **1.1 Introduction:**

For the past few decades, environmental issues have drawn attention from various groups of the society. Environment degradation is the biggest concern for human, today. These unsettled environmental issues are threat to humans that have negative impact on well-being of humans. Majority of the issues that are faced by humans are due to over population, pollution, technological advancement and irresponsible consumption habits. Consumers are aware of these issues and they are addressing them in various ways. Major part of environmental problems is caused by irresponsible consumption. The manner of consumption and consumption patterns of humans have significant impact on environment and mostly it is negative. If, we think in a bigger picture all these problems of climate change, pollution, temperature rise, various diseases, floods, forest fires, food crisis, other natural calamities are the result of irresponsible consumption. We are neither consuming the resources of earth responsibly nor sustainably. Balance between the needs of present and future must be maintained for ensuring responsible consumption. Responsible consumption is about changing our consumption habits from careless to careful towards environment. Care for our climate, environment, resources of earth and every living organism that affects our life. If, we think about solutions for responsible consumption, we have two options first to improve our consumption habits and second is the consumption of those products which have

lesser negative environmental impact. My thesis deals with second option which is consumption of products with lesser negative environmental impact, known as “Green Products”. Products which are made with care for environment are “Green Products”. Indian consumers are aware of green products and they are considering green products for their day-to-day consumption. Selection of green products over conventional products can be the game changer for industries as it can open new doors of potential green market which is more environment friendly in nature. Change in preferences of the consumer can influence the entire outlook of the manufacturers, retailers and sellers towards green products and all this can happen without compromising environmental resources. According to world economic forum, India will become the third largest consumer market after U.S and China by 2025 and consumer expenditure will increase by a factor 3 to reach \$4 trillion by 2025. It indicates higher number of consumers as well as high rate of consumption. High rate of consumption will result in negative environmental impact in terms of pollution, generated in manufacturing, distributing, selling, consuming and disposing different kinds of consumer products. We cannot stop consumption of consumer products but we can switch to responsible consumption and start the consumption of those products which are more environment friendly in nature or which have zero to less negative environmental impacts called green products. We need green products because of zero or less negative environmental impact in terms of usage as well as production. Consumers must consider environmental impact of products before making any purchases. In India, awareness about environmental problems is increasing. Indian consumers have started taking environment seriously. Big companies are trying to introduce greener version of products. In fact, India was amongst the few countries which have started the concept of eco-labelling to label green products and to encourage its consumption. In India, eco mark is given to those products

which are green in nature and which have the least impact on nature. This concept was started in 1991. This proves that India is very much aware of the usage of the green products. According to Greendex 2012 survey, Indian consumers are moving towards green products and amongst 17 countries, Indian consumers have the highest percentage of respondents who are cynical of green products. In 2011 Image Power Green Brands Survey by Landor Associates and Penn Schoen Berland surveyed 9000 customers in 8 developed (Australia, France, Germany, U.K and U.S) and developing countries (Brazil, China and India) countries and findings reveal that demand for green product is growing in developing countries and customers are willing to pay up to 10 percent more for green products that are environment friendly. It shows that customers are getting familiar with green practices regarding products or services but getting familiar and purchasing green products, is different. Indian consumers have positive attitude towards purchasing green products but they are not purchasing it due to scepticism about green products. For encouraging green products purchase in India, retailers can play an important role. Retailers are the most important link between consumers and manufacturers. They are in the closest contact with consumer if we, compare it with other factors of supply chain of products. They have the power to influence both, manufacturers as well as retailers. Retailer is not just a mere distributor of products and services but also influence their preferences and behaviour regarding purchase of products. Retailers have also the power of influencing manufacturers in adopting green practices and manufacturing green products. Today, retailers face challenges of keeping the cost level low, increasing the efficiencies of supply chain, building their brand, reputation and image and greening their operations. Retailers across worldwide are adopting green retailing strategies to improve their environmental performance and retail value chain (Tang, Lai, & Cheng, Jan, 2010). Retailers with

green practices (Green retailing) can influence consumer for purchasing green products. The idea is based on proverb “Practice before you preach”. According to a survey by Deloitte in 2009, only 22% of the consumer surveyed actually find and buy Green Products that interest them but number of consumers interested in Green Products is far more. 34% of the surveyed consumers are influenced by environmental concern. These data suggest that with few improvements and strong Green Retailing consumption of green products can be encouraged in India. My research is all about finding solution for irresponsible consumption by promoting consumption of green products through green retailing. Green products will not only solve the problem of irresponsible consumption but it will also encourage responsible consumption behaviour amongst consumers. My research is in three parts: First part deals with finding about what triggers the consumer to purchase, by finding out factors affecting purchase intention of green products. Second part deals with presenting green retailing as a potential solution for enhancing consumer purchase intention through mediation effect between purchase intention and purchase decision and third part test the findings by taking the context of specific product which is green clothing product for better understanding of the research problem. Whole research will help in promotion of green products in Indian markets. It will help in encouraging culture of responsible consumption amongst consumers.

## **1.2 Potential of the Indian Market:**

India is the largest democracy in the world. In terms of population, it is a home of nearly 1.39 billion people, making it the second most populous country in the world, (worldometer, 2021). According to economic survey of 2021, India will emerge as the fastest growing economy in next two years as per IMF report. It is the sixth largest economy and by 2025 it is expected to emerge as fifth largest economy in the world. Consumer spending will increase from \$1.5 trillion in 2017 to nearly \$6 trillion by 2030

and by 2030 India will add 140 million middle income households which accounts for 47% of the total consumption in India. As per report of WEF- 2017, in 2030, 77% of India's population will comprise Millennials and Generation Z and income will be the strong determinant of consumption choices. Middle income group and high-income group will reshape consumption pattern in India. Consumers in India will add new products to their baskets they will upgrade or expand their choices in apparel, food and personal care. Above mentioned data suggests two things, first Indian population and consumption rate are increasing day by day. Higher consumption means higher carbon foot print and higher environmental impact. Higher Consumption will result in negative environmental impact in terms of waste generated from various operations involved in life cycle of a product, introduction till its disposal. From manufacturing till final disposal various elements of environment land, air, water, soil, resources are exploited or damaged in some way or another. Second thing, is that India is the fastest growing economy in the world it has a huge potential for new product market which is green in nature. It is the biggest opportunity for companies in India to start something which can be "The next big thing" and also environment conscious. Green can be the new black in India, if market players will place their bet on this new segment of products. Whole world including India is witnessing the results of environmental degradation and we must find solutions for reducing negative environmental impact to zero or less negative because as the data suggests consumption in India is going to increase day by day and without finding solutions for this problem, we cannot think of a sustainable future.

### **1.3 Economy of Uttar Pradesh:**

Uttar Pradesh is the most populous state of India. Population of Uttar Pradesh is 19.98 crore, (ORGI, 2011). Urban population of Uttar Pradesh is 44.4 million which constitutes 11.8 % urban population of India. There are 75 districts in Uttar Pradesh. It is the second-largest economy. Net state Domestic product is 1,446,000 crores on 2017-

18. Per-capita income is increasing in Uttar Pradesh. Uttar Pradesh has huge potential to spend in upcoming years. Population growth rate of U.P is around 2.5% as per latest report. U.P can be the booming market for green products if green brands will be able to pull the right strings. There are approximate 5.76 cr. Millennials in Uttar Pradesh, (Statistics Times, 2020). If we analyze the green product market, we will find that presently consumers buy green products as a luxury not as a necessity, but necessity starts with luxury. Many products which seemed luxury few years back are necessity today like mobile phones, electricity, LPG gas, vehicles etc. So, green products are luxury today but we have to make them necessity for our future. Green product market can be the niche product market for Uttar Pradesh and if we look at the data, we will find that number of millennials is quite high in U.P. Green products data suggests that millennials can be the best potential consumer for green products because they are more spirited towards environmental issues and environment protection. I have selected U.P as area for my study due to two reasons firstly, it has huge potential for green product market in terms of consumption rate and population statistics and secondly, for higher presence of millennials and middle-income group in the strata of population. We can conclude that spending in Uttar Pradesh is going to increase in upcoming years due to higher population and higher per capita income. Higher income will further induce higher spending and higher spending will result in irresponsible consumption because if the population will spend without any concern for environment it is going to harm the future of upcoming generations. Irresponsible consumption in Uttar Pradesh is going to rise and we must find solutions for solving problem of irresponsible consumption as it has negative impact on environment as well as on humans.

#### **1.4 Irresponsible Consumption:**

Population of the world is growing day by day but resources to fulfill demands of growing population are limited. These resources are not growing enough to fulfill

demands of that much population. If we keep ignoring this fact than after some years we will be without food, water and fresh air. We must think about the future of coming generations who will be bearing the consequences of our irresponsible consumption. Irresponsible consumption means consuming goods and services in a way that is going to harm our climate, environment, biodiversity or future of coming generations. We must consume responsibly because those times have gone when earth has abundance of resources and there was no one to consume those resources. After industrialization, exploitation of planet earth's resources has increased at a high speed. Each and every country has played its part in this exploitation but the pace and proportion of exploitation is different for every country. Irresponsible Consumption means consuming goods and services without thinking its environmental impact. When we consume any product or service, it has certain impact on environment. It includes exhaustion of resources, carbon emission, pollution and waste generation. We must consume responsibly to avoid consequences of irresponsible consumption. Irresponsible consumption has the following effects:

### **Destruction of Flora and fauna:**

Single-used plastic that is used in different products and packaging is the biggest concern for environment. Build-up plastic waste around our planet results in destruction of flora and fauna of the environment. Due to plastic pollution, particles of nano plastic are observed across our food chains and even in food chains of human. Plastic pollution is the biggest threat towards substantial aquatic and terrestrial life. Due to irresponsible consumption our oceans, rivers, lands and everything living on them is under danger. Humans are responsible for extinction of most of the critical species of plants, animals, insects and birds.

**Exhaustion of Resources:**

Resources to sustain life on earth are limited. Maintenance of standard of living of present generation and upcoming generation will result in exhaustion of these limited resources of earth. Water, soil, air, biodiversity, land for recreational purpose, energy resources, fossil fuels, ores, wood etc. are the basis of human life on earth. Current pace of population increase will result in complete exhaustion of resources.

**Pollution:**

Irresponsible consumption of goods and services in any form results in pollution of environment. Pollution of land, air, water, soil, sound is the result of our irresponsible consumption. Many harmful gases, chemicals, toxins and other harmful substances are emitted in atmosphere due to our irresponsible behavior.

**Human consequences:**

It is a fun fact that humans themselves are responsible for the destruction of human life on earth. Life on earth may not end because of any meteorite, asteroids, solar flares or alien attack but it will definitely end because of humans and their self-absorbed behavior towards environment. We are witnessing Covid-19 and it is also the result of human interference with the environment. Humans are messing with the environment too much. Many uncommon diseases are household names, today. Day after day list of new diseases is increasing. Cancer, heart and lung diseases, different types of flues, asthma etc. are the result of irresponsible consumption by humans. We are breathing harmful gases, we are eating toxic food and living on unstable land. All this is because of our irresponsible consumption. Life on earth works on the concept of circularity. Every element is related to one another including humans, animals, plants, trees or any

other organism. Any kind of harm to any of the element is going to reflect consequences on other. For example: nano plastic particles are found in our food chain, so we can say that it is in humans as well as in animals. We must be careful of our consumption habits, what we are consuming, how we are consuming and what happens after our consumption of products. These questions must be asked before consuming.

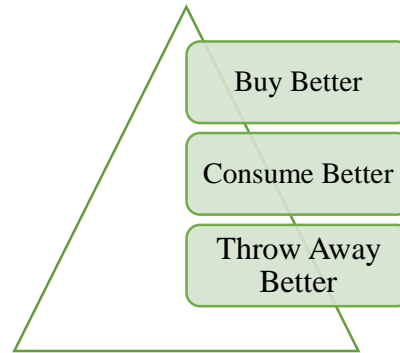
### **1.5 Responsible Consumption:**

Responsible consumption is based on sustainable development concept but responsible consumption is a whole wider concept than sustainable consumption. We are living on this planet earth. We have joint responsibility towards every element of the earth. We must consume products with lower environmental impact, products which are made with respect for society, products which are healthier, products which follow moral or ethical principles and products with positive environmental impact. Responsible consumption is based on following three criterions:

1. It is beneficial for economy. It supports local economy. Goods and services that are traded are based on benefits for every agent involved.
2. Goods and services that are produced are based on fair wages and better working conditions for employees. These goods and services are beneficial for society in terms of health benefits and others.
3. Responsible consumption is associated with consumption of products with lower environmental impact associated with different stages of the products from manufacturing till disposal.

“Responsible consumption is all about consuming greener products without wasting any and considering after life of products like recycling and reusing.” It is just about acting responsibly towards earth while consuming any product. We have the

responsibility towards environment because our life is dependent on resources of earth and we must put joint efforts towards environment protection and responsible consumption is the part of environment protection. Responsible consumption consists of three activities: buy better, consume better and throw away better.



**Figure 1.1: Concept of responsible consumption. Source: (self)**

### **Buy Better:**

Buying better means purchase of greener products. Products which will help in saving environment. These products are better than conventional products in terms of their benefits towards environment, health and society. Buying better version of products may cost more but it will save us from cost of irresponsible consumption.

### **Consume Better:**

Consuming better means avoid any kind of wastage and practice of sustainable consumption habits. It will save lots of earth resources. Consuming the products at its fullest capacity is the best way to avoid any kind of wastage. Throw-away fashion trend needs to stop. Sustainable consumption habits mean thinking about demands of future generation while fulfilling the demands of present generation.

**Throw Away Better:**

Most of the waste goes to the environment due to which environmental pollution increases. If we consume products that can be recycled after consumption and have low environmental impact then we can save environment from pollution. Throw away better means considering after-life of the products while consuming products.

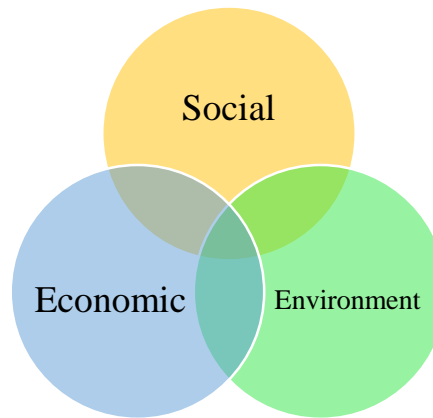
**1.6 Sustainable Development:**

*“We have no option as a society, as a business but to really adopt a sustainable business model. I think that’s a prerequisite for every business to survive as we go forward.”*

- Mukesh Ambani (Bloomberg)

The idea of sustainable development is relatively new in comparison to other advancements of the world. Creation of clean and unspoiled environment took importance with the foundation of United nations Environment program (UNEP) in 1970. This was the first time when different nations came together to talk about “Ecological balance” and “The future of humanity”. From that moment till now every nation is trying in some or the other way to be sustainably responsible towards environment. Environmental issues are the second most talked about issues in the world amongst various problems faced by nations. Brutland commission of United Nations defined sustainable development in 1987. “Sustainable development is achievement of satisfaction of human wants without compromising wants of future generation”. It is based on fulfilling needs of present generation without exhausting resources to fulfill needs of future generation. Sustainable development is the development based on the concept of developing harmony between present and future generation’s needs. Sustainable development is an approach of finding right proportion of usage of social,

economic and environmental components for fulfilling needs of the present generation. So, that the needs of future generations are not compromised. It is about finding the right balance between social, economic and environmental factors usage.



**Figure 1.2: Concept of sustainable development based on balance of social, economic and environmental factors. Source: (self)**

### **Sustainable Development Goals (SDGs):**

In 2015, 193 nations came together to form the most inclusive and comprehensive negotiations in the history regarding protection of planet earth from various calamities. Various issues affecting human race were taken up and comprehensive goals were set up to be achieved before 2030. These 193 nations expressed their determination to achieve these goals before 2030. Individuals, innovations and actions are helping planet in achieving these SDGs. “There are 17 sustainable development goals :**1.** No poverty **2.** Zero Hunger **3.** Good Earth and Well-being **4.** Quality Education **5.** Gender Equality **6.** Clean water and Sanitation **7.** Affordable and clean energy **8.** Decent work and economic growth **9.** Industry, Innovation and Infrastructure **10.** Reduced Inequalities **11.** Sustainable Cities and Communities **12.** Responsible Consumption and Production **13.** Climate Action **14.** Life below water **15.** Life on Land **16.** Peace, Justice and strong Institutions **17.** Partnerships for the Goals”. India ranks 117 out of 192 nations in SDGs index released by State of India’s Environment report 2021.



**Figure 1.3: Sustainable development goals.**

(Source: <https://www.un.org/sustainabledevelopment/blog/2015/12/sustainable-development-goals-kick-off-with-start-of-new-year/>)

### **Sustainable Development Goal 12 (SDG 12):**

SDG (12) refers to “Responsible Consumption and Production”. If our population reach 9.6 billion by 2050, it will require almost three planets to provide natural resources needed to sustain current lifestyle, (World Population Prospects, 2019). We should consider alternatives for better future. SDG 12 is all about achieving economic growth without environmental degradation, increasing resource efficiency and promoting sustainable lifestyle. This goal will contribute towards elimination of poverty and achieving low-carbon and green economies, indirectly. SDG 12 has 11 sub-goals. “SDG 12.1 suggests 10-year framework for sustainable consumption and production. SDG 12.2 deals with sustainable and efficient use of natural resources. SDG 12.3 Proposes reduction in food wastage and food losses. SDG 12.4 deals with reduction of chemicals in soil, air or water to reduce their impact on humans. SDG 12.5 is all about reduction in waste generation through recycling and reuse by 2030. 12.6 encourages

companies for adoption of sustainable practices and their reporting. **SDG 12.7** promotes sustainable procurement practices. **SDG 12.8** deals with spreading awareness about adoption of sustainable culture amongst consumers. **SDG 12.A** is about supporting developing countries in adoption of sustainable consumption and production. **SDG 12.B** is about sustainable tourism and promotion of local culture and products. **SDG 12.C** deals with rationalization of inefficient fossil-fuel subsidy.” As we can see that SDG 12 is all about promoting consumption practices will be having minimum impact on environment so, that we can save our planet from exhaustion of natural resources. Many countries are working towards it, like European union goals towards SDG 12, are energy efficiency of products, green public procurement, improve environmental efficiency of products, EU ecolabels of products and more pro-environmental goods and production technologies. We can say that EU is trying towards making production techniques as well as products greener so that the carbon footprint of consumption can be reduced for environment. From SDG 12 and EU efforts towards achieving those SDG 12, we can derive the concept of green products. Green products are those which leave less or no carbon footprint on environment. These products follow “Cradle to Cradle” approach in terms of production and consumption so that lesser carbon footprint can be left on environment. It is different from Cradle to grave approach as in this we only consider life cycle of the product and their impact on nature but cradle to cradle approach also considers post-consumption cycle of the product and its impact. Its means green products leave less carbon footprint before production, during production and after consumption.



**Figure 1.4: Sub-goals of SDG-12.** (Source: <https://www.globalgoals.org/12-responsible-consumption-and-production>)

### Target of SDG 12:

1. Implement 10-year framework for sustainable consumption and production pattern in both developed as well as developing countries.
2. Achieve sustainable and efficient use of resources by 2030.
3. Reduce food wastage and food losses at production, retail and consumer level. (Halve per capita by 2030).
4. Sound management of chemicals, wastes and reduction in their release in air, water and soil to avoid adverse impact on humans.
5. Reduction in waste generation by 2030 through recycling and prevention.
6. Encouragement, promotion and integration of sustainable practices in companies' reporting cycle.
7. Promotion of sustainable public procurement practices.
8. Promotion of sustainable lifestyle and sustainable development by 2030.

9. Provide technology to developing countries for adopting sustainable consumption and production practices.
10. Promotion of local culture and tradition and development of tools to monitor sustainability.
11. Reduction in harmful subsidies that encourage wasteful consumption.

## **1.7 Green products:**

Green products are the most important part of responsible consumption. Responsible consumption behavior has significant impact on purchase of green products. Consumer developing responsible consumption habits is most likely to purchase green products, (Burucuoglu & Erdogan, 2019). If we analyze the Indian responsible consumption behavior, we will find that buying eco-friendly products, environment friendly packaging products, repairing and reusing things, option of pooling or sharing things, extra care while disposing materials, donation, exchange and resold, are the green practices adopted by Indian consumers, (Agrawal & Gupta, 2018). The idea of green consumption goes back to 1960s and 1970s with increased concern towards protection of environment from industrial pollution. First “Green brand” appeared in American markets in 1980s since then it gained popularity amongst consumers. Earlier, it was niche phenomenon and from 2000s, American interest in green products increased. Every product leave carbon footprint on environment but green products leave lesser carbon footprint than conventional products. Green Products are environment friendly products which are reusable, recyclable, biodegradable and resource efficient in nature combined with reduced negative environmental impact. Term “Green” represents care for environment, it’s about considering environmental impact at every step-in life cycle of a product. Criterion for green products is following:

1. Products should respect our environment and biodiversity.
2. Organic products
3. Products that preserve the quality of soil, water and air
4. Products made in good working condition, without forced or child labor or forced working hours.
5. Products manufactured with good hygiene and healthier standards.
6. Products without harmful chemical, fertilizers or toxins such as phthalates, bisphenol etc.
7. Goods that create more jobs and provide better working conditions.
8. Locally produced goods
9. Respect animal welfare
10. Contribution towards society
11. Low-carbon foot-print

Green products include those goods and services that are based on sustainable use of bio diversity and eco-systems (e.g.: eco-tourism and bio trade), goods which have been produced with fewer impacts on bio diversity as a result of more efficient or lower impact production methods (e.g., timber procured from reduced logging), and goods whose consumption will have a reduced environmental impact as a result of decreased pollution load (e.g., bio degradable detergent), (OECD, 2013). A product that meets one of these criteria of possessing qualities that will protect the environment; replaced artificial ingredients with natural ingredients or products that are non-toxic, energy and water-efficient, harmless to the environment, recyclable and biodegradable, (Obayelu, A. E. ,2016). A product that consumers prefer because it help in protecting the environment during the manufacture, use, and disposal of the product. Generally

organic, ecological, recyclable, and energy-saving products are called green products, (Yildirim, S & et al, 2016).

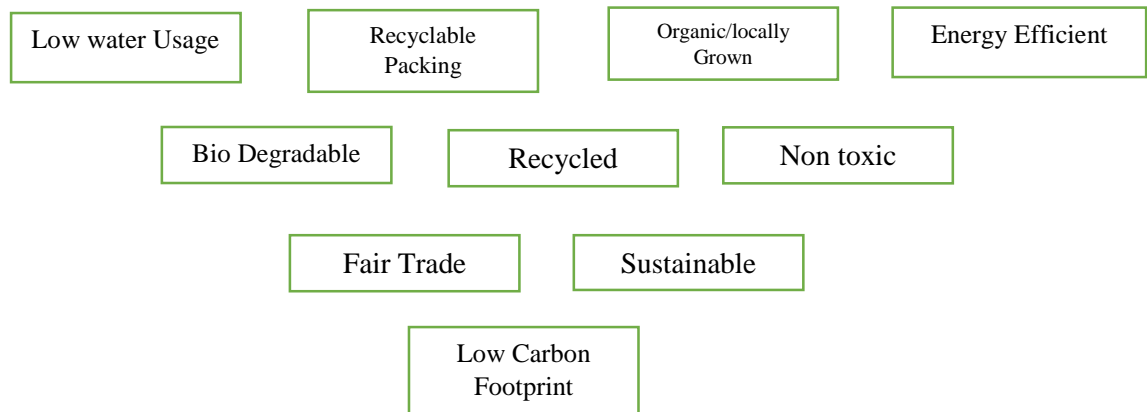
*“Green Products are made with resource-intensive manufacturing technique consumed with sustainable practices and disposed with lesser harm to environment”*

**Table 1.1: Difference between Green, Natural and Sustainable products**

<b>Base</b>	<b>Green</b>	<b>Natural</b>	<b>Sustainable</b>
<b>Definition</b>	Green Products are made with resource-intensive manufacturing technique consumed with sustainable practices and disposed with lesser harm to environment.	Natural products are made without any artificial pesticide, chemical or material	Sustainable products are made after considering present and future needs of generation.
<b>Scope</b>	Green products include natural products but they are not sustainable products	Natural product can be considered as first step of being green.	Sustainable products are one step ahead of green products. In addition to environment friendliness these are conscious towards future.
<b>Considered Aspect while manufacturing</b>	Environmental aspect	Raw material aspect (organic ingredient)	Environmental, social and economic aspect
<b>Packaging</b>	Eco-friendly packaging	Conventional packaging	alternative methods of packaging (use of less packaging material or product

<b>Base</b>	<b>Green</b>	<b>Natural</b>	<b>Sustainable</b>
			with no packaging requirement.)
<b>Production</b>	Produced with resources of lesser negative environmental impact	Produced with all-natural ingredient without any artificial substances	Produced in that way, it doesn't affect the needs of future generation
<b>Area</b>	Broader scope than natural products	Narrow scope	Broader scope than green products and natural products
<b>After life of products</b>	After-life of product is considered through recycling, upcycling and downcycling	Not considered	Long-life of products is most important.
<b>Environmental impact</b>	Less negative environmental impact than natural products for example use of vehicles based on renewable energy	Less Negative environmental impact than conventional products	Finds solution for negative environmental impact like planting trees for eliminating pollution generated in activities.
<b>Longevity and durability</b>	Normal life but through recycling or repairing life can be increased	Shorter life	Sustainable products have longer life than any product
<b>Example</b>	Purchasing environment friendly water bottle	Natural juices, vegetables etc.	Carrying steel bottle for drinking water instead of purchasing one

## 1.8 Characteristics of Green Products:



**Figure 1.5: Characteristics of Green Products. Source: (Self)**

**Low water usage:** Water is the most important source of life on earth and quantity of consumable water is very low. We must preserve our existing resources of water at any cost. Most of the products require water in their manufacturing. Green products are those which requires less water as well as efforts are made for reducing wastage of water during their production. Example: One cotton shirt requires approximately 3000 liters of water. There is a clothing brand called “Doodlage” which make clothing items from waste generated by industries which requires zero water and chemical usage. So, it is an example of green product.

**Recyclable packing:** Plastic waste takes 20 to 501 years to dissolve based on its structure and material used. We can imagine how much plastic waste would be around our planet in form of plastic, waiting to decompose. Green products are based on packaging which is recyclable or decomposable easily. Paper, jute bags, bio-degradable cotton bags, eatable cups, bamboo packing materials and products. Bodyshop runs an initiative spread across its 40 stores where customers can return empty plastic packaging in stores for recycling. They are also purchasing recycled plastic from waste pickers for their products.

**Organic/Locally grown:** Organic products are free of any artificial pesticides, preservatives, coloring, irradiation, fungicides, rodenticides, ripening agents, fumigants, drug residues and growth hormones or genetically modified organisms. Locally grown means usage of local arts, techniques, raw materials, labors so that the product will be cost efficient as well as ethically strong.

**Energy Efficient:** There is an efficient use of energy resources in green products or renewable energy is used in their manufacturing as well as in consumption process.

**Bio-degradable:** Bio-degradable means how much time product will take post-consumption to decompose in environment. Green products are 100 percent bio-degradable and does not take much time to decompose in nature likewise plastic which takes 500 years to dissolve.

**Recycled:** Products which are manufactured through recycling process can also be called green products because resources are not exploited in their manufacturing like conventional products.

**Non-toxic:** Green products does not use harmful chemicals or poisonous ingredients that raise safety concern for their production or does not emit harmful chemicals after consumption.

**Fair Trade:** Fair trade certification ensures ethical trade at fair wage under safe working conditions with improvement in livelihood of workers, farmers or any other associated party like suppliers, middlemen, agents, etc. with protection of environment. It is about being fair to community at large and giving them fair share on every product which is produced with the help of community. It also ensures welfare and well-being of animals, plants and any bio-diversity involved.

**Sustainable:** Sustainable is the broader term than green products. Sustainable means meeting the requirements of present without compromising the needs of future. It combines social, economic and environmental aspects of anything together for better future. In consumer products category we cannot find anything such as truly sustainable that's why we go for green products which have certain characteristics of sustainability.

**Low-Carbon Footprint:** Carbon-footprint of products means emission of carbon during life-cycle of products and afterwards. Green products have low-carbon footprint than conventional products.

There is no such thing as 100 percent green products because every product is going to leave certain impact on environment but if they are green products then this impact will be minimum as compare to conventional products. The characteristics which are mentioned above define criterion for being a green product. Not every characteristic can be found in one green product but on the basis of these characteristics, we can decide about greenness of the products whether it is 90 percent green or 80 percent green. There are no well-defined definition, laws or criterion regarding green products. There are standards of organic products or fair trade etc. but there are no universal laws, labels, certification or marks which will help consumer in selecting green products.

### **1.9 Advantages of Green Products for consumers:**

Consumption of green products have following advantages for consumers:

**Cost-effective Products:** Green products saves lots of money of the consumer but not in a conventional way, it's not about prices because prices of green products are higher than conventional products but green products are cost-effective in an indirect way. Green products last long and they are healthier than conventional products as well as they save environment. So, these products are saving cost of getting sick, negative

environmental impact on health and business as well as cost of frequent buying of conventional products due to short life, for example: Solar Panels for energy production. They involve one time cost of setting up but gives lifelong benefits as well as they have less carbon footprint than conventional electricity sources which is a healthier than conventional electricity sources.

**Low-maintenance:** Maintenance charges of green products are comparatively low than conventional products. Like solar powered energy sources have low operational cost if handled properly.

**Healthier:** Green products are certainly healthier than the regular one because they are free from harmful chemicals and components which results in adverse impact on health. Green products improve physical as well as mental health. For example, organic food products are healthier or green cosmetics and fashion products are better for skin than regular one.

**Mental health:** According to psychologists' pollution, urbanization, use of lead in products have an adverse impact on mental well-being of consumers. More greener products can do wonders for mental well-being of human because they are closer to environments. For example: when we want to relax or find peace we always go to greener places or places which are closer to cleaner environment.

### **Advantages of Green Products for Brands:**

Production and distribution of green products have following advantages for brands:

**New Market:** Thought of green products is not new but its application to different segments of products is something which has not been explored much. It gives big opportunities to big brands to explore green products under different segments of

products because it has a wide scope in future. Consumers already know about it and they are just waiting for better alternatives at effective prices.

**Competitive advantage:** Something exclusive or distinct always catch an eye of consumer and if it gives extra benefits in terms of health then it is certainly an edge for a brand over other competitors in the market. Being green and adopting green can be the “new black” in future if it is advertised and managed properly.

**Goodwill:** Doing something for environment protection and community at large will definitely give some brownie points to brands in the name of enhanced goodwill.

**Cost-effective:** Producing green products is a costly affair but it can be made cost-effective. Production of green products take longer time to reach at super or abnormal profit but break-even can be achieved easily. With right strategies, techniques and efforts profits can be achieved. All it requires is just to find the right consumer base for green products.

**Brand Loyalty:** Better and healthier is always admired. If green products are success in giving consumers better quality with better benefits, then brand will add loyal customers for their products.

### **Advantages of Green Products for Society:**

Consumption of green products can be beneficial for society in following way:

**Employment:** Prospects of green products markets turning into an emerging market are quite high. One all need is right amount of investment and technology to exploit the concept of green products among various categories of consumer products. It has the greatest potential for providing jobs to lots of people. It can save lots of artisans, craftsmen, local arts and work from extinction.

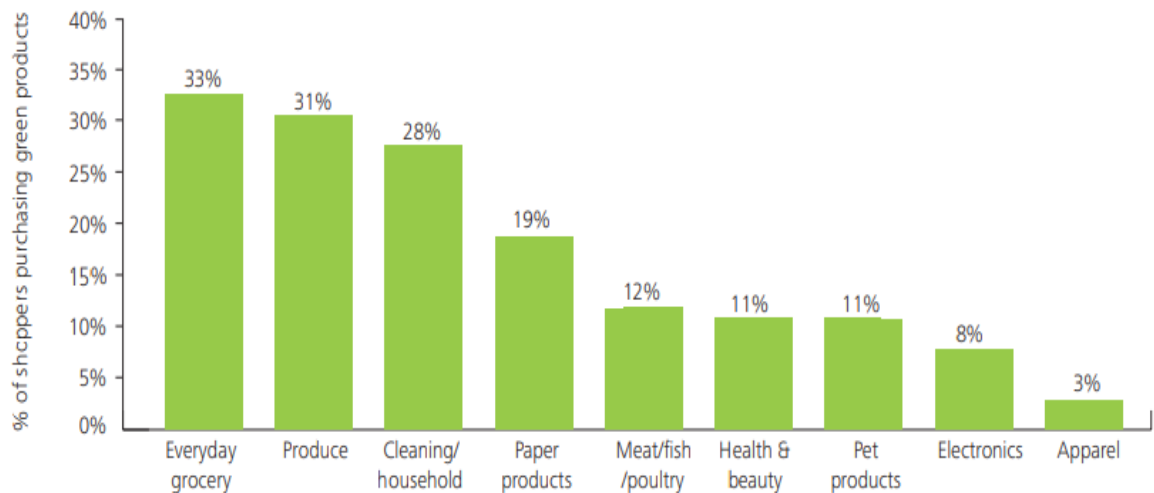
**Ensures optimum utilization of resources:** green products are green because they ensure lesser impact on environment through optimum utilization of resources available. Green products are based on renewable energy which is the best example of optimum utilization of resources.

**Protection of environment:** green products have low-carbon footprint. It saves harmful greenhouse gases going into atmosphere such as CO<sub>2</sub>, CFC, Methane etc. They are bio-degradable and their after-life negative impact on environment is also very low. Overall, they generate less to zero pollution in comparison to conventional products.

### **1.10 Examples of Green Products in different categories:**

Being green is emerging as a new lifestyle trend for many consumers. Consumer wants to differentiate themselves from others by way of adopting something new and healthy. Green products are not in the basket of consumer as dominant purchase items but green products are definitely emerging as one. Graph 1.1 represents consumers purchase of green products among various categories. It shows that consumers are more interested in green products in consumable products categories rather than merchandise.

**Graph 1.1: Percentage of respondents purchasing a green product in that category on this shopping trip. Source: (GMA/ Deloitte Green Shopper Study, 2009) (Note: Sample Size is 6,498 Shoppers Interviewed.)**



### **Food:**

Food, water and energy are the basis of human life. These elements are interlinked with each other. Food production depends on water and energy resources. Production of food itself responsible for 26% global greenhouse gas emissions. 78% of global ocean and freshwater eutrophication is caused by agriculture. One-quarter of world's greenhouse gas emission is due to food products. By making right choice of food products and sustainable diet plan, carbon footprint of food on environment can be reduced, (Ritchie, H & Roser, M, 2020). Green food Product can be seen as the “controlled and limited use of synthesized fertiliser, pesticide, growth regulator, livestock and poultry feed additive and gene engineering technology, (Lin, P. and Huang, Y, 2012).” Examples of green food products are organic or natural food products free of harmful pesticides and fertilizers and produced with sustainable practices.

### **Clothing and Textile:**

Clothing is the second most pollution generating industry in the world. Fast fashion trend has increased the consumption of clothing products. Humans are polluting environment just to wear new garment every day. These practices need to change.

Option of Green clothing is before us. We must consider green clothing products for consumption. Green clothing is based on sustainable practices. These are made up of reusable and recyclable fabric. Their carbon footprint is lower than conventional clothing products. Examples: H&M Conscious collection, Doodlage fashion brands, liva-Eco brand, good earth, No Nasties, Pero, Fab India etc.

**Buildings:**

Green building is based on lesser environmental impact concept. Its design, construction and operations reduce or eliminates negative impacts on climate and environment. These buildings make better use of resources, based on renewable energy, pollution and waste reduction methods, good indoor air, sunlight and use of non-toxic, ethical and sustainable material. Example: Infosys limited (Mysore), T-Zed homes (Bangalore), Suzlon one earth campus (Pune), Rajiv Gandhi International Airport, Hyderabad etc.

**Transport:**

Transportation is the main source of air pollution and noise pollution which results in lots of harmful effects on health and environment. Green transportation is based on green vehicles which leave less carbon footprint on environment. These are based on alternative fuels like electricity, natural gas, hydrogen, neat-ethanol, blend of bio-diesel etc. Examples of green vehicles are Tesla electric cars, CNG based or hydrogen-based auto, e-rickshaw etc.

**Electronics:**

Electronic waste poses a significant challenge before environment and climate. New innovations and upgradation are main reason for piled-up electronic waste. Green electronics can be the solution to this generation of electronic waste. Green electronics

are based on 3 components: 1. Eco-efficient and sustainable product design 2. Elimination of energy wastage 3. Refurbishment and Reuse. These appliances are based on end-to-life approach to eliminate their carbon footprint. Examples: LED bulbs, BEE five-star rating appliances, Solar chargers, TCO certified laptops and other electronics this includes brands like Lenovo, apple, Asus etc, Eco-friendly batteries. Etc.

### **Beauty:**

Green beauty products are those which meet our needs without harming environment. These products are good for health of human, animals and environment. Green beauty products reduce toxicity of conventional products. These products must be free from BHA, BHT, coal tar dyes, Formaldehyde-releasing preservatives, Aluminium, DBP (Dibutyl phthalate) etc. These chemicals have adverse effect on our health. Examples: The Body shop, Forest essentials, Kama Ayurveda, Soutree etc. are the products which are free from these chemicals.

### **Health care:**

Healthcare industry has also large carbon footprint. This industry generates 5.9 million tons of waste, annually. Hospitals are responsible of 8% carbon emissions of human activities. Green health care products work on three attributes: 1. heavy metal free components such as lead, mercury, hexavalent, chromium and cadmium 2. Suppliers should offer end-to-life solutions for products like take back options etc. 3. Energy efficiency. Examples: Johnson & Johnson: Earthwards initiative, (Sutter, K, 2012).

### **Household Products:**

Conventional cleaning products have harmful chemicals which are dangerous for human and planetary health. These chemicals cause headaches, nausea, rashes, difficulty in breathing, neurological damages, reproductive defects and cancer. These

ingredients also pollute air and cause damage to our ozone layer which later results in sun's harmful ultra violet rays on earth. Green household products are those which are free of these chemicals and toxins or use negligible amount of these chemicals. Examples: household products with green seal or other certification, The Better home products etc.

### **1.11 Indian Companies' initiatives towards green products:**

Indian brands and companies are definitely known to the concept of green products. Some of them doing great work in greening of consumer products to save the environment. Some are mentioned below:

- Zomato is working towards ensuring 100 percent bio-degradable packaging for their products. It will consist of sugarcane bagasse, bamboo, palm leaf and paper solutions.
- Godrej consumer products, PepsiCo, L'Oréal and P&G are also working towards recyclable, reusable and compostable packaging.
- There are many Indian fashion brands which are working towards green fashion retail in India such as Doodlage, FabIndia, No Nasties, Good Earth, Brown Boy, Nicobar, Anokhi, Taavi, Upasana, Chola-The Label, Liva fabrics by Aditya Birla group etc.
- Wipro and Infosys are working towards green products. Wipro has launched desktops, laptops known as "Wipro Green wares". They are aiming towards carbon neutral, water positive and energy saving in business. It is also working towards net zero carbon emission. Wipro's 18 building are green building, according to international green standard. Infosys has installed solar panels in

their campuses. Products manufactured by these companies are less harmful towards environment.

- Suzlon energy is the world's 4<sup>th</sup> largest wind power company that manufacture green products and it is the best in India. It manufactures wind turbine.
- HCL has launched HCL ME 40 notebooks. These notebooks are free of PVC (polyvinyl chloride) or other harmful chemicals. This is a 5-star rating energy efficient product given by Bureau of energy efficiency.
- Haier have launched eco life series for their products which is based on semi-automatic and automatic washing machines, refrigerators, Air conditioners etc. these products are greener than the regular one.
- Samsung has launched eco-friendly LED backlight which is 40 percent energy efficient and devoid of harmful chemicals such as lead mercury etc.
- TCS has gained the spot of Greenest Company in Newsweek with the global green score of 80.4%. They are creating greener products for agriculture and community benefits.
- ITC is also working towards low carbon growth path and cleaner environment for their products.
- MRF tyres, ONGC, IndusInd bank, L.G, Wipro etc. Many Indian companies are working towards green products in India.
- Hindustan unilever company works on "Less, Better, no plastic" framework policy for delivering its products.
- Harley Davidson launched its electric motorbike brand "Livewire". It will also be available in India from December.

- IFFCO (Indian Farmers fertilizers cooperatives limited) has developed Nano urea liquid which has replaced conventional urea. It is cheaper, environment friendly, more effective and improves nutritional value.
- Indian Council of Agricultural research has launched Anti-Methanogenic feed supplement for animals called “Harit Dhara”. It cuts down methane emission of cattle to 17-18% and it also results in higher milk production.
- Pune startup “Weinnovate” Bio solutions has launched alcohol-free, aqueous, non-inflammable and non-toxic hand sanitizer which is gentle to skin.

### **1.12 Identification of Green Products in India:**

Eco-mark was launched by India in 1991 for easy identification of environment friendly products. It is based on Cradle-to-grave concept. It is awarded to products which follow required environment friendly criterion and quality requirements of Indian standards. There are other identifications available such as Ecocert, EPEAT, Earthcheck, Carbon neutral certification, BEST (Better environmental sustainability targets) standards 1001, Best Aquaculture practices, FSC (forest stewardship council), GEO certified, Global Green Tag certified, Global Organic Textile Standards, Goodweave, India organic (Nation program for organic production) NPOP, totally chlorine free, UPS carbon neutral, WQA gold seal, Sustainable forestry Initiative (SFI), Natutre-label. etc. which ensures environment friendliness of the products.



**Figure 1.6: Different labels available in India for identification of green products. In order from left to right Eco-mark, Eco-cert, GI tag, Global organic textile, Nature-label, India organic. Source: (companies' websites)**

### 1.13 Challenges for Green Products in Indian Market:

There is a wide scope of green products to gain prime place in the basket of consumer if consumers are familiar with the benefits of greener products. Following bottlenecks are faced by green products in Indian markets:

**High Price:** Green products are costlier than the conventional products that's why only high-income group purchase them. Middle income group has also high purchase intention towards buying green products but due to price constraint they are not being able to convert their intention into a buying decision. The problem of high price can be solved through large production, large demand, better logistical solutions and proper management. Marketing of green products can also play an important role in solving high price problem. Brands should made consumer aware of hidden cost of consuming conventional or non-green products whose consumption is going to cost them more in future in indirect way. As direct cost of green products is higher but the indirect cost is much higher in case of non-green products due to negative environmental impact which results in adverse impact on health, business and other factors.

**Investment:** The market of green products is emerging and it is in its initial phase in India. In the name of greening their products, big brands are just focusing on green packaging but there are certain other factors which needs be made green. As compare to other countries, India is quite behind in terms of investment in green products. Government must provide incentives to companies which are making green products. Corporate and government sector must work together to increase investment in green products because this is the only solution for greener future.

**Availability:** Greener alternatives of conventional products are available but they are not in reach of consumers. Lots of consumer base of green products is lost in the way of finding green products at the nearer store. Demand of green products is replaced by non-green products due to unavailability. Retailers can play an important role in making green products available for consumer at nearer store.

**Unawareness:** Millennials and generation Z forms the prime consumer of green products. There are lots of ignorance, skepticism, mis-information regarding green products amongst consumers in India. Awareness is the solution for most of the challenges faced by green products in India. As awareness will increase demand, demand will increase investment and investment will lower prices.

**Green washing:** green washing is the term used for false claim of companies regarding greenness of their products. Many companies make false claim of achieving eco-friendliness of their products in order to charge high price in name of green products, this malpractice increases doubts in the mind of consumer. So, government must stop this malpractice and define proper criterion for identifying green products.

### **1.14 Consumer Purchase Intentions Towards Green Products:**

Consumer is the one who purchases or uses goods and services for consumption. Term consumer include individual as well as groups which purchases goods or services to satisfy their social, physical or economical needs. Consumer pays some amount for goods and services whether in present or in future. Consumer is the center around which whole economic system revolves. Every single element of economy revolves around consumer. Demand, supply, prices, production, market, various economic policies etc. depend on consumer. Consumer is the most important part of chain of distribution. For determining the future of green products, it is very important to study consumer behavior of green products.

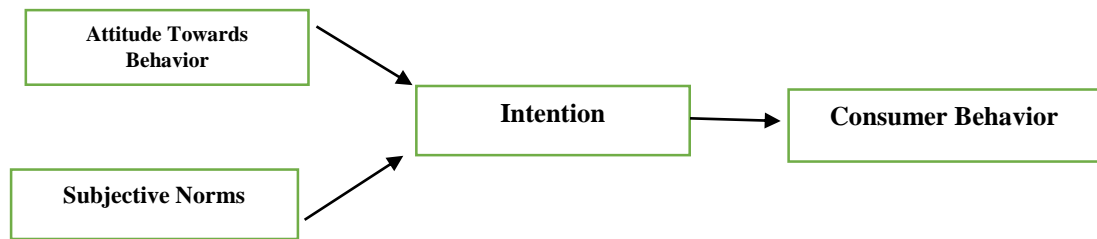
**Consumer Behavior:** Consumer behavior is the study of buying behavior of individuals, groups and organizations. How consumer purchase, use and dispose products and how attitudes, preferences and attributes of consumer affects their buying behavior, is the basic scope of consumer behavior study. Consumer Behavior emerged in 1940-1950s as a sub-discipline of marketing. Consumer behaviour entails "all activities associated with the purchase, use and disposal of goods and services, including the consumer's emotional, mental and behavioural responses that precede or follow these activities, (Kardes, F., et, al, 2011). Consumer Behaviour mainly is a 5-step process which include:

1. **Recognition:** This is the stage of identification of consumer's need. At this stage, consumer recognize its physical, social, economic or other kind of need and take action toward fulfilling those needs. Stronger the strength of need, stronger the chances of purchase decision.

2. **Information search:** At this stage, consumer scans options for satisfaction of his needs or wants. He goes through various information about products and brands that will satisfy his needs or wants.
3. **Evaluation stage:** At this stage consumer evaluate those options and brands which were identified in the earlier stage. At the end of evaluation stage consumer form, its “Purchase Intention”. Purchase intention may or may not form into a purchase decision. Person’s intention to perform certain behavior is the main predictor of performance or non-performance of actual behavior, (Glanz & et, al, 2015).
4. **Purchase Decision:** This is the stage where consumer take the decision of buy or not to buy product. If the purchase intention is strong enough than it is certain that the consumer will purchase the product depends upon the circumstances.
5. **Post-Purchase Evaluation:** This is the stage where consumer compare his desired experience with resulted experience after consumption of the product. This stage will decide whether consumer will purchase the product next time or not.

There are theories of Consumer behaviour and we must understand these theories to develop better understanding of human behaviour in this research context. I have considered two theories of consumer behaviour for research problem. These theories are: Theory of Reasoned Action and Theory of Planned Behaviour.

### 1.15 Theory of Reasoned Action:



**Figure 1.7: A theory of reasoned action: factors determining a person's behaviour.** From Ajzen. I. and Fishbein.M. (1980) *Understanding Attitudes and Predicting Social Behaviour*. Prentice Hall, New Jersey, p. 8. Arrows indicate the direction of influence within hypothesized relationships. Source: (self)

Theory of Reasoned action was given by Martin Fishbin and Icek Ajzen in 1967. According to the theory, person's intention to perform certain behavior is the main predictor of performance of behavior. It means intention of a person determine whether or not person will perform certain behavior. Stronger intention indicates increased chances of likelihood of behavior. Intention is the key determinant of behavior and intention depends on two factors which is Attitude and subjective norms.

**Attitude toward the behavior:** It includes beliefs of the consumer regarding certain behavior which leads towards certain outcomes and evaluation of these outcomes. Attitude depends upon behavioral beliefs and evaluation of outcomes. **Behavioral beliefs** are certain outcomes or features which consumer associate with certain behavior. **For example:** There is a person who fear God and believe that bad behavior is punished by God that's why he exerts good behavior. So, here his beliefs regarding God are the predictor of his behavior. **Evaluation** means before forming intention person evaluate the outcomes of a performed behavior. Like in the above example, person will evaluate his belief that God will punish or not. If yes, then he will perform good behavior and if not then he will not exert good behavior.

**Subjective Norms:**

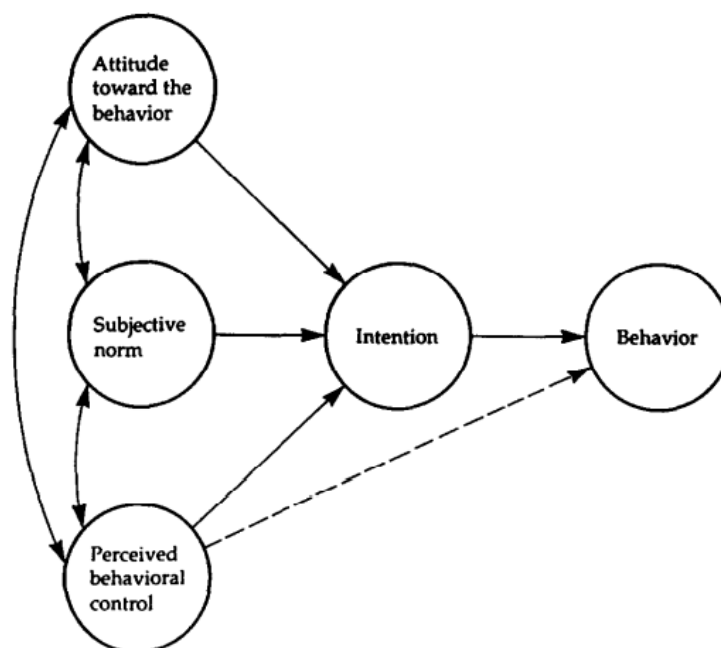
Ajzen, (2007) defines subjective norms as “The Perceived Social Pressure” to perform or not to perform the behavior. Perception of the relevant groups such as family, friends, neighbors, peers affect the performance of certain behavior. On the basis of perception person forms **Normative Beliefs** that certain behavior is acceptable or not. He should act in a certain way or show certain behavior for being accepted in the society. Like in the above example it may happen that due to beliefs of his family regarding God, person has formed his normative belief that he should display good behavior to save himself from punishment of God.

**Behavioral Intention:** Behavioral Intention is the function of Attitude toward the behavior and subjective norms. Both the factors form behavioral intention regarding certain behavior. Intention can be defined as “amount of effort one is willing to exert to attain a goal”, (Ajzen, 1991). Stronger intention means person will put more than normal effort for certain behavior. On the basis of above example person’s personal beliefs and social beliefs, person will decide to exert good behavior or not. Still, he has not exerted the behavior he has just formed his stronger intentions towards displaying good behavior due to fear of punishment from God.

**Consumer behavior:** Stronger intentions convert into certain behavior. On the basis of personal factors and social factor person takes the decision of displaying certain behavior or not. Like on the basis of above example, person exert good behavior that means his intention to perform good behavior which was dependent on his beliefs and social beliefs, motivated him to perform good behavior and his intentions were strong enough to convert into a behavior. Decision to ultimately perform or not perform the actual behavior, is the consumer behavior.

### 1.16 Theory of Planned Behavior:

Theory of planned behavior is an extension of Theory of reasoned action. This theory has been elaborated by Icek Ajzen. TRA include only two components that shape behavioral intention of consumer that were Attitude toward the behavior and subjective norms. Theory of planned behavior has added one more component which is Perceived behavioral control. TRA predict the human behavior on the basis of two components and through derived behavioral intention but the behavior was not certain. It means conversion of intention into behavior was not certain, as consumer may or may not exert certain behavior. To predict more accurate behavior Ajzen has introduced one more component which is perceived behavioral control.



**Figure 1.8: Model of theory of Planned Behavior. Source: (Ajzen, I, 1991)**

Theory of planned behaviour suggests three independent determinants of behavioural intentions which are following:

**Attitude Toward the Behaviour:** It refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question. This includes beliefs of a consumer toward certain behaviour.

**Subjective Norms:** It signifies the opinion of our significant others that influence our behaviour. It is perceived social pressure by the consumer to exert or not exert certain behaviour. Feeling of acceptance by our friends, family and society is a great driving force for exerting certain behaviour.

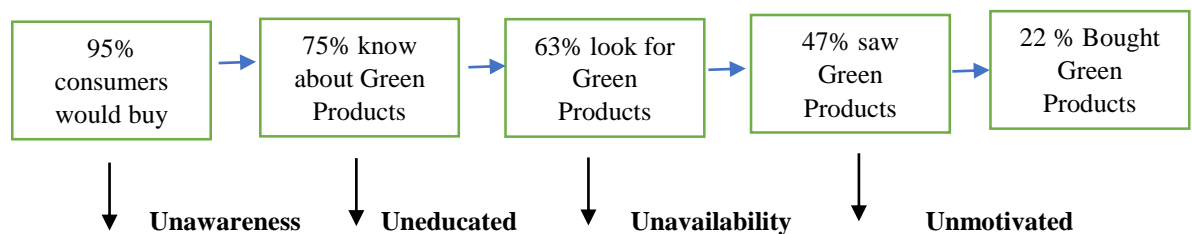
**Perceived Behavioural Control:** It refers to the perceived ease or difficulty of performing the behaviour and it is assumed to reflect past experience as well as anticipated impediments and obstacles. It is a confidence of a person for executing certain behaviour. These statements always start with “I am Sure. I can...I have ...” etc. It shows control of a person over his or her actions. Perceived behavioural control affects behaviour indirectly through intentions. Stronger control over intention to perform certain behaviour results in positive behaviour. Theory of planned behaviour can predict human behaviour more accurately than Theory of Reasoned action. Favourable attitude and subjective norms combined with perceived behavioural control forms strong intentions of performing certain behaviour. Relative importance of these determinants of intentions and behaviour may vary according to different situations and conditions. I have considered the theory of planned behaviour for developing model to understand the purchase intention of green products in India. This theory is very apt for understanding consumer purchase intention regarding green products in Indian market.

### **1.17 Limitations of the Theory:**

TRA and theory of planned behavior neglects human needs in predicting behavior. For example, if someone has no need for certain products no components can make him purchase that product. So, the concept of need is not taken into consideration while

forming these theories. Emotions of the consumer at the time of purchase are also neglected. Like if, someone has strong intention of purchasing certain product but while purchasing, he was going through some emotional imbalance than he will not exert predicted behavior. These three components must be tested amongst different circumstances in forming understanding of correlations between different components. Despite this limitation these two theories play important role in predicting human behavior.

### 1.18 Consumer Purchase Intention & Green Retailing:



**Figure 1.9: Results of consumer survey conducted by Deloitte. Source: (GMA/Deloitte, 2009)**

Consumer purchase intentions can be determined through theory of planned behaviour but whether these intentions convert into purchase decision or not, is doubtful. Indian consumers are highly sceptical about purchasing green products. Consumers are willing to purchase green products as it will give them healthier lifestyle but they are not purchasing it due to many reasons, as one of these many reasons is their dilemma regarding greenness of the products. Ninety-five percent of shoppers surveyed indicated they are ready and willing to consider more sustainable products, but green products were only purchased in 22 percent of the shopping trips. There are substantial gaps between the market's readiness for sustainable products and the delivery of those products to the shopper's market basket, (GMA/Deloitte ,2009). If we look at the figure 1.9, we can understand the behaviour of consumers because it is based on actual

survey done by Deloitte. From the total population 95% can be our potential green products buyers. That means in regular circumstances these 95% can purchase green products but if we, further analyse we will find that 75 % of these 95% know about green products only. That means consumers lack knowledge regarding green products, of the 75% only 63% look for green products and of these 63% only 47% found green products and at last only 22% purchased Green Products. It means companies have lost their 73 % consumers in the journey from purchase intention to purchase decision. This is a big loss for brands. Unawareness, lack of knowledge, unavailability and motivation are the reasons of loss of consumers. Motivation is also the biggest concern after forming purchase intention. Due to lack of motivation many consumers don't make the final move. Indian consumers are willing to purchase green products and their intentions are favourable but all they need is some motivation to convert their purchase intentions into purchase decisions. Consumer need retailer for making their final move. Retailers' presence and assistance can be the game changer for the products that are new to consumers and also new in the market. That's why I have thought of introducing the idea of green retailing for eliminating consumer's dilemma regarding the purchase of green products and assisting consumer in making final move. I have thought of Green Retailing and not just Retailing also because "Act before you Preach". Retailers cannot motivate consumers if they himself are not following green practices. Green Retailing is 'leading by example' method of motivation for retailers. If retailers follow green practices, they can leave more positive impact on consumers for purchasing green products. Green retailing can play an important role in converting purchase intention into purchase decisions. It can be the missing link between intentions and decisions. Retailers are the middlemen between manufacturers and the consumer. They have the power to influence both manufacturer as well as consumer. Retailers can influence manufacturer for adopting green practices as well as they can influence consumer for adopting green products. If we talk about green products retailers are the closest to the

consumer. They can influence the consumer in the most absolute terms in comparison to manufacturer or any other medium. Retailers and manufacturers are losing potential green sales from a quarter of shoppers at the store shelf. Inspiration and information will yield better conversion at the shelf level decision. For some shoppers, credibility and concerns about product performance enter into the equation, (GMA, 2009). It is a new era where retailers are not just limited to selling products and earning profit. We must consider them the prime mover of change in terms of green products and green practices amongst manufacturer and consumers.

### **1.19 Retailing:**

*“A retailer is a person, agent, agency, company, or organization, which is instrumental in reaching the goods, merchandise, or services to the ultimate consumer. Retailers perform specific activities, such as anticipating customers’ wants, developing assortments of products, acquiring market information, and financing.”*

- (H. Rina, Economic Discussions)

“Retail” word is derived from French word “tailor” which means “cut off or divide in terms of tailoring”. In 1433, it was recorded as noun which means “selling in small quantities”. Simple definition of retail is, “It is the activity of selling goods or services to consumers or end-users”. This activity usually occurs in retail stores or service establishment. It also includes door-to-door sales, online sales, vending machine sales or any kind of electronic sales regarding selling goods or services. Retail comprises of following:

1. Retail of goods (consumer goods, industrial goods, agricultural goods, manufacturing goods etc.)

2. Retail of services (Banking, tourism, insurance, healthcare, transport, legal firms, education, entertainment, publishers etc.)

Retail has its ancient importance. Its history goes back to 10,000 years. Initially, it was barter system then it was replaced with coinage. Presently, we are using legal tender money as well as new instruments of payment for retail. It was emerged in “Minor Asia” (Turkey) in 7<sup>th</sup> millennium BCE. Retail business has seen various changes thorough the years. It is now existed in many forms from store retailing to online retail. Big players like Walmart, Amazon, Alibaba etc. are ruling retail business thorough advanced strategies.

### **Retail Marketing Mix:**



**Figure 1.10: Six Ps of Retail marketing mix. Source: (Self)**

Retail Marketing mix is also known as “6 Ps”. It is a strategic plan of retailer, divided into some specific action plans regarding different components of retail. It is basically a marketing plan of a retailer. It includes price, promotion, place, product, presentation, personnel known as 4 Ps of retailing. Personnel and presentation are extension of 4 Ps to make it more accurate marketing plan.

**Price:** Price of a product is decided by adding profit to the cost of the product. It is called mark-up pricing strategy. Price is decided by keeping in mind organizational as well as retailer’s goals. Price strategy must be formed carefully as it should cover cost and profits of the retailer as well as it must attract customer for purchase. High price of a product will move away customers towards other brands and low prices will result in loss of the firm. So, balanced price is decided by considering cost, profits, competitor strategy, customer financial condition, etc.

**Promotion:** Retailer forms promotional strategies to attract and influence consumer purchase intention. Promotion impact directly purchase intention and purchase decision of the consumer. Various means of promotion can be used by retailer to influence consumers like online or print advertisement, promotional campaigns, tv advertisement etc.

**Place:** This includes operational strategies of the place (store or office) where retailer sell products or services. It defines organizational structure of the store for maintaining and running a store. Customer is going to spend most of the time of purchase in the store. So, it must be regulated properly as it has a huge impact on purchase intention of a product. Location, operation hours and space utilization are part of place strategies.

**Product:** What type of product retailer is going to sell, what assortment is needed for storing those products, what should be the inventory level, decision regarding

availability of the product, supportive services like repairing, updating of products as well as customer service etc. are the part of product strategy.

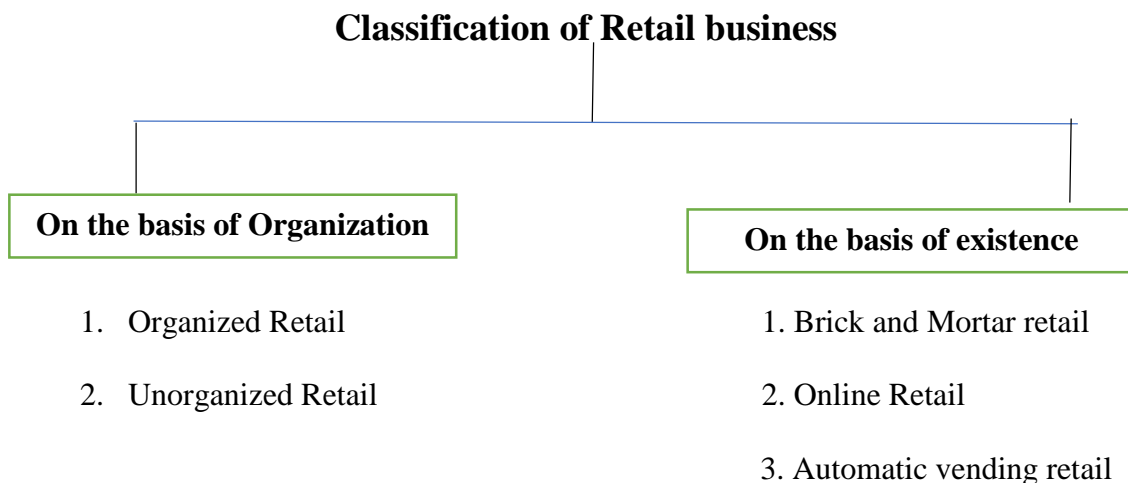
**Presentation:** It is concerned with outlay of the retail store. Exterior, interior layouts, delivery vans, employees' dresses, websites, warehouse, premise office, signage, identification of products etc. come under this. Retailer must keep in mind physical condition of the store, ambient conditions, signage, artifacts and decorations. Retailers must try to convince customer to spend time in the store and maximize opportunities of selling products. Retailer tries to project certain image in front of the consumer to sell products through presentation strategies.

**Personnel:** Personnel refers to people which are hired for doing job of retailing. They must be trained and skilled to make an impact. Number of employees, their qualification and their interaction with the customer is part of personnel strategies of the retailer. These are hired for providing retailing experience to the customers. They play an important role in inducing customer to purchase. We go to certain stores because of the people we have interacted in store. People like to go to barbeque nation food chain restaurant despite of comparatively high price because of employee's interaction with the customers as well as services they give. Human is a social animal. He like to interact and socialize. Retailers take advantages of this characteristics of the humans by making personnel strategies.

### **1.20 Indian Retail Sector:**

India is one of the largest retail markets in Asia. Indian retail sector is estimated at \$950 billion in 2018 as per report of IEBF. Brick and Mortar retailer's revenue stood at US\$ 1.39-2.77.100 percent FDI is allowed in single brand retail and 51 percent FDI is allowed in multi brand retail in India. Retail industry employs large amount of energy,

water and resources for its better functioning. Groceries and food are the largest sector followed by apparel, footwear and consumer electronics in India, (IBEF, 2011). “Domestically, it is one of the fastest growing sectors that accounts for 10% of the country’s GDP (Gross Domestic Product) and contributes to 8% of the total employment, (CII, 2020). However, 96% of the Indian retail market consists of large number of unorganized players with the average size of the shop less than 500 sq feet.”



**Figure 1.11: Classification of retail business. Source: (self)**

“A retailer or retail store is a business enterprise whose primary source of selling comes from retailing. Retailing includes all the activities involved in selling of goods or services directly to final consumer for personal, non-business use – Philip Kotler”. On the basis of organization there are two types of retail in India: organized retail and unorganized retail.

**Unorganized retail:** This includes general stores, pan/beedi shops, convenience stores, local “kirana” stores and family-owned stores spaced usually less than 500 square feet area in size. These shops are in great number in India. There is one store for every 100<sup>th</sup> Indian. These shops are not registered and their business is limited to very

small area. They operate at local level. They have their fixed customers on the basis of area population.

**Organized retail:** This includes registered shop owners who pay tax to government and have license for business. Examples: departmental stores, hyperstores, supermarket, specialty stores, discount stores, chain stores, mall and shopping centers etc. Global retailers are also part of organized sector.

On the basis of existence there are three types of retail in India which are following:

**Brick and Mortar Retail:** This type of retailing means existence of a physical store for retail business. It is the traditional form of retail where customer can come, browse and purchase products. Consumer prefer going to brick and mortar retail because it is where they can ask questions and check quality themselves. This form of retail provides real experience of shopping. Consumers can communicate with the retailer and retailer can encourage consumers for purchase of certain products and can show their gratification for the purchase. They can also provide complete assistance to the consumers for their purchase.

**Online Retail:** E-commerce industry is growing day-by-day. Many companies like amazon, myntra, flipkart are growing their existence in the country. So, many retailers have started providing services online also. Retailers can offer their online services through their own website, online application or they can register themselves with these companies like amazon, myntra and flipkart to sell their products. Requirement of physical store is not mandatory as they can sell their products online only, all they need is some warehouse to store their products. At the time of this pandemic, online retail has significantly increased. Many offline retailers are offering online retail as a part of their expanded business to save themselves from the loss due to lockdown and

restrictions. According to report by FICCI, online commerce industry will reach \$188 billion by 2025.

**Automatic Vending Retail:** In this type of retail, existence of physical store or presence of retailer is not necessary. In this type of retail, products are store in some machine. After paying certain amount you can purchase the product without anyone's assistance. This type of retail is mostly found in hospitals, cafeteria of schools and offices generally.

**Door-to-Door sale:** It is a part of direct selling method where small retailers sell their products by going door-to-door within their reach. They have no store or office. They purchase in small quantities from whole sellers and then sell it to customers. They take advantage of offers and discounts to lure customers into purchase.

### 1.21 Green Retailing:

*“we've 'No Option' but to make businesses go green to survive”*

- Mukesh Ambani (Bloomberg)

Green retailing refers to the management of retail business with care for environment and take advantages of environment friendly process. It is an approach of managing business by adopting sustainable practices and environment friendly processes. Green Retailing comprises of green product sales and eco-friendliness of other activities. Sales means selling products with low carbon footprint with environment friendly characteristics. Management of other activities means non-product management including retail supply chain, operations, premise of business, customer-facing initiatives and facilities management including after-sale services. “Greening of Retail is all about taking care of environment at every step from sourcing to disposal”. Green

retailing generally viewed as the incorporation of environmental protection measures into retail operations. Practical steps for incorporation of green practices into retailing are:

1. Low cost-level
2. Green products
3. Optimization of resources utilized
4. Efficient supply chain
5. Greening of workplace
6. Creation of Green brand
7. Sustainable reputation and image
8. Greening of operations.
9. Post-consumer waste management
10. Awareness and campaigning

“Retailers have a major role to play in care of environment- political, social and ecological, aspect. They need to adopt a holistic approach for a sustainable retail by encompassing strategy, design and execution to increase revenue, manage risk, enhance brand and reduce cost in their day-to-day operations.” These retailers need to emulate the best global practices to save the planet and to make it a better place to live for generations to come. It is needless to mention that a major responsibility lies with the Government not only in enacting legislations towards “green initiatives”, but also in ensuring its effective implementation, which no doubt can be achieved only with the co-operation of the various stakeholders, (**Ramanan & et al, 2014**). According to the report of CII, many consumers in India are ready to pay for environment friendly products such as apparel, food, personal care etc. Millennials are showing greater interest towards green products, and generation Y and Generation Z are following the

suit. Refrigeration, cooling, ventilation, lighting result in loss of energy in retail environment. That's why retailers are finding more sustainable solution of energy for their stores. Many large-scale retailers are using sustainable logistics and shipping options. Concept of green supply chain is also gaining its pace in India. Many retailers are going towards organic and locally produced products. Many e-commerce retailers are looking for electric transport for delivery of their products. Centre and state government are taking initiative for encouraging retailers to adopt sustainable practices. Single-use plastic is banned in few states, many Indian companies are switching towards recyclable plastic packaging etc. but these efforts are like a drop in an ocean. We need more collective efforts of government, retailers, manufacturers and consumers. New packaging regulations were announced by FSSAI (Food Safety and Standards Authority of India). To promote digital transactions, small retailers are incentivised by giving a lower rate of 6 percent of deemed profits on their total turnover, (CII, 2020). Indian government can take up following steps for encouraging green retailing:

1. Preparing cohesive policy for ease of doing business
2. Modernization through adoption of technology
3. Access to capital, funding and subsidies for retailers
4. Continuous upskilling of employees and managers
5. Public-private partnership in retail industry could benefit green retailing
6. Production linked incentive scheme would be beneficial for green retailing
7. Reduce procedures to start sustainable business
8. Tax benefits

## 1.22 Framework of Green Retailing:

External Activities	Internal Activities	Supportive Activities	Other Activities
Green Products	Green store management	Green Technology	Green Awareness
Procurement	Green logistics	Green Policy	Green campaigning
Green Packaging	Green Warehousing	Green HRD	
Green Promotion			
Green-After-Sale			

**External Activities:** It includes those activities which come under external environment of the retail business. These activities involve following:

1. **Green procurement:** when goods and services are purchased in a manner where social, economic and environmental concerns are kept in place, is called green procurement. It involves purchase of green products which are less harmful for environment as well as which are based on technology that is energy, water and resource efficient combined with low toxic and chemical waste generation. Green procurement refers to the spending and investment policy adopted by a firm towards purchase of environment friendly products as well as services, selection of vendors and the setting of required environmental criteria, (Adhikari, A et al, 2016).
2. **Green Packaging:** Green packaging simply means use of those packaging materials which are recyclable and environment friendly in nature. In green packaging, organic fabrics, refurbished products, plant based plastic recycled paper is used in place of plastic, tin canes, styrofoam etc. which are harmful for environment.

3. **Green Promotion:** We can call it promotion of green. Green promotion is advertisement of green products, policies and practices. It is concerned with promotion of best environmental practices for better and safe future.
4. **Green After-Sale:** Conventional retailing stops after selling products to consumers but the area of green retailing extends towards:
  1. Taking care of post-consumer waste
  2. Providing services for increasing life of products through repairs and modifications
  3. Providing means for disposal of post-consumer waste.Basically, green after-sale is concerned for taking steps towards post-consumer waste or selling products which can be disposed of in an environment friendly way. Example: H&M, clothing retailer provide services for disposing off discarded clothing items in exchange of coupons for next purchase from H&M.

**Internal activities:** These activities are concerned with managing in-store activities of the business in environment friendly ways:

1. **Green Store Management:** It means management of retail store in an energy efficient and environment friendly way. It can be achieved in a following way: green assortment of products, green advertisements, green promotional campaigns (like take-back programs), Eco-logical processes (eco-design of building, eco-friendly packing, Mobile bills), use of renewable energy. These are the simple steps which have a huge impact on consumers while purchasing any items. In-store experience can play a significant role in increasing consumer purchase intention of green products.
2. **Green Logistics:** It means making logistical operations optimized in terms of cost and efficiency while keeping in mind ecological aspect. Green Logistics refer to transportation, storage and handling of goods in a most sustainable way with an

objective to reduce the GHG emissions, (Prof. Murthy, R.A.D & et al, 2018). Efficient use of energy resources, reducing carbon footprint in operations, taking shorter trips, optimum utilization of trips, managing time, cost and efficiency of these trips are some ways of making logistics green.

3. **Green Warehousing:** Green warehousing is all about reducing cost, increasing efficiency and sustainability, reducing carbon footprint and encouraging employees for adopting best sustainable practices for managing warehouse. It involves upgrade of lighting, investment in energy efficient equipment, eco-friendly packaging, efficient insulating (not too cold not too high), hire HVAC expert (heating, ventilation, air conditioning expert).

**Supportive Activities:** These activities involve activities which provide basic support for adopting green practices in retail business. It involves following:

1. **Green technology:** Adoption of sustainable and environment friendly technology for ensuring best practices in retail business. There is an advance technology which provide faster and efficient execution of operations without considering environment and then there is green technology which ensures efficiency without doing much harm to environment. Green technology may take longer time to give desired results but their results have larger significance than advance technology.
2. **Green Policy:** Every retail business works on some rules and regulations. There is always an inherit policy in every retail business which they follow. Green policy is all about ensuring care of environment in every aspect of retail business. Being green should be their motto. It needs not to be something big but it lies in smaller steps like ensuring energy efficient lighting, waste management, recycling, no use

of plastic bags, giving preference to green products, making consumer aware of green culture. It is about doing their bit towards environment.

3. **Green HRD:** If any business wants to follow green culture, then it must ensure green HRD (Human Resource Development). “It is all about converting organizations culture of environmental carelessness to environmental carefulness”. It gives sustainable solutions for ensuring organizational growth. It involves following steps: 1) Ensuring green culture within organization for which putting training, learning and development schemes for employees to learn about becoming green consumer. 2) innovative approach for sustainable solutions. 3) Consumption of fewer environmental assets. 4) Transforming organizations culture into green culture. **Haddock et al. (2010)**, define Green HRD as “a cyclic process of continuous development and transformation of self, others and the organization, as prudent users of natural and manmade resources, aligning economic, environmental and social growth, for present and future generations.”

**Other Activities:** These activities do not come under the scope of conventional retailer but in order to encourage green consumption among consumers these activities are important. It involves following:

1. **Green Awareness:** Retailers can play an important part in encouraging consumers for purchasing green products because they come in direct contact of consumer. Retailers can make them aware of consequences of unsustainable consumption, they can make them aware of benefits of consuming green for them as well as for environment. In-store awareness as well as through other means like messages or e-mails, about availability of green products stocks, making separate

area for green products with proper signage and information etc. can be done on part of retailer for ensuring green awareness among consumers.

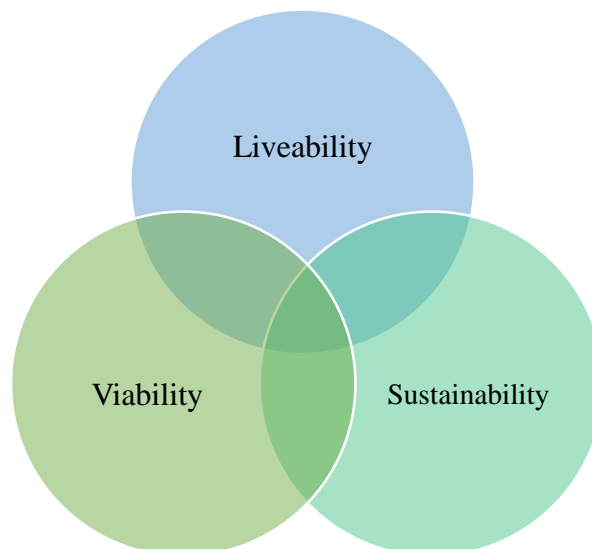
2. **Green Campaigning:** Green retailers should take active part in encouraging green consumption among consumers. They must organize promotional and awareness events for their consumers. Various offers like discounts or promotional vouchers and coupons must be provided for promotion of green products. They can organize various competitions and events for creating curiosity in consumers mind about green products.

Basically, Green Retail deals with what you sell? And how you sell? Whatever you are selling must be procured in an environment friendly way and whatever you are selling must be environment friendly and must be sold through environment friendly techniques. Retailers can influence social and environment sustainability in various areas. They can improve sustainability of their product and their services such as packaging, assortment, and delivery.

Green Retailing is an approach towards managing any retail business by incorporating sustainability focused practices and environment friendly processes. (Adhikar, A & et al, 2016). Retailer being the crucial link between the producer and consumer of goods, plays an influential role in supply chain, they can promote sustainable practices and consumption by using social media; print them on bill receipts and in-store signage along with stating reduction in carbon emissions/carbon footprint through implementing sustainable practices in retail outlets, also through word-of-mouth advertising, by sending regular newsletters, etc. Retailer should fulfil its mediating role by communicating the requirements of consumers regarding products to the supplier, communicate and influence consumers to opt environment friendly products, (Purasala, L P & et al, 2017).

### 1.23 Various Green Retailing Practices:

After making few changes in retailing, it can be made green retailing. Retailers need to focus on liveability, viability and sustainability of their services, (Thompson, B, 2007). For retailers to adopt green retailing practices, it is important to consider liveability, viability and sustainability of their retailing model if, they want to follow it in long run. For example: none of the retailer wants to follow green retailing practices if it is not viable enough to cover cost and profits of a firm in long run. It should be liveable also. Sustainability means if it considers future and present needs of the business or not. Liveability means it is good for living and viability means chances of surviving in future and if it is in the capacity of business or not.

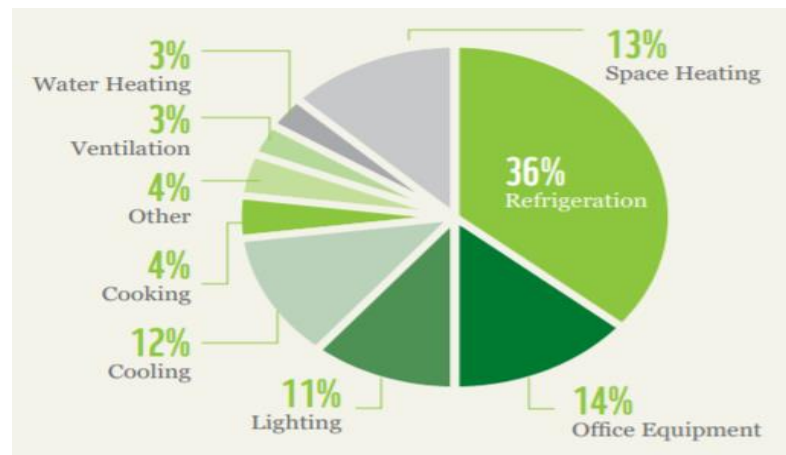


**Figure 1.13: Model of green retailing considering three factors. Source: (Thompson, B, 2007)**

Various Green Retailing practices followed by various retailers across the world are mentioned below:

**Energy conservation and emission reduction:** According to world energy council, Global output of coal reserve is left only for 130 years as per usage level of 2011, (World coal association, 2012).

**Graph 1.2: Energy consumption in typical Super-Market. Source:( E source companies, 2009)**



It is evident from the above figure that refrigeration takes maximum energy of the retail store. Retailers can use renewable energy to reduce their carbon emission like Walmart which is working towards 100% renewable energy and its refrigeration system called secondary loop. Most of the global retailers have realized the importance of energy conservation and they are taking alternative measures and more efficient technology.

**Table 1.2: Usage of renewable across different retail stores globally.**  
 Source:(World Wide Fund for Nature, 2014)

	Solar Energy	Wind Energy	Using LEDs	Non-HFC Refrigeration
Carrefour S.A.			✓	✓
H&M Hennes & Mauritz AB	✓			
The IKEA Group	✓	✓	✓	
Inditex, S.A.	✓	✓		
Marks & Spencer Group Plc			✓	
Tesco PLC	✓	✓		
Wal-Mart Stores, Inc.	✓	✓	✓	
Whole Foods Market	✓		✓	✓
Woolworths Limited				✓

Retailers can switch to renewable energy resources to make their retailing green like above retailers that are using energy efficient methods for reduction in their emissions.

**Packaging:** Packaging is the important component of the product. It is for protection, transmission, marketing and security of the product. Use of plastic in packaging is the biggest harm to environment. So, many retailers are shifting towards recyclable packaging. Reduce, reuse and recycle is the best solution to make packaging sustainable. In India, single use plastic is banned across different states. Different stores have shifted towards paper packaging and reusable cotton bags.

**Waste Management:** Concept of reduce, reuse and recycle also apply to waste management. Many retailers are following that like H&M takes back old clothes and recycle them into new one. IKEA sells repaired products, returned by customers at discounted price, M&S and Oxfam inspire to exchange clothes at discounted price, Bodyshop brand offers to return empty bottles, Woolworth offers waste food of the

stores to farmers to be used as feed, Sainsbury has planned to generate electricity from food waste etc. The basic idea is to reduce waste as much as possible and maximize utilization of products. Retailers can switch to any practice which will help in reducing waste generated by retail stores.

**Water usage:** Water scarcity is one of the biggest problems before India. Green retailers make efficient use of water like Tesco is using rainwater for their day- to- day operations. Avoid waste and find alternative option like rain water harvesting, rooftop storage of water or other options which will save water like planting trees, saving rivers, reducing water pollution, increasing ground level of water etc. steps can be taken by retailers to maximize water usage.

**Green Store:** Retailers are trying to make their store “zero-carbon stores”. They are improving their greenhouse gas emission and energy efficiency of the store. Typical green store works on natural refrigeration and natural lighting which are certified by LEED or BREEAM. M&S opened its first green store in Bangalore in 2012. It uses natural lighting and non-HFC refrigeration. Wal-Mart has reduced its GHG emission to 12.74% from 2005 level. Carrefour Store at Delhi is working on innovative solutions for energy saving such as LED lights entire building, high efficiency glass doors for negative cold units, gas defrosting system, comprehensive centralized technical management system. It saves 30-40% energy of the store which is, a lot in terms of cost involved in regular circumstances.

**Green Products:** Consumers have shown their interest towards purchasing green products. Demand for green product is enormous, (**Business Green, 2012**). Demand for greener products is higher than its supply. Green retailing is mainly based on selling green products with green techniques. Retailers should increase supply of green

products. Green products are those which are more environment friendly than conventional products. Wal-Mart is moving towards green products. It has added 250 green products to its website in Brazil. Ikea is working on “sustainability Product Scorecard” to assess sustainability of its products. M&S and H&M has banned harmful chemicals in its products. In India, Aditya Birla group has launched Ecoliva fabric which is totally environment friendly. Five-star electrical appliances in India are also example of green products.

**Supply chain:** In retailing, various third-party stakeholders are involved such as suppliers, transportation, distributors, customers etc. Green retailers should try to involve those stakeholders which are following green practices or they should try to influence them to adopt green practices for better future. For making retailing green, it is very important that its various stakeholders adopt green practices because these stakeholders are also part of carbon emission and pollution. Like, transportation is an important part of retailing. Through various transportation means retailers bring goods to their stores. If retailers adopt green transportation practices based on less GHG emission then it can make huge difference to the environment. Proper logistics management, efficient trips, biofuels, online shopping, sea route transportation, bigger trucks, consolidation centre, return logistics system, lorry loading, backhauling, transport management system etc. are the few steps taken by retailers to make their transportation green. Likewise, agricultural suppliers can also be encouraged to adopt green practices. Ikea and Marks & Spencer’s along with WWF developed better management practices that help farmers in producing sustainable cotton, free of chemicals and pesticides and it will also increase yield, reduce cost and environmental damage and health risk in India.

**Customer Awareness:** Tesco and Unilever have started campaign called “creating a better future starts at home” with an objective to spread awareness about sustainable products among customers and to reward them for purchasing it. Doodlage India has launched a campaign for restyling old sari (Indian Cloth) to increase the lifecycle of product. M&S launched campaign like “swopping”, so that consumers can exchange old garments with one another. Spreading awareness about green products and green practices is also part of green retailing. It is a new scope of retailing which is not limited to selling products but it is about creating culture of responsible consumption by encouraging manufacturer and customers for adopting green practices and also following themselves.

#### **1.24 Indian Retailers and Green Retailing Practices:**

Retail is one of the most energy-intensive and waste generating sector of India. 80-90% of carbon-footprint of retailer is the result of product they sale. Transportation, poor infrastructure and handling practices of product are responsible for 40% waste in Food Beverage sector in India, (**Switch Asia, 2017**). Green retailing practices are in nascent stage in India. Very few retailers are putting conscious efforts towards green practices in retail business. Only few market retailers are following green retailing practices in general unlike global retailers who are more aware towards green retailing practices. Some retailers like Aditya Birla Group, Reliance retail, Future Group and Shoppers stop like taking steps towards green retailing in India. Most of the retailers in India are focused on improving their operational efficiency in the name of sustainability. So, they need to understand the true meaning of sustainability and about its incorporation into retail business. Presence of global retailers like Ikea, H&M, M&S etc. in the market

will give significant push to retailers for adopting green retailing practices to be more competitive.

### 1.25 Switch Asia, Green Retail Program:



**Figure 1.14: Green retailing measures. Source: (Self)**

To promote Green Retailing in Food Beverage sector, Switch Asia organized project aiming retailers of F&B sector for adopting sustainable practices in retailing. Under the project, four retailers interested in adopting green practices are identified and they applied sustainable practices across 30 stores in Delhi, Chennai, Kolkata, Bangalore and Mumbai. They have followed the following guidelines of Switch Asia:

1. Development of sustainable business model comprises of various sustainable measures to green their supply chain.
2. GSCM (Green supply chain management) training was given to retailers.
3. Consumer awareness and educational campaigns targeting customer were developed.
4. SME support program was given to 9 suppliers for adopting green supply chain practices.
5. Updating retail trade policies.



Figure 1.15: framework of the project Switch Asia for retailers. Source: (self)

**Impact Of project:** This project has following impact on retailer’s operational efficiency:

**Economic Impact:** Over 25% operational cost savings achieved by 6 Spencer’s retail stores after implementing the projects recommendation. 10 kg/day production has been increased after following SME gap assessment.

**Environmental Impact:** Reduction in energy and resource consumption in retail stores. 10-24% energy has been saved across 7 stores after implementation of the project. Carbon footprint has been reduced to 2000-3000 tonnes at 30 retail stores.

**Social Impact:** After improving their energy performance through energy efficient technology, building owners also adopted the same. Retailers switched to improved packaging and reduced waste methods.

**Awareness:** “Supplier’s rating tool” has been developed for rating sustainable practices of the suppliers. Retailers were made aware of resource consumption methods. 25000 consumers were made aware of responsible consumption methods. 153 retail executives were given training on green supply chain management.

**Policy Intervention:** Use of electric bill in place of physical bills in the state of Maharashtra and Andhra Pradesh had been followed by retailers. Farmers were allowed to directly sell their produce to retailer without going through middlemen in Maharashtra.

Reduction of cost, management of resources and government pressure are the biggest drivers for Indian Retailers towards green retailing. Green Practices like, use of recyclable packaging, management of energy consumption through renewable energy and L.E.D light, sunlight etc., Better Refrigeration system, greener products, minimizing waste are the areas where Indian retailers are taking initiatives but still, their biggest concern is high cost of sustainability because Indian consumers are definitely aware about green products but they are not willing to pay premium price for their green purchase. Awareness about environmental cost of spending on conventional products must be spread amongst Indian consumers to remove their scepticism about green products and green retailing is the best way to do it. Few initiatives of Indian retailers are listed below:

1. 16 retail fashion brands of India signed the Su.re (sustainability resolution) to develop sustainable sourcing policy for utilizing and prioritizing certified raw material that have positive impact on environment. Brands like: Spykar, westside, trends, shoppers stop, Fbb, House of Anita Dogre, lifestyle and max etc. comes under this resolution of textiles ministry and IMG Reliance and clothing manufacturers.
2. Garnier India is working towards introducing Product Impact label for its products to show social and environmental impact of their products. “Garnier’s Green beauty initiative aimed at reducing brand’s environmental cost was launched in 2020.”

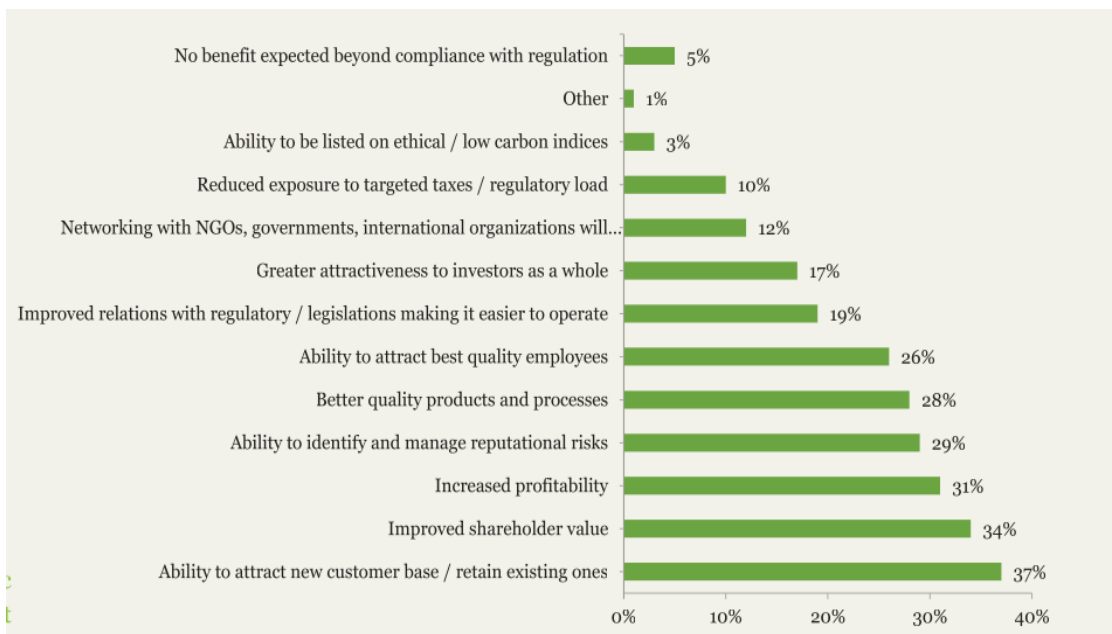
3. Big Bazaar launched “Plastic lao Paise kamao” program across its few stores in Maharashtra in collaboration with government and Marico. Where consumers can get 10 rupees in Future Pay wallet for every empty plastic bottle.
4. ITC has adopted low carbon growth plan to combat climate change. 41% of ITC’s energy comes from renewable energy like biomass, wind and solar energy. ITC has 33 green building with LEED platinum rating. ITC is using post-consumer waste paper in its operations instead of virgin-fiber. It runs WOW (well-being out of waste) program for waste management, (ITC, 2020).
5. Mc Donald India has started using recycled paper for napkins, straws and bags.
6. RPG group has converted 20 plants into green building for environment protection.
7. FMCG companies are aiming at 100% recyclable plastic packaging by 2025.
8. Nature’s Co. has replaced its plastic bubble wrap with Kraft Corrugated sheets. New product range of candles comes in glass jars instead of plastic. They organize Pro-Green day on 15 September for encouraging green practices. Like planting trees for every payment bill, distributing seeds with every order, use of cloth or jute bags instead of plastic packaging, recycling of plastic through eco-barrels, e-bill etc.
9. Reliance has set its target of becoming a net-zero carbon company by 2035.
10. Flipkart made commitment to eliminate single-use plastic in packaging. 100 percent recycled plastic will be consumed in its supply chain by March 2021. Flipkart is also working towards eliminating plastic bubble wraps, air bags, poly pouches with eco-friendly paper shreds and recycled paper bags. It has also filed for EPR (extended producer responsibility) and targeting 30 percent collection back in the first year.

11. Flipkart announced introduction of EVs (electric vehicles) for last-mile delivery network aimed at replacing 40 percent of its existing delivery vans with EVs by March 2020.
12. Flipkart's Bengaluru office uses non-plastic cutlery and encourages steel and glassware products. It also segregates waste at source. It is working towards prevention of pollution at workplace.

It is evident that Indian retailers are doing their bit towards sustainability and today it is not just about in the name of CSR. They really want to make changes for environment.

### 1.26 Benefits of Green Retailing:

**Graph 1.3: Benefits of adopting green practices for retailers. Source: (The Economic Intelligent Unit, 2008)**



There is a scepticism in Indian retailers regarding adoption of green retailing practices as they are more concerned about the cost involved in adoption of green practices but there are many benefits of adopting green retailing practices as observed by global retailers which are listed below:

1. **New customer base:** There is a whole new generation of conscious consumers who are ready to take up the market. They are willing to be a part of environmental protection initiatives. There is also wide range of consumers who are looking for something unique and distinct in their products and wants to develop their distinct identity. After covid-19, number of health-conscious consumers is also increasing. So, we can say that being-green has a lot of potential in future, all it need is retailers correct assessment of potential consumers for their products.
2. **Revenue growth and cost reduction:** Indian retailers are mostly concerned about cost involved in being green but being green is not costly, it just doesn't give returns immediately. It takes time to generate revenues. Like we can take the example of Doodlage (Indian brand based on green retailing) and H&M (foreign brand based on green retailing). They both are working on green practices but Doodlage is at "No profit, no loss" and H&M is earning super normal profit. Real catch is in time period involved. It has taken 11 years for H&M to achieve profitability for their sustainable initiatives but there are some industries which can generate immediate profits by switching to green practices such as renewable energy.
3. **Better Quality of Products and Processes:** Being-green ensures quality of operations because it is free of every operation which results in health or environmental hazard. Positive environmental impact is the best advantage of green

retailing. For example: plastic free packaging results in cleaner environment with positive result on health.

4. **Reduces government restrictions:** Many taxes and restrictions are imposed by government on industries for environmental protection due to environmental harm caused by these industries. For example: Coal Cess in India but green retailers don't need to conform to these taxes or restrictions as their activities are based on environment friendly outcomes.
5. **Globalization of activities:** There is a borderless transfer of knowledge, techniques, intelligence and resources for achieving sustainability. Various organizations, NGOs, institutions and companies are working towards sustainability. There is a larger community of people who want to protect environment irrespective of borders. Being-green gives opportunities to retailers for engaging at international level to achieve sustainability.
6. **Goodwill:** Being-green is an identity himself. It is an identity of being aware of our actions towards environment. It gives distinct identity to the person or a company. Greener activities of retailers enhance goodwill of the retailers as well as brand.

### **1.27 Drivers for Green Retailing:**

Concept of Green retailing is in nascent stage in India. Retailers know about green retailing practices but they are not following it due to many reasons. Following are the drivers of green retailing as they can encourage green retailing in India as per (**Wang, C & et, al, 2013**):

1. Government financial support and regulations can encourage green retailing in India.

2. International standards and protocols can persuade retailers to follow green practices for selling products in different countries.
3. Domestic environmental standards and protocols must also be established.
4. Public awareness regarding harms of environmentally-detrimental activities can lure them towards green products and that is where green retailing can play its role.
5. Being-green is an identity. It gives distinction to establishments from others. So, in long run in enhancing corporate-image and gaining more customers, green retailing can be very beneficial.
6. Environment friendly products, activities and services are increasing continuously day-by-day. So, cost of being-green is decreasing. It is a great driver for green retailing as being green is not that much costly as it was few years back.
7. If few retailers follow green practices others will also do the same to maintain healthier competition between them.
8. Mission and vision decide operations of the firm. If being green is incorporated in mission and vision of a firm then retailers will be obliged to follow the same.

### **1.28 Barriers of Green Retailing:**

Being green is not that easy. It is a costly affair if not managed properly. Being green requires strong determination on part of retailer to do something towards environment.

Green retailing has following barriers:

1. High cost of waste disposal and waste management.
2. High cost of environment friendly packaging and materials.

3. Green business requires heavy investment and it has slow incentive rate. It cannot give immediate returns.
4. Green products market has not been flourished enough to make profits out of it. It is still in niche product category.
5. Insufficient government policies and laws for encouraging retailers to adopt green practices.
6. Lack of recognition to retailers as an important link in the supply chain.
7. Lack of required skill and guidance for assisting retailers in adopting green practices.
8. Unawareness of customers towards environment protection.

### **1.29 Green Retailing and Clothing Products:**

I have selected green clothing products as reference for analysis of mechanism of Green Retailing and Green products together in clothing industry, just to understand the concept more clearly. In simple words, I have tried to explain how green retailing can help within some specific product category in increasing consumer purchase intention of green products. Taking clothing is a way of explaining research problem more specifically and to develop a clearer picture about green retailing and green products mechanism. As Clothing is the second most pollution generating industry in the world and in India, many fashion retailers are working towards greenness of their clothing products, we call them Green Clothing products. These green clothing products comprise of environment friendliness, efficient resource management, low carbon footprint, low negative environmental impact combined with low after-life impact on environment.

### **1.30 Indian Clothing Industry:**

India's apparel market will be worth \$59.3 billion in 2022, making it the sixth largest in the world, comparable to the United Kingdom's (\$65 billion) and Germany's (\$63.1 billion), according to data from McKinsey's FashionScope. More than 300 international fashion brands are expected to open stores in India in the next two years but India remains a complex market that presents challenges as well as opportunities. The apparel business is still largely unorganized, with formal retail accounting for just 35 percent of sales in 2016. Its share, likely to reach around 45 percent by 2025—still a relatively low proportion. This data anticipates serious social and environmental damage in upcoming years due to increase in clothing industry. 20% world water pollution is because of textile industry as 2720 liters water is used to make 1 t-shirt & 85% of garments go to landfills and only 1% of garments are recycled. Clothing industry results in high negative environmental impact in terms of process involved. From manufacturing till consumption and then after-life every step involves high carbon-footprint. In the name of fashion, exploitation of environmental resources is unacceptable. We must find solutions for more greener products to save our environment. Many fashion retailers across globe are working towards achieving green clothing products. H&M, fashion retailer is doing remarkable works in terms of achieving low-carbon foot print and management of after-life of clothing products. In India, there are many green fashion retailers who are working towards green clothing products. Such as Doodlage, Good Earth, Grassroots, Insom, B Label, Upasana, Chola-The Label, Liva brand by Aditya Birla Group. These retailers are doing their bit towards making clothing green in India.

### **1.31 Green Clothing Products:**

Green clothing products are based on the concept of six R's technology which comprises of Re-imagine, Reduce, Recycle, Re-style, Repair, Re-wear. Green clothing is all about maximization of value creation over entire life cycle of the product including post-consumer life. Green clothing comprises of following processes:1.)

**Reduction in expenditure of resources used for manufacturing the product:** It can be achieved by applying energy and resources saving technologies, reduction in defects, reduction in losses, reduction in waste at every stage, complete and circular use of resources utilized, reduction in emissions. 2.) **Creation of value at post-consumer stage:** It can be achieved by collecting, sorting and processing of used products from consumer. Processing involves recycle, reuse, refurbish, incineration and remanufacturing. Green clothing is based on the following:

**Green Design:** Green Clothing products are made of organic cotton, natural fiber, recycled synthetic, synthetic materials like lyocell, recycled wool, linen, recycled polyester, recycled polyamide and recycled plastic. H&M fashion retailers has developed "Circulose" which is 100 percent discarded cotton. Agricultural waste, used carpets, post-industrial plastic and many organic produces can be converted into clothing products. Doodlage fashion retailers works on zero-waste policy. Their clothes are based on patch work technology where many pieces are combined together like puzzle to make garment. 1 kg. of cotton production requires 10000-liter water. That means, for every fresh piece of cotton clothing we are consuming tons of water. Green clothing products are based on low waste and maximum output processes.

**Green Manufacturing:** H&M follows restricted chemical lists to restrict use of harmful chemicals in clothing products. Green manufacturing ensures less water

utilization and chemical free production of green clothing products. Standard water and energy usage policies are followed for production of green clothing products.

**Green Transportation:** Online purchases, fossil fuel free or carbon neutral transportation are the alternatives for green clothing products. Renewable energy is also an option for transportation. Basic idea is to reduce emissions for delivery and logistical processes.

**Green Retailing:** Many fashion retailers are providing facility of recycle, reuse, reduce, remanufacture and update or mend. H&M believes in textile-to-textile recycling. They have launched the clothing conscious concept in 2013 where customers can drop off used or worn clothes and in return, they can get coupons for next purchase. These disposed of clothes are taken by I-collect initiative. These retail stores also provide services of re-sale, restoring damaged garments and offer rental services also. Few stores across Vienna, Paris and London offer services of mend and update textile for future. Tags of H&M clothing are made in that way, so that customers can trace back supplier and manufacturer also which ensures full transparency. Their buildings and stores are also sustainably handled. 96% of energy used in their stores and offices is renewable. “Take Care initiative” also offers guidance in garments handling. These services are provided at some selected stores. Doodlage, launched an interactive project wherein consumers can send their pics of old saris and then Doodlage will suggest five different ways of restyling that sari. Doodlage team also create repair kit which is tagged along with their brand tag so that consumers can easily repair and alter their wardrobe. Doodlage is also working on a project called “clothes swapping events”.

### **1.32 Indian initiative towards Green Clothing products and Green Retailing:**

Indian clothing brands are aware of impact of clothing products on environment and also about, environmental harm caused by these clothing products. That's why many clothing brands are switching to green clothing products. Few Indian clothing brands initiative towards green products is listed below:

**Trends:** Recycled nylon, recycled polyester, TENCEL lyocell fibers, Pinatex and BCI (Better cotton initiative) are used as a raw material for clothes at Trends. Renting and outsourcing is also part of their green retailing initiatives.

**Livaeco:** Ecofriendly garment of Livaeco and B label are available at similar cost with regular products. Livaeco is a sustainable fabric made from eucalyptus, aspen, birch, maple and fir trees. Livaeco has unique tracer in its labels to ensure credibility of resources. It identifies journey of garment from source to destination to encourage visibility of resource.

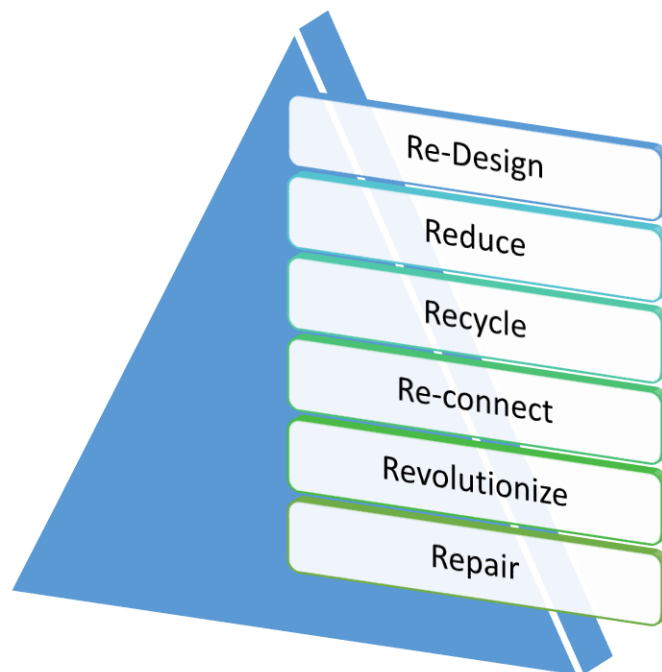
**B label:** B label uses Hemp for manufacturing its products which is carbon negative crop. It requires 400 times less water than cotton. Apart from sustainable fabric, it distributes its products in plastic-free packaging.

**Spykar:** Spykar encourage its suppliers and vendors to adopt green practices. It collaborates with partners that work on nature conservation norms for clothing products. Technology based on reducing carbon footprint, water recycling process, zero fossil fuel usage, solar power are the few initiatives taken by Spykar for environment protection.

**Arvind:** Their clothing brand is continuously working on sustainability of clothing products. They have introduced “Khadi Denim” manufactured by old traditional method of India. This is the most sustainable fabric ever made without electricity, chemicals, high technology and depletable resources. They have launched 4-in-1 smart shirt in collaboration with Arrow. They have implemented ISO 50001 energy management system. They are moving towards alternate energy methods for their offices also.

### 1.33 Framework adopted by Green Retailers for Green Clothing

#### Products:



**Figure 1.16: Six R's strategy adopted by Green Retailers for encouraging green clothing in India. Source: (Self)**

**Re-design:** Green retailers like Doodlage, Good earth etc. are designing their supply chain by involving more sustainable elements. They are trying to make more sustainable products. They are trying to involve manufacturers and suppliers that are

working towards sustainable practices. This re-designing process goes beyond reducing carbon foot-print. Whole process should be in closed-loop to avoid any wastage or in efficiency. Doodlage (Green Retailer) works on patch work technique for making clothing products to avoid wastage. It is less expensive to design a low-impact product than to manage or retrofit a high-impact one (**Powell and Prostko-Bell, 2010**). The basic idea is to consider environment at every step of process.

### **Reduce:**

Reduction in carbon footprint of the store, transportation and reduction in wastage, is the basis for green retailers. 1 kg. of cotton takes up 10000-liter water. We are wasting so much water just to look fashionable. So, reduce means reduction in pressure on resources to fulfill demand of consumer. Green clothing is made of recycled cotton or from fabric other than cotton which is more environment friendly.

### **Recycle:**

These retailers are not using virgin fiber for manufacturing clothing products. They are using recycled fabric. From post-consumer waste, fabric is generated using certified recycled yarn on handloom and power loom. Idea is to maximize utilization of all resources and retailers take back used clothing products and further recycle them and also, they pay their customers in form of coupons, for every returned item. They also provide facility of purchasing second hand clothing items. So, it's a win-win for consumer, for retailer and for environment.

### **Re-connect:**

In this era of industrialization and globalization, companies are going to other countries for better clothing products. We are ignoring our local arts and craftsmen just to look international. These retailers are giving chances to these local suppliers,

craftsmen and artisans to showcase their work. These locally made products can save lots of carbon emission and energy plus it will give better standard of living to these craftsmen. Green retailers try to re-connect to their roots.

**Repair:**

There are certain products which can be mend, updated, restyled or fixed. Without giving a thought to this, we try to go for new one in most of the cases without considering environmental consequences of our purchase. Clothing is one of those products that can be repaired or restyled. At H&M they give assistance for repairing clothing products and at Doodlage they give repairs kit attached with clothes. So, that the life of products can be increased and pressure on resources can be reduced. Levi's brand also works on the concept of recycled jeans just to increase life of clothing products as denims takes many years to decompose. So, they are repairing old denims for further use.

**Revolutionize:**

Revolutionize means “bringing the change” in the culture of clothing. It's about spreading awareness regarding green fashion and how we can change the world by just adopting something which is more environment friendly. It goes beyond promotion. It is about bringing change in the mindset of people to adopt green clothing to save environment from negative impact of irresponsible consumption of clothing products. Doodlage clothing or H&M retailers are bringing change through their little efforts towards greening clothing products.

Retailers can adopt this six R's framework for making their retailing green for providing green clothing products. They should try to re-design their supply chains by adopting more sustainable partners, reduce their carbon emission and wastage, recycle their waste, they should re-connect with their local suppliers, they must

provide services of mend, update, restyle, repair and rearrange, above all they must bring the change through their efforts by influencing manufacturer and consumer in adoption of green lifestyle. I will try to find solution for enhancing purchase intention of green products through green retailers. Research will try to find how retailers can be useful in enhancing green products purchase intention amongst consumers.

### **1.34 Rationale of the Study:**

Last one year, has taught us the importance of environment protection. Before that we were only aware of the problem but Covid-19 has made us realize the significance of action-reaction theory (every action has an equal and opposite reaction), whatever we are giving to the nature is going to come to us in some way. Our climate is changing constantly after industrial revolution and results of these extreme environmental exploitation are before us in form of draught, harsh weather conditions, flood, food crisis, earthquakes, locusts attack, transmission of various viruses in animals or humans, and this Covid-19. Our consumption habits are irresponsible towards environment. Due to irresponsible consumption, we are facing many environmental, social and economic problems. Pollution, climate change, calamities, heart and lung diseases are the consequences of our irresponsible consumption. Environmental impact of irresponsible consumption is extreme. We must adopt the culture of responsible consumption. We can take steps for reducing our environmental impact. We cannot stop consumption but we can shift from irresponsible consumption to responsible consumption. Responsible consumption is nothing else but the care of environment before, during and after consumption. As a part of responsible consumption, we can start from consumption of products with low or positive environmental impact. Green products are the one

which have low environmental impact. These products are made with care for environment that's why they are called green. This is the reason I have selected this research problem. Solving the problem of irresponsible consumption through green products and green retailing. Idea of green products is not new but not much of work has been done to increase consumption of green products in India. For increasing consumption of green products, we must find factors which are responsible for affecting consumer purchase intention of green products as intention is the basis of purchasing and after finding those factors, we must find solutions for converting purchase intention into purchase decision. That's why I have tried to find factors responsible for forming purchase intention of green products in first place and in second place I have introduced retailer in research context to solve the problem of conversion of intention into purchase decision. Green retailing can help in encouraging consumption of green products amongst consumers. So, I have tried to bring the concept of green products and green retailing together to find solution for the problem of low purchase intention of green products among consumers. I have also presented the example of green clothing products for better understanding of the research problem. This example will show how green products and green retailers can work together for solving problem of irresponsible consequences. I have tried my best to present green retailing and green products as a solution for consequences of irresponsible consumption. I have selected Uttar Pradesh as area for research because of its population. Uttar Pradesh is the most populous state of India because none study has taken place before in Uttar Pradesh regarding consumption of green products. So, I have selected Uttar Pradesh as universe of my study because if we are able to solve the research problem in context of U.P then it will be a biggest step towards achieving

responsible consumption habits amongst consumers in India. Another reason is that I was born and brought up in U.P and I am a consumer who belongs to U.P so I can carry out this research in U.P easily than any other place which is completely new to me.

### **1.35 Significance of the study:**

Significance of this study is associated with its contribution to existing work of knowledge regarding sustainability in consumer products market. This study will help companies in understanding intentions of the consumer while going for purchase of green products as well as it also presents green retailing as a driver for growth in green products market in India. I have worked towards giving requisite importance to retailing which is often neglected. Retailing is one of the important components of supply chain in terms of its influence on consumer in assisting his purchase decisions and manufacturer in making their decision regarding producing certain products. I have tried to bring together the idea of green products and green retailing to find solution for irresponsible consumption. Findings of the study will help in forming strategies for increasing consumption of green products in Uttar Pradesh and it will also give guidelines for making retailing green. Environment protection is the most alarming issue before us and this study presents different dimension of consumption and retailing where both have positive or low negative impact on environment. Greener products can save our environment from extreme exploitation of resources.



*Chapter 02*  
*Literature Review*



## CHAPTER-02

### LITERATURE REVIEW

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I have reviewed approximately 100 research papers from the year starting 1999 to 2021. Through literature, I have understood the concept well and also assessed the past work done by various authors on the same. This review has helped me in determining theoretical base and nature of the study. These studies helped me in finding path of her research based on previous work. All the reviewed literature is related to three constructs': consumer behavior, green products and green retailing.

According to **Greendex 2012 survey**, Indian consumers are moving towards green products and amongst 17 countries Indian consumers have the highest percentage of respondents who are cynical of green products. In 2011 Image Power Green Brands Survey by Landor Associates and Penn Schoen Berland surveyed 9000 customers in 8 developed (Australia, France, Germany, U.K and U.S) and developing countries (Brazil, China and India) and findings reveal that demand for Green is growing in developing countries and customers are willing to pay up to 10 percent more for green products that are environment friendly. It shows that customers are getting familiar with green practices regarding products or services. So, we must study what factors influence green purchase intention of green products in India. Companies should focus on their quality to gain consumers' trust and they should also reduce perceived risk of green products and it is worth educating experienced retailers as a reliable information channel between consumers and vendors to increase green perceived quality of the consumers and to decrease their green perceived risk in order to raise their green trust in a more complicated marketing environment. Knowledge plays a particularly important role in reducing risk perceptions (**Sweeney et al., 1999**).

(**Bhate.S, 2001**), Indians have regard for environmental issues. If green alternatives are available, Indians may not need much persuasion to buy green products. Indian market has demand for green products. Companies need to fulfil existing and potential demand by providing green products. Price and availability of environment friendly products are the main issues of India.

(**Gossling et al., 2005**), better information can increase consumers' willingness to pay premium for green energy. Consumers' knowledge and attitude towards these products is important. Communication environmental information will help consumer in taking knowledge-based decisions.

(**Joergens,C., 2006**), the effect of ethical issues on purchasing behaviour of the consumer is very low because consumers cannot avoid behaving unethically due to aesthetic needs. They need more knowledge to purchase ethically. Communication is important. Brand image, latest fashion and price are the elements which influence young consumer's sustainable purchasing behaviour. If the product is same as unsustainable one in terms of price and quality, they will definitely purchase it if not then no.

(**Hur et al., 2007**), social value, price and quality affect purchase of green products for elderly consumers.

(**D'Souza, C., & et.al, 2007**), for understanding green purchase behaviour management must: build a strong competitive advantage for the product, in terms of price and quality, company must develop and project a profile of green consumer based on demographics, and also meet the consumers' expectations by demonstrably socially responsible behaviour. These strategies may assist in achieving sustainable longer-term profitability.

(Hustvedt & Dickson, 2009), outcome of purchasing organic is the main reason for purchasing organic products. Organic product will benefit me and my family is the main reason behind buying organic. Consumers who had purchased organic cotton were more concerned about the impact of production on environment than others. These consumers had strong self-identity as environmental, organic or socially responsible consumer and they preferred buying locally.

(Bieak Kreidler & Joseph-mathews, 2009), Most perceived organic, natural or green retailers are able to charge a premium for their products based on the perception that sustainability and organic production methods cost more. This is an important factor in today's competitive environment where retailers are constantly looking for ways to stand out in the marketplace and differentiate themselves from the competition. These improvements allow them a differentiation point that significantly distinguishes these retailers from other competitors. The implementation of green atmospherics and environmental upgrades can set a retailer apart from the competition in terms of ambience, design and layout as well as social elements. Day lighting facilitates comfort and relaxation within a store environment thereby allowing approach behaviours are often discussed in the environmental psychology discipline. At the same time, the presence of other like-minded consumers who also care about their carbon footprint and limiting emissions can also help to promote and reinforce a particular brand personality in the minds of the consumer.

(Bears, S., & et.al, 2009), Consumer identifies green products through 3 attributes: green packaging/labelling, in-store signage and brand advertisement. Retailers and manufacturers can leverage these attributes while motivating consumers for purchasing Green Products. Retailers and manufacturers must have proper education about

sustainability to address this issue. Consistent, aligned messaging in stores, online, in advertising are important tools for driving consumers towards Green Purchasing.

(**Gam et al., 2010**), environmental concern, environmental behaviour, recycling behaviour significantly affect mothers' decision of buying organic clothing.

(**Cheah & Phau, 2011**), eco-literacy, interpersonal influence and value orientation have a strong influence on attitude towards environment friendly products and favourable attitude results in purchase of environment friendly products. Perceived necessity of green products plays a moderating role between attitude towards green products and willingness to purchase green products.

(**Ramayah et al., 2010**), intention to purchase green products is negatively related to effort and convenience of the consumer.

(**Lee, 2011**), peer influence is the most powerful predictor of green behaviour in adolescent. Social acceptance or approval and shared identity are the most important concern for adolescent for adopting green behaviour. Again, collectivism plays an important role in forming green behaviour of adolescent in Hong Kong.

(**Carey & Cervellon, 2011**), says that the biggest obstacle in purchase of green products is lack of information available about green products and about their certification and in case of clothing and beauty products it is very difficult for the consumer to identify green or organic products. Consumers also find difficulty in trusting eco-labels and certification. Eco-labels and certification are major criterion of consumer choice in fashion and beauty products. Companies need to work on their certification and label process to ease the whole process of purchasing green for the consumer.

(**Gam.H, 2011**), fashion orientation plays an important role in choosing eco-friendly clothing. Fashion orientation positively influence purchase intention of eco-friendly clothing. Consumers choose eco-friendly clothing for fun and need of wanting more. Elevated cost is the only reason that stops them from buying eco-friendly clothing. Participants revealed that they did not purchase eco-clothing in the past because they did not like the available styles. Green is not the 'New Black' yet. Merchandiser of eco-friendly clothing should encourage fashion leaders for adopting eco-friendly fashion to that they can influence the masses.

(**Kim et al., 2012**), green self-identity affects purchase intention towards eco-friendly products but it also forms consumer norm which is related to concern for environment. Social norm plays a mediating role between self-identity and purchase intention. In case of apparel shopping social approval and cost-benefit analysis is done by consumer. If, benefits are higher than cost then they engage in purchase of sustainable apparel. Social norms play an important role in promoting consumption of sustainable fashion. Sustainable fashion should be encouraged as moral obligation.

(**J. Park & Ha, 2012**), consumers having favourable cognitive and affective attitudes, stronger social pressure and personal obligation and greater intention to perform recycling are most likely to purchase green products than non-purchasers. Author also reveals that consumers practicing sustainable behaviour in the past are most likely to adopt green lifestyle and purchase green products. Communication strategies and educational programs are the best option for boosting green products purchase.

(**Carrete et al., 2012**), there is a need of collective efforts on part manufacturer, retailer and company all together to improve the comprehension about green products among consumers. They should also improve labels and packaging for better understanding to

avoid confusion of consumers regarding green products. Policymakers need to solve the problem of confusion, trust and credibility regarding green products.

(Yusof et al., 2012), green image has no significant influence on store loyalty of consumer. Shopping value is a mediator between store loyalty and green image. Shopping value of customer of retail store has an effect on consumer behaviour. Quality of service, in-store atmosphere, product assortment and merchandising are needed to provide shopping experience to the customer to gain his loyalty. Comprehension of consumer is a necessity for green products.

(Lee, N., & et.al, 2012), Green Product- related activities of fashion retailers have meaningful direct impact on the formation of behavioural attitude towards consumption of green products. Consumer's perception of retailers' green products and green campaign activities affects their consciousness and behaviour towards green products. Retailers play a very important role in spreading green consumption culture. They have a great responsibility in spreading eco-friendly consumption awareness in society.

(Chen & Chang, 2013), there is a positive relationship between green perceived quality, green satisfaction and green trust. Green satisfaction plays mediating role. There is also negative relationship between perceived risk and green trust.

(Shen, 2014), the concept of green retailing was successfully applied by H&M, a clothing retail company. Consumers can return their old apparel and in-return they get 15 percent off coupon for their next purchase. Offering rewards is the best way to appeal less ethical consumers for returning their old apparel. All the collected apparel and textiles is recycled and some of the fabric is utilized in making commercial products through up-cycling process. Consumers get discount and textile waste is avoided

through this process. Sustainable supply chain consists of eco-material, sustainable manufacturing, green distribution and at last green retailing and educating consumers.

(**S. T. Wang, 2014**), green purchase intention is affected by collectivism and subjective norms positively. Gender, age, and education of the consumer can explain green purchase intentions and show that personal and social factors represent more effective antecedent variables of green purchase intentions. Environmental visibility also affects purchase intention of green products. Engaging people in environmental activities can play the trick of promoting green products. Communication tools are very important for increasing environmental visibility. Various social media platforms can be used for enhancing environmental visibility.

(**Nittala, 2014**), environmental concern is not significantly related to willingness to purchase green products. Recycling positively affects willingness whereas comfort lack of information and has a negative influence on willingness to purchase green products. Eco-labels and green shops do not show any significant influence on willingness to purchase green products in India due to scepticism on part of consumer.

(**Jeong et al., 2014**), green practices positively influence restaurant's green image which further influences consumer's attitude towards the outlet but only for ecologically conscious consumers.

(**Kumar, 2014**), Nine core groups of green retail practices are identified – distinctness of green products, promoting sustainable business practices, use of environmental keywords, promotion for awareness, promotional offers for sale, ensuring availability and visibility of green products, approval for environmental claims, environmentally friendly appeal of store and consumer involvement approaches.

(Taylor et al., 2014), there is a strong relationship between consumer' purchase of green products and environmental concern and perception formed about firm. Green manufacturing techniques of the firms also influence consumer's decision regarding green products.

(Garg & Singh Hada, 2014), The Slow Fashion movement is a unified representation of all the "sustainable", "eco", "green", and "ethical" fashion movements. It encourages education about the garment industry's impact on the environment and depleting resources, slowing of the supply chain to reduce the number of trends & seasons, and improved quality & value to garments while removing the image of disposability of fashion. A number of stakeholders like farmers, designer, manufacturer and retailer have taken a diverse variety of initiative for achieving sustainability like growing organic cotton, organic wool, bamboo fibres, etc. However, it is difficult to get these different groups of people to agree on a similar desired scenario as they have different perspectives and vested interests.

(Yildirim, 2014), amongst other demographic factors financial strength affects green purchasing behaviour the most. Willingness to pay additional price for green products is relative. Like consumers are willing to pay extra for cheaper goods but they are not willing to pay extra for frequently buying goods or for expensive green products. It shows the importance of price adjustment process for companies for enhancing purchase intention of green products.

(Cowan & Kinley, 2014), individual environmental attitude, environmental concern and knowledge, social pressure to behave environmentally, environmental guilt perceived environmental impact, past environment friendly apparel purchases, accessibility and cost influence the purchase intention of sustainable apparel.

(Zheng & Chi, 2015), favourable attitude, perceived consumer effectiveness, perceived behavioural control, perceived social pressure and willingness influence purchase intention of environment friendly apparel. Attitude is enhanced by environmental knowledge. Educating consumers, increasing the availability of EFA, social pressure, word-of-mouth and communication of environment friendly practices of the business could play an important role in enhancing purchase intention of environment friendly apparel. It is important to educate consumer about difference between environment friendly apparel and traditional apparel in terms of their attributes and environmental impact.

(H. H. Park, 2015), marketers and retailers should adopt LOHAS consumption tendency and PCE in targeting consumers. Effective communication strategies are needed to influence young consumer. Trust factor is very important for young consumer as well as perceived consumer effectiveness. Trust can be enhanced through LOHAS consumption tendency and for PCE, effective communication is needed.

(Mcneill & Moore, 2015), concern for social and environmental well-being, preconception of sustainable fashion and prior behaviour in relation to sustainable consumption are the determinants of behaviour towards sustainable clothing. Consumers can be divided into three categories on the basis of preference for sustainable clothing. There is self, social and sacrifice consumers. Self-consumer does not care about sustainable fashion for them self-image is important where as social consumers are inconsistent in their behaviour. They care about sustainable behaviour but certain impediments stop them like price, non-availability, unawareness. Sacrifice consumers are willing to purchase sustainable clothing. So, retailers and manufacturers should try to capture these two types of consumers more.

(**Johnstone & Tan, 2015**), being green is very difficult for the consumer. Researcher have pointed out 3 construct that affects green behaviour. These constructs are: being green is hard, green stigma and green reservations. Consumer thinks that being green is very costly and difficult as it requires time, money, commitment and sacrifice. Findings reveal that consumer has shown distrust towards green products and he has perceived indifference that consuming green will not impact in any manner. Consumer cannot see the negative impact of consuming non-green product.

(**Kwok et al., 2015**), trust is positively related to purchase intention. The most important finding of the researcher is that risk does not affect purchase intention but the perceived value which the green product will give should be more than negative effect of the risk. Higher risk with higher perceived value led to higher intention to purchase environment friendly products.

(**Mohammad Naved Khan & Kirmani, 2015**), Willingness to pay is influenced by environmental concern and attitude towards green products whereas environmental responsibility has no bearing on willingness to pay for green products.

(**Biswas & Roy, 2015b**), environment friendly consumers are willing to pay premium price for green products due to high perceived consumption value. Social recognition or social influence has no impact on green product adoption behaviour. Shift from non-green to green is the result of want for dynamism in lifestyle. Strong environmental attitude enhances the urge to search for new products with greater environmental compliance.

(**Kushwaha & Sharma, 2015**), Proper promotion and development of a green product with the help of innovation is also necessary. Cost controlling is very necessary for the

green production as it leads to the better performance. The manager must be assertive while adopting green initiatives.

**(Khare, 2015)**, Consumers having green values are identified as green self- identity. Their green self-identity encouraged them to project environment friendly attitude and purchase of green products. Past experiences with the products governed consumer buying decision. They assess green products in terms of value or satisfaction they have derived from earlier consumption.

**(Biswas & Roy, 2015a)**, says that peer opinion, social recognition also plays an important role in forming sustainable behaviour. Positive word-of-mouth and social-cultural practices plays are the significant motivators for sustainable behaviour.

**(Maichum et al., 2016)**, says that consumer attitude, subjective norms and perceived behavioural control have a significant influence on intention to purchase green products. Environmental knowledge has no effect on purchase intention but environment concern has a significant effect on these three constructs.

According to **(Mohd Suki, 2016)**, Green brand knowledge is the most significant determinant of consumer's green purchase intention. Knowledge about green brands affects his intention towards purchasing it and the I have also pointed out the impact of green position on green buying behaviour. All in all, the more is consumer known to the product and about the product the more inclined he will be towards the product.

**(Muralidharan et al., 2016)**, there are two important aspects which need to be considered before designing promotional strategies for green products for millennial in India. These are: 1. Ad-message and content 2. Sponsor promotional events. Importance should be given to conversational word-of-mouth among family and peers. Informative messages for parents and parallel targeting campaign for peers with image-based

messages. Interpersonal sources have more impact on green buying behaviour than mass media.

(**Sadachar et al., 2016**), youth purchase green products to stand out in the crowd. It gives them distinct identity. Youth's knowledge about green apparel and its impact on society affect his behaviour.

(**Ninh & Lobo, 2016**), consumers' Bio spheric values positively influence their attitude towards environment protection which further translates into behaviour. Bio spheric values affect subjective norms but subjective norms do not affect purchase behaviour. Bio spheric values are negatively affected by perceived inconvenience of eco-friendly products due to unavailability or higher cost. Retailers can make easy availability of eco-friendly products. Bio spheric values positively affects environmental self-identity. Past behaviours of eco-friendly products strengthen intention behaviour relationship.

(**Kong et al., 2016**), consumers have low understanding of sustainability concept. Public education on sustainability as well as relationship between sustainability and fashion is needed. Effective knowledge and social knowledge have a positive influence on attitude towards sustainable fashion. Attitude toward sustainable fashion influence behavioural intention of sustainable fashion. To encourage sustainable fashion action-based curriculum supported by accurate information is needed.

(**Ninh & Lobo, 2016**), has explored bio spheric values of the consumer in influencing purchase intention of green products.

(**Kan et al., 2017**), Brand image, environmental consciousness and environmental performance of products positively influence purchase intention of sustainable apparel. Companies should build green image to influence consumers. They should work on quality and should give more eco-information about the product.

(Cai et al., 2017), According to the researcher the biggest problem that the consumer face while purchasing is how to distinguish between green and non-green products. This is the top reason for not purchasing green products. There is a lack of perceived credibility of the eco-labels of the products. Other than eco-labels green purchase is also affected by the reputation of the final outlet. Success of green marketing is challenged by effectiveness of the communicating information about the products to the consumer. Manufacturers should select credible eco-labels certifiers as well as retailers for better communication about the product.

(Varshneya et al., 2017), Positive attitude positively influences intention of the consumer to purchase organic clothing. Green consumption values have a positive relationship with purchase intention of organic clothes. Social influence does not impact purchase intention of organic clothes.

According to (Prakash & Pathak, 2017), personal norms is the strongest influencer among other variables. Ethical motives and higher values play an important role for a young Indian consumer in selecting green products. Fulfilment of moral responsibility towards nature influences their green purchase decision. Researcher further explains that young Indian consumer can pay extra for eco-friendly products. They prefer buying from eco-friendly companies.

(Adnan et al., 2017), young Indian consumer wants self-identity and uniqueness in his endeavours. So, in case of buying, he also finds uniqueness. Young Indian consumer purchase green products because it gives them uniqueness and self-identity. It creates image of a “Green Consumer” for them.

(Khare & Sadachar, 2017), Young consumer is not influenced by social norms or peer groups. Even green apparel knowledge has no influence on their buying behaviour.

Youth seek self-identity and green apparel gives them distinct identity. It shows individualistic buying behaviour on part of youth in India in case of green apparel buying.

**(Bhatia & Jain, 2017)**, awareness knowledge, preference, purchase intention, learning and experience, environmental concern, pro-environmental action, and perception of consumer plays an important role in purchasing behaviour of green products. Consumers having these attributes are most likely to purchase green products.

**(Tandon & Sethi, 2017)**, has given five factors which influences purchase of green products. These are environment friendliness, positive inclination towards green products, social appeal, accessibility and green marketing elements.

**(Yang et al., 2017)**, there is a need of developing understanding of green fashion in developing countries. Local companies must introduce ethical fashion practices to build competitive advantage.

**(Mohd Suki, 2017)**, consumer satisfaction is affected by product quality, corporate image, and store image and product price. In case of buying green products, consumers depend upon corporate image, social image and product price. Consumer is ready to pay high price if he is satisfied with the product. So, satisfaction leads towards brand loyalty. Consumer also faces problem of identifying green products. Problem of identification must be solved through eco-labelling and through other means.

**(Zarei & Maleki, 2018)**, suggested that environmental attitude and corporate ability are the main factors in building green purchase intention. Green scepticism has a moderating impact on the relationship between corporate ability and environment knowledge and information seeking.

According to **(Chaudhary, 2018)**, perceived value and willingness to pay has a positive influence in purchase of green products in India. Price-sensitivity is not found in Indian consumer in relation to the purchase of green products because green products generate high value. Environmental concern and personal norm do not impact millennial in India regarding purchase of green products. Purchase intention based on willingness to pay and perceived value influence green purchase behaviour.

**(Jaiswal & Kant, 2018)**, Green purchase intention is significantly influenced by attitude towards green products (AGP), environmental concern (EC) and perceived consumer effectiveness (PCE). Role of AGP is mediating. Perceived environmental knowledge has no significant effect on GPI. Customer engagement (CE) and social influence are the key determinants of consumers' purchase intention of green apparel products. Companies also need to work on brand experience (BE) of the products.

**(Sreen et al., 2018)**, Customer engagement is the key in this matter. Green purchase intention is significantly impacted by attitude, subjective norms and perceived behavioural control. Collectivism has a direct relationship with these three. Long term orientation has also significant relationship with subjective norms and PBC and man nature orientation has a significant relationship with attitude.

According to **(Taufique & Vaithianathan, 2018)**, subjective norms doesn't influence behavioural intention leading to ecologically conscious consumer behaviour among young consumer in India. Self-identity and past environmental behaviour are important predictor of green behaviour of Indian consumer. Engaging customer in more green activities can foster sales.

**(Kirmani, M.D & Khan, M.N, 2018)**, Attitude towards green products has a significant and positive influence on willing to pay for green products in India.

Collectivism and environmental concern are the predictor of attitude towards green products.

**(Mohammed Naved Khan & Kirmani, 2018)**, Collectivism is the significant predictor of environmental concern and attitude towards green products.

**(Hashim et al., 2018)**, social influence and eco-labels have positive effect on intention to buy green products. Social influence has shown higher effect than eco-labels. Consumer likes to be perceived as adopting eco-friendly lifestyle.

**(Mishra & Devakumar, 2018)**, green trust, green motive, green perceived value and green attitude influence purchase of organic apparel products in India. Lack of knowledge, proper promotion, availability and absence of effective marketing techniques are the biggest hindrances in the path of organic products. Companies need to understand the generational cohort also in India.

**(Gupta & Singh, 2018)**, among all the demographic factors only education has an impact on environment friendly behaviour. And graduates are more responsive towards willingness to pay, green self-identity and perceived behavioural control than post graduates and under graduates in India.

**(Ardeno.R, 2018)**, Green brand positioning and green brand knowledge influence purchase intention of eco-friendly plastic bags and attitude does not affect their purchase intention. researcher has suggested emotional appeal than rational marketing strategies to promote green.

**(Setyawan et al., 2018)**, purchase intention of green products does not influence by attitude of the consumer in millennial whereas gender also play role in deciding purchase intention of green products.

(Kaur, J & et.al, 2018), Price, purchase intention, Eco-label, Media, Altruism, PCE, brand Image, information, transparency, environmental knowledge, environmental concern, environmental belief, environment friendliness of companies, environmental attitude and environmental responsibility are the factors that affects purchase intention of green products of generation Z in India the most.

(H. Wang et al., 2018), conditional value has a significant effect on green consumer behaviour among young consumer. Young consumer pays much attention to discounts, offers, gift coupon. He has also revealed that epistemic value also influences consumer behaviour. Young consumers are more curious towards green products. They want to know about them. So, the process of communication with the young consumer is very important. Outlets must explain products knowledge and features to the young consumers. Companies should try to capture curiosity of young consumer. Functional value, social value and emotional value plays no role in the behaviour of young consumer because they are rational, logical, willing to pay premium price and make individual decisions. Females are more likely to purchase green products because they pay much attention to conditional value, epistemic value.

(Dabija, 2018), Environment protection strategies adopted by retailers affect consumer's loyalty towards the store. Environment friendly practices derive consumers to prefer, revisit and recommend green-oriented apparel stores but these practices affect mostly generation Z and millennial's because they are more curious about green products and practices.

(Alex & Mathew, 2018), Green marketing positively influence consumers intention of green products. When the awareness of green products increases consumers tends to buy more green products. Higher the consumer's perception of green products, higher

is the purchase of green products. Green marketing awareness has a greater impact than perceived innovation. So, companies should more focus on green awareness than innovation.

(**Y. Wang et al., 2018**), purchase intention is positively influenced by perceived value and perceived trust. Perceived value is most influenced by emission reduction knowledge whereas perceived trust is mostly influenced by material reduction knowledge. Availability and clarity of green information and the presence of green certification has the most effect on consumers' perception of remanufactured products and their propensity to make a decision to purchase.

(**Jacobs et al., 2018**), positive attitude towards sustainable clothing, self-transcendence values and online and catalogue shopping affinity enhance sustainable clothing purchases. Self-enhancement values and preference for durability are the barriers of sustainable clothing. Price and fashion consciousness does not have any influence on sustainable behaviour.

(**Wiederhold.M, 2018**), price, availability, knowledge, transparency, image, inertia and consumption habits are the barriers of sustainable clothing. Availability, knowledge, transparency, image and inertia are the barriers which can be solved through the help of retailers. Retailers can help in communicating sustainable fashion, ethical brands and ethical labels to the consumer. They can help in removing purchasing inertia by discussing benefits of sustainable apparel. Retailers can help in increasing transparency by disclosing sources and supply chain of the apparel. This step will also increase trust of consumer. Manufacturer can help in price management and availability of the sustainable apparel. Manufacturer and retailers should work on price, style,

communication and availability of sustainable fashion to change the consumers purchase decision of sustainable apparel.

(**Diddi et al., 2019**), consumers think that engaging in sustainable clothing will be costly for them. This needs to be addressed through labels giving information related to benefits of the sustainable clothing. Young consumer engages in sustainable clothing when it is affordable, convenient and creates value for them. Cost-benefit analysis is important for them and it is just not related to money and time spent but it includes economic, social and psychological factors. In shorts, which creates value for them. Consumers like to spend their money on long lasting and quality clothes. So, companies can provide services of repairs, mend, recycle and more innovative ways to create longevity of the apparel to entice young consumers.

(**Choi et al., 2019**), green self- expressive motive has positive impact on perceived value and attitude towards green products. Favourable product attributes lead to favourable product attitude and enhances intention of green products. Green premiums are the best options for promoting green products. Green premiums can positively affect intention towards green products then leads towards its purchase.

(**Zaidi & et.al, 2019**), green trust is a significant mediator between consumption values and green purchase intention. Green trust is influenced by functional values like quality and price as well as social values significantly. Green washing perception has a moderating effect on relationship between consumption value and green trust. Green trust plays an important role in green purchase intention. Firms need to place significant effort on enhancing green trust of green products.

(**Hojnik & Ruzzier, 2019**), consumer with consciousness with eco-products, familiarity with eco-products and perceived sense of environmental responsibility has

a positive purchase intention of eco-products. That means they exert higher intention towards eco-products. Females have higher environmental concern, consciousness of eco-products and perceived sense of responsibility towards eco-products. More emphasis should be placed by government, policymakers, companies, and other relevant stakeholders on ecological labels, environmental certification, non-polluting ingredients, environmentally friendly packaging, and encouraging eco-design—designing the product from the start to be environmentally friendly and educating consumers on opportunity for cost reduction when behaving in an environmentally responsible way. Favourable BE and CE can create a shift in customer's perception towards green apparel products.

**(Joshi & Srivastava, 2019)**, Customer oriented communications and campaigns can maximize BE and CE, So, in this way green retailing can play a crucial role in GPI (Green purchase intention) of green products because retailing is the only stop in the whole process where company can directly communicate with the customer about their products.

**(Shukla, 2019)**, Perceived environmental responsibility serves as a foundation for millennial' attitude, perceived behavioural control, subjective norm, and environmental concern toward intention of green product purchase. The study disclosed that perceived environmental responsibility is the strongest determinant of subjective norm. Marketers should publicize green properties of their products and drive demand for eco-conscious consumers by promoting convenience correlated with the purchase of green products. Marketers need to align their sustainable brand messaging to the sentiments of the eco aware millennial generation.

(Shukla, 2019), perceived environmental responsibility influences green behaviour of millennial in India. Millennials have grown to embrace pro environmentally responsible behaviour. For Indian organic clothing market these ideas of collectivism, long-term orientation and man orientation can be very helpful. Indian companies should incorporate these into their business while promoting green products.

(Chekima, B & Chekimaa, K, 2019), cultural values are significantly related to green purchase intention in India. Environmental knowledge is not the significant factor in green purchase intention.

(Chakraborty, U. 2019), brand awareness and perceived value affect green purchase intention of green products in India.

(Singhal, D & et.al, 2019), purchase intention of remanufactured product is positively and strongly affected by attitude and subjective norms and moderately affected by perceived benefits and behavioural control and also there is a negative relationship between perceived risk and purchase intention.

(Mahdi et al., 2019), health consciousness and environmental knowledge positively impacted attitude towards green products. Consumers having citizenship behaviour have favourable intention towards green products. Citizenship behaviour can be linked to self-extension attitude where consumer not only thinks about himself but he thinks about community and environment as well.

(Paço et al., 2019), prosocial attitude has a direct influence on green consumption values whereas green values positively impact receptivity to green communication and buying behaviour. Green advertisement has weak influence on buying behaviour. The whole concept of greenness must be communicated for influencing consumer.

(**Ndofirepi, 2019.**), extent of green product knowledge influences green purchase intention and behaviour. Communication of the green products is most important. Communication, stressing the environment welfare and compatibility of green products results in swaying consumers' attention towards green products. When environmental attitude is positive, and knowledge of green products is high then intention and behaviour of green products of consumer is also tend to be high.

(**Jalil & Shaharuddin, 2019**), consumers' attitude and their clothing disposable behaviour significantly impacted consumer purchase intention of eco-fashion clothes. Decision of recycled material depends upon quality, design, price and touch. Clothing disposable options are very important for promoting green intention by providing easy access to charities or donations and disposable bins.

(**Grace & Chai, 2019**), retailers should provide information of sources, ingredient and supply chain to convince the customer. To link consumption with altruistic and pro-environmental behaviour is important for retailer. It is also noteworthy for retailers and marketers that awareness of negative consequences of their behaviour on environment is not sufficient only, they have to establish ascription of responsibility to their behaviours to form a pro-environmental norm among consumers which will translate into purchase intention later. Little extra information of labels, point of purchase or on bar code which could be accessed easily can go long way. In-store messages and displays can also play important role.

(**Sharma & Foropon, 2019**), reveals that product attributes play an important role in green purchase decisions. Researcher also suggested that attributes of the green products must be communicated well so that the consumer can form their green purchase decision. When attributes and qualities of green products are communicated

then non concerned consumer also purchase green products. Green retailers can play an important role in communicating those attributes to the consumer.

According to the research of (**Acharya, 2019**), the four barriers for Indian consumers in purchasing green products are incomprehension, extortionate, limited range of green products and non-availability of green products in the market. In India retailers do not stock many products when even consumers are willing to wait for few days to get green products. Retailers are not in a position to deliver it to the consumer.

(**Khare & Kautish, 2020**), suggested that green apparel manufacturers should use online communities to promote green apparel. Green clothing is linked to green global values, cosmopolitanism, and self-identity. Online communities can bring global consumer on one platform to discuss the rationale of using sustainable products. Indian companies must consider this idea of online communities, social identity, self-identity and cosmopolitanism.

(**Khare, 2020**), consumer's perception of green apparel benefits is influenced by style and design also. Consumers understanding of green apparel attributes could enhance perception about their benefits, which reflects using pro-environmental processes incorporating new trends and styles. Fair trade practices also affect their perception of green apparel. Green apparel helps consumers in creating green-self-identity.

(**Ghose & Chandra, 2020**), Environmental awareness and look conscious personality positively influences attitude towards organic personal care products. Consumer willingness to behaviour, social pressure, perception and feelings influences buying of eco-friendly textile and apparel products. Additionally, consumers' confidence, environmental attitude, values and past experiences influences purchase intention and behaviour towards sustainable product consumption.

(**Khare et al., 2020**), consumers' knowledge about green clothing positively influences their involvement with organic clothing. Availability of organic clothing play crucial role. Price and fashion ability of organic clothing also affect consumers involvement of organic clothing. Communication about organic clothing is the key to success for organic clothing business in India. Organic clothing should be promoted like handloom industry and cotton industry in India through exhibitions, fairs, workshops etc.

(**Kautish, 2020**), consumer sustainability consciousness influence behavioural intention and it should be enhanced to augment sustainable practices. Value orientation should be used to target Indian consumers for green products.

(**Bautista et al., 2020**), Altruism is a mediator between green products and intention to purchase green products. Companies can form their marketing strategies around altruism to promote green products.

(**Waris & Hameed, 2020**), knowledge of eco-labels has a significant and positive influence on attitude of consumer. They are important source of information for eco-friendly products. Eco-labels enhance green trust and green trust shapes the purchasing behaviour of the consumer.

(**H. J. Park & Lin, 2020**), consumer attitude is insignificant predictor of green buying. 35% of the participants showing higher purchase intention failed to buy green in real scenarios. According to current situation, utilitarian value, perceived consumer effectiveness and subjective norms influence green buying. Self-expressiveness also plays an important role in influencing purchase intention of eco-friendly clothing but it did not convert into actual buying. Consumers like to choose cheap fashion in cost of few ethical ones.

(Neumann et al., 2020), Attitude does not necessarily translate into purchase intention in case of sustainable clothing, whereas positive perception of brands social responsibility plays a vital role. It enhances consumers' trust on the brand when it comes to environmental issues. Positive perception of brands also increases trust amongst consumers and trust affects purchase intention of sustainable clothing strongly. Perceived consumer effectiveness plays no important role in purchase intention of sustainable clothing. There is an attitude-behaviour gap and in only 30 percent cases intention translates into behaviour in case of sustainable clothing.

(Rausch & Kopplin, 2021), sustainable clothing purchase intention is highly impacted by attitude towards sustainable clothing and green washing has negative impact on purchase intention. Perceived aesthetic risk also negatively impacts intention and perceived economic risk has no impact on this relationship.

## **2.1 Research Gap:**

Initially researchers have insisted on three most important factors which influence purchase intention of green products which are price, availability and communication of green products to the consumers. From 2007 to 2011 researchers have explored factors in broader picture. New factors like self-identity, collectivism, trust, interpersonal influence, value orientation, and eco-literacy have been explored by the authors. 2012 to 2015 researchers have focused on theory of planned behaviour, hierarchy effect model under consumer decision making process. Factors like subjective norms, consumer attitude, and perceived behavioural control, perceived consumer effectiveness, willingness to pay, environmental knowledge, environmental concern, and perceived value, perceived risk have been explored. Some authors have explored factors like green image of the company, green store loyalty, and in-store

atmosphere also. (H. H. Park, 2015), has explored LOHAS consumption tendency and PCE for targeting consumers for green products purchase. In 2016 researchers have more focused on promotional activities, ad-campaigns, and brand image. Effective communication for green products is very important to enhance purchase intention of green products. From 2017 to 2018, researchers have explored more intense factors like cost-benefit analysis, environmental attitude, customer engagement, brand experience, conditional value, transparency, green brand positioning, consumption habits and altruism. In 2019, researchers have focused on self-expressive motives, trust, and consciousness of the consumer about health and environment, product attributes, environmental knowledge, environmental responsibility, self-extension attitude, communication of products sources, manufacturing process and consumer perception. In 2020, researchers have focused on creating green community. Online promotion, distinct green identity, cosmopolitanism, altruism, self-expressiveness, consumer's sustainability, and environmental awareness has been explored by the researchers. According to (Neumann et al., 2020), only 30 % intention convert into decisions. So, according to me there is a gap between purchase intentions and purchase decision of green products. According to a study, 95 % of the shoppers surveyed were ready to buy green products but green products were purchased by only 22% of the shoppers. There is a gap between shopper's intention to buy green products and their purchase decision to buy green products. Retailers are losing many customers on their path to purchase. So, according to me there is a gap in conversion of purchase intention into purchase decision. Factors like conditional value, functional value, social value, emotional value and epistemic value have not been explored much. Most of the authors have focused on theory of planned behaviour, and consumer decision making process for analysing the intention of green products. Another gap which I have found is that none of the

researcher has correlated Green Retailing with purchase intentions of green products. Green marketing, green manufacturing has been explored more than green retailing. Many researchers have worked on theory of planned behaviour and many have worked on green retailing but none too few have combined these two aspects in a similar context. This research gap, I have tried to fulfilled through work.



*Chapter 03*  
*Research Methodology*



## CHAPTER- 03

### RESEARCH METHODOLOGY

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The research methodology has been decided after reviewing literature available on green products and green retailing. Literature has helped me in determining theoretical base and nature of the study. Research is a mixture of qualitative and quantitative research techniques. Research design of the study is exploratory in nature. The sample size is about 500 respondents. Data is collected after conducting pilot study on 50 respondents of Uttar Pradesh. Sampling technique is based on Snow-ball sampling method. Data has been collected through survey method. Online questionnaire is prepared to collect the data from various respondents of Uttar Pradesh. Analysis of the data has been done on SPSS 23.0 version and on AMOS 23. Suitable statistical methods have been applied for the analysis of the data.

Research methodology of the topic is divided into following sections: Research questions, Objectives of the study, Hypothesis formulation, Research Design and type of research, Research Approach, Data Collection and questionnaire designing, sampling design with sampling plan, Population of the study, sampling frame, sampling unit, sample size, sampling technique, Data analysis tools.

#### **3.1 Objectives of the Study:**

This research determines factors affecting consumer purchase intention of green products and impact of green retailing on consumer purchase intention of green products. For achieving those goals certain specific objectives and required methodologies have been framed. Objective of the study are following:

1. To find out factors affecting consumer purchase intention of Green Products.
2. To explore different dimensions of Green Retailing for influencing consumer purchase intention of green products.
3. To present Green Retailing as an effective tool of enhancing consumer purchase intention of green product.

### **3.2 Research Questions:**

After brief study of the available literature, I have developed following research questions for my study. On the basis of following research questions questionnaire has been prepared. Research questions are following:

1. Which factors affect consumer purchase intention of green products?
2. What are the various dimensions of green retailing that can influence consumer purchase intention of green products?
3. Does green retailing is an effective tool of enhancing consumer purchase intention of green products?
4. Does green retailing help in converting consumer purchase intention into purchase decision?
5. What factors affect the purchase intention of green clothing products?
6. Does green retailing help in conversion of purchase intention into purchase decision of green clothing products?

### **3.3 Hypothesis Formulation:**

As per research questions based on objectives, following hypothesis associated with objective one and three have been formulated.

**Objective 1: To find out factors affecting consumer purchase intention of Green Products.**

**H<sub>01</sub>:** No factor affects consumer purchase intention of Green Products.

**H<sub>A1</sub>:** Some factors affect consumer purchase intention of Green Products.

**Factors considered for this objective are following:**

- a) Attitude towards behavior
- b) Subjective Norms
- c) Perceived behavioral control
- d) Environmental Concern
- e) Willingness to pay

**H<sub>01 a</sub>:** Attitude towards behaviour does not affect consumer purchase intention of green products.

**H<sub>A1 a</sub>:** Attitude towards behaviour affects consumer purchase intention of Green Products.

**H<sub>01 b</sub>:** Subjective norms does not affect consumer purchase intention of Green Products.

**H<sub>A1 b</sub>:** Subjective norms affect consumer purchase intention of Green Products.

**H<sub>01 c</sub>:** Perceived behavioural control does not affect consumer purchase intention of green products.

**H<sub>A1 c</sub>:** Perceived behavioural control affects consumer purchase intention of green products.

**H<sub>01 d</sub>:** Environmental Concern does not affect consumer purchase intention of Green Products.

**H<sub>A1 d</sub>:** Environmental Concern affects consumer purchase intention of Green Products.

**H<sub>01 e</sub>:** Willingness to pay does not affect consumer purchase intention of Green Products.

**H<sub>A1 e</sub>:** Willingness to pay affects consumer purchase intention of Green Products.

**H<sub>01 f</sub>:** Attitude towards behaviour, subjective norms, perceived behavioural control, environmental concern, willingness to pay does not affect consumer purchase intention of green clothing products.

**H<sub>A1 f</sub>:** Attitude towards behaviour, subjective norms, perceived behavioural control, environmental concern, willingness to pay affect consumer purchase intention of green clothing products.

**Objective 3: To present Green Retailing as an effective tool of enhancing consumer purchase intention of green product.**

**H<sub>03</sub>:** Green retailing has no mediating role in conversion of consumer purchase intention into purchase decision of green products.

**H<sub>A3</sub>:** Green retailing has mediating role in conversion of consumer purchase intention into purchase decision of green products.

**Following dimensions of green retailing has been considered for analysis:**

- a) Green Packaging

- b) Eco-labels/ certification
- c) Communication
- d) Availability of stocks
- e) Rewards
- f) Green Practices

### **3.4 Research Design and Type of Research:**

Research design has been finalized after brief study of objectives and tandem hypothesis. For the analysis of first and third objective I have opted for exploratory cum descriptive research design and for the second objective descriptive research design has been finalized. Objective one studies factors that affects consumer purchase intention of green products. Five factors: attitude towards behaviour, subjective norms, perceived behavioural control, environmental concern, willingness to pay have been analysed for objective one to reach the conclusion and objective three finds out the role of green retailing in conversion of purchase intention into purchase decision. Dimensions of green retailing such as green packaging, eco-labels/certification, communications, availability of stocks, rewards, green practices have been explored in this objective. So, these two objectives are exploratory in nature as these two objectives are exploring impact of different factors of green products and green retailing. Objective two finds out different dimensions of green retailing through available literature that can affect consumer purchase intention of green products. So, this objective is descriptive in nature that lays foundation for third objective. This research is mix of exploratory and descriptive research design depending upon three different objectives.

### **3.5 Research Approach:**

Research approach for this research problem is associated with its research design which is exploratory and descriptive in nature. So, based on research design I have opted for qualitative and quantitative research approach. Qualitative analysis is done to understand the phenomenon or event, whereas quantitative analysis predicts the outcome or explain the phenomenon or event. Quantitative analysis is the analysis of numerical data and qualitative analysis derive conclusion on the basis of non-numerical data such as text, video, audio etc. Qualitative research provides in-depth insights about the research problem which forms basis for statistical analysis. Qualitative data can be collected through observation, interview, survey, secondary data research etc. Quantitative research is a systematic investigation of phenomenon through quantifiable data after applying various statistical techniques to predict outcomes. Objective first and third are based on exploratory research design and explores different outcomes of the different factors of green products and green retailing. So, analysis of these two objectives is based on quantitative research approach as these have predicted certain outcomes after analysis. Objective second is based on descriptive research design and qualitative research approach has been used for the analysis as this objective examines different dimensions of green retailing that will affect purchase intention of green products.

### **3.6 Research Instrument and tools:**

As per the nature of the study both primary and secondary data has been collected for analysis of the objectives. Data has been collected from following sources:

**Secondary data:**

Secondary data has been collected from various published and unpublished resources available online as well as offline. Data has been collected from books, journals, magazines, newspapers, online articles, news, government reports, reports of various institutions and organizations available on their websites, various surveys and reports of international organizations such as United Nations, WHO etc., CSR reports or sustainability reports of various companies selling green products or opting for green retailing. Various news articles published online or offline related to green products or green retailing has been analysed by the researcher. Historical data has also been analysed by the author related to the research problem. Work of previous scholars on the same research problem helped me in forming the base for the research. Sources of unpublished data are unpublished materials of different scholars working on same research problems and also some data of public and private associations have been analysed.

**Primary Data:**

Primary data means the data which has been collected for the very first time. Primary data has been collected through ‘Survey’ of consumers of Uttar Pradesh. For the collection of data ‘Structured Questionnaire’ has been designed. Questionnaire was designed as per the requirements of objectives and formulated hypothesis. Due to the present situation of Covid-19, online questionnaire has been prepared on Google Form for the collection of data and Google form has been circulated through e-mail address of the respondents as well as various social media applications has been used for collection of data. Collection of data is purely done online due to the condition of restrictions and lockdown.

### **3.7 Sampling Design:**

Sampling design is based on non-probability sampling method. Non-probability sampling means choice of respondent is dependent on the discretion of the researcher. I have selected non-probability sampling method because it suited best in the present situation of covid-19. Under non-probability sampling method snow-ball sampling technique has been applied for the collection of the data.

### **3.8 Universe of the study:**

Universe of the study is consumers of Uttar Pradesh. Every person who is making purchase and consumption of consumer products, is the universe of the study as I am studying consumer behaviour regarding green products in Uttar Pradesh. It does not matter whether consumers are purchasing green products or not, the whole idea is to study their purchase intentions towards purchasing green products.

### **3.9 Sampling Unit:**

Consumer is the sampling unit for the study as, whole of the study is based on studying consumer behaviour towards green products.

### **3.10 Sampling Size:**

Size of sample is decided on the basis of Slovin's formula. Slovin's formula is used when behaviour of the population is unknown. In this case I have no idea about the behaviour of consumers of Uttar Pradesh regarding Green products that's why I have used Slovin's Formula. It is computed as following:

$$n = N / (1+Ne^2)$$

n= sample size

N= Size of population

E=error margin (5%=.05)

After keeping population of Uttar Pradesh as 237,882,725 and error of margin as .05 we get 400 sample sizes. We have collected the data of 523 respondents in an Online survey method through Google forms. Due to this pandemic, data was collected online purely. All the respondents were from different parts of the Uttar Pradesh. I have collected data from all five zones of Uttar Pradesh which are North U.P, South U.P, East U.P, West U.P, Central U.P. Data collection was based on Snow-ball sampling technique. Google form was circulated through e-mails, WhatsApp number and through other social media platforms such as Facebook, Instagram etc. After editing and cleaning, data of 500 respondents has been used for final analysis.

### **3.11 Time-Horizon of the study:**

Primary data has been collected through structured questionnaire. Data collection has been done from 26 May 2021 to 31 July 2021. Two months has been given for collection of the data and 523 respondents have responded.

### **3.12 Sampling Technique:**

Sampling technique was based on non-probability sampling method. Snow-ball sampling method was used for collection of data. Snow-ball sampling is known as chain-referral sampling. It is based on referrals. One respondent refers another and as the chain goes on each respondent refer some other for collection of the data. This technique can go on till adequate sample has been collected. Exponential Non-discriminative snowball sampling method has been applied for collection of data in which first subject recruited, provide multiple referrals and so on till the adequate sample size has reached.

### **3.13 Ethical Consent:**

Consent regarding data confidentiality and data processing has been taken from the respondents before participating in the survey. Those who were not ok with the online survey have not participated in the survey. All the collected data has been used with maintaining proper secrecy and privacy of the respondents. Their consent has not been violated in any manner by the researcher

### **3.14 Development of Questionnaire:**

Structured questionnaire has been prepared for the collection of the data after reviewing many research papers based on similar research problem. There is total 57 questions in the questionnaire. 6 questions are regarding demographic variables which is nominal data. 4 questions were based on categorical data (Question 8, 30, 56, 57) and 1 question was regarding consent of the respondent for participation in the survey. Rest of the 46 questions were based on ordinal data. Division of these 46 questions is following:

1. Attitude towards behavior (ATB) – From question 9 to 11
2. Perceived behavioral control (PBC) – From question 12 to 14
3. Subjective norms (SN) – From question 15 to 16
4. Environmental concern (EC) – From question 17 to 20
5. Willingness to pay (WP)- From question 21 to 23
6. Purchase Intention (PI) – from question 24 to 26
7. Purchase decision (PD) – From question 27 to 29
8. Green Retailing (GR)- from question 31 to 46
9. Green clothing products (GC) - from question 47 to 55

Questionnaire is divided into four sections. 5-point Likert's scale has been used for measuring items of the questionnaire except section one which collects demographic data. 1 on scale denotes strongly disagree and 5 denotes strongly agree. Respondents were given proper instructions about filling the questionnaire.

**Demographic Profile:**

This section has recorded the demographic details of the respondents which were consumers of Uttar Pradesh. This includes:

1. Location
  2. Type
  3. Gender
  4. Age
  5. Family Income
  6. Educational Qualifications
- A. **Green Products:** This section has recorded the responses of consumers on factors affecting consumer purchase intention of green products. These factors are Attitude towards behavior (ATB), subjective norms (SN), perceived behavioral control (PBC), Environmental concern (EC), willingness to pay (WP). Items of ATB and PI (purchase intention) are taken from Y.K Chan (2001). Items for SN, EC and PBC has been taken from Maichum, K & et, al, (2016). Items of WP are taken from Moh. Khan, N & et, al, (2015). Items of PD are taken from Chaudhary, R, (2018).
- B. **Green Retailing:** This section has recorded the responses of consumers about impact of different dimensions of green retailing on their purchase intentions of green products. These dimensions of green retailing are Green

Packaging, Eco-labels/certifications, Communication, Availability of stocks, rewards, green practices.

C. **Green Clothing Products:** This section deals with collecting responses about purchase intention of consumers towards green clothing products. To test the real-life scenario. How consumers react to green clothing (green product) when retailers adopt green retailing.

### 3.15 Pilot Study:

Pilot study has been done after preparing questionnaire for collection of the data. Questionnaire was sent to 50 respondents to assess the response of the consumers towards questionnaire. Questionnaire was sent to academicians and retailers and any suggestions given by them were taken into full consideration after discretion. Few modifications have been made in the questionnaire based on results of the pilot study before its circulation for full data collection. Validity and reliability of the questionnaire has been checked in the pilot study.

#### 3.15.1 Reliability and Validity of The Questionnaire:

**Table 3.1: Cronbach's alpha of the questionnaire items**

Reliability Statistics	
Cronbach's Alpha	N of Items
.977	49

Cronbach's Alpha of all the items of the pilot study questionnaire is showing excellent reliability as it is  $>.9$ . Cronbach alpha of the different constructs has also been derived.

Items which variate from others were deleted from the questionnaire to increase its reliability.

**Reliability of different constructs:** Reliability of the constructs are following:

**Table 3.2: Cronbach's alpha of all the constructs**

Factors	No. of Items	Cronbach Alpha
ATB (Attitude towards behaviour)	3	.802
PBC (Perceived behavioural control)	3	.900
SN (Subjective Norms)	4	.928
EC (Environmental Care)	4	.922
WP (wilingness to pay)	3	.923
PI (purchase Intention)	4	.946
PD (purchase decision)	3	.842
GR (Green Retailing)	16	.950
GC (Green Clothing)	8	.906

As it is clear from the above table that all the constructs are reliable as all the values are greater than .8 but few items were deleted for the final questionnaire. In subjective norms constructs, there were 4 items 2 items were deleted. Only item 15 (Individuals important to me, expect me to buy green products when getting out for shopping) and item 16 (My friends/Colleagues positive beliefs influence me to buy green products) were kept in final questionnaire. One item is deleted in PI construct, only 3 items were kept. Item 24 (Over the next one month, I will consider buying green products because they are less polluting), item 25 (Over the next one month, I plan to switch to a green version of a product) and item 26 (Over the next one month, I certainly wants to buy green products).

### 3.15.2 Validity of Questionnaire:

Content validity and constructs validity of the data has been checked. For content validity, I have reviewed various research papers based on similar topics and have taken the opinions of various expert on the same. For checking construct validity convergent validity and discriminant validity of the data has been derived. Convergent validity of the data is following:

**Table 3.3: Convergent validity of the constructs**

Measurement of instrument	No- of items	AVE	SQRT AVE
ATB	3	.520740	.721623
PBC	3	.540046	.734878
SN	4	.683882	.826971
EC	4	.578952	.760888
WP	3	.654722	.809149
PI	4	.543825	.737444
PD	3	.589606	.767858
GR	16	.678945	.823981
GC	8	.576745	.759443

From the above table, it is clear that all the AVE (Average variance extracted) values are above .5, hence convergent validity has been established.

**3.15.3 KMO and Bartlette's Test:** Kaiser-Meyer-Olkin test detremines the suitability of data for factor analysis. It also checks adequacy of sampling for each variable as well as for complete model. Values lies between 0 and 1 and values between 0.8 and 1 shows adequacy of the sample and Bartlette's test is used for checking assumption of equal variances.

Table 3.4: KMO Bartlett test of the questionnaire

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.806
Approx. Chi-Square		467.696
Bartlett's Test of Sphericity	df	36
	Sig.	.000

KMO and Bartlett's test was also derived for the items of the questionnaire which is found significant because value was greater than .8.

#### 3.15.4 Content Validity:

Items of the questionnaire which were self-generated were revised after the response of pilot study and with the help of subject experts and experts of language. Suggestions of the subject expert were duly incorporated in the final questionnaire. Quality and relevance of the items of the questionnaire was verified by subject experts. There was total 49 items in the pilot study questionnaire based on scales and after suggestions only 46 items were kept and 4 categorical questions has been added in the final questionnaire.

#### 3.15.5 Face validity:

Face validity of the constructs has also been checked through pilot study. It measures whether items of the constructs are measuring the same construct as it claims to or not.

**Table 3.5: Tabular Representation of Research Methodology**

<b>Particular</b>	<b>Research Method</b>
Research Type	Exploratory
Research Approach	Quantitative and Qualitative
Research Design	Exploratory and Descriptive
Primary Data	Online Survey method
Secondary Data	Published and unpublished data
Primary Data Tool	Structured Questionnaire
Method of Administration	Personally
Population	Total population of U. P
Sampling Frame	Consumers of U. P
Sampling Unit	Consumer
Sampling Size	500 respondents
Sampling Method	Non-Probability Method
Sampling technique	Snow-ball sampling method
Time horizon of the study	26 May 2021 to 31 July 2021

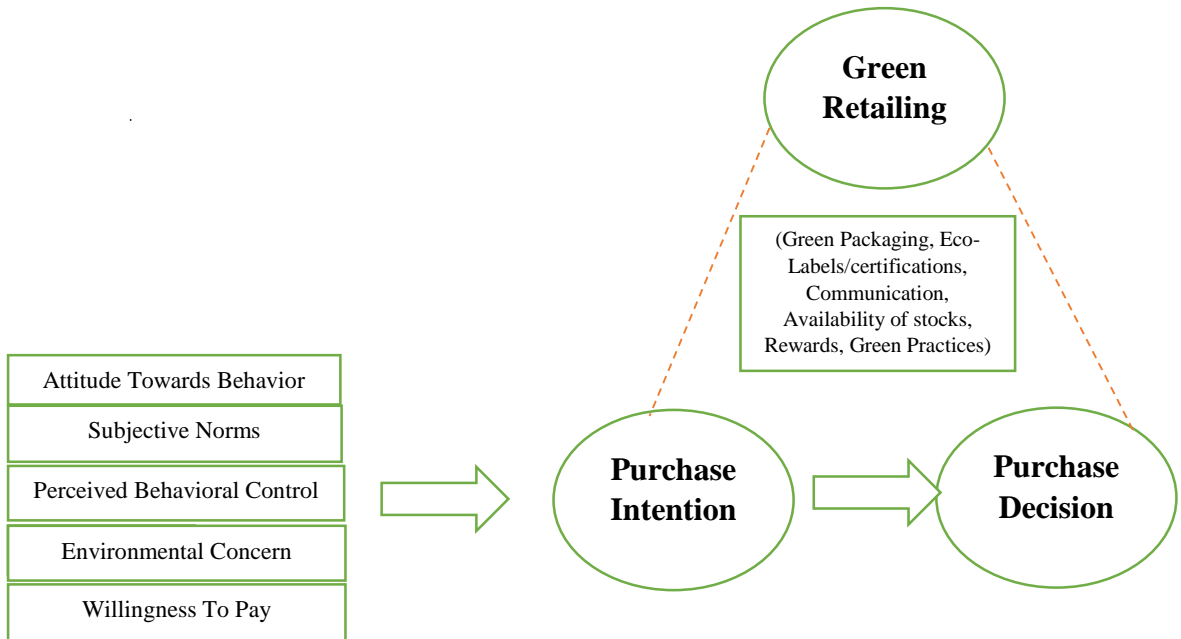
### 3.16 Coding of Questionnaire items:

1. I prefer the idea of purchasing Green. (ATB1)
2. Purchasing Green is a good Idea. (ATB2)
3. I have a favorable attitude towards purchasing a green version of a product. (ATB3)
4. I feel I have the capability to buy green products. (PBC1)
5. If it was totally up to me, I am Hopeful that I will buy green products. (PBC2)
6. I have Amenities, time and desire to buy green products. (PBC3)
7. Individuals important to me believe I should buy green products when getting out for shopping. (SN1)

8. Individuals important to me Expect me to buy green products when getting out for shopping. (SN2)
9. I am Extremely Caring about the environment. (EC1)
10. I would be ready to lower my consumption to support saving the environment. (EC2)
11. Greater social and political change is important to save the natural environment. (EC3)
12. Anti-pollution laws should be implemented to a greater extent. (EC4)
13. It is acceptable to pay extra for environment friendly products. (WP1)
14. 17. I would pay extra taxes to pay for an environmental cleanup program. (WP2)
15. If buying eco-friendly products results in an additional monthly expenditure, I am ready to bear it. (WP3)
16. Over the next one month, I will consider buying green products because they are less polluting. (PI1)
17. Over the next one month, I will consider switching to other brands for ecological reasons. (PI2)
18. Over the next one month, I plan to switch to a green version of a product. (PI3)
19. Over the next one month, I certainly want to buy green products. (PI4)
20. I will purchase green products over the next month. (PD1)
21. I have purchased green products, within past one month. (PD2)
22. I will purchase green products, regularly. (PD3)
23. I always look for eco-labels and certification of the products. (GR1)
24. Eco-labels or eco-mark affects my purchase decision favorably. (GR2)
25. I tend to switch to products with eco-labels and certification. (GR3)
26. I always pay attention to packing of the products. (GR4)
27. Green packaging (sustainable or recyclable) packaging affects my purchase decision favorably. (GR5)
28. I tend to switch to products with green packaging (sustainable or recyclable). (GR6)
29. I pay attention to retailer's description about the products. (GR7)
30. Retailer's opinion about products affects my purchase decision favorably. (GR8)
31. I am open to purchase products with better specifications suggested by the retailer other than my usual choice. (GR9)
32. I tend to purchase those products which are easily available in the market. (GR10)
33. I usually look for products with better specifications or benefits. (GR11)


34. Additional benefit or rewards like discount affects my purchase decision favorably. (GR12)
35. I can switch to green products if I can avail additional benefit or rewards. (GR13)
36. I pay attention to the retailer's green practices. (Environmental concern of the retailer). (GR14)
37. Retailer's efforts inspire me to make green choices. (Sustainable choices) (GR15)
38. Retailer's green practices affects my purchase decision favorably. (GR16)
39. I am aware of green clothing products. (GC)
40. I have favorable attitude towards purchasing green clothing products. (GC1)
41. I have Amenities, time and desire to buy green clothing products. (GC2)
42. My friends, colleagues positively influence me to buy green clothing products. (GC3)
43. I am ready to use green clothing products to support saving the environment. (GC4)
44. I am willing to pay extra for green clothing products. (GC5)
45. I want to purchase green clothing products. (GC6)
46. I will definitely purchase clothing products over the next month. (GC7)
47. Retailer's efforts can impact my decision of purchasing green clothing products. (GC8)

### 3.17 Tentative Model:

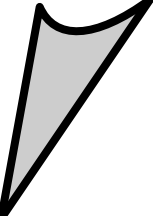



**Figure 3.1: Proposed model for the study. Source: (self)**

Above model, represents tentative model which is based on objectives and hypothesis of the research as it is depicted in the model, Purchase intention (PI), Purchase decision (PD) and green retailing (GR) are the main constructs and Attitude towards behaviour (ATB), Subjective norms (SN), Perceived behavioural control (PBC), Environmental concern (EC) and willingness to pay (WP) are latent constructs or variables. Firstly, I will find which latent variable affects the PI construct and then mediating effect of GR will be calculated between PI and PD to find its impact on PD. ATB, PBC, SN, EC, WP are independent variable (exogenous variable) and PI is dependent variable (endogenous) for one objective one. For objective three PI is independent variable and PD is dependent variable and GR is mediating variable.



*Chapter 04*  
*Data analysis*



## **CHAPTER-04**

### **DATA ANALYSIS**

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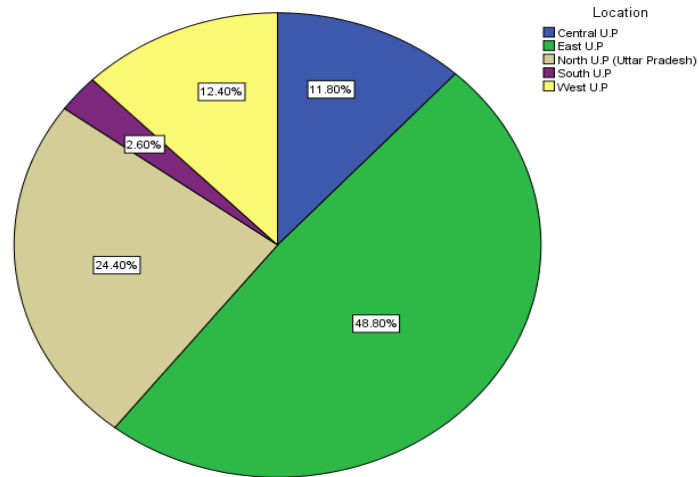
After data collection, data has been edited and cleaned. 523 responses were received but only 500 responses were taken for further analysis. Statistical tools have been applied on the data. In the questionnaire 46 items were based on ordinal data on which parametric tests has been applied whereas nominal data is presented in form of graphs and tables.

#### **4.1 Analysis of Demographic variables:**

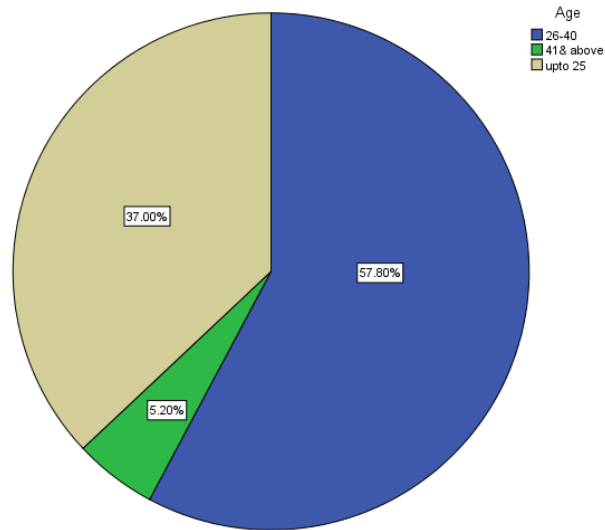
Location, age, gender, family income, educational qualification, type are the demographic questions which were asked from the respondents. All the demographic variables are shown in form of charts and tables. Analysis of these variables is following:

##### **Location:**

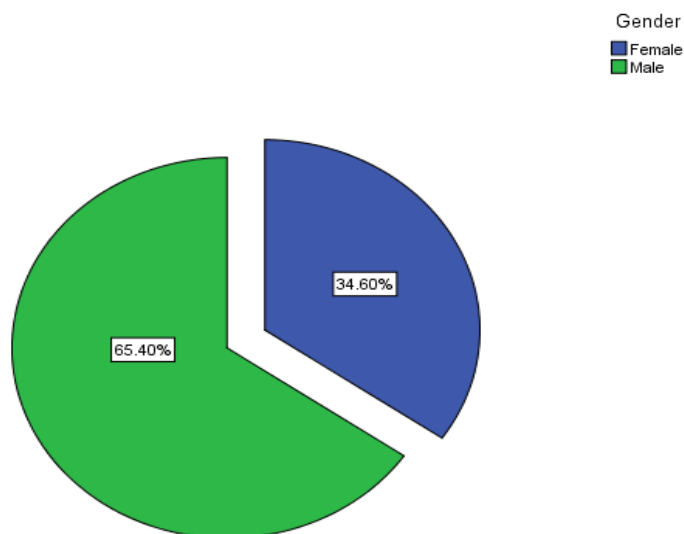
Data has been collected from various consumers who are resident of Uttar Pradesh. I have divided the whole Uttar Pradesh into five segments which were North, south, east, west, and central U.P. Most of the respondents were from east U.P which is 48.8% and least respondents were from south U.P which is 2.6%.

**Graph: 4.1: Locations of the respondent****Age:**

There were three groups for age 26-40, 41& above and up to 25. Most of the respondent belong to 26-40 category which is 57.8% and least age group was 41& above which is 5.2%. Purchaser of green products mainly belongs to 26-40 age group as they are more active towards environmental causes. Being aware and being pro-active towards some cause, is different.

**Graph 4.2: Age division of the respondents****Gender:**

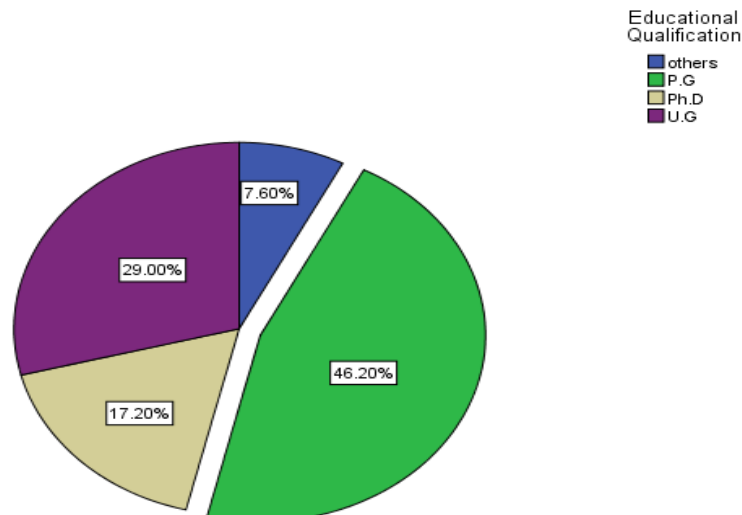
There were three options for gender. Male, female and others. Number of male respondents is higher for the study which is 65.4% and for female is 34.60%. There can be many reasons for that as data was collected online. So, it shows that usage of internet is lesser in females in Uttar Pradesh.

**Graph 4.3: Gender division of the respondents**

### Educational Qualifications:

There were four categories for educational qualifications. U.G, P.G, Ph.D., Others. Higher number of respondents have educational qualification of post-graduation which is 46.2%. It shows responses of the questionnaire were filled with wisdom. There were responses from others category also which is 7.6%. It shows representation of opinions of different customers belong to different educational background.

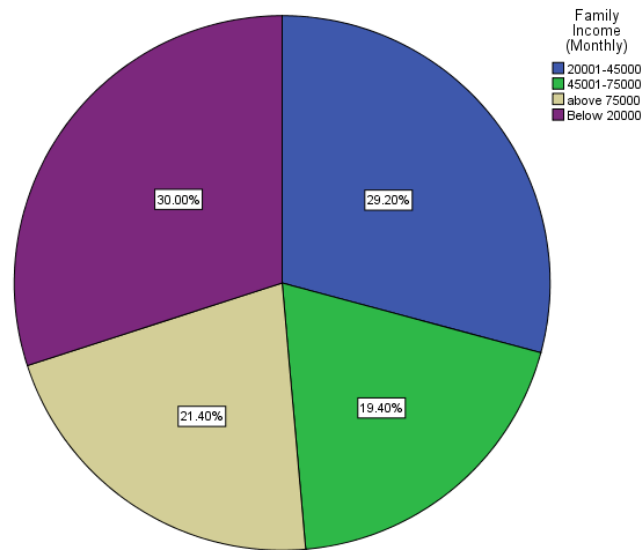
**Graph 4.4: Educational qualification of the respondent**



### Family Income:

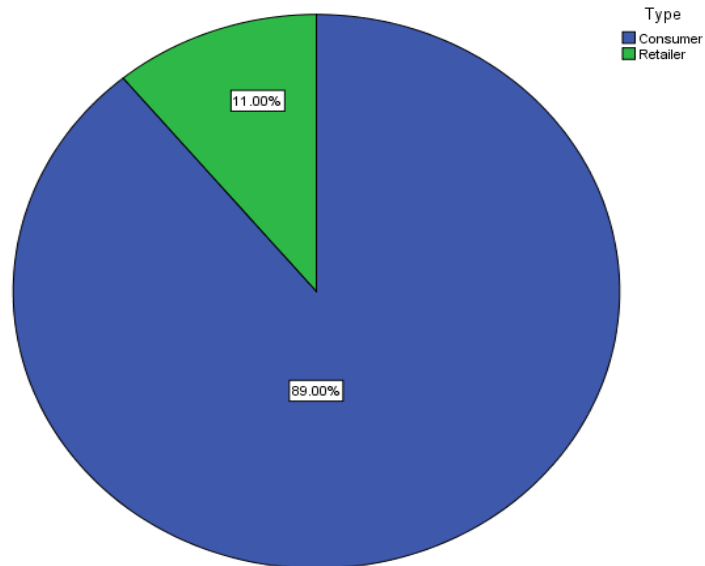
There were four categories under family income which were, below 20000, 20001-45000, 45001-75000, above 75000. Most of the respondent belong to below 20000 category which is 30% as most of the respondents were students. Least respondents were from 45001-75000 which is 19.04%.

Graph 4.5: Income of the respondents

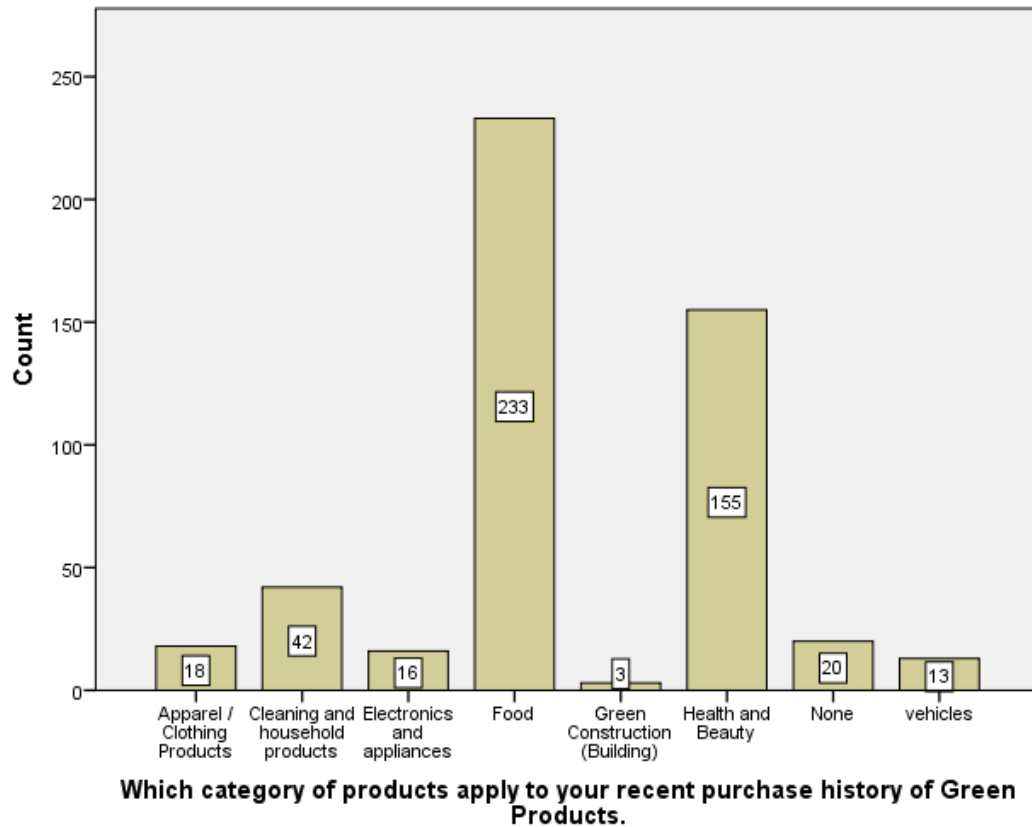
**Type:**

There were two categories under type option which were Consumer or retailer. This option was there to collect the responses of retailers also about green products but most of the responses were filled by consumers which is 89% and only 11% retailers had responded as due to covid restrictions not many retailers were contacted by the researcher. Another reason was that many retailers had not responded to the online questionnaire and also not every retailer has online contact address.

**Graph 4.6: Whether respondents are consumers or retailers**



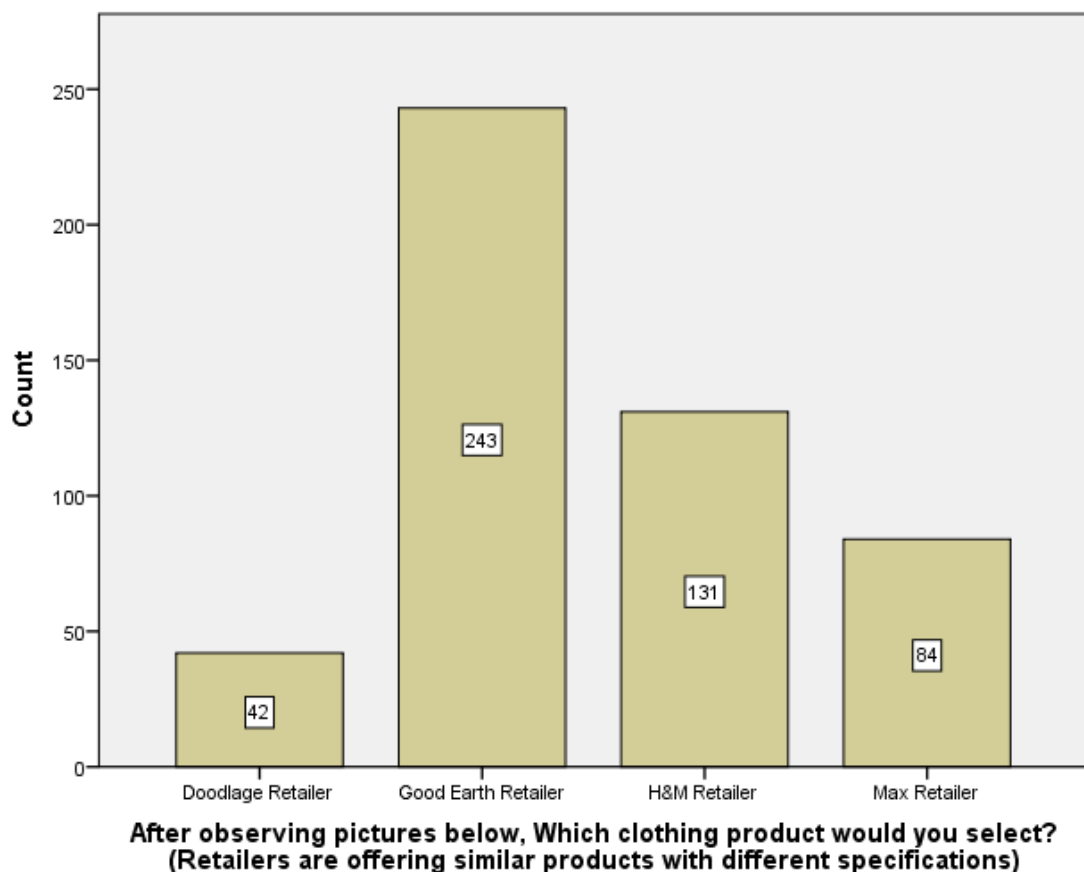
**Graph 4.7: Most purchased Green Products**





greener products etc. Highest number of respondents have selected Packaging, labels and retailers' assistance which is 14.2%. It shows the importance of retailing in purchase of green products. Brands should focus on green retailing to increase the purchase of green products. The second highest selected option is own research which is 12.8%. It shows that awareness about green products should be increased as self-awareness plays an important role in purchase of green products. 8.80% respondents also selected option of special section for green products. This is also a part of green retailing. Retailers must focus on this to increase the purchase of green products.

**Graph 4.9: Green Retailing Scenario**



Respondents were given pictures of real-life scenario of retail store. There were pictures of 4 stores selling similar clothing products with different specification. These scenarios

were as following: Max (Product A), H&M (Product B), Good Earth (Product C), Doodlage (Product D).

**Table 4.1: Description of question number 56 in the questionnaire**

Product Name	Price	Discount	Specifications
<b>Product A (Max)</b>	1000	No discount	Pure cotton Fabric, Plastic bag Packaging
<b>Product B (H&amp;M)</b>	1000	20%	Organic cotton, Paper bag packaging
<b>Product C (Good earth)</b>	1200	No discount	Regenerated cotton, Recycled paper bag packaging, Proper signage about green product, Store works on green practices
<b>Product D (Doodlage)</b>	1200	10 %	Made from fabric waste, Cotton bag packaging

The basic idea was to know the responses of consumers in real-life scenario. I was quite happy with the result because most of the consumers have selected Product C offered by Good Earth retailer. Results were quite surprising because both the retailer Doodlage and Good earth were offering green products but only Good Earth had adopted green retailing practices such as proper signage in the store regarding presence of green products whereas if, we look at product D, Doodlage itself is a green clothing brand of India it was also offering discount of 10% but most of the consumers had selected good earth retailer for purchasing green product. It shows the importance of green retailing in purchase of green products. The Second most selected brand was H&M reasons for selection of that is H&M, itself a well-known brand and it was also offering highest discount on the similar product. We can derive conclusion that branding also plays an important role and rewards do attract consumers towards purchasing green products. So, in short, we can say that green retailing plays an important role in purchase of green products. Branding and rewards are the factors which do have an impact on the purchase

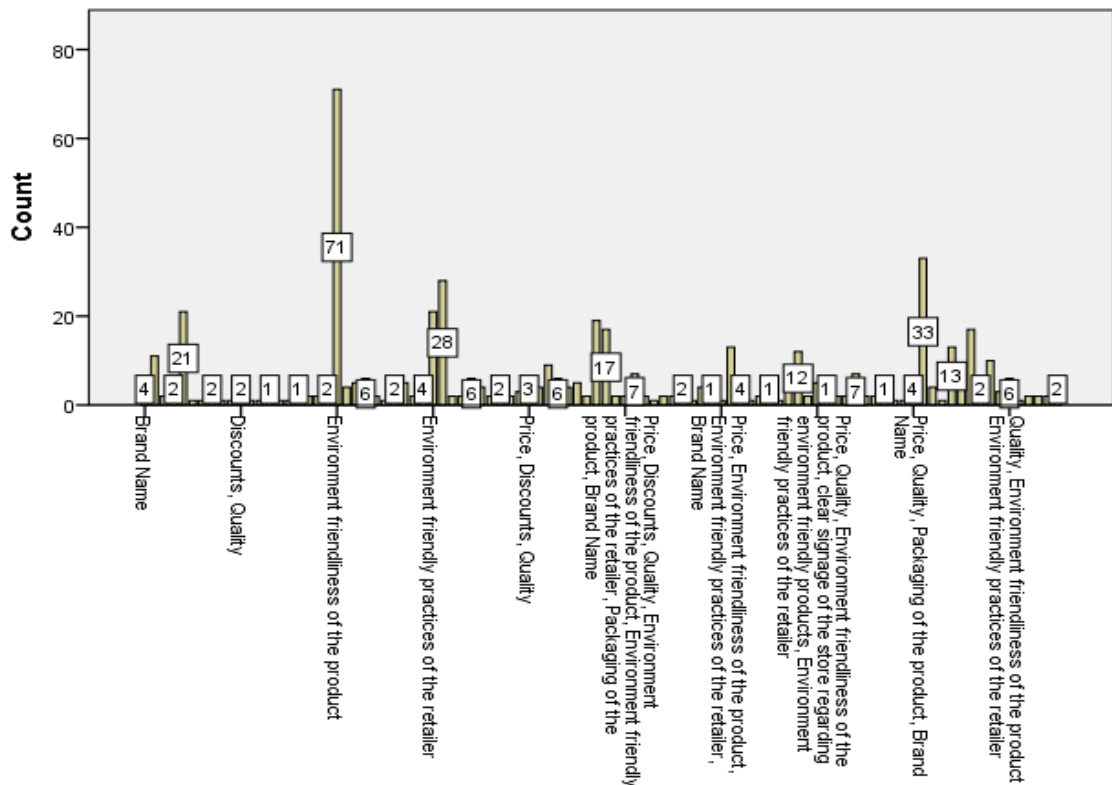
intention of green products and green retailing do have an impact on purchase decision of green products. To support these conclusions, I have asked another question from the respondents based on these scenarios which is explained in following way.

**Which factors helped you in forming your purchase decision:**

This question asks the respondent their reason for selection of the product shown in question number 55. It means what prompted the respondent for giving selected answer.

This question testifies the findings of question number 56.

**Graph 4.10: Factors helped you in forming your purchase decision**



**Based on above question, which factors helped you in forming your decisio...**

The most selected option was environment friendliness of the product, Price, quality, packaging, environment friendly practices of the retailer and clear signage of the store regarding green products. So, it is quite evident from the selected options that the derived conclusions were right and green retailing do have an impact on purchase

decision of green products as well as brand, quality, price and packaging are also an important element for happening of purchase.

#### **4.2 Analysis of ordinal data:**

Analysis of ordinal data has been done on SPSS and AMOS (version 23) software. Exploratory factor analysis is done on SPSS and SEM (Structured equation modelling) has been done on AMOS software. Data of 500 respondents has been used for analysis.

#### **4.3 Exploratory factor analysis (EFA):**

Exploratory factor analysis is used to identify structure or dimensionality of the observed data and extract underlying constructs that form observed phenomenon. It extracts clusters of inter-correlated variables, called “factors” or “latent variables”. Factor analysis is used for further theory development under SEM (Structured equation modelling). Factor analysis is of two types: Exploratory factor analysis (EFA) and Confirmatory factory analysis (CFA). Exploratory factor analysis is used to determine relationships between observed variables and factors. In confirmatory factor analysis, correlational structure of data is tested against hypothesized model based on some theory. EFA has been done on SPSS version 23 software. After analysis 9 factors has been extracted. All these factors were given suitable names and on the basis of that SEM analysis is done on AMOS software. Except few items all 46 items were extracted under 9 different factors which are Attitude towards behaviour (ATB), Perceived behavioural control (PBC), Subjective norms (SN), Willingness to pay (WP), Environmental concern (EC), Purchase intention (PI), Purchase Decision (PD), Green Retailing (GR) and Green Clothing (GC). According to these factors, further analysis will be carried out in AMOS. Table number 4.2 is showing factor loadings of different items. Factor loading shows correlation coefficient of variables. Values greater than .5

are significant enough and can be used for further analysis but some values are showing cross loadings. These items will not be taken for further analysis.

**Table 4.2: Factor loadings of different items of the questionnaire under 8 different components**

	Factor loadings of different components								
	1	2	3	4	5	6	7	8	9
ATB 1	.673								
ATB 2	.763								
ATB 3	.695								
PBC 1		.529							
PBC 2		.661							
PBC 3		.569							
SN 1									.501
SN 2									.547
EC 1		.572							
EC 2		.557							
EC 3		.619							
EC 4		.627							
WP 1							.740		
WP 2							.670		
WP 3							.610		
PI 1					.538				
PI 2					.535				
PI 3					.576				
PD 1								.695	
PD 2								.547	
PD 3								.569	
GR1						.670			
GR2						.596			
GR3						.656			
GR4						.577			
GR5						.595			
GR6									
GR7									
GR8				.606					
GR9				.611					
GR10				.697					
GR11				.528					
GR12				.768					

	Factor loadings of different components								
	1	2	3	4	5	6	7	8	9
GR13				.671					
GR14									
GR15				.519					
GR16									
GC			.701						
GC1			.802						
GC2			.763						
GC3			.661						
GC4			.642						
GC5			.705						
GC6			.718						
GC7			.724						
GC8			.615						

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 13 iterations.

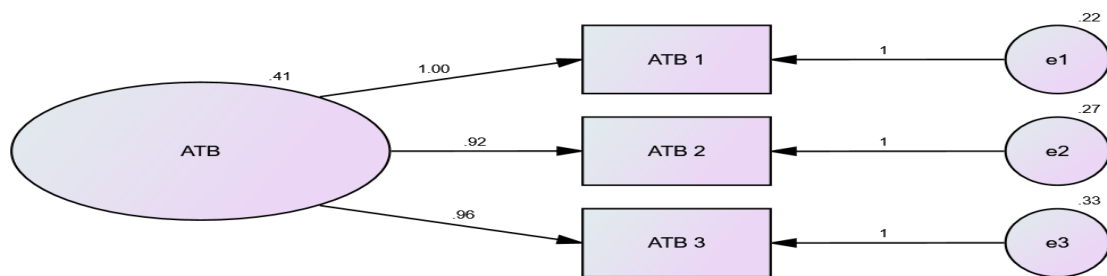
After analysing the significance of various items few items were not taken into further analysis of the data in AMOS. All the constructs were fine except GR (Green retailing) and GC (Green clothing). So, for GR only item GR2, GR3, GR4, GR5, GR6, GR7, GR11, GR12, GR15, GR16. Are retained and whereas for GC, only GC, GC1, GC2, GC3, GC4, GC5, GC6, GC7 are taken for further analysis. Deleted items are GR1, GR8, GR9, GR10, GR13, GR14 and GC8.

#### 4.4 Confirmatory factor analysis (CFA):

Confirmatory factor analysis is used in social sciences. It is used to test whether various items of the constructs are consistent with the measured construct or not. It identifies relation between observed variables and underlying constructs. In simple words, it tests whether data fits with the hypothesised measurement model. Hypothesised model is based on some theory or previous research. It was developed by Joreskog in 1969. It is the first step of assessing proposed measurement model in structural equation modelling. Model extracted under CFA is called measurement model. It shows

correlation and covariances of different factor with each other and tests their fitness for SEM through model fit indices. CFA tests whether observed constructs are fit for forming structural model based on some theory. After doing EFA, I have done CFA of these 9 factors to test their validity and reliability as well as derived model fit of the measurement model in AMOS software version 23. CFA of different constructs of the research problem is following:

### Attitude towards behaviour (ATB):

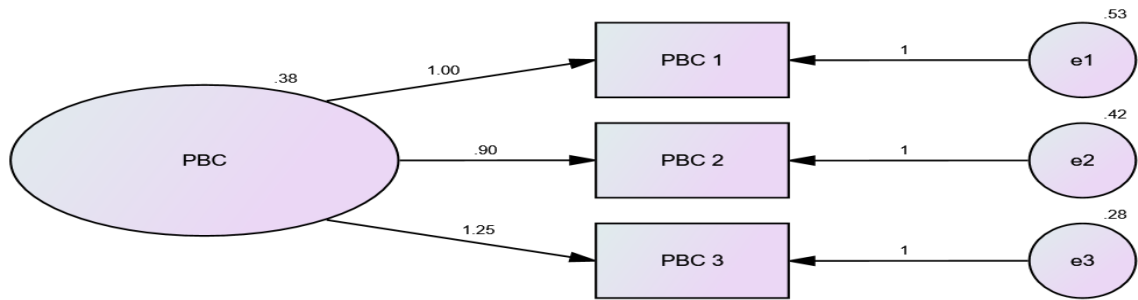


**Figure 4.1: CFA for ATB**

There are three indicators for the ATB construct. All the three indicators are loaded significantly on the latent construct as all the values are greater than .5. All the indicators of ATB construct will be retained for further analysis.

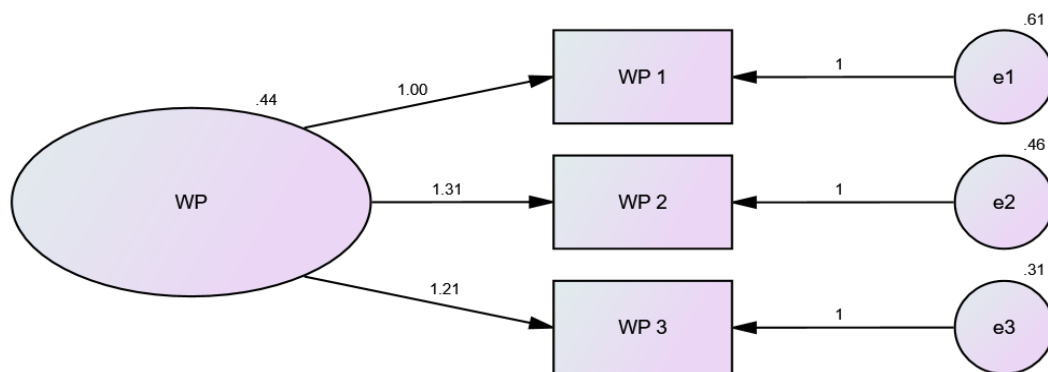
### Perceived Behavioural Control:

There are also three indicators of Perceived behavioural control (PBC). These indicators are loaded significantly for the constructs PBC and all the three indicators are retained and will be used for further analysis.



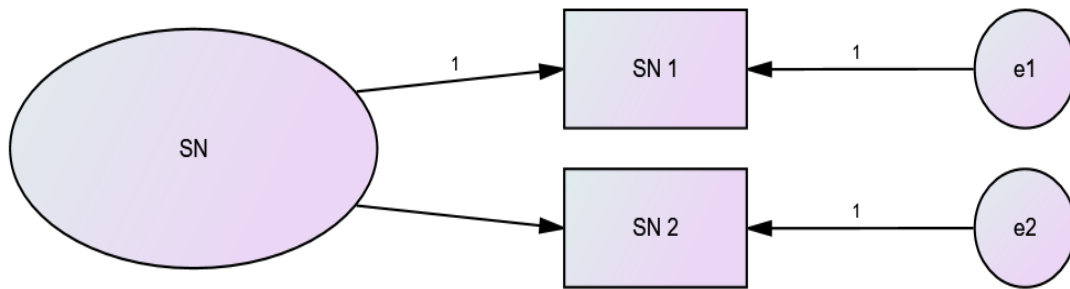
**Figure 4.2: CFA of PBC**

### Willingness to pay:

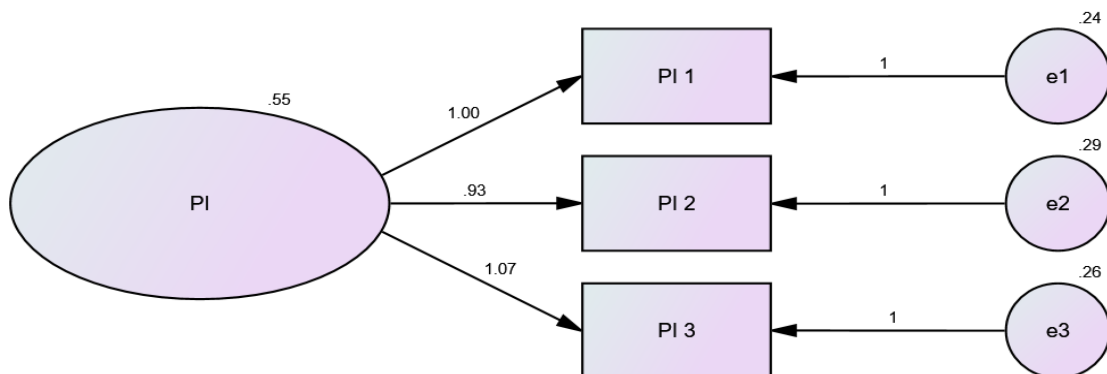


**Figure 4.3: CFA of WP**

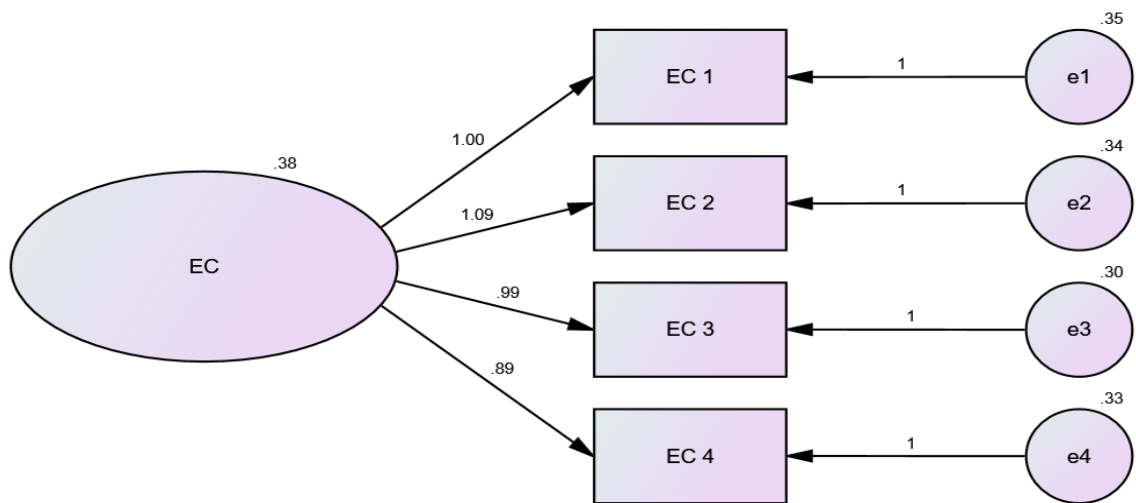
There are three indicators of Willingness to pay (WP). All these indicators are loaded significantly on the latent construct WP. All the indicators will be retained for further analysis. These three indicators are forming willingness to pay constructs (WP) together, all are significant.

**Subjective Norms:****Figure 4.4: CFA of SN**

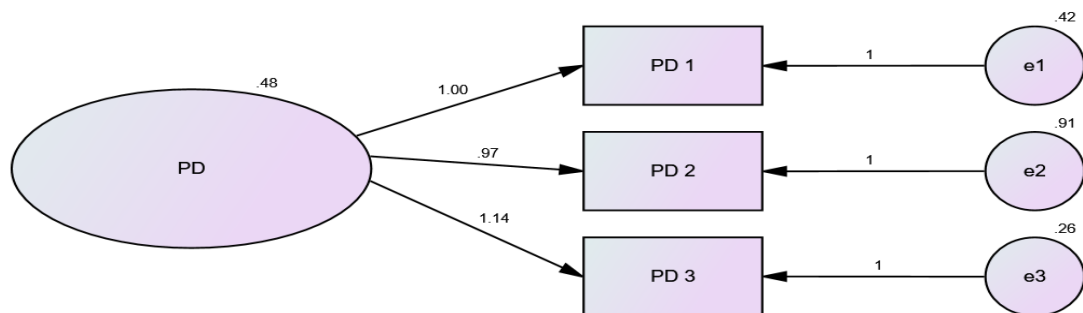
There are only two indicators of SN and both the two indicators are showing significant relation.

**Consumer Purchase Intention (PI):****Figure 4.5: CFA of PI**

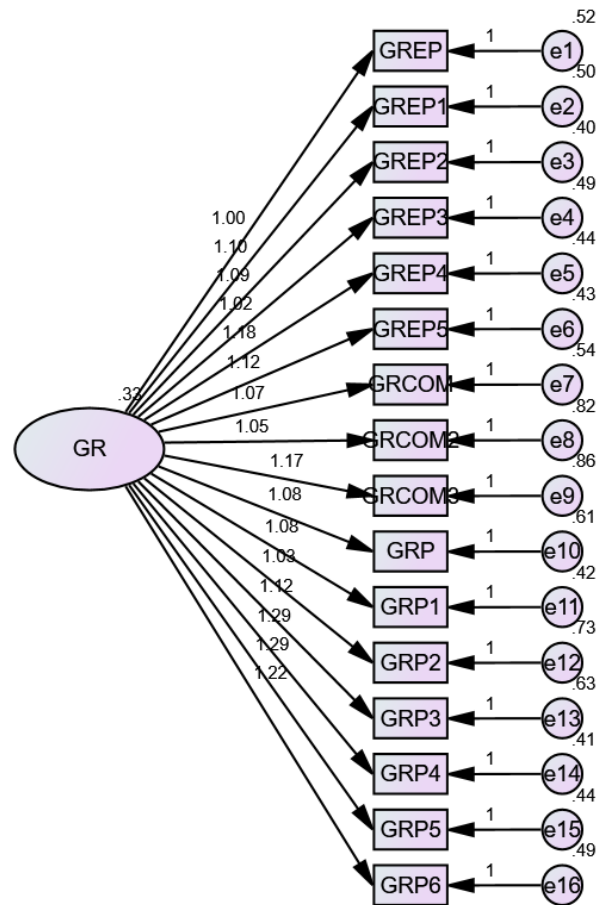
There are three indicators of the construct PI and all the three indicators are loaded significantly on the constructs and can be used for further analysis.

**Environmental Concern (EC):****Figure 4.6: CFA of EC**

There are four indicators of the constructs EC and all of the four indicators are showing significant relation with EC as the values are greater than .5. All four indicators are retained for further analysis.

**Purchase Decision (PD):****Figure 4.7: CFA of PD**

There are three indicators of PD constructs are all of the three constructs are showing significance. All the indicators are retained and had been taken for further analysis. These three indicators are forming Purchase decision construct.

**Green retailing (GR):****Figure 4.8: CFA of GR**

There are 16 indicators of green retailing defining three different dimensions. All 16 indicators are showing significant relation with GR which all 16 items are forming green retailing construct but for further measurement model, I have taken only 10 indicators to avoid complications. Deleted items are GR1, GR8, GR9, GR10, GR13, GR14.

**Measurement Model:**

After doing CFA for all the constructs, I have prepared a measurement model based on theory of planned behaviour. All the latent constructs with their retained indicators are forming measurement model for green product based on theory of planned behaviour.

Figure 4.9 is showing measurement model. All the values are significant because values are greater than .5.

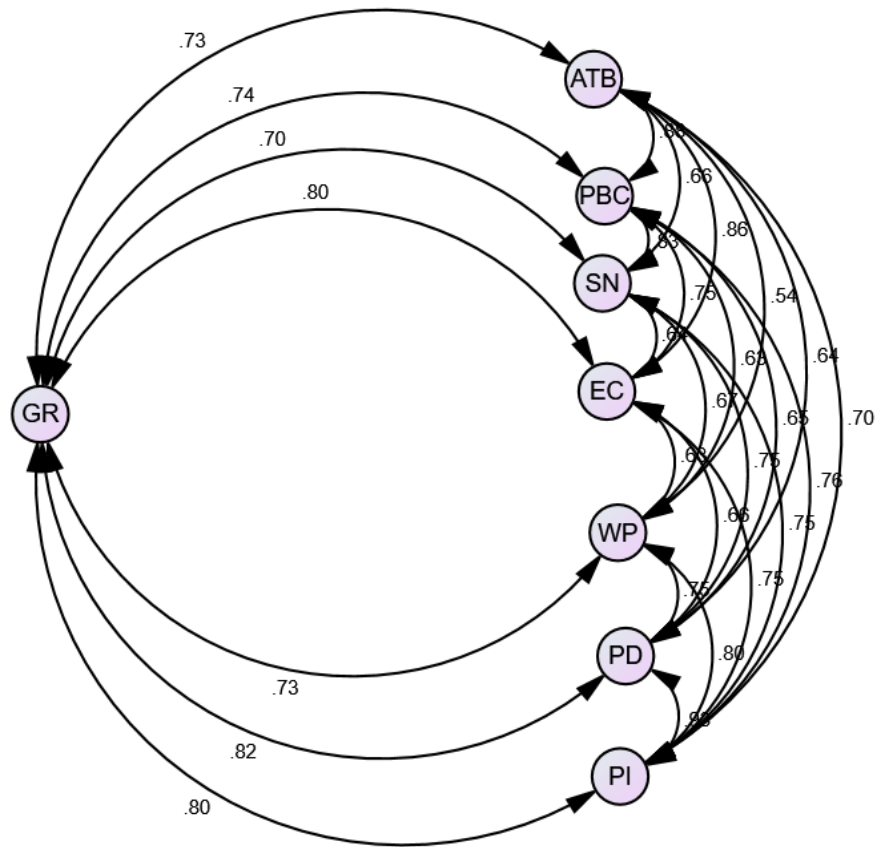
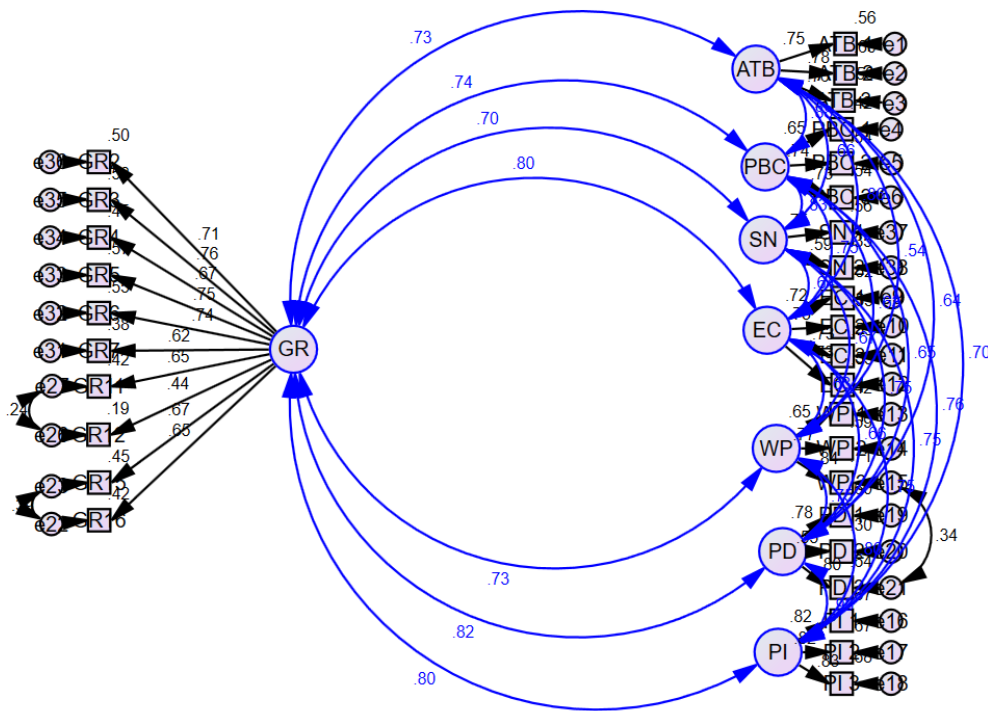


Figure 4.9: Measurement model of the data



**Figure 4.10: Detailed Measurement model**

Both figure 4.9 and 4.10 are showing confirmatory factor analysis of all the factors which were derived in EFA. Figure 4.9 is showing measurement model for the study based on that structural model will be derived. Figure 4.10 is showing more detailed version of the model. In measurement model, we will look into how well all the constructs are related to each other and whether all these constructs fit for structural model or not. So, first of all we will look into the validity and reliability of the measurement model. Validity is “the degree to which a test measures what it claims, or purports, to be measuring”, (**Brown, J.D, 1996**). Validity means how well all the items are defining the constructs being measured. Reliability of the constructs represents consistency of the results that means we get the same result every time for different constructs and if the phenomenon is not changing, it is considered consistent.

Table 4.3: Reliability and validity of the measurement model

	C R	A V E	M S V	Max R(H)	ATB	PBC	EC	WP	PI	PD	GR	SN
<b>A T B</b>	0.8 05	0.5 79	0.7 72	0.806	<b>0.761</b>							
<b>P B C</b>	0.7 51	0.5 02	0.7 72	0.755	0.678 ***	<b>0.708</b>						
<b>E C</b>	0.8 17	0.5 27	0.7 43	0.817	0.662 ***	0.651 ***	<b>0.726</b>					
<b>W P</b>	0.7 99	0.5 73	0.6 36	0.826	0.550 ***	0.635 ***	0.634 ***	<b>0.757</b>				
<b>PI</b>	0.8 62	0.6 76	0.8 48	0.862	0.703 ***	0.757 ***	0.749 ***	0.597 ***	<b>0.822</b>			
<b>P D</b>	0.7 59	0.5 19	0.8 48	0.794	0.642 ***	0.650 ***	0.654 ***	0.690 ***	0.821 ***	<b>0.721</b>		
<b>G R</b>	0.8 90	0.4 51	0.6 63	0.898	0.737 ***	0.736 ***	0.605 ***	0.731 ***	0.800 ***	0.714 ***	<b>0.672</b>	
<b>S N</b>	0.6 25	0.4 58	0.6 92	0.647	0.660 ***	0.632 ***	0.636 ***	0.677 ***	0.748 ***	0.757 ***	0.697 ***	<b>0.6 77</b>

### Model Validity Measures:

Above table is showing validity and reliability of measurement model. CR is representing composite reliability of different constructs of the model. Its value should be  $>.5$ . and as it is quite evident that CR for every construct is  $>.5$ . Every construct is reliable enough to present a definite model. So, reliability of measurement model is established. Construct Validity is of two types: convergent validity and discriminant validity. Convergent validity means how closely all the constructs of the measurement model are related with each other and discriminant validity means how much each construct differ from each other within some model. For convergent validity, we will look into AVE (Average variance extracted). Its value should also be greater than  $.5$ . As it is quite evident from the above table value of AVE is greater than  $.5$  for all the constructs except GR and SN but for both the constructs it is closer to  $.5$ , as values are  $.451$  and  $.458$  for GR and SN respectively. So, we can say that it is acceptable. So, with this convergent validity is established with little variations. For discriminant validity.

we will look for diagonal value which are highlighted with black colour in table 4.3. All the values below these black ones should be less than that to establish discriminant validity. All the constructs are showing discriminant validity except PBC, EC and PD. These constructs have one value which are highlighted with red colour which are greater than diagonal values but we can say that discriminant validity is also established. So, in short, we can say that validity and reliability of the measurement model is established with few exceptions. All the constructs are reliable and valid enough to construct a structural model.

### Model fit measures:

Model fit means how well all the constructs of the measurement model are correlated with each other to represent a model or theory. Does all the constructs fit enough to establish a theory or present a model for analysis.

**Table 4.4: Model fit of the measurement model**

Measure	Estimate	Threshold	Interpretation
CMIN	1205.442	--	--
DF	403	--	--
CMIN/DF	2.991	Between 1 and 3	Excellent
CFI	0.907	>0.95	Acceptable
SRMR	0.044	<0.08	Excellent
RMSEA	0.063	<0.06	Acceptable
PClose	0.000	>0.05	Terrible

As it is evident from the above table that model fit measures are absolutely fine for the measurement model and model is fit enough to represent a theory and present a structural model. All the values are between acceptable range except for Pclose value but we can ignore that because rest of all the values are showing good fit.

**Table 4.5: CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	93	1205.442	403	.000	2.991
Saturated model	496	.000	0		
Independence model	31	9085.072	465	.000	19.538

Minimum discrepancy per degree of freedom (CMIN/DF). It is the Chi-square value of the model if, it is not significant then we can say model is acceptable. So, model is acceptable based on that.

**Table 4.6: RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.037	.865	.834	.703
Saturated model	.000	1.000		
Independence model	.346	.164	.108	.153

RMR means root means square residual. Its value should be less than .08. GFI is Goodness-of-fit of the model it should be greater than .5. So, based on that model is Good enough to fit.

**Table 4.7: Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.867	.847	.908	.893	.907
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Comparative fit index (CFI). Its value should be closer to 1 for acceptance. So, its value is .907 and it is acceptable.

Table 4.8: RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.063	.059	.067	.000
Independence model	.193	.189	.196	.000

Root mean square error of approximation. Its value should be less than .08. The value is .063 which is acceptable. So, we can say that measurement model is fit enough for further analysis.

### Analysis of measurement model:

Table 4.9: Regression Weights (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
ATB1	<---	ATB	1.000				
ATB2	<---	ATB	1.026	.061	16.776	***	par_1
ATB3	<---	ATB	1.077	.065	16.444	***	par_2
PBC1	<---	PBC	1.000				
PBC2	<---	PBC	1.016	.074	13.701	***	par_3
PBC3	<---	PBC	1.105	.081	13.614	***	par_4
EC1	<---	EC	1.000				
EC2	<---	EC	1.056	.069	15.230	***	par_5
EC3	<---	EC	.968	.064	15.134	***	par_6
EC4	<---	EC	.936	.062	15.171	***	par_7
WP1	<---	WP	1.000				
WP2	<---	WP	1.280	.093	13.794	***	par_8
WP3	<---	WP	1.269	.086	14.700	***	par_9
PI1	<---	PI	1.000				
PI2	<---	PI	.988	.047	21.173	***	par_10
PI3	<---	PI	1.070	.050	21.310	***	par_11
PD1	<---	PD	1.000				
PD2	<---	PD	.867	.072	12.026	***	par_12
PD3	<---	PD	1.038	.055	18.732	***	par_13
GR16	<---	GR	1.000				
GR12	<---	GR	.722	.079	9.169	***	par_14
GR7	<---	GR	.927	.075	12.394	***	par_15
GR6	<---	GR	1.062	.074	14.406	***	par_16
GR5	<---	GR	1.105	.076	14.539	***	par_17
GR4	<---	GR	.957	.072	13.316	***	par_18
GR3	<---	GR	1.030	.072	14.370	***	par_19

GR2	<---	GR	1.016	.075	13.539	***	par_20
SN1	<---	SN	1.000				
SN2	<---	SN	.795	.070	11.343	***	par_21
GR11	<---	GR	.918	.071	13.005	***	par_22
GR15	<---	GR	1.039	.061	16.947	***	par_23

Above table is showing regressing weights of different items under measured constructs it shows how well each item is defining the construct as it is quite evident that all the values are significant. Star is showing significance of each item under measured construct. Values should be closer to 1 for perfect significance.

**Table 4.10: Standardized Regression Weights: (Group number 1 - Default model)**

			<b>Estimate</b>
ATB1	<---	ATB	.745
ATB2	<---	ATB	.777
ATB3	<---	ATB	.761
PBC1	<---	PBC	.651
PBC2	<---	PBC	.738
PBC3	<---	PBC	.732
EC1	<---	EC	.720
EC2	<---	EC	.731
EC3	<---	EC	.726
EC4	<---	EC	.728
WP1	<---	WP	.641
WP2	<---	WP	.763
WP3	<---	WP	.852
PI1	<---	PI	.821
PI2	<---	PI	.821
PI3	<---	PI	.825
PD1	<---	PD	.776
PD2	<---	PD	.546
PD3	<---	PD	.811
GR16	<---	GR	.653
GR12	<---	GR	.446
GR7	<---	GR	.622
GR6	<---	GR	.744
GR5	<---	GR	.752
GR4	<---	GR	.677
GR3	<---	GR	.743

GR2	<---	GR	.692
SN1	<---	SN	.751
SN2	<---	SN	.593
GR11	<---	GR	.658
GR15	<---	GR	.675

Above table is showing standardized regression weights of the different items under measured constructs.

**Table 4.11: Correlations: (Group number 1 - Default model)**

			<b>Estimate</b>
ATB	<-->	PBC	.878
ATB	<-->	EC	.862
ATB	<-->	WP	.550
ATB	<-->	PI	.703
ATB	<-->	PD	.642
ATB	<-->	GR	.737
ATB	<-->	SN	.660
PBC	<-->	EC	.751
PBC	<-->	WP	.635
PBC	<-->	PI	.757
PBC	<-->	PD	.650
PBC	<-->	GR	.736
PBC	<-->	SN	.832
EC	<-->	WP	.634
EC	<-->	PI	.749
EC	<-->	PD	.654
EC	<-->	GR	.805
EC	<-->	SN	.636
WP	<-->	PI	.797
WP	<-->	PD	.790
WP	<-->	GR	.731
WP	<-->	SN	.677
PI	<-->	PD	.921
PI	<-->	GR	.800
PI	<-->	SN	.748
PD	<-->	GR	.814
PD	<-->	SN	.757
GR	<-->	SN	.697

The above table is representing correlations between different constructs. Based on our objectives we can look into the correlation of purchase intention (PI) with other constructs such as PBC, ATB, EC, WP, SN, PD, and GR. Values of correlations should

be between -1 to +1. -1 is perfectly negative and +1 is perfectly correlated. 0 to .2 weak correlation. .2 to .5 moderate correlation and above .5 shows strong correlation. From the above table we can drive following conclusions:

**Table 4.12: Correlations of the different constructs of the study and its interpretation**

Constructs	Correlations with PI	Interpretation
ATB	.703	Strong correlation
PBC	.757	Strong correlation
WP	.797	Strong correlation
SN	.748	Strong correlation
EC	.749	Strong correlation
GR	.800	Very strong correlation
PD	.921	Very strong correlation

We can interpret that consumer purchase intention (PI) is correlated with ATB, PBC, SN, EC, WP and strongly correlated with GR and PD.

**Table 4.13: Covariances: (Group number 1 - Default model)**

			Estimate	S.E.	C.R.	P	Label
ATB	<-->	PBC	.324	.033	9.936	***	par_24
ATB	<-->	EC	.314	.030	10.457	***	par_25
ATB	<-->	WP	.214	.027	7.825	***	par_26
ATB	<-->	PI	.304	.030	10.030	***	par_27
ATB	<-->	PD	.279	.030	9.157	***	par_28
ATB	<-->	GR	.280	.030	9.429	***	par_29
ATB	<-->	SN	.315	.036	8.820	***	par_30
PBC	<-->	EC	.287	.031	9.145	***	par_31
PBC	<-->	WP	.259	.032	8.034	***	par_32
PBC	<-->	PI	.343	.035	9.701	***	par_33
PBC	<-->	PD	.296	.034	8.647	***	par_34
PBC	<-->	GR	.294	.033	8.857	***	par_35
PBC	<-->	SN	.418	.044	9.488	***	par_36
EC	<-->	WP	.256	.030	8.423	***	par_37
EC	<-->	PI	.336	.033	10.250	***	par_38
EC	<-->	PD	.295	.032	9.180	***	par_39

EC	<-->	GR	.318	.033	9.678	***	par_40
EC	<-->	SN	.316	.037	8.531	***	par_41
WP	<-->	PI	.381	.039	9.902	***	par_42
WP	<-->	PD	.380	.040	9.582	***	par_43
WP	<-->	GR	.308	.035	8.817	***	par_44
WP	<-->	SN	.359	.042	8.488	***	par_45
PI	<-->	PD	.492	.042	11.811	***	par_46
PI	<-->	GR	.375	.037	10.227	***	par_47
PI	<-->	SN	.440	.044	10.080	***	par_48
PD	<-->	GR	.383	.038	10.011	***	par_49
PD	<-->	SN	.448	.046	9.784	***	par_50
GR	<-->	SN	.362	.041	8.917	***	par_51

Above table is showing covariances of different constructs and all the covariances are significant. That means our measurement model is good to go for structural equation modelling.

**Objective 1: To find out factors affecting consumer purchase intention of Green Products.**

**H<sub>01</sub>:** No factor affects consumer purchase intention of Green Products.

**H<sub>A1</sub>:** Some factors affect consumer purchase intention of Green Products.

**Factors considered for this objective are following:**

- a. Attitude towards behavior
- b. Subjective Norms
- c. Perceived behavioral control
- d. Environmental Concern
- e. Willingness to pay

4.5 Structural equation modelling (SEM):

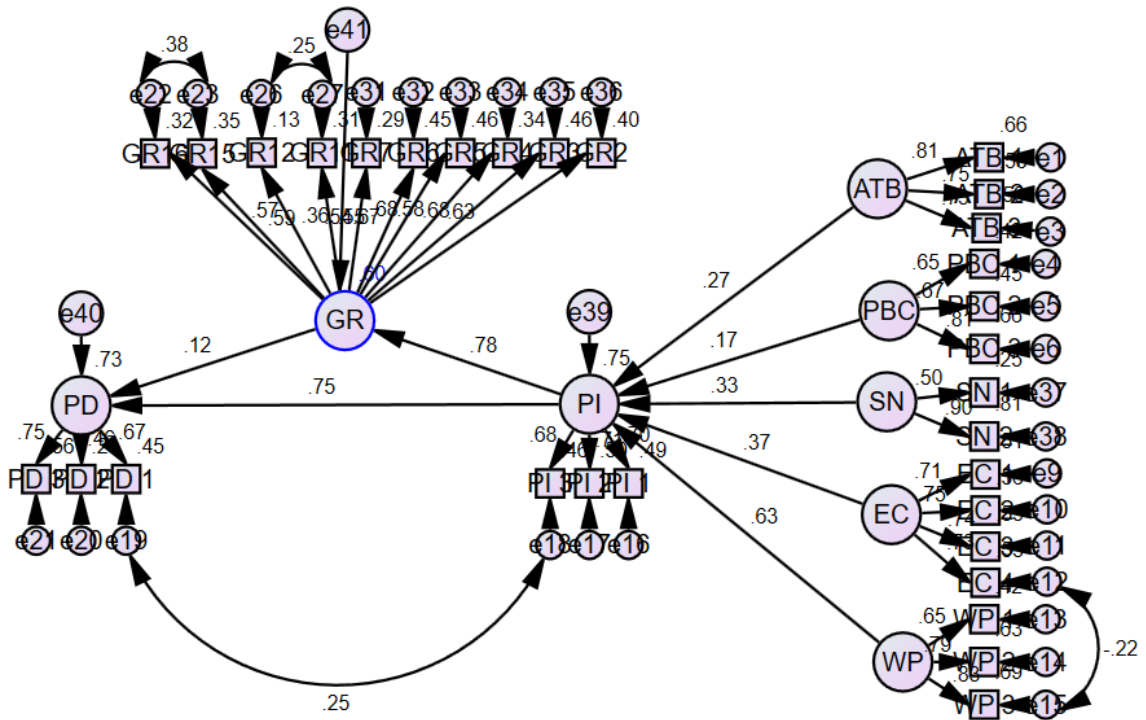


Figure 4.11: Structural model of the study

Above model is derived after measurement model. Through measurement model, we have tested the validity and reliability of the various construct within model and their correlation with each other. Structural model is based on theory. So, above model is based on theory of planned behaviour. Based on theory of planned behaviour, I have made an assumption that consumer purchase intention is impacted by Attitude towards behaviour (ATB), perceived behavioural control (PBC), environmental concern (EC), willingness to pay (WP) and subjective norms (SN). So, in this model we have tested the theory for green products. I have also extended the theory based on my observations and literature review and green retailing has been added as a mediator between consumer purchase intention and consumer purchase decision to know whether intentions convert into purchase decision or not and whether green retailing plays any role in this phenomenon or not.

**Table 4.14: Model fit of the structural model**

Measure	Estimate	Threshold	Interpretation
CMIN	1274.782	--	--
DF	412	--	--
CMIN/DF	3.094	Between 1 and 3	Acceptable
CFI	0.900	>0.95	Acceptable
SRMR	0.051	<0.08	Excellent
RMSEA	0.065	<0.06	Acceptable
Pclose	0.000	>0.05	Terrible

Structural model is acceptable as all the values are within acceptable range except the Pclose value but we can claim, it is accepted.

**Table 4.15: CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	84	1274.782	412	.000	3.094
Saturated model	496	.000	0		
Independence model	31	9085.072	465	.000	19.538

Minimum discrepancy per degree of freedom (CMIN/DF). It is the Chi-square value of the model if it is significant then we can say model is acceptable. So, model is acceptable based on that.

**Table 4.16: RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.042	.858	.829	.713
Saturated model	.000	1.000		
Independence model	.346	.164	.108	.153

Goodness-of-fit of the structural model is also acceptable and within acceptable range.

**Table 4.17: Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.860	.842	.901	.887	.900
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

**Table 4.18: RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.065	.061	.069	.000
Independence model	.193	.189	.196	.000

Root mean squared error of approximation is also within acceptable range. Hence, proved our structural model is accepted and all the conclusions derived on the basis of that are also acceptable.

**Table 4.19: Reliability and validity of the structural model**

	CR	AVE	MSV	MaxR(H)	ATB	PBC	EC	WP	SN
<b>ATB</b>	0.736	0.545	0.771	0.808	<b>0.667</b>				
<b>PBC</b>	0.627	0.478	0.771	0.755	0.678***	<b>0.615</b>			
<b>EC</b>	0.772	0.531	0.741	0.819	0.861***	0.549***	<b>0.656</b>		
<b>WP</b>	0.779	0.481	0.442	0.733	0.553***	0.533***	0.648***	<b>0.694</b>	
<b>SN</b>	0.576	0.335	0.693	0.659	0.659***	0.833***	0.638***	0.664***	<b>0.579</b>

Again, we can look into the model validity and reliability. Value of CR (Composite reliability) is greater than .5 for all the constructs. Convergent validity is also acceptable as values of AVE (average variance extracted) are greater than .5 except for SN (subjective norms). Discriminant validity is a problem here as two values are greater than diagonal bold values but we can say that our structural model is reliable and valid enough to draw conclusions.

Table 4.20: Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
PI	<---	ATB	.216	.033	6.462	***	par_31
PI	<---	PBC	.141	.034	4.122	***	par_32
PI	<---	SN	.321	.048	6.643	.159	par_33
PI	<---	EC	.314	.038	8.190	***	par_34
PI	<---	WP	.489	.046	10.646	***	par_35
GR	<---	PI	.777	.076	10.173	***	par_28
PD	<---	GR	.133	.094	1.409	***	par_29
PD	<---	PI	.811	.111	7.272	***	par_30
ATB1	<---	ATB	1.000				
ATB2	<---	ATB	.909	.062	14.570	***	par_1
ATB3	<---	ATB	.947	.066	14.387	***	par_2
PBC1	<---	PBC	1.000				
PBC2	<---	PBC	.920	.082	11.270	***	par_3
PBC3	<---	PBC	1.228	.111	11.077	***	par_4
EC1	<---	EC	1.000				
EC2	<---	EC	1.086	.076	14.307	***	par_5
EC3	<---	EC	.993	.070	14.216	***	par_6
EC4	<---	EC	.962	.068	14.129	***	par_7
WP1	<---	WP	1.000				
WP2	<---	WP	1.307	.094	13.888	***	par_8
WP3	<---	WP	1.233	.087	14.197	***	par_9
PI1	<---	PI	1.000				
PI2	<---	PI	.995	.071	14.011	***	par_10
PI3	<---	PI	1.045	.077	13.561	***	par_11
PD1	<---	PD	1.000				
PD2	<---	PD	.902	.104	8.706	***	par_12
PD3	<---	PD	1.079	.085	12.695	***	par_13
GR16	<---	GR	1.000				
GR12	<---	GR	.701	.101	6.932	***	par_14
GR7	<---	GR	.931	.096	9.661	***	par_15
GR6	<---	GR	1.070	.095	11.234	***	par_16
GR5	<---	GR	1.109	.098	11.294	***	par_17
GR4	<---	GR	.938	.092	10.158	***	par_18
GR3	<---	GR	1.050	.093	11.327	***	par_19
GR2	<---	GR	1.045	.097	10.773	***	par_20
SN1	<---	SN	1.000				
SN2	<---	SN	1.827	.371	4.923	***	par_21
GR11	<---	GR	.889	.090	9.823	***	par_22
GR15	<---	GR	1.035	.079	13.149	***	par_23

It is evident from the above table there is a significant relationship between consumer purchase intention (PI) and Attitude towards behaviour (ATB), willingness to pay (WP) and Environmental concern (EC). So, we can reject the null hypothesis  $H_{01 a}$ ,  $H_{01 c}$ ,

$H_{01 e}$  and  $H_{01 d}$  and accept the alternate hypothesis  $H_{A1 a}$ ,  $H_{A1 c}$ ,  $H_{A1 e}$ ,  $H_{A1 d}$ . Null hypothesis  $H_{01 b}$  cannot be rejected due to lack of sufficient evidence. There is a significant relationship between PI and Green retailing (GR) and PD (purchase decision). On the basis of that we can also reject the null hypothesis  $H_{01}$  and accept the alternate hypothesis  $H_A 1$ .

**Table 4.21: Standardized Regression Weights (Group number 1 - Default model)**

			Estimate
PI	<---	ATB	.270
PI	<---	PBC	.170
PI	<---	SN	.332
PI	<---	EC	.373
PI	<---	WP	.634
GR	<---	PI	.777
PD	<---	GR	.123
PD	<---	PI	.752
ATB1	<---	ATB	.811
ATB2	<---	ATB	.748
ATB3	<---	ATB	.728
PBC1	<---	PBC	.650
PBC2	<---	PBC	.668
PBC3	<---	PBC	.812
EC1	<---	EC	.715
EC2	<---	EC	.746
EC3	<---	EC	.740
EC4	<---	EC	.727
WP1	<---	WP	.651
WP2	<---	WP	.791
WP3	<---	WP	.829
PI1	<---	PI	.698
PI2	<---	PI	.706
PI3	<---	PI	.681
PD1	<---	PD	.669
PD2	<---	PD	.459
PD3	<---	PD	.747
GR16	<---	GR	.569
GR12	<---	GR	.360
GR7	<---	GR	.540
GR6	<---	GR	.673
GR5	<---	GR	.678
GR4	<---	GR	.579
GR3	<---	GR	.682
GR2	<---	GR	.631
SN1	<---	SN	.495

SN2	<---	SN	.899
GR11	<---	GR	.553
GR15	<---	GR	.588

Above table is also showing standardized regression weights, and it is also showing significant relationship between PI and ATB, EC, WP, GR, PD and PBC.

### Analysis of Objective Two:

**Objective 2: To explore different dimensions of Green Retailing for influencing consumer purchase intention of green products.**

To explore different dimensions of green retailing that affects consumer purchase intention, EFA has been performed on 16 items of Green Retailing as shown in table number 4.22 and three factors have been extracted which are given appropriate names. These are green packaging and eco-labels (GREP), green communication (GCOM), green practices (GRP).

**Table 4.22: EFA of Green retailing items**

Rotated Component Matrix <sup>a</sup>	Component		
	1	2	3
1.I always look for eco-labels and certification of the products. (GREP1)	.782		
2.Eco-labels or eco-mark affects my purchase decision favourably. (GREP2)	.764		
3.I tend to switch to products with eco-labels and certification. (GREP3)	.816		
4.I always pay attention to packing of the products. (GREP4)	.633		
5.Green packaging affects my purchase decision favourably. (Low waste packaging) (GREP5)	.707		
6.I tend to switch to products with green packaging. (GREP6)	.677		

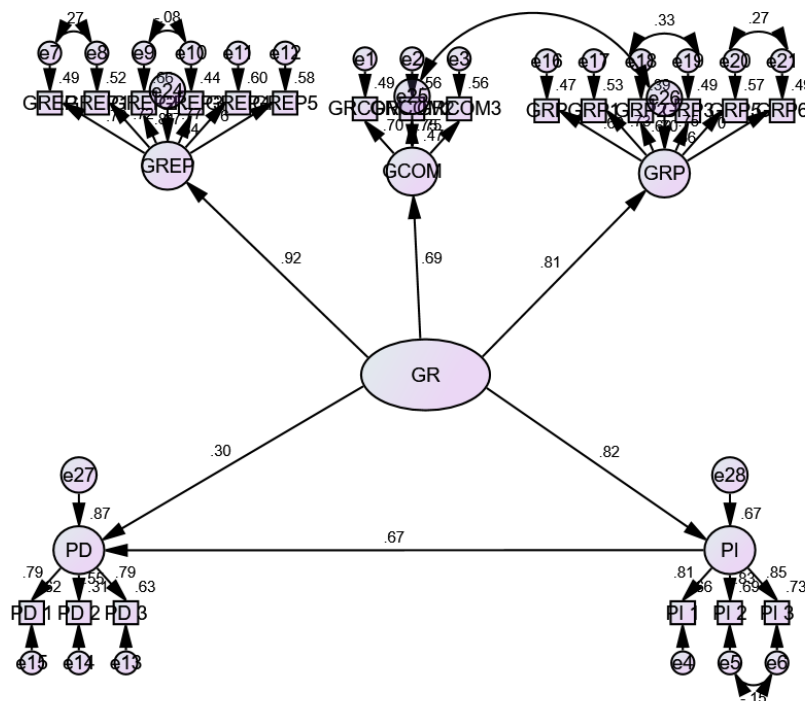
Rotated Component Matrix <sup>a</sup>	Component		
	1	2	3
7.I pay attention to retailer's description about the products. (GCOM1)			.560
8.Retailer's opinion about products affect my purchase decision favourably. (GCOM2)			.861
9.I am open to purchase products with better specifications suggested by the retailer other than my usual choice. (GCOM3)			.764
10.I tend to purchase those products which are easily available in the market. (GRP1)		.552	
11.I usually look for products with better specifications or benefits. (GREP2)		.683	
12.Additional benefit or rewards like discount affects my purchase decision favourably. (GRP3)		.691	
13.I can switch to green products if I can avail additional benefit or rewards. (GRP4)		.826	
14.I pay attention to the retailer's green practices. (Environmental concern of the retailer).	.503	.576	
15.Retailer's efforts towards saving environment inspire me to make green purchase decisions. (GRP5)		.678	
16.Retailer's green practices affects my purchase decision favourably. (GRP6)		.583	
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 5 iterations.			

Item number 14 has been deleted as it showing cross loading and total 15 items were taken for further analysis. These three dimensions GREP, GCOM, GRP will be considered for further analysis of objective three. Green packaging and eco-labels are showing highest correlation with green retailing. So, we can say that green packaging and eco-labels are the strongest dimension of green retailing that affects consumer

purchase intention. Figure number 4.12 is showing three dimensions of green retailing that affects consumer purchase intention and consumer purchase decision. It is a structural model for green retailing that has been derived in Amos software showing different dimensions of green retailing in a structural model. These dimensions are:

1. Green packaging and eco-labels (GREP)
2. Green communication (GCOM)
3. Green retailing practices (rewards, store condition and availability of products) (GRP)

GREP, GCOM and GRP together are creating construct called green retailing (GR). GR is playing mediating role between consumer purchase intention (PI) and consumer purchase decision (PD). Strength of relation of GR with PI is higher than the relation between GR and PD but it is impacting both PI and PD and also playing mediating role between PI and PD. It is tested in objective number 3.



**Figure 4.12: Various dimensions of green retailing that affects consumer purchase intention**

Table 4.23: Model Fit Measures

Measure	Estimate	Threshold	Interpretation
CMIN	585.669	--	--
DF	177	--	--
CMIN/DF	3.309	Between 1 and 3	Acceptable
CFI	0.930	>0.95	Acceptable
SRMR	0.058	<0.08	Excellent
RMSEA	0.068	<0.06	Acceptable

Our model is acceptable as all the values are within acceptable range. These dimensions can be used for further analysis.

Table 4.24: Regression Weights (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
PI	<---	GR	1.002	.082	12.278	***	par_22
GP	<---	GR	1.000				
GCOM	<---	GR	.778	.078	9.999	***	par_17
GRP	<---	GR	.933	.083	11.214	***	par_18
PD	<---	PI	.691	.086	8.077	***	par_23
PD	<---	GR	.381	.106	3.597	***	par_24
GR7	<---	GCOM	1.000				
GR8	<---	GCOM	1.215	.088	13.830	***	par_1
GR9	<---	GCOM	1.283	.092	13.876	***	par_2
PI1	<---	PI	1.000				
PI2	<---	PI	1.008	.051	19.668	***	par_3
PI3	<---	PI	1.116	.055	20.390	***	par_4
GR1	<---	GP	1.000				
GR2	<---	GP	1.058	.061	17.343	***	par_5
GR3	<---	GP	1.127	.069	16.355	***	par_6
GR4	<---	GP	.944	.070	13.537	***	par_7
GR5	<---	GP	1.139	.072	15.778	***	par_8
GR6	<---	GP	1.088	.070	15.541	***	par_9
PD3	<---	PD	1.000				
PD2	<---	PD	.862	.070	12.237	***	par_10
PD1	<---	PD	.998	.054	18.397	***	par_11
GR10	<---	GRP	1.000				
GR11	<---	GRP	.963	.067	14.298	***	par_12
GR12	<---	GRP	.958	.077	12.410	***	par_13
GR13	<---	GRP	1.054	.076	13.785	***	par_14
GR15	<---	GRP	1.098	.075	14.606	***	par_15
GR16	<---	GRP	1.010	.074	13.611	***	par_16

As it is evident from the table all the items are significant for their respective constructs.

**Table 4.25: Squared Multiple Correlations (Group number 1 - Default model)**

	<b>Estimate</b>
PI	.667
GRP	.656
PD	.868
GP	.843
GCOM	.471
GR16	.485
GR15	.567
GR13	.492
GR12	.391
GR11	.532
GR10	.466
PD1	.619
PD2	.305
PD3	.632
GR6	.578
GR5	.597
GR4	.443
GR3	.658
GR2	.517
GR1	.485
PI3	.726
PI2	.689
PI1	.660
GR9	.562
GR8	.556
GR7	.486

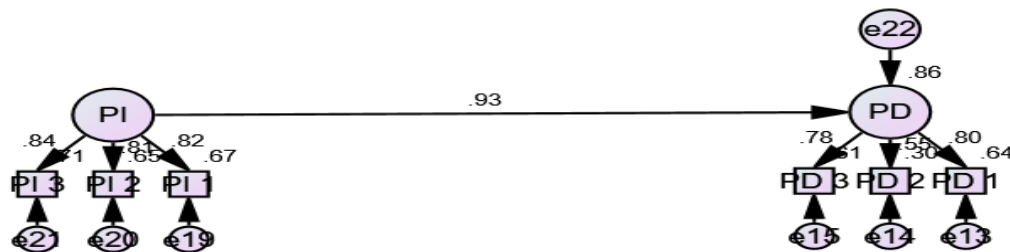
### Analysis of the objective three:

**Objective 3: To present Green Retailing as an effective tool of enhancing consumer purchase intention of green product.**

**H<sub>03</sub>:** Green retailing has no mediating role in conversion of consumer purchase intention into purchase decision of green products.

**H<sub>A3</sub>:** Green retailing has mediating role in conversion of consumer purchase intention into purchase decision of green products.

### 4.6 Mediating effect of green retailing between Purchase intention and purchase decision:



**Figure 4.13: Direct relation between PI and PD**

Mediating effect means independent variable is impacting dependent variable through some variable which means transmission of effect of independent variable on dependent variable through some variable known as mediating variable. In my research problem, green retailing is playing a role of mediating variable between purchase intention (IV) and purchase decision (DV). Because of green retailing consumer purchase intention of green products is converting into consumer purchase decision. For deriving the mediating effect of green retailing firstly, I have tested the direct relation between purchase intention and purchase decision to know whether it is significant or not.

Table 4.26: Regression Weights (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
PD	<---	PI	.963	.054	17.793	***	par_5
PD1	<---	PD	1.000				
PD2	<---	PD	.843	.070	11.993	***	par_1
PD3	<---	PD	.969	.054	17.886	***	par_2
PI1	<---	PI	1.000				
PI2	<---	PI	.971	.049	19.898	***	par_3
PI3	<---	PI	1.098	.052	21.079	***	par_4

Above table is showing direct relation of purchase intention and purchase decision and it is significant as p value is  $>.5$ . So, there is a significant relationship between consumer purchase intention and purchase decision after knowing that we will look into how this relation changes when we add green retailing as a mediating variable. There are three cases of mediation: Full mediation, Partial mediation and No mediation. If the relation between independent variable and dependent variable becomes non-significant after removing mediating variable then it is the case of “full mediation”. If its relation remains significant after adding mediating variable then it is the case of “Partial mediation”. When addition of mediating variable does not change the relation of observed constructs to significant then it is the case of “No mediation”.

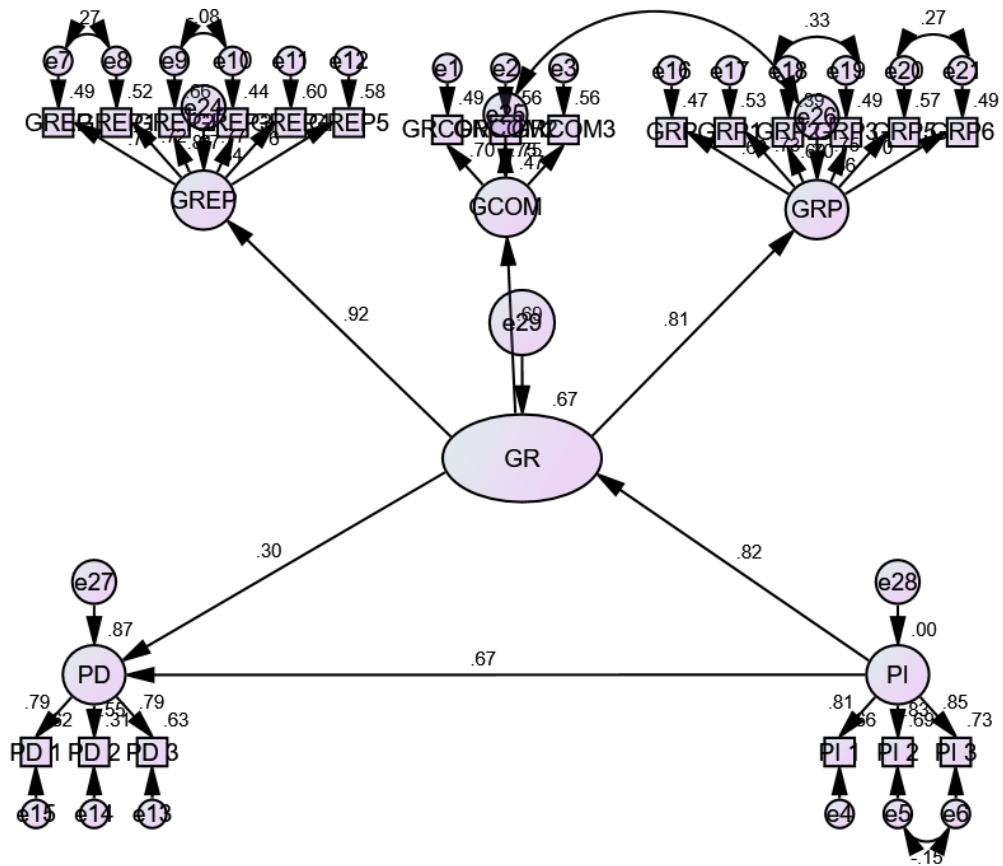


Figure 4.14: Mediating effect of green retailing between PI and PD

I have added green retailing as mediating variable between purchase intention and purchase decision and I have run the model, results are shown in the table below.

Table 4.27: Regression Weights (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
GR	<---	PI	.745	.054	13.861	***	par_15
PD	<---	PI	.769	.078	9.848	***	par_14
PD	<---	GR	.232	.076	3.065	.002	par_16
PD1	<---	PD	1.000				
PD2	<---	PD	.866	.071	12.151	***	par_1
PD3	<---	PD	1.009	.055	18.395	***	par_2
PI1	<---	PI	1.000				
PI2	<---	PI	.980	.048	20.407	***	par_3
PI3	<---	PI	1.089	.051	21.230	***	par_4
GR16	<---	GR	1.000				
GR15	<---	GR	1.038	.071	14.554	***	par_5
GR12	<---	GR	.714	.073	9.745	***	par_6

GR11	<---	GR	.860	.064	13.408	***	par_7
GR7	<---	GR	.887	.068	12.980	***	par_8
GR6	<---	GR	1.013	.066	15.255	***	par_9
GR5	<---	GR	1.050	.068	15.356	***	par_10
GR4	<---	GR	.875	.065	13.444	***	par_11
GR3	<---	GR	.975	.064	15.138	***	par_12
GR2	<---	GR	.975	.068	14.367	***	par_13

As it is evident from the above table, relationship between all the three constructs is significant. It means it is showing partial mediation. It shows green retailing mediates between consumer purchase intention and purchase decision. It is showing low mediation level between PI and PD but keeping in mind the sample size it is a big finding that green retailing can help in conversion of consumer purchase into and purchase decision of green products. There is a partial mediating role of green retailing between PI and PD. Therefore, I reject the null hypothesis  $H_{03}$  and accept the alternate hypothesis  $H_{A3}$ .

**Table 4.28: Model fit measures of the mediation model**

Measure	Estimate	Threshold	Interpretation
CMIN	391.742	--	--
DF	101	--	--
CMIN/DF	3.879	Between 1 and 3	Acceptable
CFI	0.930	>0.95	Acceptable
SRMR	0.048	<0.08	Excellent
RMSEA	0.076	<0.06	Acceptable

As it is evident from the above table that model which is showing mediating effect of green retailing between purchase intention and purchase decision and it is acceptable as all the values CMIN/DF, CFI, SRMR, RMSEA are in acceptable range. So, green retailing mediates between consumer purchase intention and consumer purchase decision.

4.7 Green Clothing Products:

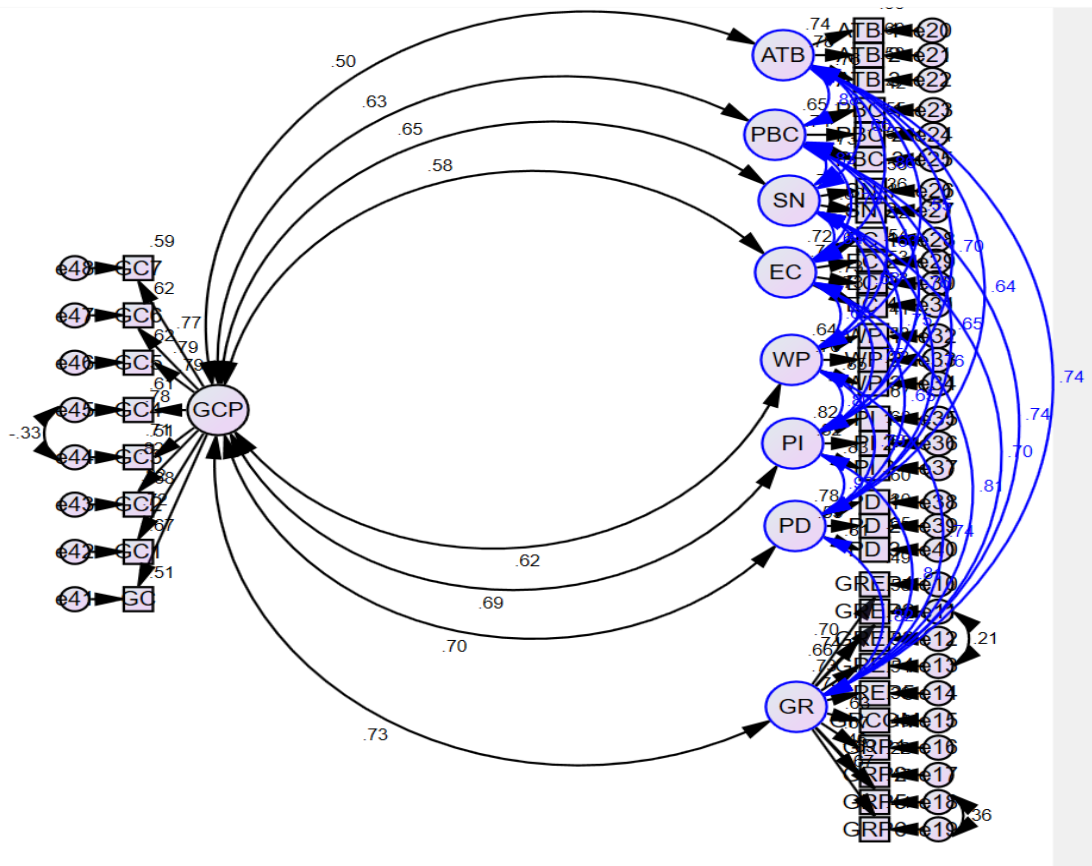


Figure 4.15: Measurement model for green clothing products

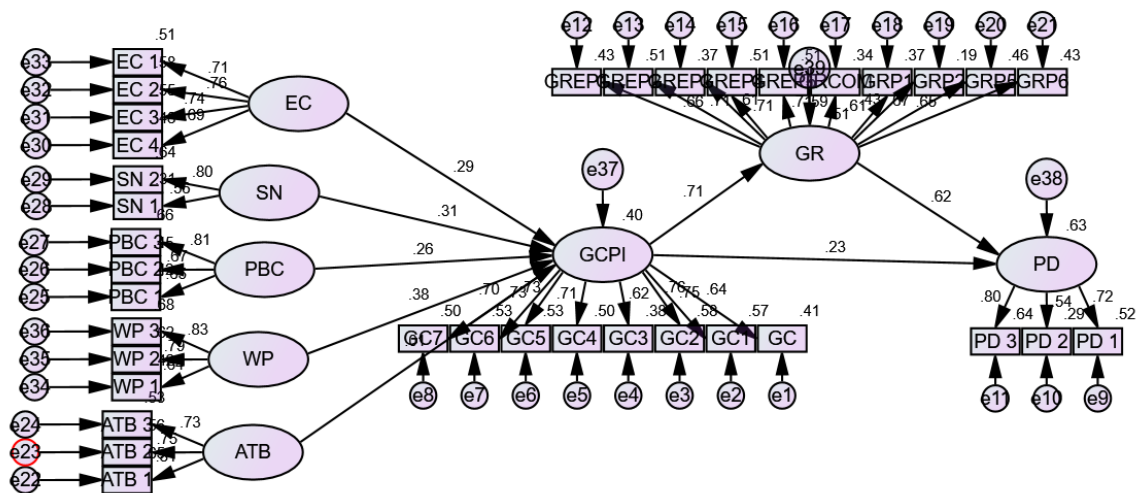
After analysing the correlations and regression of different factors of green products in general. I have taken green clothing products to see whether these correlation changes if I, take some particular green products which is in this case, is green clothing products. I have tested the correlation and regressions of green clothing products with ATB, PCB, SN, EC, WP, PI, PD, GR. These factors ATB, SN, PBC, WP, EC are showing significant correlation with GCP (Green clothing products) as shown in the table 4.29.

Table 4.29: Correlations: (Group number 1 - Default model)

			Estimate
GR	<-->	GCP	.733
PD	<-->	GCP	.696
PI	<-->	GCP	.694
ATB	<-->	GCP	.496

PBC	<-->	GCP	.632
SN	<-->	GCP	.652
EC	<-->	GCP	.583
WP	<-->	GCP	.616

**Structural model for green clothing products:**



**Figure 4.16: Structural model for green clothing products**

Above diagram is showing structural model for green clothing products. GCPI is showing green clothing products purchase intention and it is impacted by five factors and green retailing is mediating between green clothing products purchase intention and green clothing products purchase decision. Model fit is within acceptable range. All the values of CMIN/df, RMSEA, Goodness-of-fit etc. are within acceptable range for this model.

**Table 4.30: Regression Weights (Group number 1 - Default model)**

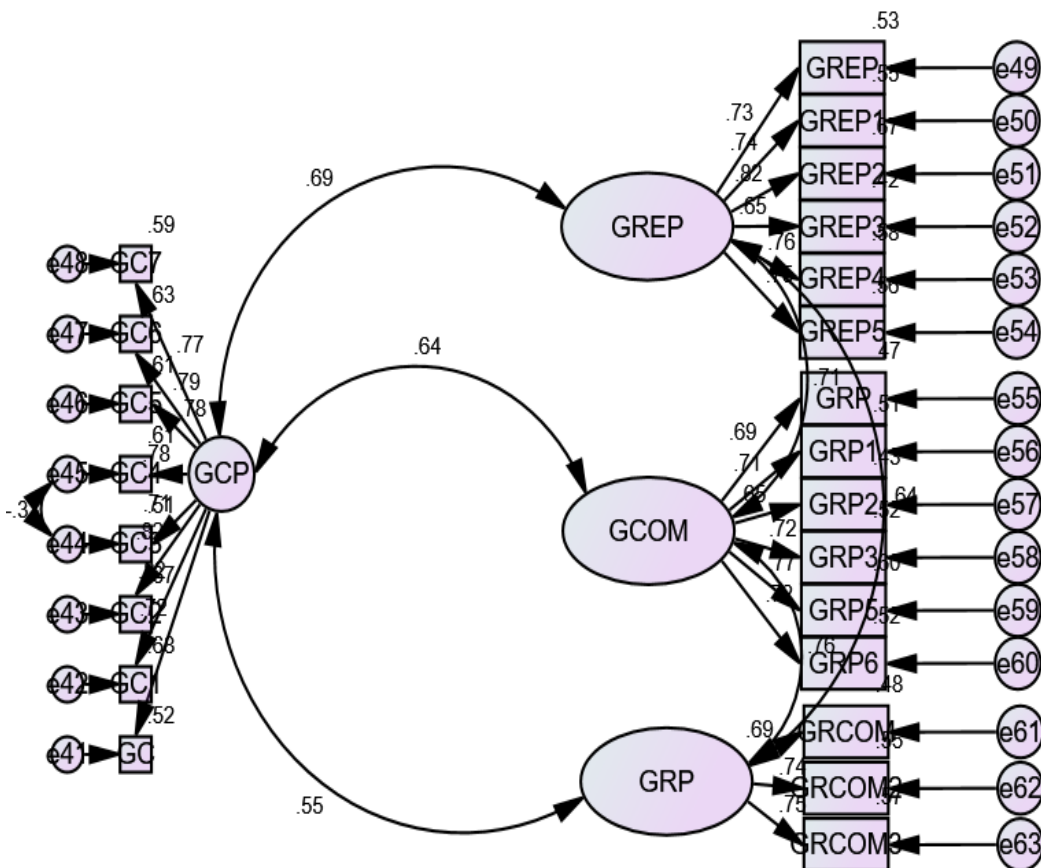
			Estimate	S.E.	C.R.	P	Label
GCPI	<---	EC	.365	.062	5.908	***	par_29
GCPI	<---	SN	.360	.067	5.381	***	par_30
GCPI	<---	PBC	.290	.056	5.217	***	par_31
GCPI	<---	WP	.398	.056	7.121	***	par_32
GCPI	<---	ATB	.008	.048	.164	***	par_33
GR	<---	GCPI	.611	.057	10.725	***	par_34
PD	<---	GR	.680	.084	8.054	***	par_35
PD	<---	GCPI	.213	.062	3.438	***	par_36
GC	<---	GCPI	1.000				

GC1	<---	GCPI	1.033	.073	14.233	***	par_1
GC2	<---	GCPI	1.060	.074	14.397	***	par_2
GC3	<---	GCPI	1.017	.084	12.137	***	par_3
GC4	<---	GCPI	.899	.066	13.587	***	par_4
GC5	<---	GCPI	1.064	.076	13.910	***	par_5
GC6	<---	GCPI	.973	.070	13.909	***	par_6
GC7	<---	GCPI	1.007	.075	13.494	***	par_7
PD1	<---	PD	1.000				
PD2	<---	PD	.932	.088	10.615	***	par_8
PD3	<---	PD	1.087	.074	14.711	***	par_9
GR2	<---	GR	1.000				
GR3	<---	GR	1.015	.073	13.828	***	par_10
GR4	<---	GR	.897	.074	12.068	***	par_11
GR5	<---	GR	1.080	.078	13.872	***	par_12
GR6	<---	GR	1.044	.076	13.809	***	par_13
GR7	<---	GR	.914	.078	11.702	***	par_14
GR11	<---	GR	.884	.073	12.072	***	par_15
GR12	<---	GR	.740	.084	8.818	***	par_16
GR15	<---	GR	1.074	.081	13.211	***	par_17
GR16	<---	GR	1.038	.081	12.858	***	par_18
ATB1	<---	ATB	1.000				
ATB2	<---	ATB	.918	.064	14.237	***	par_19
ATB3	<---	ATB	.957	.068	14.112	***	par_20
PBC1	<---	PBC	1.000				
PBC2	<---	PBC	.923	.082	11.308	***	par_21
PBC3	<---	PBC	1.227	.109	11.233	***	par_22
SN1	<---	SN	1.000				
SN2	<---	SN	1.448	.322	4.494	***	par_23
EC4	<---	EC	1.000				
EC3	<---	EC	1.107	.081	13.656	***	par_24
EC2	<---	EC	1.232	.089	13.883	***	par_25
EC1	<---	EC	1.115	.084	13.320	***	par_26
WP1	<---	WP	1.000				
WP2	<---	WP	1.318	.100	13.223	***	par_27
WP3	<---	WP	1.222	.092	13.236	***	par_28

All the factors are showing significant relationship with green clothing products such as ATB, PBC, SN, WP, EC but Strongest correlation of green clothing products is with green retailing which supports the third objective green retailing enhances consumer purchase intention of green products. SO, I can reject the null hypothesis  $H_{01}$  and accept the alternate hypothesis  $H_{A1}$ .

**Green clothing products and different dimensions of green retailing:**

As it is shown in the figure 4.16, strongest correlation is between GREP and GCP which means green packaging and eco-labels dimension of green retailing impacts the consumer purchase behaviour of green clothing products strongly.



**Figure 4.17: Correlation between different dimension of green retailing and green clothing products**

**Table 4.31: Model fit for green clothing measurement model**

Measure	Estimate	Threshold	Interpretation
CMIN	2098.192	--	--
DF	663	--	--
CMIN/DF	3.165	Between 1 and 3	Acceptable
CFI	0.880	>0.95	Need More DF
SRMR	0.047	<0.08	Excellent
RMSEA	0.066	<0.06	Acceptable

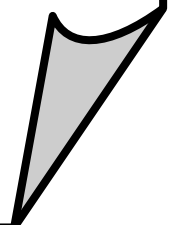
Model is acceptable for green clothing products as values are between acceptable range except CFI but we can say that it is acceptable.

#### 4.8 Results of the analysis:

**Table 4.32: Results of the data analysis**

<b>Null Hypothesis</b>	<b>Result</b>	<b>Alternate Hypothesis</b>	<b>Result</b>
<b>H<sub>01</sub></b>	Rejected	<b>H<sub>A1</sub></b>	Accepted
<b>H<sub>01 a</sub></b>	Rejected	<b>H<sub>A1 a</sub></b>	Accepted
<b>H<sub>01 b</sub></b>	Cannot be rejected	<b>H<sub>A1 b</sub></b>	Rejected
<b>H<sub>01 c</sub></b>	Rejected	<b>H<sub>A1 c</sub></b>	Accepted
<b>H<sub>01 d</sub></b>	Rejected	<b>H<sub>A1 d</sub></b>	Accepted
<b>H<sub>01 e</sub></b>	Rejected	<b>H<sub>A1 e</sub></b>	Accepted
<b>H<sub>01 f</sub></b>	Rejected	<b>H<sub>A1 f</sub></b>	Accepted
<b>H<sub>03</sub></b>	Rejected	<b>H<sub>A3</sub></b>	Accepted

*Chapter 05*  
*Findings*



## CHAPTER-05


### FINDINGS

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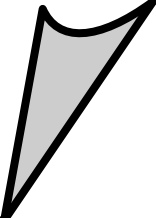

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Data was analysed in SPSS and AMOS software. EFA, CFA and SEM was performed on the data for deriving conclusions. The first objective was about finding factors that affect the purchase intention of green products. For analysing this objective EFA, CFA and SEM was performed on the data through which measurement model and structural model were derived. It was based on theory of planned behaviour and on the basis of structural model, it can be concluded that Subjective Norms (SN), do not impact consumer purchase intention of green products, this finding does not go according to the theory of planned behaviour. So, Attitude towards behaviour (ATB), Willing to pay (WP), Environmental concern (EC), Perceived behavioural Control (PBC) affect the consumer purchase intention (PI) of green products. Through structural model we can also derive that Purchase intention is also impacted by green retailing. Strong correlation has been derived in the measurement model between PI and GR and in structural model also strong relation has been derived. PD (Purchase decision) is also impacted by PI. So, intentions do covert into purchase decision. Second objective was, what are the various dimensions of green retailing. Answer to this research question was derived after analysing previous year research papers as well as prepared questionnaire. As few questions were asked related to this from consumers. Exploratory factor analysis has been performed on the data and three dimensions has been derived. These dimensions are eco-labels and packaging (GREP), green practices of retailer (GP) and green communications (GCOM). Third objective was does green retailing enhance consumer purchase intention which means does purchase intention convert

into purchase decision due to green retailing. For this, mediation has been performed on the observed data in AMOS. Partial mediation has been derived, of green retailing between consumer purchase intention and consumer purchase decision of green products. So, we can say that green retailing plays a mediating role between consumer purchase intention and consumer purchase decision. Our structural model goes with the theory of planned behaviour with few exceptions. As, SN (Subjective norms) do not affect purchase intention of green products. Brands should focus on elements of theory of planned behaviour and green retailing for increasing green products purchase in Uttar Pradesh. These findings were tested again when I have taken particular green product which is green clothing product. I have again derived measurement model and structural model for green clothing products and all the findings were true which means there is a significant relationship between ATB, PBC, WP, EC and consumer purchase intention of green clothing products and I have found that SN too impacts the consumer purchase intention of green clothing products which was earlier not significant. So, green clothing products completely follow theory of planned behaviour. I have also found strong relation between consumer purchase intention of green clothing products and green retailing. So, I can say that theory of planned behaviour has a great influence on consumer behaviour of green products. Some variations may derive, if we take some particular industry or products but basic idea is to focus on these factors such as ATB, PBC, SN, WP, EC and GR for increasing consumer purchase intention of green products.



*Chapter 06:  
Conclusions &  
Suggestions*



## CHAPTER- 06

### CONCLUSIONS & SUGGESTIONS

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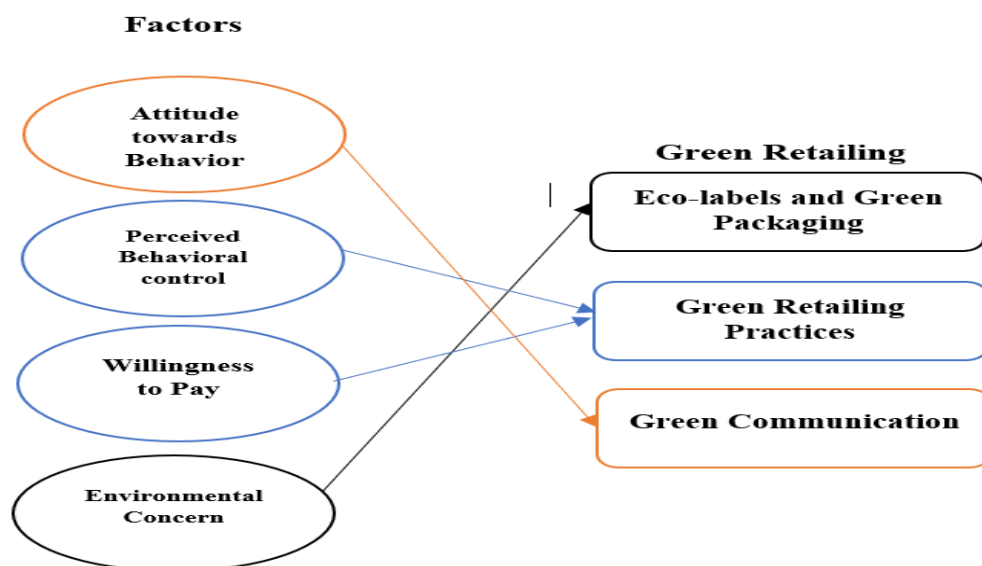
World is facing so many environmental issues today. These environmental problems are growing bigger and bigger by each day. Temperature of the planet is constantly rising and our ice-caps are melting. If we will not improve our lifestyle, it will cost us our planet. We need combined efforts of administration, consumers and companies. We can start by improving our consumption habits. We need to change what we are consuming and how we are consuming. Green products are part of what we are consuming and green retailing comes under how we are consuming. Green products will help in saving environmental damage. For increasing purchase of green products, the factors which help in forming purchase decision are Attitude towards behaviour, perceived behavioural control, environmental concern and willingness to pay. Companies can focus on these factors for capturing more consumers. Findings also shows that green retailing plays a mediating role between Consumer purchase intention and consumer purchase decision. Companies can focus on adopting green retailing practices for capturing consumers from the market and also retailers must be trained and made aware of green retailing and its practices. So, that they can apply those practices into their business and can play their part towards environment. Our structural model was based on theory of planned behaviour and certain part of its are proven right in the context of consumers of Uttar Pradesh. As, subjective norms doesn't come as a factor that have an impact on consumer purchase intention but when I have taken green clothing product, it has been found significant. This is something which needs to be checked in further analysis. All in all, awareness about greener products must be spread

amongst consumers and findings of the research help in increasing consumer purchase intention of green products while incorporating green retailing into the context.

Based on findings of the study, following are the suggestions by me for green products companies:

1. It is highly recommended that green brands should follow “Social theory of reflexivity” which means if brands want their green products to be purchased then they should itself follow green norms which is going to reflect in the behavior of their consumers. This theory predicts simple cause and effect relationship. Firstly, you should adopt green norms then expect reflex of your actions on actions of your consumer. This suggestion is based on the finding that green retailing affects both purchase intention and purchase behavior. If brands will follow green practices or retailers will follow green retailing practices, it is certain that consumer will also reflect the same in their actions.
2. Attitude towards behavior, perceived behavioral control, Willingness to pay and environmental concern has a significant association with consumer purchase intention and through second objective we have derived three dimensions of green retailing such as eco-labels and green packaging, green communication and green practices. These factors and dimensions should be linked together to increase consumer purchase intention of green products.
3. Attitude towards behavior should be increased with green communication methods. Positive attitude can be formed through communication by retailers.
4. Willingness to pay can be controlled through green practices. Green practices include rewards, availability of products, store environment and other green strategies.

5. Environmental concern can be controlled through eco-labels and green packaging.
6. Perceived behavioral control means how much control consumer have on his action in conversion of certain behavior. It can also be controlled through green practices.
7. Awareness about green products and green retailing should be spread more to increase consumption of green products and practice of green retailing.
8. Green retail program was organized by Switch Asia organization in 2016. It was about encouraging green innovation, thinking, approach in food & beverage sector. It had focused on creating favorable climate for adoption of green practices in retail value chain but it was limited to one industry. We need more programs like this to encourage green retailing practices among retailers.



**Figure 5.1: Suggestions for future research**

9. Theory of planned behavior should be explored more for green products in further analysis.

10. Awareness about responsible consumption and behavior should be spread more amongst consumers.
11. Green products should be encouraged as necessity not as luxury.
12. “Being-Green” should be adopted as lifestyle by the consumers not as some trend.
13. Government should decide proper guidelines, definitions, rules and regulations regarding green products.
14. We need change, not just in actions but in mindset of consumers while making any purchase or consumption.
15. Retailers should be given more importance in the supply chain. They should not be limited to just selling products. They can be given more responsibilities regarding influencing consumer behavior and encouraging responsible behavior.

### **6.1 Managerial Implications:**

Findings of the study upholds a crucial importance for big companies and retailers who are looking for business prospects in green products industry. This industry will see a boom after some time due to environmental degradation. Findings of the study, suggests adoption of green retailing practices for retailers as it will impact consumers positively and may turn them towards greener products. Being green is hard but it does not require one big step of improvements in day-to-day operations, it requires few smaller steps of improvement each day. It has started currently in form of green packaging. Many retailers like Myntra and flip kart have discarded plastic packaging. Now, you can find sustainable brands online easily on these applications. We can say that green retailing has started but there is a long way to go. Idea of greening retail must be rooted in the

policies of companies. They must go beyond green packaging, as there are many aspects of green retailing. Green retailing can help companies in encouraging green products. Other findings suggest on ATB, PBC, WP, EC for increasing consumer purchase intentions of green products. So, companies should focus on these elements before forming their marketing strategies of green products. As, consumer purchase intentions are the basis of consumer behaviour. They must try to create positive consumer purchase intentions towards green products as it can be converted into consumer purchase decision of green products.

## **6.2 Limitations of the study:**

Limitations of the study include sampling restrictions. As Uttar Pradesh has very large population and to derive conclusions about such a huge population, we need more and more data and also there were covid restrictions at the time of data collection that's why only online data has been collected for the analysis. So, offline data collection can be held for further analysis. Retailer's opinions can also be taken into considerations as an improvement of the study. As in the analysis I have taken green products as a general category and green clothing industry has been taken only for reference and drive certain conclusions. I have taken offline retail into consideration. Online retail is an important part of retail segment. So, it is a limitation of the study. I have done online data collection. So, there are chances that rural population may be excluded this can be considered as limitation of the study. Both offline and online retail can be taken into consideration for further improvement.

**6.3 Future Scope:**

1. Other theories of consumer behavior can be explored keeping in the mind the context of green products.
2. Green retailing has a wider scope of analysis. So, various derived dimensions of green retailing such as eco-labelling and packaging, green practices and green communications can be explored distinctively and it can be explored which dimension affect more consumer purchase intention of green products.
3. I have used mediation technique to find the role of green retailing. Moderation can also be applied on the same.
4. Different industries of green products can be explored in further analysis.
5. Place of the study can also be changed for further analysis.



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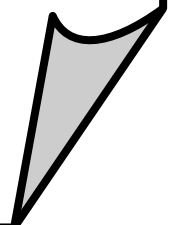
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# *Appendix*



# Questionnaire

My name is Vandana Singh , I am a research scholar of BABASAHEB BHIMRAO AMBEDKAR UNIVERSITY, LUCKNOW. I am collecting data for my thesis . My work is based on finding solutions for irresponsible consumption through Green products and Green Retailing. Kindly fill this Questionnaire . It will take only 4-5 minutes . This questionnaire has 4 sections: Section A, Section B, Section C and Section D .

\* Required

Consent form  
to Data  
Confidentiality  
And Data  
Processing

This consent form informs you about the purpose of the research and type of commitment required so that you can voluntarily choose to take part in the survey . You must provide your consent before participating in this research . Collected data will be processed anonymously and handled exclusively by the researcher. Researcher guarantees the impossibility of identifying the participants. Participant are free to ask any clarification on any aspect of the research, as well as to refuse participation or abandon the investigation at any time.

1. I agree to the processing of the personal Data and to take part in the survey. \*

*Mark only one oval.*

Agree

Section A

2. Location \*

*Mark only one oval.*

North U.P (Uttar Pradesh)

South U.P

East U.P

West U.P

Central U.P

3. Type \*

*Mark only one oval.*

Retailer

Consumer

4. Gender \*

*Mark only one oval.*

Female

Male

others

5. Age \*

*Mark only one oval.*

upto 25

26-40

41& above

6. Family Income (Monthly) \*

*Mark only one oval.*

Below 20000

20001-45000

45001-75000

above 75000

## 7. Educational Qualification \*

Mark only one oval.

- U.G
- P.G
- Ph.D
- others

Section  
B

There are 5 options starting from 1 to 5. 1 is strongly disagree, 2 is Disagree, 3 is Neither agree nor disagree, 4 is Agree and 5 is Strongly Agree.

Green Products have low impact on environment before, during and after consumption. Green products have following characteristics: low water usage, energy efficient, Recycled, Organic or locally grown, Low carbon foot print, Non toxic, Sustainable, Recyclable packing, Fair trade, Bio-degradable. some ecolabels to identify green products are given below. Based on this information you can easily fill this questionnaire.



8. How will you identify the Product as "Green"? (you can select more than one option) \*

*Check all that apply.*

- Own Research  
 Brand Advertisements  
 Special Section for "Green Products"  
 Signage in store  
 Packaging/ Label  
 Retailers Assistance

9. I prefer the idea of purchasing Green. \*

*Mark only one oval.*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

10. Purchasing Green is a good Idea. \*

*Mark only one oval.*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

11. I have favorable attitude towards purchasing greener version of a product. \*

*Mark only one oval.*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

12. I feel I have the capability to buy green products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

13. If it is totally up to me, I am Hopeful that I will buy green products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

14. I have Amenities, time and desire to buy green products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

15. Individuals important to me Expect me to buy green products when getting out for shopping. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

16. My friends/colleagues positive beliefs influences me to buy green products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

17. I am Extremely Caring about the environment.. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

18. I would be ready to lower my consumption to support saving the environment. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

19. Greater social and political change is important to save the natural environment. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

20. Anti-pollution laws should be implemented to a greater extent. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

21. It is acceptable to pay extra for environment friendly products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

22. I would pay extra taxes to pay for an environmental cleanup program. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

23. If buying eco-friendly products results in an additional monthly expenditure , I am ready to bear it. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

24. Over the next one month, I will consider buying green products because they are less polluting. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

25. Over the next one month, I plan to switch to a green version of a product. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

26. Over the next one month, I certainly wants to buy green products . \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

27. I will purchase green products over the next month. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

28. I had purchased green products , within past one month. \*

Mark only one oval.

1	2	3	4	5		
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

29. I will purchase green products, regularly. \*

Mark only one oval.

1	2	3	4	5		
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

Section  
C

Green Retailing (There are 5 options starting from 1 to 5. 1 is strongly disagree, 2 is Disagree , 3 is Neither agree nor disagree , 4 is Agree and 5 is Strongly Agree.)

30. Which category of products apply to your recent purchase history of Green Products. \*

Mark only one oval.

- Food
- Health and Beauty
- Apparel / Clothing Products
- Cleaning and household products
- Electronics and appliances
- Green Construction (Building)
- vehicles
- None

31. I always look for eco-labels and certification of the products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

32. Eco-labels or eco-mark affects my purchase decision favorably. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

33. I tend to switch to products with eco-labels and certification. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

34. I always pay attention to packing of the products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

35. Green packaging affects my purchase decision favorably. (Low waste packaging) \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

36. I tend to switch to products with Green packaging. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

37. I pay attention to retailer's description about the products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

38. Retailer's opinion about products affect my purchase decision favorably. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

39. I am open to purchase products with better specifications suggested by the retailer other than my usual choice. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

40. I tend to purchase those products which are easily available in the market. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

41. I usually look for products with better specifications or benefits. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

42. Additional benefit or rewards like discount affects my purchase decision favorably. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

43. I can switch to green products if I can avail additional benefit or rewards. \*

Mark only one oval.

1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Strongly Agree

44. I pay attention to the retailer's green practices.( environmental concern of the retailer). \*

Mark only one oval.

1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Strongly Agree

45. Retailer's efforts towards saving environment inspire me to make Green purchase decisions. \*

Mark only one oval.

1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Strongly Agree

46. Retailer's green practices affects my purchase decision favorably. \*

Mark only one oval.

1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Strongly Agree

Section  
D:Green  
clothing .

There are 5 options starting from 1 to 5. 1 is strongly disagree, 2 is Disagree , 3 is Neither agree nor disagree , 4 is Agree and 5 is Strongly Agree.

Green Clothing products have low environmental impact.



47. I am aware of Green clothing Products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

48. I have favorable attitude towards purchasing green clothing products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

49. I have Amenities, time and desire to buy green clothing products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

50. My friends, colleagues positively influences me to buy green clothing products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

51. I am ready to use green clothing products to support saving the environment. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

52. I am willing to pay extra for green clothing products. \*

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

53. I want to purchase green clothing products. \*

*Mark only one oval.*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

54. I will definitely purchase green clothing products over the next month. \*

*Mark only one oval.*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

55. Retailer's efforts can impact my decision of purchasing green clothing products. \*

*Mark only one oval.*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

56. After observing pictures below, Which clothing product would you select?(Retailers are offering similar products with different specifications) \*

**Max (Product A)**



Product Price 1000  
Pure cotton fabric  
Plastic bag packing

**H&M (Product B)**



Product Price 1000 (20% discount)  
Organic Cotton  
Paper bag packing



**Good Earth (Product C)**

Product Price 1200  
Regenerated Cotton  
Recycled paper bag packing  
store works on renewable energy and zero waste



**Doodlage (Product D)**

Product Price 1200 (10% discount)  
Made from Fabric waste  
cotton bag Packaging

Mark only one oval.

- Max Retailer
- H&M Retailer
- Good Earth Retailer
- Doodlage Retailer

57. Based on above question, which factors helped you in forming your decision regarding selection of the clothing product. (You can select more than one option) \*

*Check all that apply.*

- Price
- Discounts
- Quality
- Environment friendliness of the product
- clear signage of the store regarding environment friendly products
- Environment friendly practices of the retailer
- Packaging of the product
- Brand Name

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## GREEN FASHION RETAILING : A STUDY ON H&M AND DOODLAGE'S IDEA OF GREENING RETAIL

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## GREEN FASHION RETAILING : A STUDY ON H&M AND DOODLAGE'S IDEA OF GREENING RETAIL

□ Singh Vandana\*  
Khan M.S\*\*

### ABSTRACT

85% of the textile goes to dump each year. Year after year we are making same fashion choices and pressure on resources to fulfill those choices is increasing. We need to need to decrease the pressure on resources to fulfill those choices. The best way is to close the loop of fashion. Closed-loop supply chain means utilizing every resource to its extent and avoid unnecessary damage, wear and tear or any kind of wastage. So, in this paper we have presented the idea of closed-loop supply chain for fashion products while incorporating Green Retailing into it and how retailers can be useful in closing the loop at consumers end. For selling Idea of Green fashion retailers' incorporation into the system is very important. So, we have presented the framework for fashion retailers for closing the loop of fashion. This paper is based on secondary data and investigative web-scan technique has been used to analyze the data. We have taken two fashion retailers, H&M and Doodlage, to study closed-loop supply chain through their cases.

**Keywords :** Green Retailing, Closed-loop supply chain, Green fashion, H&M, Doodlage

#### Introduction :

Global apparel consumption is expected to reach USD 2.6 trillion by 2025-26 from USD 1.8 trillion in 2017-18. India apparel consumption is expected to reach USD 220 billion by 2025-26. These data anticipate serious social and environmental damage in upcoming years due to heavy consumption. Green fashion is very crucial for reducing environmental and social damage. Many fashion brands are taking advantage of unawareness and loose rules regulations regarding green fashion for achieving low production cost. But there are some brands which are doing their bit for achieving green fashion. Adopting sustainable techniques at only one step will not give positive impact. Every step from starting life of the product to end of life needs to be sustainably implemented for positive impact. Most of the time we think about green production, green distribution, green retailing and green consumption which means green life of the product what remains left out of discussion most of the times is after life of the product. Closing the loop of

green supply chain is also very important step for positive impact. Post-consumer textile waste is approximately 39 million ton per year worldwide primarily in form of apparel.

The total level of fashion waste will rise to 148 million tons by 2030, which amounts to 17.5 kg per capita annually across the planet, (Koszewska,2018). Closed loop supply chain is all about reduction in waste generated by fashion products. At every step of supply chain minimum or zero waste should be generated by way of recycling, upcycling or re-use methods. Firms adopting closed loop supply chain utilize every resource to its extent and even after life of the product is also considered for reuse to minimize waste.

Our objectives in this paper are: 1. To study closed-loop supply chain in fashion industry. 2. To investigate importance of green retailing in better implementation of closed loop supply chain considering work done by some fashion retailers. 3. To suggest framework for Closed-loop supply chain involving retailing for fashion industry.

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## Literature review :

Closed loop supply chain management is the important tool of enhancing environmental sustainability. The most important goal of closed-loop supply chain management is generating value from scraps, damaged products and unsold fashion products through ways of reuse, remanufacture, and recycle, (Choi, T.-M., & Li, Y,2015).The study of closed-loop supply chain (CLSC) networks is used to maximize the value created from product take-back, recovery, and re-distribution which reuses the entire product, and/or some of its modules. CLSC can reduce waste through environmental recovery which will result in reduced landfills, reduced pollution and reduced destruction of environmental resources, (Quang.Q, 2013).Closed loop supply chain consists of five steps: collection, inspection/ separation, reprocessing, disposal, re-distribution.Various recovery and disposal options in a closed-loop supply chain include reuse, repair, refurbishing, recycling, incineration, and land filling.Companies can adopt five-R model in their green supply chain management initiatives. Five-R method stands for recycle, reuse, reduce, redesign, reimage. This method is very useful in greening fashion, (Pui - Yan Ho, H., & Choi, T,2012). Closed loop supply chain is a 5-phase process which include: remanufacturing, reverse-logistics process, coordinating the supply chain, closing the loop, prices and market,(Guide, V. D. R., & Van Wassenhove, L. N. 2009). Product return has positive impact on CLSC activities and by adopting CLSC activities firms can increase their effectiveness. Besides effectiveness firms can also achieve cost savings, repeat buyers, utilize recovered products in production, lowering the buying cost of raw material, mitigating the volume of waste, reducing the scrap rate and increase in revenue after sale and increasing the commitment towards green practices, (Shaharudin et al.,017). CLSC is created by combining forward and reverse activities in a supply chain together. CLSC deal with creating environment friendly system. By offering discount to the retailer on forward purchase manufacturer can ensure more profits in the CLSC. As this discount will increase retailers interest and he can further forward this discount

to the customers in their returns and this will increase the efficiency of the system, '(Heydari et al., 2017). Key drivers for closed loop fashion value chain are collaborating networking, innovation, an effective waste management system and educating customers and bringing change in utilization patterns. Reduce, Recycle, Repair, reuse and reduce are the principles that need to be adopted, (Mishra, S.& et al, 2020).

## Closed-loop supply chain :

(Govindan et al, 2015), define closed-loop supply chain management as the design, control, and operation of a system to maximize value creation over the entire life cycle of a product with dynamic recovery of value from different types and volumes of returns over time.

1. **Reduction in expenditure of resources used for manufacturing the product :** it can be achieved by applying energy and resources saving technologies, reduction in defects, reduction in losses, reduction in waste at every stage, complete and circular use of resources utilized, reduction in emissions.
2. **Creation of value at post-consumer stage :** it can be achieved by collecting, Sorting and processing of used products from consumer. Processing involves recycle, reuse, refurbish, incineration and remanufacturing.

## Research Methodology :

We applied an investigative web-scan approach in order to gain insight into closed-loop supply chain activities of the two case companies. Most of the data has been collected from companies' websites in form of annual reports, sustainability reports, blogs, journals, articles and related magazines. Various online interviews of these companies' owners have also been used to analyze their activities. Various research paper like (Mishra, 2020) and (shen, 2014) have also been analyzed for proper investigation. This paper is deductive in nature and purely based on secondary data.

## Findings :

### CLSC concept Adopted by H&M fashion Retailer :

Hennes & Mauritz AB is a Swedish multinational clothing-retail company. It operates in 74 countries. Their concept is following:

### **Green Design :**

H&M are the biggest users of organic cotton in world. H&M uses almost all-natural fibre and recycled synthetic materials like lyocell, recycled wool, linen, recycled polyester, recycled polyamide and recycled plastic, Circulose, Vegea (Grape leather).

### **Green Manufacturing :**

H&M is the first company to establish restricted chemicals list 1995 for its suppliers. So that hazardous chemicals cannot be used in their clothing products. They have adopted a method called Screened Chemistry. With this they limit hazardous chemicals at design stage.

### **Green Transportation :**

H&M transportation stands for only 2-3% of their emissions. They have collaborated with Maersk biggest transport company for carbon neutral ocean product which can replace fossil fuel. they have also collaborated with Scania, E. ON and Siemens to work towards fossil fuel free transportation by 2050.

### **Green Distribution :**

There are no plastic bags their stores but H&M uses plastic packaging for online purchases which they are trying to change. By 2025, all of their packaging will be recyclable, reusable or compostable.

### **Green Retailing :**

H&M as a Green Retailer doing their best to provide green fashion and above all they are playing a very important role in closing the loop from consumers end. As a fashion retailer they are giving facility of recycle, reuse, reduce, remanufacture and update or mend. H&M believes in textile-to-textile recycling. They have launched the clothing conscious concept in 2013. You can drop off used or worn clothes at H&M stores and in return you can get coupons for next purchase. This idea is first of sustainable and secondly this way of retailing is also increasing customer bases for the company. This is the only company which take back any company's clothes.

Then these clothes are sorted according to re-wear, reuse, recycle category. These disposed of clothes are taken by I-collect initiative. In 2019, H&M Group collected 29,005 tonnes of textiles for reuse and recycling.

### **Green Retailing as a means of closing the loop at consumer's end :**

1. **Inspire :** Retailers are the middlemen between consumer and manufacturer. They can influence both the consumer as well as the manufacturer.
2. **Rent :** retailers can give the facility of renting the clothing for a day or two which can reduce idea of throw away fashion after one wear. This idea was there but not popular enough to make an impact.
3. **Restyle, re-wear, mend and update :** Another way of closing the loop on consumer's end is through increasing the life of garment by way of restyling, updating or repairing the garment.
4. **Recycle :** Retailers can close the loop by providing services of disposing off clothing.
5. **Transparency :** Retailers can eliminate doubt by giving information about supplier and manufacturer. As in case of H&M, through tags consumers can trace back the supplier as well as the manufacturer.
6. **Promote local products:** Best way of sustainable fashion is promotion of local and traditional arts in terms of fashion as there are various traditional arts which are zero waste and less damaging for environment like block print, handmade embroidery, woven techniques etc.

### **Suggested framework for Green Retailers to close the loop of fashion :**

#### **Re-design :**

- Redesign supply chain by involving sustainable partners
- Include green fashion products

#### **Reduce :**

- Reduce carbon foot print of the store and products
- Use renewable energy

#### **Recycle**

- Provide options for recycling products
- Recycle your waste

#### **Re-connect :**

- with local community for sustainable results

#### **Revolutionize :**

- Inspire customers to adopt sustainable lifestyle

**Repair :**

- Provide repairing and restyling options to guide customers

**Conclusion :**

Fashion industry is the second most polluting industry in the world. Closed-loop supply chain is the idea of going full circle in terms of fashion to avoid these wastages. Every loose end where waste is generated or resources are unutilized needs to be closed. Closing the loop means using every resource at its full extent and incorporating the concept of Green retailing can be very helpful in going full circle. H&M is the best example of encouraging customers to return their garment and then recycle those garments for next wear and Doodlage is the best example of making industrial or consumer waste into wearable garment. The suggested framework of Re-imagine, reduce, recycle. Re-connect, revolutionize and repair can be helpful for retailers to make their retailing green. This framework is suggested after analyzing the case of Doodlage and H&M. The ideology of take-make-dispose should be replaced with Take-make-recycle.

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**Corporate Social Responsibility and Business Ethics: A Study of Textile Industry**

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**Abstract**

The concept of Corporate Social Responsibility (CSR) can be stated as something, but not always the same thing to everybody because the concept of CSR is transforming and evolving day by day. More and more industries are contributing towards CSR initiatives. CSR is giving back to the society in forms of economic, social or environmental benefits. Following the Companies Act 2013, Garments companies are pursuing their corporate social responsibility more professionally than before. More companies are now spending 2% or more of their net profits on CSR activities. The aim of this paper is to study textile industry in the light of CSR initiatives taken by them and the Business Ethics involved in it. This paper further investigates the impact of CSR initiatives and also the value systems that underline their business activities concerned with textile industries. The methodologies adopted for carrying out this research is mainly based on secondary data and the nature of this paper is purely deductive in character.

**KEYWORDS:** CSR initiatives, Business Ethics, Inductive, value system, CSR.

## **Introduction:**

India's Textile industry is well organized and is among the best in the world. In Textile industry India upholds second position after china. Due to cheap labor rates, India has a advantage in making and exporting stylish clothes. India's Textile industry has been growing rapidly in last few years .The Textile industry is of major importance to the Indian economy as it contributes major share in India's GDP. According to IBEF (India brand equity foundation) .India's overall textile exports during FY 2017-18 stood at US\$39.2 billion. India's textile industry contributed 7% of the industry output of India in 2017-18. More than 45 million people have been employed in Textile industry in 2017-18. The contribution of Textile industry in India's GDP stood at two percent. The sector contributed 15% to the export earnings of India in 2017-18. The CSR norms and requirements have brought a whole range of new economic opportunities into the textile industry. CSR is the process by which an organization thinks about and evolves its relationship with the stakeholders for the common good, and demonstrates its commitment in this regard by adoption of appropriate business processes and strategies. Thus, CSR is not charity or mere donations. CSR is away which visibly contributes to social good .secondly , responsible companies not only limit themselves to using resources to engage in activities that only increase their profits but also they use CSR to integrate economic , environmental and social objectives with the company's operations and growth .In the last few years India has emerged as the fastest growing economy. And with the second largest population of consumers in the world, India is emerging as a major player in the global apparel market place (Halepete and Iyer, 2008) yet very little research has been done regarding CSR initiatives of the textile industry in India. But textile industry results in various harms to environment. The most important environmental hazards from textile are:

1. Use of water
2. Generation of waste contaminated with hazardous substances
3. Use of chemicals

4. Hazardous and toxic waste generation

Wet processing under Textile industry involves lots of energy, water and chemical. Every fabric goes to this process of wet processing. In this process textile is cleaned, dyed, bleached and finished in the moist environment. This process is very harmful for the environment because it involves lots of energy and toxic substances.(KIRIAN-CILLIZ , 2003). So due to these hazards of the Textile industry, it is the responsibility of the Textile industry to fulfill their CSR requirements and give back to the society from whom these industries had taken much to increase their profits.

**Rationale:**

In this modern era of technology and fashion, clothing plays an important role. Textile industry is very much connected to our day to day life. And for some being properly dressed is the way of life. Food, house and clothes are considered basic necessities for human life. So, all in all textile industry is very much important today. If something is done with good heart always wins appreciation. In case of textile industry, if the clothes that we wear are made up good intentions, and it does not involves any exploitation or forced labor or it involves contribution to some social cause than it increases value of those clothes in the eyes of the customer. We somewhere feel connected to what we wear. So, this is the reason for my research paper, to know the CSR initiatives and ethical practices of the Textile industry

**Objectives:**

- To know the CSR initiatives of the Textile industry.
- To know the Business Ethics involved in the Textile Industry.
- To know, the active participation in the CSR by the textile industries.
- To know the areas of CSR expenditure by the textile industries.

**Literature Review:**

As a resource-intensive sector, Textile industry needs to compensate for using the planets' reserves and mitigate its damage to the natural environment. It uses a magnitude of resources, needed for production, therefore the important activity is to handle waste efficiently and diminish environmental impact.(Paulina Ksiezak,2016).CSR is seen as contributing to developing and retaining workers with positive implications for enhancing productivity.(Patsy Perry, Steve Woods, and John Fernie, July 2014). Higher percentage of female (23%) participants had supported causes through their apparel purchases than males (18.8%) participants. More than 50% of the respondents who said they had supported a cause through their apparel purchases indicated that their household income was greater than USD50000. (S. Diddi and L.S Niehm,March,2016). CSR is important in terms of buying apparels but customer did not want to pay unreasonably high prices or compromise quality for the sake of social responsibility. Ultimately, many believe that it is the retailers job to adhere to socially responsible practices and that the retailer, not the consumer, should absorb the cost of CSR. (Megha Gupta, 2012). If CSR wants to live up to its name, in order to improve the social and economic situations for their workers and their environment, instead of creating more profitable business model, demands of the workers should be taken in to full consideration. Therefore more structural more power imbalances and the dominant neoliberal order have to be contested. ( Nena Bode , July 2013)

### **Research Methodology**

The data have been collected from various secondary sources like, journals, books, magazines and websites relating to CSR. No specific statistical tools have been used for the analysis. This study is deductive in character and nature as majority of the data has been derived from secondary sources.

### **Discussions and conclusions:**

According to Textile excellence, of the 50 companies analyzed in the study, 45 textile companies contributed Rs 68.52 cr. towards CSR initiatives in 2014-15 out of which 49% contribution was made in education and 18% supported healthcare. Only 2 % contribution was made in skill development .The number of Textile companies preparing Business Responsibility Report has

gradually risen from 5 to 7 in the last three years. All the companies had a CSR policy in 2014-15 whereas only 16% had a CSR policy in 2010-11 .There are many Textile companies which has now started active participation towards CSR initiatives .Companies such as Aditya Birla Nuvo, Donear Industries, Raymonds ,Arvind,Century Enka, among others are quite proactive. Grasim , Bombay Dyeing , Indo Rama , Vardhman Textiles and Nitin Spinners are classified active. And a long list of 29 companies including SRF ltd., JBF Industries, Sangam India ltd. Alok Industries ,Himatsingka Seide are passive. If we think about Textile Industry , we will find that Textile Industry has been enjoying the benefits of the CSR initiatives of the Non-Textile Industries because many companies has been working towards skill development programs in rural and semi-rural areas. These companies are helping poor tailors, weavers and craftsmen in enhancing and developing their skill. Due to this CSR initiatives of the other Industries are creating skilled and semi. Skilled workers for Textile Industry.

**Some CSR Projects of the Textile Industry:**

**Sutlej Textile And Industries Limited:** In 2017-18 Sutlej Textile had spent 6.26 cr. towards CSR initiatives. It had spent in the areas of Health, Education, Environment and Relief projects .The Company organizes free medical camps in nearby villages and also helps in promoting Swachh Bharat Abhiyan. Sutlej also provides cash rewards to female students to encourage them to pursue further education. It also distributes free books, and bags to under privileged children. The Company has undertaken tree plantations in its premises to improve green cover and also funded afforestation efforts in Kathua town by adopting certain stretches of roads for improvement. This company also invests in eco-friendly and reliable technologies.

**Century Enka Limited:** In 2017-18 Enka limited had spent 2.06 cr. amounts against the prescribed 2.02 cr., towards CSR initiatives. The company had spent in the areas of Education, Infrastructure and health care .The company has helped in setting up vocational training centre in the vicinity of Bharuch site. This institute offers vocational training in 6 trades. The company has offered money in community welfare also. Under drinking water project, they installed bore

wells in 2 villages. Under street light project it installed 27 electric poles and lights. The company has spent some amount of money in promoting healthcare in following way :

1. Eye check up: Company has organized 4 eye check up and operation camps in a year.
2. Operation camp: Company conducted an operation camp for the people suffering from Hernia, Hydrocele, Lipoma and similar diseases in the vicinity of its Bharuch site.
3. General medical check-up: General health check up was organized and free medicines were given.
4. Blood donation camp: Blood donation camp was organized and 121 units were given to Red Cross Society , Rajpipla, Dist. Narmada.
5. Every year Kanya Kevlani Mahotsav is organized by the government of Gujarat for enrolment of child. The company participated in the event and also distributed educational material and uniforms to over 90 students of a school Shahad, Dist., Thane, and Maharashtra.

**Grasim Industries Limited:** The Company had spent 29.84 cr. Amount on CSR initiatives against the prescribed limit of 22.14 cr. In the year 2017-18. The company has spent in the areas of Disaster Relief Programs, Natural Resource Conservation income generation programs, Animal Husbandry, Agriculture and Horticulture, Promotion of heritage and culture and sports, Mpower Projects , Educational programs, Social security, Vocational Training, Institutional building , livelihood infrastructure , Eradication of poverty, Reproductive and health , HIV awareness program, community awareness programs, and promoting preventive health care. The company has contributed some amount of money for Bio gas Program, Solar Energy and other Energy Program like low smoke wood stoves/sky light, plantation / Green belt development/ Roadside Plantation, soil conservation/ Land improvement, water conservation and harvesting, community pasture land development/ Orchard development. Some of the other programs are following:

1. Integrated Livestock Development Centers has been established in the villages. The centre provides live stock breed improvement services to the surrounding 62 villages.
2. At Nagda, Rehla, Renukoot , Indian Rayon, Indo Gulf and Vilayat, company familiarised 4589 farmers with innovative cropping techniques which was a fine learning experience.

3. At various centers 2269 women were trained in different skills. These comprise of tailoring, crafting, handbags, purses, animal rearing, and vegetable farming as well as shop keeping.
4. The company enrolled 1167 girls in the KGBVs and government schools round manufacturing units.
5. The company has spent some money on Rural Infrastructure Development. The 4 dams constructed at Nagda on the river Chambal continue to benefit nearly 2 lakhs people to drinking water.
6. In collaboration with District health department, 341256 children were immunized against polio and 7137 children for Diptheria, Typhoid, measles, and Rubella at Harihar.
7. For preventive healthcare company reached out to 74430 villagers in hinterland through their rural mobile medical van services.

Grasim Industries limited has been proactive towards CSR initiatives. It has done lots of work towards society and environment.

**Manyavar:** The Company has spent 1.36 cr. Amount in the year 2016-17 towards CSR initiatives against the prescribed limit of 1.32 cr. I t has spent money in the areas of Education, Animal welfare and health care. It has spent 0.75 cr. For the promotion of education. Manyavar makes an active commitment to human respect. Manyavar’s Manas Foundation provides funding for heart surgeries for the needy .It also provide financial and medical help to the tribal. Some initiatives are mentioned below:

1. Manas Foundation: Overtime, Manas has sponsored 800 plus surgeries worth Rs 3.5 cr. At Rabindranath Tagore International Institute Of Cardiac Sciences& The Mission Hospital.
2. Friends of Tribal People (FTS): The Company works towards the upliftment of the Tribals and deprived people.
3. Parivaar: A humanitarian service organization works for complete care and overall development of orphans, girls who are highly vulnerable to exploitation, victimization and trafficking with its own formal school “AMAR BHARAT VIDYAPEETH”.

4. Rural Health Care Foundation : It is a network of 10 clinics spread across West Bengal and has served over 10 lakhs patients .It provide affordable health care.

**VF Brands India Private Limited:** The Company has spent 1.60 cr. In the year 2016-17.The Company has spent amount in the areas of Eradication of Poverty and Hunger and in the promotion of preventive health care.

**Obeetee private limited :** The company has spent 0.50 cr. In the year 2016-17. The company has spent amount in the areas of Education, Women Empowerment, and Health care.

**AYM Syntex Limited:** The Company has 0.88 cr. In the year 2016-17. The company has spent amount in the areas of promotion of Education, Benefits to Armed Forces, Administration and Drinking water facilities. The company has spent amount for CSR monitoring and administrative overhead including salaries, administrative expenses of the Industrial Training Institute and carrying out research and studies for CSR activities

**Vardhman Textile Limited:** They have company has spent 5.41 cr. in the year 2016-17 towards CSR initiatives. The company has spent money in the areas of Promotion of Education, Solar lighting Systems, Promotion of Arts and Culture, Rural development, Health care, Sanitation and Drinking Water facility .The Company has provided solar lights to the Mandi area of Pilikarar Panchayat.

**Arvind limited :** The company has spent 8.85 cr. Amount in the year 2016-17 towards CSR initiatives against prescribed limit of 8.76 cr. The company has spent in the areas of Heritage and Culture, Animal welfare, rural development, Preventive health care and Promotion of Education .The Company supported Lalbhai Dalpatbhai Bhartiya Sanskriti Vidyamandir (LDBSV) for a project on “Promotion of Indology”.Gyanda is a unique supplementary education model designed for Primary, secondary and higher secondary school going children studying in municipal schools. It prevents them from dropping out of school. At present 1200 students are part of the Gyanda family in Ahemdabad. The company has also established Arvind Medical

centers in association with swasth India Foundation . It provides quality Health care and Dental care.

**Jockey (Page India Limited):** The Company has spent 2.02 cr. Amount in the year 2016-17 against the prescribed limit of 5.80 cr. It has spent in the areas of Health care, promotion of education and in the Prime Minister Relief Fund.

**Raymond Limited:** The Company has spent 1.53 cr. Amount in the year 2016-17 towards CSR initiatives. The Company has spent in the areas of Arts and Culture, Animal breeding program, Vocational Training, and in Health care. Through the JK Trust Gram Vikas Yojna , Company aims to significantly improve the quality life in rural areas in Cattle Breeding Program. This program has benefitted 4.5 million people across 45000 villages in 11 states of India. The Company also provides skill training through various skill training institutes. The Company has institutes in Patna, Lucknow, Jodhpur and Jaipur. In the area of Health care, Company has undertaken activities of raising awareness about Cancer, treating patients suffering from Cancer and treating patients suffering with renal ailments.

**Siyaram:** The Company has spent 2.13 cr. In the year 2016-17 towards CSR initiatives. It has spent in the areas of Education, Healthcare, and Public Service

**Being Human:** This fashion brand works towards free heart surgeries for the children below age of 5 years. In which 50% sponsorship is given by being human foundation and 50% sponsorship is given by fortis hospital. Around 500 heart surgeries has been done under this partnership. So there CSR ideology revolves around giving back to the society in form of better health to the next generation.

### **CSR and Business Ethics**

In this era of globalization in the economy, Ethical values play an important role in the universal recognition of an enterprise. Various Companies are undertaking various initiatives towards social challenges of globalization. Heads of the Companies are working towards improvement of the conditions of their employees through various innovative personnel policies. As a sense of

their social responsibility, Companies are going beyond their productive framework and recognizing the importance of ethical values in enterprises. India is the biggest manufacturer of Textiles and apparels in the world and supplies many leading brands. Indian domestic market accounts more than 40 % of the industries revenue, Indian domestic market is huge in size. Indian Textile sector is dominated by small and medium sized enterprises that are why competition is very high among companies. There is a pressure of reduced costs and quick production. Many use forced labor, while abuses including withheld salaries and debt bondage are most common, according to activists. According to World Bank, hourly rate of wages in India of Textile sector is 1.06\$ as compared to China (2.60\$), it is very low. Low margins trickles down to cotton farmers. Indian cotton is genetically modified, its seeds cannot be replanted, and farmers have struggled with rising input costs and lower prices for cotton. Many indebted cotton farmers have killed themselves in the past two decades in the western states of Maharashtra. Best Business Ethics involves Fair Trade practices. It is based on dialogue, transparency, and respect that seek greater equity. Rights of the marginalized farmers and producers are secured through better trading conditions and it contributes to sustainable development. According to World Fair Trade Organization (WFTO), there are 10 principles of Fair Trade:

- 1. Opportunities for disadvantaged producers**
- 2. Transparency and Accountability**
- 3. Fair Trade Practices**
- 4. Fair Payment**
- 5. No Child Labor, No Forced Labor**
- 6. No Discrimination, Gender Equity, Freedom Of Association**
- 7. Good Working Conditions**
- 8. Capacity Building**
- 9. Promote Fair Trade**
- 10. Respect For The Environment**

**Some Examples of Best Ethical Practices in Textile Industry in India:**

There are some Companies in India which sources cotton, and audits its supply chain to ensure there is no child labor and that workers receive fair wages.

**No Nastiest:** It is India's first Fair trade licensed clothing brand and it closely works with Fair Trade India to grow the ethical consumer market in India. It involves Eco-Friendly Screen Printing, No Child Labor, Hand- made and hand printed, only 100% organic cotton, Plastisol free Inks, Better Wages, and Happier Workers. From seeds to Garments, at every step only best ethical practices are involved.

**Do You Speak Green:** This company provides consumers with ethical, fashionable and authentic eco- clothing at affordable prices. This Company uses sustainable blends of Organic Cotton, Bamboo, and Modal and even post consumer recycled polymers blended with organic cotton waste, to produce stylish clothes at affordable prices.

**Fair Trade India:** Fair trade India is working with small and marginal farmers. It is working with over 10,000 cotton farmers from Orissa, Andhra Pradesh and Madhya Pradesh. This organisation is working towards providing better treatment to farmers in terms of fair and sustainable income . This organisation emphasizes on fair trade standards which is a commitment towards fair prices to the farmers as well as to the investors. It also spread awareness towards the demand of exploitation-free products.

**Samtana Eco Pvt Ltd:** It is a ethical fashion brand. That works towards the co-existence of fashion as well as sustainability. This company sources sustainable fabrics from the farmers and then makes limited edition clothes. This company works towards eliminating poverty through fair trade rather than aid. This company is based in Bangalore.

More Companies in the Textile Industries are becoming more socially responsible, ensuring fair wages are paid, safe and clean working conditions are provided, offering tools and workshops to improve local community and supporting sustainable livelihoods. The following are companies that are doing their part to change the industry for the better:

Beaumont Organic, Bottle top, Braintree Clothing, Do You Speak Green, Elroy, The Ethical Silk Co, Gilda & Pearl, Here Today Here Tomorrow, Kuyichi, Lur Apparel, Mimco, Nudie Jeans, O My Bag, Pants To Poverty, Study NY.

There is a lack of technical know-how a lack of capacity, lack of awareness, about ethical supply chains, even among big businesses but things are changing now and Companies are taking steps towards best ethical practices in India in Textile Industry.

This research paper explains the various CSR initiatives of the different Companies in the Textile industry. Some companies are actively participating towards CSR and some are just fulfilling the criterion. Many companies are very much aware of the rules and regulations of CSR but still there is lack of awareness among small and medium enterprises in India. Government should make more stringent rules towards the implementation of CSR and Ethical practices of the business in the industry. And this research also explains that there is a lack of knowledge amongst companies that which areas should be considered while making CSR expenditure. Most of the companies are making investments in the areas of Education, Health and vocational training. That's true these are the most important concerns for the society but there are still some social issues which requires attention and expenditure as their CSR initiatives like Women Empowerment, Customer Welfare, Environment Protection, Community Welfare.

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## A REVIEW ON THE INNOVATIVE PRACTICES IN TRADE MARKETING AND DISTRIBUTION BY FMCG DURING COVID 19

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### ABSTRACT

*Crisis brings opportunities, this proverb was well leveraged by FMCG sector in INDIA during COVID phase. While most of the sectors grappled with the impact of the pandemic, FMCG sector innovated, companies resumed operations in no time and now looking forward to new financial year with lot of positivity and confidence. COVID 19 crisis has changed a large part of our lifestyles, this pandemic also opens up scope for newer avenues of growth. FMCG sector companies have made lot of changes in their trade marketing and distribution space to cope up with current working environment. FMCG sector in INDIA is divided in 3 broad heads which is household & personal care (50%), Foods (19%) & healthcare (31%). FMCG industry saw a negative growth in 1<sup>st</sup> half of 20-21 however industry saw a positive recovery in 2<sup>nd</sup> half of 20-21. Within FMCG, Health & Hygiene, Ayurvedic products & Immunity based categories outperformed than other segments. Companies operating in FMCG space made significant changes on front of communication, digital payments, E-Commerce, quick turnaround on new launches. Major companies such as HUL, ITC also launched/scaled their business to business and business to consumer apps during these times to deal with COVID 19 impact. With this research paper we tried to study key process led changes which FMCG sector adopted in field of trade marketing & distribution space. In this research paper we will provide an information on process changes which have become a work practice & companies benefitted by these changes at an overall level.*

**Keywords:** E-Commerce, FMCG, COVID 19, ITC, HUL, Digital payments

### Introduction

FMCG industry keep changing on account of evolved consumer preferences towards product & categories. However, changes which happened during pandemic were more from trade marketing & distribution front. All major FMCG companies changed their supply chain from a standard one to agile supply chain model -

### Standard Model:

**Raw materials > Supplier > Manufacturer > Company Warehouse > Distributor > Retailer > Consumer**

### Supply chain Agility during Pandemic:

During pandemic all major FMCG companies tried to work with unconventional supply chain models which can help in getting company products directly to consumer. This led to an unprecedented surge in E-Commerce business. E-Commerce business grew at three major fronts –

- Surge in established E-Commerce companies such as Amazon etc.

- FMCG companies started their own Apps to cater trade & consumer requirements. ITC started E-Store which was consumer centric whereas HUL started Humara Shop. Both companies also launched a business-to-business app to take care of trade requirements Shikhar was introduced by HUL & Unnati by ITC.

- Specialized E-Commerce solutions at local level also saw huge surge in adoption. FMCG companies also adopted unconventional models to reach out to consumers, ITC made a tie up with Dominos to ensure essential products are supplied to a greater number of consumers. At this time lot of government agencies also came forward to ensure distribution of essential products. All these unconventional models helped in getting a new distribution model.

All FMCG companies digitalized possible communication to ensure faster turnaround time & effective implementation at market place. This intervention helped all companies in significant cost savings.

FMCG Companies also pushed retailers/consumers towards getting digital payments at an overall level. There has been

good adaption of digital payments across outlet types & class in urban markets.

In order to summarize while there have been lot of innovations & changes in FMCG industry, Key changes which happened during pandemic were as follows –

- (1) Surge in Digital Payments
- (2) Digitalized Team Communication
- (3) Surge in Local E-Commerce apps
- (4) FMCG Companies started their own B2B & B2C platforms

### **Rationale of the study**

The basic reason behind selecting this topic of my research is to document key shifts which happened in FMCG industry in India on front of trade marketing & distribution owing to pandemic. In the immediate to medium term, there are lot of changes in consumer preferences, due to this FMCG companies will be forced to adapt new models for trade marketing & distribution for customer acquisition and retention. The product/brand mix has changed due to COVID and some of these changes will be more permanent than others FMCG industry has done lot of innovation on product & process front during this phase. Pandemic also made the FMCG sector carve opportunities out of the pandemic crisis. Key shifts which happened in FMCG industry has led to improved efficiency & sizable cost savings. Key learning's of this industry will be useful for other sectors as well. While doing this study key focus has been kept on two major FMCG companies namely ITC & HUL to get necessary details.

### **Review of Literature**

**Ritter J.B. (1992)** International electronic commerce is not merely defined by the absence of paper documents. Indeed, though an important objective of many commercial and administrative users is the eradication of paper, most users will also admit that current implementation endeavors remain heavily inter-dependent upon the continued use of paper document. Eppler (2006) maintains that factual, high-quality information is sufficient for user's needs. Park et al. (2007) also measures the quality of information communicated by e-WOM from its content. He suggests four measures of information quality:

relevance; understandability; sufficiency; and objectivity. Hasan (2010) pointed out that nowadays electronic commerce industries have increasingly become a necessary component of business strategy and a strong catalyst for economic development. Ray (2011) "As a logo of globalization, E-Commerce represents the cutting edge of success in this digital age and it has changed and is still changing the way business is conducted around the world". Awis Muhammad and samin Tanzalia (2012) indicate that use of internet has made the world a global village. The use of Internet has reduced the distances and brought the people tools in which electronic commerce plays a vital role. The important feature in E-commerce is privacy which not only increases competitive advantage but confidence level also. E-commerce brings sellers and potential buyers at the distance of one click and it saves time as it is cost effective, as Electric commerce is becoming key to success. Internet banking, one among the innovative and significant internet-based services has experienced explosive growth and led to transformation of traditional banking practice. Online people and saves a lot of time for its customers. The traditional way of standing in the queues and filling up all the forms are well solved and now it is no hassle for making any transaction with the banks by virtue of internet banking. The financial institutions which operated traditionally are now able to lower their operational costs and increase the consumer retention by virtue of technology. Internet banking as a latest and potential means for banking now holds a similar importance as that suggest that an internet banking strategy may be effective, with reports of more profitable, loyal and committed consumers compared with traditional banking consumers. Scholars plausibly derive information quality by means of a content analysis. Nanekharam Y.A (2013) found Electronic commerce is a powerful concept and process that has fundamentally changed the current of human life. Electronic commerce is one of the main criteria of revolution of information technology and communication in the field of economy. Mitra Abhijit (2013) suggests electronic commerce has unleashed yet another revolution, which is changing the way

businesses buy and sell products and services. New methodologies have evolved. The role of geographic distances in forming business relationships is reduced. Electronic commerce is the future of shopping. Das and Ara (2015) With an increase in the number of players in the business to consumer segment, competition for the first position is set to intensify, making it imperative for the firms to enhance service quality and to invest in logistics, so as to derive benefits from increase in disposable income of households, rise in internet subscriptions and infiltration of mobile commerce. Gao et al. (2017) For online consumers, strong emotional and cognitive reactions can enhance consumers' purchase intention.

### Objectives of the study

The basic objectives are as under:

1. To List key sustainable changes which happened on front of trade marketing & distribution front for FMCG companies
2. To establish key benefits of all such shift for FMCG sector

### Research Methodology

The research used during the study comprises of the following tools:

1. **Methods of Data Collection:** Data collection was done through primary method where in company executives, distributors, retailers and salesman were contacted personally. Apart from primary sources, some of the data points were collected from the published government manuals, reports, books, and journals.
2. **Sampling Designing:** Sample size was of 100 (Retailers, Salesman, Distributors & Company representatives) to get to final data points. The convenience sampling and purposive sampling were used for the present study.

### Discussion

#### Surge in Digital Payments

To curb the spread of Covid-19 Corona virus the Reserve Bank of India (RBI) urged citizens to use more electronic payments so that exposure to crowded places like ATMs or banks is reduced. Digital payment gained momentum during Covid to reduce social

contact and counter any concern of the novel corona virus spreading via currency notes.

Considering the same situation, FMCG companies like ITC, HUL, Nestle & Mondelez started an initiative to facilitate digital payment across the value chain. FMCG companies took an initiative to promote digital payments. The objective for this Initiative were:

- To maintain social distancing and making Salesmen safe.
- To ensure money rotation and funds available with the distributor.
- To make sure no fear of losing cash or getting fake currency.
- To tracks and maintains the digital record of every transaction.
- To ensure efficiency & time-saving.

The platforms which were used to make digital payments- UPI Bharat Pay, Google Pay, Phone Pay, Paytm, Amazon Pay. NPCI speaks on digital payments: Digital payment helps maintaining social distancing

- NPCI enabled UPI payments without any interface hindrances
- PM care support has been launched on UPI
- Due to lockdown, there is a drop in discretionary purchases
- UPI ID is the most popular method for merchants
- NPCI strengthened the security tools and procedures
- NPCI launched: India stays safe, India Pay Safe
- NPCI launched: UPI Chalega

FMCG distributors followed below process to drive digital payments:

- Proper cascading to each Salesman.
- QR Code scan image has been given to every salesman on his phone.
- Salesman can accept payments from retailers' viz. Phone Pay, Paytm, Google Pay, etc.
- Retailers scan the QR Code and make these payments.
- These payments will directly go to the account of the distributor.
- Salesmen check the payment send details of retailers.
- Salesmen then call the operator and confirm the receiving of payment.

- The operator checks the payment receipt in the Bank account of the distributor.
- The operator confirms the Salesmen.
- Then after, Salesmen confirm this to Retailers.
- Salesmen then visit another outlet.

**Digitalized Team Communication**

Due to covid, it was imperative to practice covid appropriate behaviors including not stepping out of home unless necessary, maintaining social distancing, practicing lockdown guidelines. In such times, frontline sales staff was on duty to serve the customers and teamcommunication was crucial as there were new launches and it was imperative to sustain the team motivation anddo the job with sustained momentum. Innovative ways were devised to cascade all necessary information to team, practiced by all FMCG companies. FMCG companies digitalized communication at below levels from distribution view point.

**Salesman:** All companies moved daily physical gate meetings (Day objective setting) to virtual mode. All major FMCG companies followed below points.

- Salesman instructed to report to distributor point once a day

- Salesman to proceed to market directly and leverage Apps for order booking
- Daily objective setting was done through a WhatsApp Virtual video call on a daily basis
- Target setting, new launch cascade happened through WhatsApp Video call.

HUL conducted online training workshops for their DS through their hand-held terminal by a module called “Pathshala” which taught covid appropriate safety behavior, new launches, sales pitch and support that DS required to carry on.

**Company Executives:** On this front also, companies moved complete physical meetings to virtual meetings on Zoom & MS teams platforms. Monthly agenda discussion & new launch discussion were done virtually. In case of Marico company employee appraisals also happened through virtual platforms. Almost all companies used virtual platforms for employee training as well

**Distributors & Retailers:** Earlier frequency of such meetings were on a quarterly basis to cascade major schemes, incentives or important new product launches. Companies moved all such meetings to virtual platform. ITC recently concluded a retailer meet where 3000+ retailers joined over a web application & this was a gunnies book record.

Head	ITC	HUL	MARICO	P&G
Salesman Virtual Meetings	Y	Y	Y	Y
Salesman Training	Y	Y	Y	
Employee Meetings	Y	Y	Y	Y
Employee Appraisals			Y	
Employee Training	Y	Y	Y	Y
Retailer Meet	Y			
Distributor Meet	Y	Y	Y	Y

**Surge in local E-Com Apps:**

In Covid scenario, there were restrictions on delivery and commute, supply chains of companies were impacted and thus organized delivery apps were impacted. In such a scenario, local E-Commerce apps gained prominence due to their local network and tie-ups, this momentum has also sustained post Covid as well. A snapshot of two Local grocery chains in Delhi that run E-commerce apps for delivery across Delhi NCR: **Modern Bazaar**

- Total no. of stores in Delhi NCR- 14 outlets
- Approx. 4500 sqft. Avg store size
- Daily Footfall- Min 500, 500-1400 heads per day per store average
- Industry monthly business- 1.5-2Cr / outlet.
- Types of Promos available- Banner ads, home page display, Search rankings, Modern Bazar Magazines
- App contribution increased to store sales by 15%, App also saw 200% increase in traffic.

**ATCOST**

5-6 ISS outlets across Gurgaon

- Launched app in 2019- Around Rs 3k for banner Ads for 15 days
- 2k sq ft store size
- Customer base 400-500
- Total biz size: 1 Cr+
- App contribution increased to store sales by 35%, App also saw 500% increase in traffic.

During Covid context, FMCG companies undertook the following initiatives:

- ✓ Terms of trade closure on Local E-Comm apps on pricing & portfolio listing
- ✓ Banner visibility for focus portfolio
- ✓ ITC, HUL & P&G were among top companies to reach out to all such local E com Apps.
- ✓ All major FMCG companies also started extending large packs & specific consumer offer on such platforms.
- ✓ Growth of these apps will bring a balance in organized E-Commerce space

**FMCG Companies Own B2B & B2C Platforms:**

In Covid, during initial phases of lockdown and post that, there were government restrictions and unclear guidelines which lead to impacted supply chains for all FMCG companies. Thus, FMCG companies had to adopt innovative ways to undo the disruption caused in supply chain and serve the consumer needs:

- Britannia partnered with Dunzo to delivery essential items.
- Marico partnered with Swiggy for hyperlocal delivery.
- PepsiCo partnered with Dunzo.
- ITC partnered with Dominos.
- Coca-Cola tied up with Swiggy.

Companies also focused heavily on B2B solutions to reach out to trade and amped up with the available technology solutions: Below is the summary of available solutions of FMCG companies in B2B and B2C space, which was heavily amped up during Covid:

FMCG Company	B2B Solution	B2C Solution
HUL	Shikhar	Humara shop
ITC	Unnati, Viru	E-Store
Nivea	-	Website
Marico	Telecaller	-
P&G	Link+Telecaller	-

**Business to Business(B2B) Solutions:** It gives an option to trade- to place order through an App even when salesman is not visiting store. The order is serviced by distributor itself. These apps make

distribution more cost efficient. Both Shikhar (HUL) & Unnati (ITC) apps work on below principles –

- Order recommendation basis purchase history
- One Click Order
- Live tracking on order status
- Scheme & other necessary details
- Outlets which are currently serviced by these companies are able to use these apps
- App usage is high across large format stores
- Both companies are working towards getting a digital payment through app itself

**Business to Consumer (B2C) Solutions**

Large FMCG companies introduced their own consumer interface apps. These apps help companies to get a consumer understanding which is used in decision making. These apps have seen limited success owing to selective range availability. Key driver of traffic on such apps in special promotions which are being run by specific companies.

**Results & Way Forward**

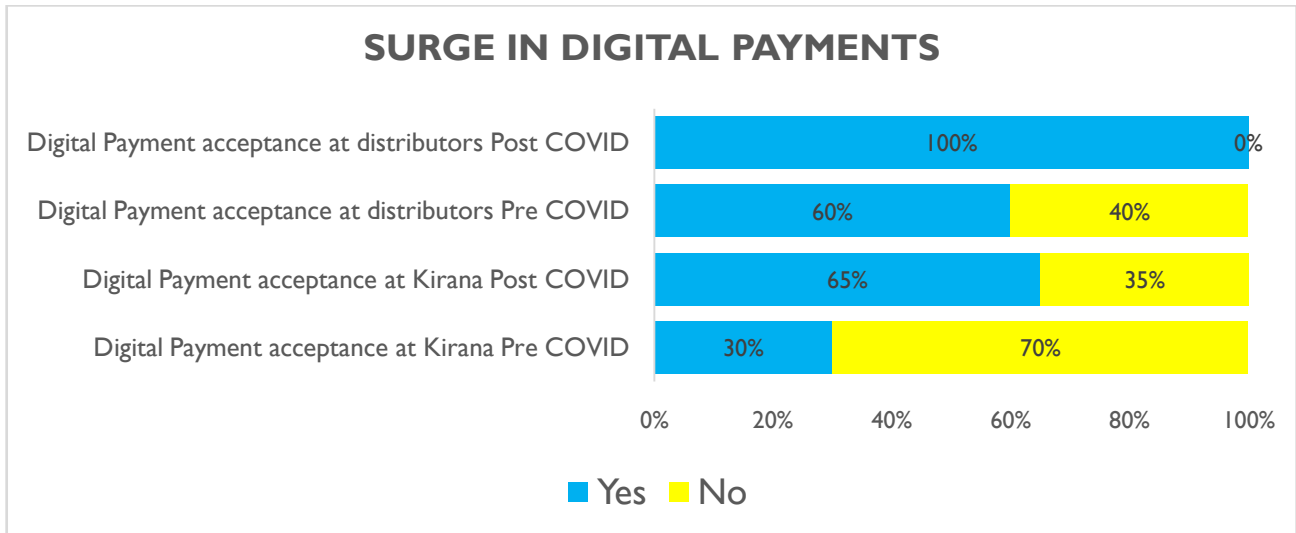
(1) There has been a surge in digital payments across FMCG industry. Below are the key findings basis interaction with retailers & distributors. Post covid all distributors started accepting the digital payments.

Retailers who are accepting digital payment has gone up to 65% which is greater than 2X of pre covid level. These levels will grow from here onwards as FMCG companies/distributors are pushing this from their side as well. By driving digital payments distributors also save

on bank charges which is a cost head for these parties.

Market – Delhi NCR & Lucknow

Respondents – Retailers (50 Nos), Distributors (6)

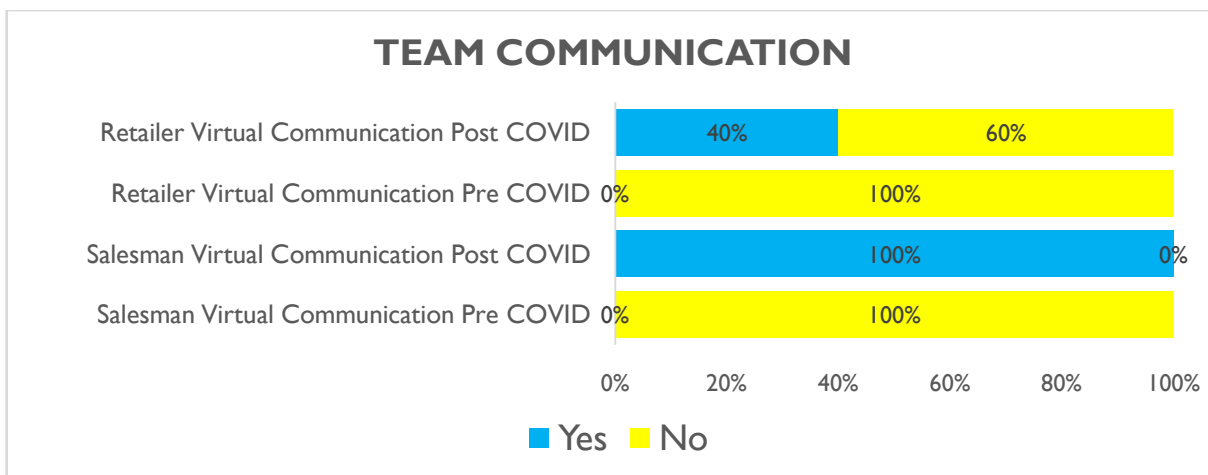


(2) Digital communication has increased across FMCG industry. Everyone in chain has started using digital medium of communication to conclude daily business activities. Technology usage at Kirana & salesman has started at last mile in form of salesman & kirana stores. This trend of technology usage is

going to remain in FMCG industry even after covid. Companies have saved sizeable cost & manhours which use to be there on account of physical meetings.

Market – Delhi NCR & Lucknow

Respondents – Retailers (50 Nos), Salesman (20)



(3) There are lot of new users who used local E com apps for the very 1<sup>st</sup> time owing to market disruptions. Basis interaction with manager of Atcost app they confirmed 2500 new users joined platform for ordering of fruits & vegetables after lockdown. This base of new users is almost 5X of pre covid base.

Consumers also started using FMCG company apps which started during phase 1 of lockdown. This trend of local apps will continue even when covid is over. Critical success factor for these apps will be consumer promotions.

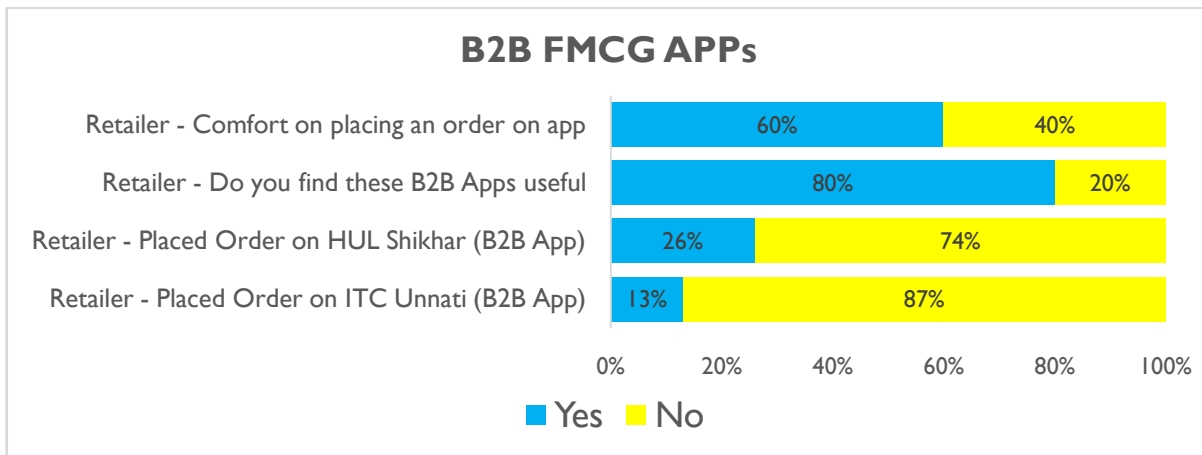
(4) All major FMCG companies introduced B2B & B2C apps to digitalize entire process of order booking. Kind of investment which is being done by these companies on

education/incentivizing retailers & consumers will benefit these companies to optimize distribution cost in long run.

(5)

Market – Delhi NCR & Lucknow

Respondents – Retailers (50 Nos)



All in All, these key trends will further grow from here onwards. These interventions will help in optimizing distribution & cost for all major FMCG companies. Pandemic has given required push to these critical interventions which FMCG companies initiated while dealing with COVID challenges.

**Limitation of study:** This research study has got below limitations –

- Sample size is limited & from urban centers only.
- Within FMCG space major focus has been on large scale companies such as ITC HUL, Marico etc., this leaves local companies out of this study.
- Correlation of these points with other functions of FMCG was also not available owing to data limitations.

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## Certificate of Participation

This is to certify that *Vandana Singh* from *Babasaheb Bhimrao Ambedkar University Lucknow* has presented paper title '*Green Fashion Retailing: A Study on Closed Loop Supply Chain for Fashion Products*' in the 3rd ICDE & 14th ISDSI Annual Conference, organized by Centre for Digital Economy, Indian Institute of Management Raipur, India, during 27-29 December, 2020.

Mahadeo Jaiswal  
President ISDSI

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