

## **Attitude of People Towards Green Product**

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### **1 INTRODUCTION TO THE STUDY**

Green products are those items considered eco-friendly. This means that the manufacturer of the particular product took the proper steps in ensuring that the environment was not harmed during its manufacturing process. The raw materials used in the product were derived from sustainable sources. And the production should have a low impact on the environment regarding waste, carbon emissions and energy use.

Competition is one of the major challenges that a business man want to face in a modern world. Every industry is composed of many individual firms and each individual firm is providing similar goods and services. Naturally this situation makes a big chance for competition among this firms. so in order to becoming the market leaders every business wants to adopt different strategies.

Nowadays one of the major strategy adopted by companies to capture market is the marketing of green products or eco-friendly products. A green product provides a lot of advantages to us. Today people giving more attention to protection of environment, as they are aware about the appearance of hole in the ozone layer, destruction of forest etc. Because of these factors green products get more attention in today's world.

#### **1.1 Statement of the Problem**

In modern world people are concerned about the environment. Green products have a vital role in the protection of the environment as it does not make a negative impact to the nature. A company can increase its competitive position by providing green products. This study is conducted to know the attitude of people towards green products like solar power products, paperbags, handi craft items and clay products.

#### **1.2 Objectives of the Study**

- To know the attitude of people towards green products
- To analyze those factors which induces people to purchase green products
- To know the level of satisfaction of the respondents towards the green products
- To determine the willingness of people for paying high price for the green products

#### **1.3 Scope of the Study**

The study is conducted to know the attitude of people towards green products like solar light, solar heater, handicraft items, paper bags and clay products. Around 50 people are considered for the analysis. The study helps to acquire maximum information about the acceptability of the products, level of satisfaction of people using these products and also helps to get an overall picture of factors influencing people to purchase these products.

#### **1.4 Research Methodology**

Research methodology is a way to systematically solve the research problem. It deals with the objective of a research study, the method of defining the research problem, the type of data collected, method used for data collecting and analyzing the data etc. The methodology includes collection of primary and secondary data.

#### **1.5 Limitations of the Study**

Time allotted for the study is limited. The study does not reveal actual results as the sample size is limited to 50. Sometimes the respondents may give false information.

## **2. REVIEW OF LITERATURE**

- Aditya Maheswari and Guan Malthotre (2011) wrote an article entitled “Green marketing: A study on Indian youth”. This study focuses on the awareness, perception and parameters considered by the consumers while purchasing green products. Statistical tools like percentages and one-way ANOVA were used to analyze the purchase behaviour through parameters considered by the consumers while purchasing the products such as price, availability, convenience, brand name and variety of the products. They found that brand name is the significant factor considered by the respondents while purchasing green products rather than all the product variables adopted in the study. Finally, they concluded that a majority of the consumers are confused with the information provided in the products related with the green attributes, so consumers are needed to be educated with the green claims in the products.
- Ishawini and Sarojkumar Datta (2011) in their paper analyzed with the objective of pro-environmental concern and its influence on green purchase behaviour of the consumers. In order to achieve the objectives, consumers' preference, pro-environmental concern, and knowledge about the environmental issues are the variables used. Correlation analysis reveals that pro-environmental concern and green buying behaviour are significantly related. This study concludes that educated consumers are highly concerned towards the environment, so companies may focus on the segment of educated consumers for green products.
- Ronald Drozdenko et al. (2011) in their study entitled with “pricing of green products, premium paid, consumer characteristics and incentives”. The study focuses on customer's perception towards the price premium of green products based on demographic, situational, and product categories. From the study, they found that male customers are willing to pay extra for green products, and also there was no significant difference in purchase behaviour of the consumer's while purchasing the green products based on their income and education. They suggested that tax incentives highly influence the consumers for willing to pay for green products.

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- Afzaal Ali and Israr Ahmad (2012) focused on the factors that influence the green purchase intension of the consumers. To fulfil the objectives of the study organization green image, environment knowledge, environment concern; perceived product price and quality are the variable used. They found that organization green image, environmental knowledge, environmental concern, perceived product price and quality are the influential factors to the green purchase behaviour of the consumers. So green companies are offer price and quality of the product with the identical one to motivate the consumers towards the green products.
- Aysel Boztepe (2012) in his research paper he found that environmental awareness, price, product features, promotion are the variables of green product influencing the purchase behavior of male consumers but promotion is the only variable influence the purchase behaviour of female consumers and also mentioned that environment awareness, green product features, price and promotion are significantly related with green purchase behavior. Finally he suggested that there is a significant difference between the male and female consumers while purchase the green products, so companies are focus the different strategies on gender basis.
- Azhagaiah (2006) observed the impact of green marketing and environmental protection. In his study, found that the environmental issues have a significant impact on the modern society. The environmental problems are the result of mass consumption and production across the globe. Due to limited resources, an extra caution is needed from both the consumers and the producers. Therefore, awareness is needed for the protection of environment.

### 3. THEORETICAL REVIEW

The products which are made of environment friendly materials are Ecofriendly products or green products. Eco-friendly products do not harm the environment.

The term green product is used to describe a product that meets one of these criteria.

1. It has qualities that will protect the environment.
2. It has replaced artificial ingredients with natural ingredients.

For example, a cleaning product may be considered green for two distinct reasons.

It may be manufactured without phosphates in order to reduce a source of pollution in the water supply, which makes it better for the environment than a cleaner that contains phosphates. Or it may contain ingredients derived from natural sources to lower the risk of health problems that can be caused by exposing the skin to artificial dyes or fragrances.

#### 3.1 Solar Product

Solar products are innovative mechanism that helps to conserve energy. Solar products are environment friendly and are usually cost effective as well.

Today there are several solar power products in the market for our home and office use. Solar products include items such as solar hot water heaters, solar flash lights, small radios, solar calculators, solar battery chargers, solar lighting, solar car batteries, etc.....

### **3.2 Solar Light**

Solar lights have a good demand and acceptance in the modern world. There are several companies providing solar lights. The solar light manufactured by COMPLEX International Ltd, provides multi-pin USB cable for mobile charging facility.

### **3.3 Solar Heater**

Solar water heaters have a better acceptance because of its benefits and durability. Solar heater makes the use of solar energy for its functioning. There are different varieties of products which are work on solar energy.

### **3.4 Paper Bag**

The cheap availability and low cost of plastic bags makes it popular among people. But plastic bag makes a lot of problems to our environment. In order to save our earth from the threat of plastic bags, an alternative is developed that is paper bags. Paper bags are green products as they are bio degradable and not harm the environment.

### **3.5 Benefits of Green Products**

#### **➤ Benefits Available for Firms and Industries**

- 1) Helps to access new markets.
- 2) Can help to achieve competitive advantage over other companies.
- 3) Protects the company in the long run.
- 4) Aids in long term growth.
- 5) Improves the quality of the environment. 6) Environmentally responsible company will hold a unique status in the society

#### **➤ Benefits for the Consumers**

- 1) Health benefits.
- 2) The network of green users expands.
- 3) Less threat to the eco-system by the consumers.
- 4) The earth will be protected from hazardous goods.

### **3.6 Green Products and Eco-Label**

#### **➤ Eco- Labeling**

It is an environmental claim that appears on the packaging of a product. It is awarded to a manufacturer by an appropriate authority. ISO 14020 is a guide to the award of eco- labelling works like an instructor for the firms who indulge in the production of goods and services that cause damage both to the health of humans and the environment. The government of India launched an eco-mark scheme in 1991 to increase consumer's awareness with respect to environment friendly products. The products are requiring eco-marketing are textiles, toilet soaps, detergent cakes, paints, packages, pesticides, cosmetics, and pharmaceutical products.

#### **➤ Eco-mark scheme**

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The government of India launched an eco-mark scheme in 1991 to increase consumer's awareness towards environmental friendly products. Another aim of the eco-mark scheme is to stimulate the consumers to go for pro-environmental products. The eco-mark is needed for products like cosmetics, leather goods paints, lubricant oil, plastic products, batteries, etc...

### ➤ Green Product Certification

When looking for green products, there are a couple of ways you can ensure you are not being duped into buying a fake, though it can be tricky. A stroll through any supermarket will yield products labeled "earth friendly," "eco buzzwords which will make you feel warm and fuzzy about the purchase, even though this could be false. certification labeling, if that is not on the product then keep on walking. This leads us into what certification labels are available and what do they mean, which is why we have put below. This is not an all encompassing list, it will however provide you with the most common certifications and their meaning.



**Energy Star:** building products, electronics and appliances. a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping protect the environment through energy efficient products and practices.



**Green Seal:** Green Seal Certification ensures that a product meets rigorous, science-based leadership standards. It is a lifecycle assessment based labeling program for building products, green operations and maintenance procedures A green seal can be found on anything from a coffee filter to a hotel.



**Forest Stewardship Council:** A certification program for wood products that come from forests that are managed in a environmentally responsible socially beneficial and economica viable way. They are a non profit organization, not affiliated with the government, working to promote responsible management of the world's forests since 1993.



**Leadership in Energy and Environmental Design (LEED):** The LEED certification was created by the U.S. Green Building Council in 2000, it is an internationally recognized standard for green building and design. The rating system works off 5 categories and is associated to both business and residential buildings. LEED focuses on whole building sustainability which can be used by diverse professionals and government agencies. You could look for the LEED seals when looking to purchase green homes or office buildings, as an example.



**USDA Organic Product:** When looking to go green at the dinner table many will look for certified organic foods. The United States Department of Agriculture has implemented the National Organic Program, which will indicate whether an agricultural product was produced in such a way that integrates biological, cultural and mechanical processes to conserve biodiversity and foster cycling of natural resources. In general this means synthetic fertilizer, irradiation or genetic engineering practices will not be used.

### **3.7 Measures Taken by Government to Promote Green Products**

#### **❖ GREEN TAX**

Green taxes” (also called "environmental taxes" or "pollution taxes" or “eco taxes”) are excise taxes on environmental pollutants or on goods whose use produces such pollutants. “Green taxes” are meant to improve the environment or reduce the negative impact on the environment or create an environmentally sustainable environment. “Green taxes” are a kind of economic instruments to address environmental problems. It is generally believed that “green taxes” will reduce environmental harm in the least costly manner, by encouraging changes in behaviour by firms, organizations, communities and households and individuals etc. Taxes on pollution provide clear incentives to polluters to reduce emission.

#### **❖ INDIA’S SOLAR MISSION**

India's solar mission provides strong support to solar deployment and includes a goal of developing 20,000 megawatts of solar power capacity by 2022. A key objective of the program is to boost the capacity of India to domestically manufacture solar panels. To achieve this objective, the government of India has required Indian developers of solar photovoltaic ("PV") projects using

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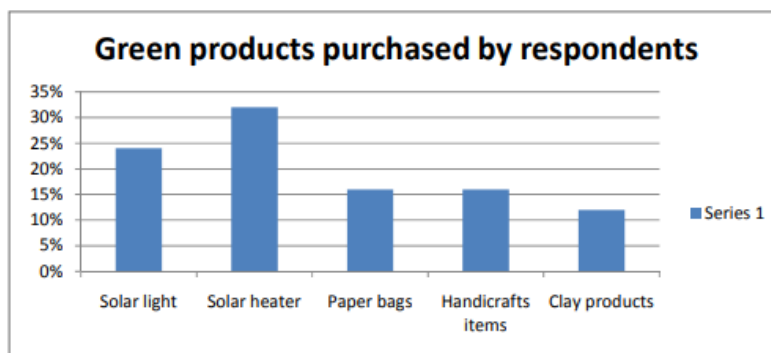
crystalline silicon technology to buy solar modules manufactured in India in order to take advantage of the programs benefits, including subsidies and guaranteed long-term competitive rates for solar power. These requirements to purchase locally manufactured solar panels are referred to as domestic content rules.

### 4. DATA ANALYSIS AND INTERPRETATIONS

**Table – 1- Green products purchased by respondents**

Green products	No of respondents	Percentage
Solar light	12	24%
Solar heater	16	32%
Paper bags	8	16%
Handicrafts items	8	16%
Clay products	6	12%
Total	50	100

**Chart – 1**



### Interpretation

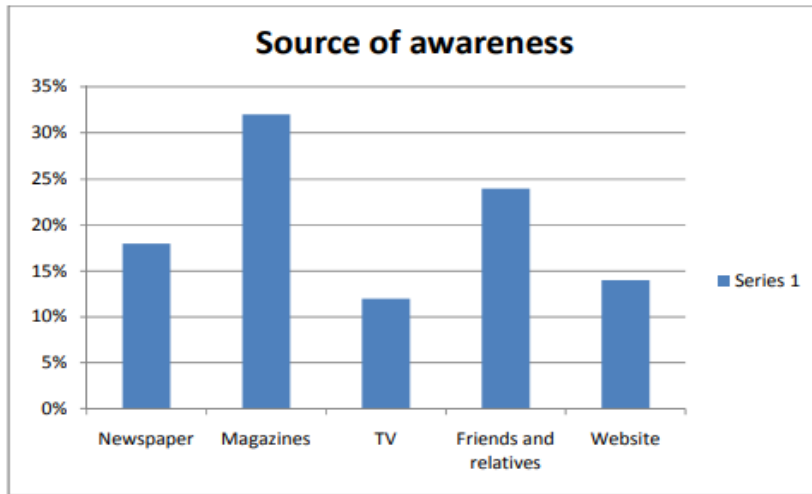
From this table it is clear that most of the people are in the habit of purchasing solar heater (32%).

24% of people purchased solar light. 16% of people purchased paper bags and 16% of people purchased handicraft items and only 12% of people purchased clay products.

**Table – 2 - Source of awareness**

Source	No of respondents	Percentage
Newspaper	9	18%
Magazines	16	32%
TV	6	12%
Friends and relatives	12	24%
Website	7	14%
Total	50	100

Chart – 2



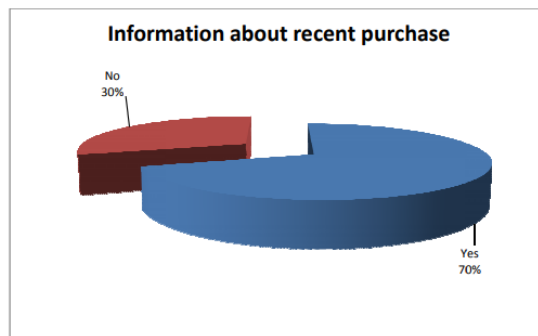
**Interpretation**

32% of people are come to know about green products through magazines and 24% of people got information about green products through friends and relatives. Newspaper provides awareness about green products to 18% of people. 14% of people are aware about green products through websites. TV provides awareness to a small percentage of people (12%).

Table – 3- Showing information about recent purchase

Response	No of respondents	Percentage
Yes	35	70%
No	15	30%
Total	50	100

Chart – 3



**Interpretation**

70% of people make recent purchase and 30% of people do not make recent purchase.

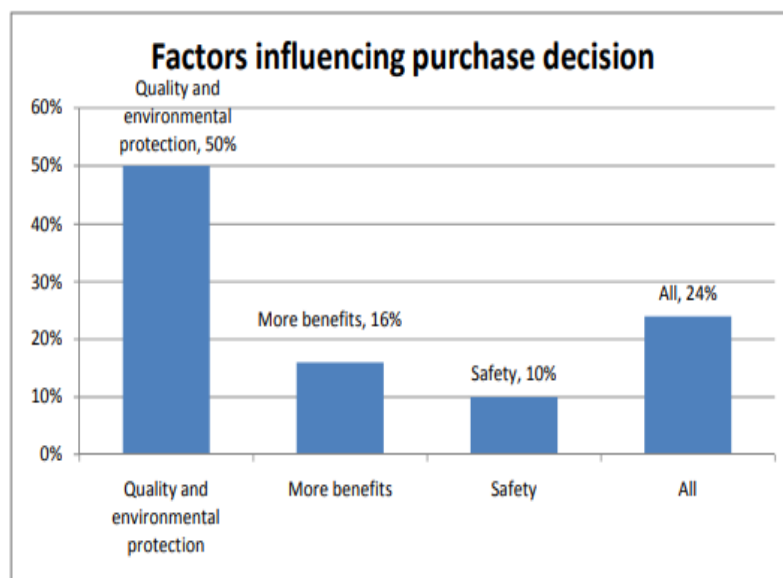


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**Table – 4 - Showing factors influencing the purchase decision**

<b>Faction</b>	<b>No of respondents</b>	<b>Percentage</b>
Quality and environmental protection	25	50%
More benefits	8	16%
Safety	5	10%
All	12	24%
Total	50	100

**Chart – 4**



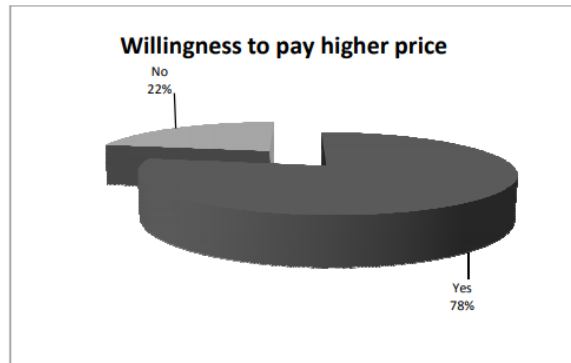
### **Interpretation**

The major factor induces people to purchase green product are quality and environmental protection. 50% of people are fall under this category. 16% of people are induces to purchase these products, because of its benefits. Safety is the another criteria which influence the purchase decision. 5% of people are fall under this category. 24% of people are in the habit of purchase these products by expecting all these benefits.

**Table – 5-Willingness to pay higher price**

<b>Response</b>	<b>No of respondents</b>	<b>Percentage</b>
Yes	39	78%
No	11	22%
Total	50	100

**Chart – 5**



**Interpretation**

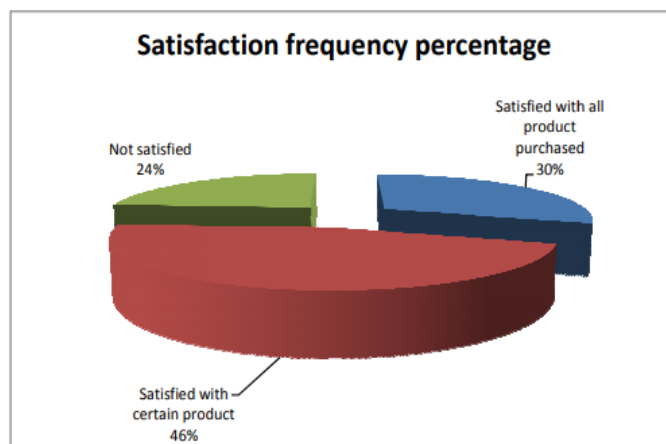
78% of people are willing to pay higher price for green products and 22% are not willing.

**Table – 6-Satisfaction level**

**Satisfaction frequency percentage**

Satisfaction	Frequency	Percentage
Satisfied with all product purchased	15	30%
Satisfied with certain product	23	46%
Not satisfied	12	24%
Total	50	100

**Chart – 6**



**Interpretation**

30% of people are satisfied with all products purchased by them. 46% of people do not get satisfaction from all the products, they are satisfied only with certain products. 24% of people are not satisfied with the products they are purchased.

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**Table – 7-Opinion about the quality**

Opinion	No of respondents	Percentage
Excellent	9	18%
Good	15	30%
Average	9	18%
Poor	4	8%
Quality varies according to the product	12	26%
Total	50	100

**Chart – 7**



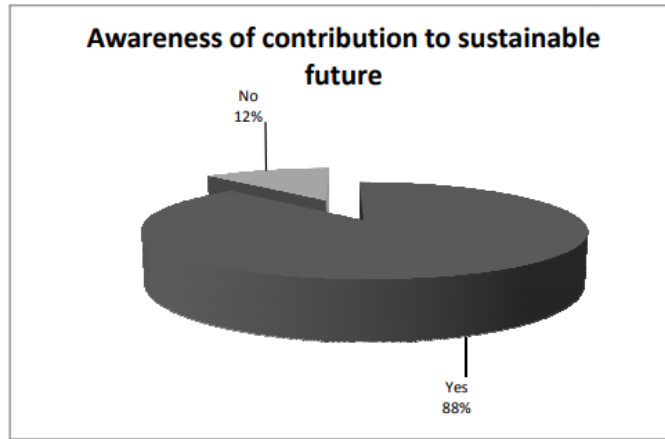
### **Interpretation**

30% of people have good opinion about the quality of the product they are purchased. 26% of people are in the opinion that quality varies according to the product. 18% people have excellent opinion about the quality. 18% of people believe that green products have an average quality and 8% of people have poor opinion about the quality.

**Table – 8-Awareness of contribution to sustainable future**

Response	No of respondents	Percentage
Yes	44	88%
No	6	12%
Total	50	100

**Chart – 8**



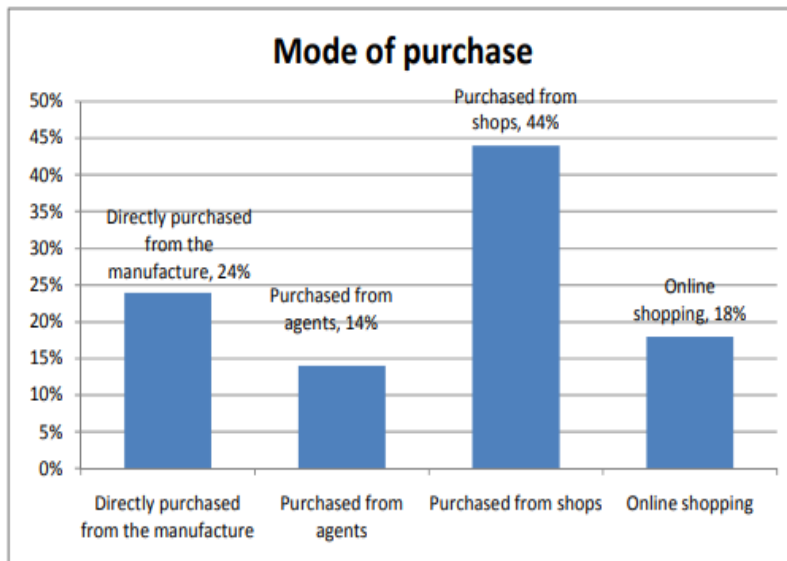
**Interpretation**

88% of people are aware that purchase of green products will contribute to the sustainable future and 12% people are not aware about this.

**Table – 9-Showing mode of purchase**

Mode	No of respondents	Percentage
Directly purchased from the manufacture	12	24%
Purchased from agents	7	14%
Purchased from shops	22	44%
Online shopping	9	18%
Total	50	100

**Chart – 9**



## Attitude of People Towards Green Product

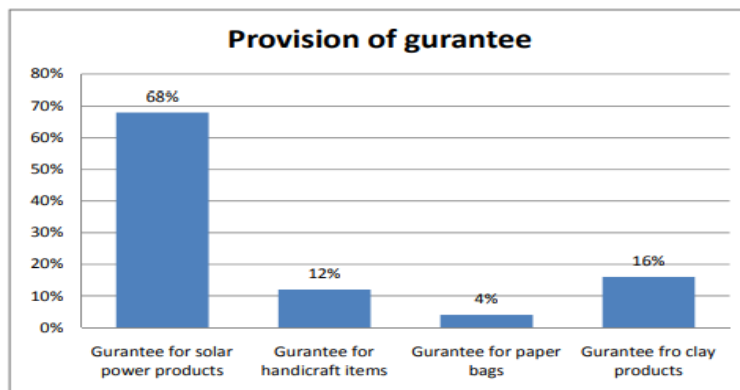
### Interpretation

44% of people are in the habit purchasing the products from shops. 24% of people purchased products from the manufactures. 14% people depend agents to get the product and 18% people makes online shopping.

**Table – 10-Showing provision of gurantee**

Response	No of respondents	Percentage
Gurantee for solar power products	34	68%
Gurantee for handicraft items	6	12%
Gurantee for paper bags	2	4%
Gurantee fro clay products	8	16%
Total	50	100

**Chart – 10**



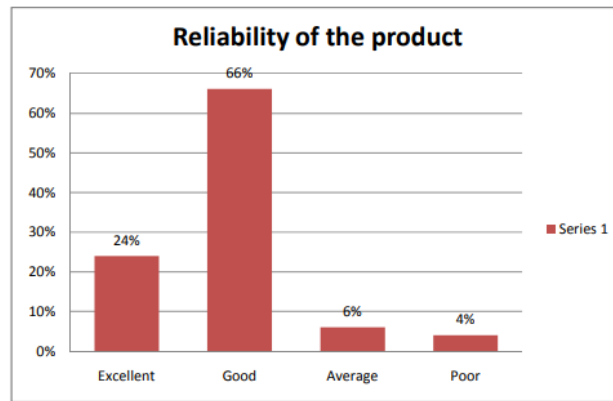
### Interpretation

68% of people get gurantee from solar power products. 16% of people get gurantee for clay products. 12% of people get gurantee for handicraft items and only a few percentages of people (4%) get gurantee for paper bags.

**Table – 11-Showing reliability of the product**

Opinion	No of respondents	Percentage
Excellent	12	24%
Good	33	66%
Average	3	6%
Poor	2	4%
Total	50	100

**Chart – 11**



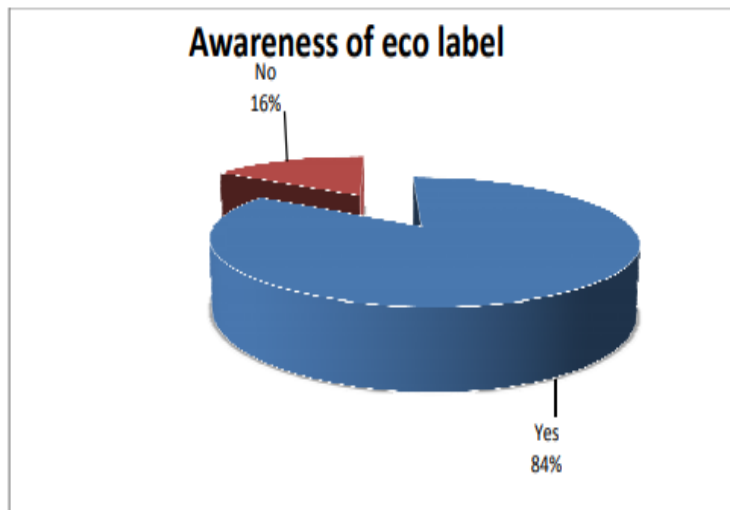
**Interpretation**

66% of people have a good opinion about the reliability of the products that are purchased. 24% of people have an excellent opinion about the reliability. 6% of people believes that reliability is average and only a few percentage of people are in the opinion that its reliability in poor.

**Table – 12-Awareness of eco label**

Response	No of respondents	Percentage
Yes	42	84%
No	8	16%
Total	50	100

**Chart – 12**



**Interpretation**

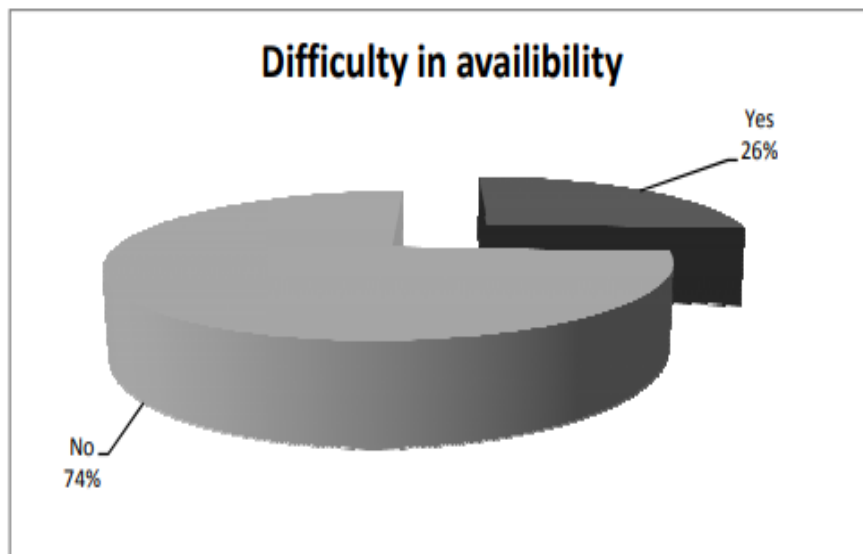
84% of people are aware about the eco label and 16% of people are not aware about this.

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**Table – 13-Difficulty in availability**

Response	No of respondents	Percentage
Yes	13	26%
No	37	74%
Total	50	100

**Chart – 13**



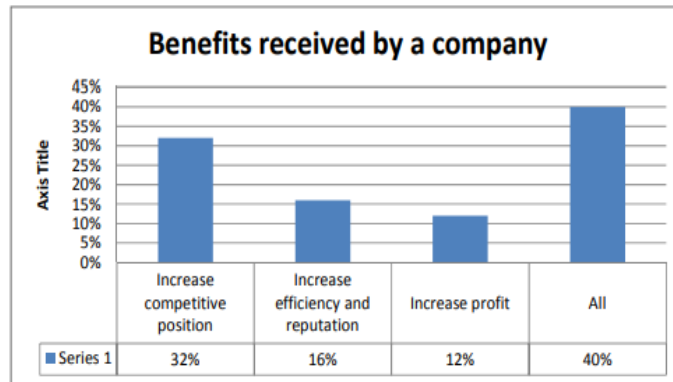
### Interpretation

74% of people are not facing any problem in availability and 26% of people face some problems in availability of the product.

**Table – 14-Benefits received by a company**

Benefits	No of respondents	Percentage
Increase competitive position	16	32%
Efficiency and reputation	8	16%
Profit	6	12%
All	20	40%
Total	50	100

**Chart – 14**



**Interpretation**

32% of people believe that a company deals with green product will have a higher competitive position.

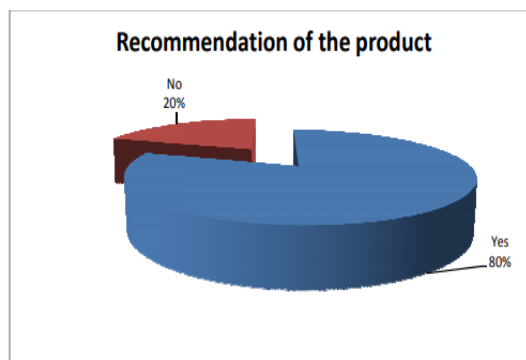
16% of people believe that company which provides green products can increase its efficiency and reputation.

12% of people are in the opinion that, companies can increase its profit and 40% of people believe that a company deals with green product will get all the benefits.

**Table – 15- Recommendation of the product**

Resource	No of respondents	Percentage
Yes	40	80%
No	10	20%
Total	50	100

**Chart – 15**



**Interpretation**

80% of people are ready to recommend the product and 20% of people are no ready to recommend the product they are purchased.



## 5 STATISTICAL TOOL

Here, Chi-square test is used as statistical tool.

### 5.1 Chi-Square Test

The statistical test, based on the statistic following  $X^2$  distribution, is known as  $X^2$  test

$X^2$  test can be used for testing the given population variance, by comparing with variance of the sample.

### 5.2 Conditions for the Application of $X^2$ -test

1. The total frequencies (N) must be reasonably large say at least 50.
2. Expected frequency of less than 5 is pooled with the preceding or succeeding frequency so that no expected frequency is less than 5. Then the degrees of freedom are based on the resulting number of frequencies.
3. The distribution should not be of proportions or percentages etc. it should be or original units.

## 6 FINDINGS

- 56% of people are purchased solar power products
- Most of the people are come to know about the products through magazines
- TV and websites are not effective in providing information about the green products
- Most of the people are willing to pay higher price for the products
- Most of the customers makes the purchase through shops
- Solar power products provides guarantee for 68% of people
- Only 4% of people got guarantee for paper bags
- 66% of people have good opinion about the reliability of the product they are purchased
- 84% of people are aware about the eco label
- 16% of people are not aware about eco label
- 26% of people face difficulty in availability of the products
- Most of the people have an opinion that a firm dealing with green products can increase its competitive positions profitability and efficiency
- 80% of people are ready to recommend the product they are purchased
- There is a relationship between purchase decision and level of income of customers.
- 70% of people makes recent purchases
- The main factors induces people to purchase green product is quality and environmental protection
- 30% of people are satisfied with the products they are purchased
- 24% of people are not satisfied
- 30% of people have good opinion about the quality of the product.
- 88% of people believes that green products will contribute to the sustainable future

## 7 SUGGESTIONS

- Consumers are to be well educated about importance of green products like paper bags, handicraft items and clay products

- In order to increase the sale of paper bags, handicraft items and clay products there is a need to undertake promotional activities
- There is a need for providing more information about the products through TV and websites
- Analyze the reason for low satisfaction of people and take corrective actions to solve these problems
- Provide guarantee for paper bags
- Provide information about eco label to those who are not aware of it
- Take measures to avoid the problem of unavailability of the products
- Educational institutions should introduce a subject on “environmental studies” in the academic curriculum.
- Distribute paper bags in educational institutions, municipalities, etc...
- Deliver the product early as possible
- Conduct awareness classes among the people about the problems of plastic bags
- Provide information to people about the contribution of green products to sustainable future
- Setup specialized outlets to make easy availability of green products

## 8 CONCLUSION

Green products or eco-friendly products have a prominent role in conservation of environment. So there is a need for promoting the green products.

From this study, it is clear that most of the people are in the habit of purchasing green products like solar light, solar heater, paper bags, handicraft items and clay products.

Most of the customers are willing to pay higher price for these products because of the quality and environment protection.

Here, the null hypothesis is rejected and accepted the alternative hypothesis. So we can assume that the purchase behaviour and income level are dependent

This study reveals that people have positive opinion towards solar lights and solar heater. On the other hand, handicraft items, paper bags and clay products are not much attracted to the respondents.

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