

# Green Financing Towards Sustainable Energy Sources and the Preferences of Consumers

P. Akshaya<sup>1</sup> and V. Devika<sup>2</sup>

<sup>1</sup>Research Scholar, PG and Research Department of Commerce, Mannar Thirumalai Naicker College (Affiliated to Madurai Kamaraj University), Madurai, Tamil Nadu

<sup>2</sup>Assistant Professor of Commerce, PG and Research Department of Commerce, Mannar Thirumalai Naicker College, (Affiliated to Madurai Kamaraj University), Madurai, Tamil Nadu

\*Corresponding Author Mail Id: [hopemichaelson2411@gmail.com](mailto:hopemichaelson2411@gmail.com)

## Abstract

*Green Financing has been introduced to increase the level of flow of finance from public, private and non – profit organizations which includes banks, micro – credits, insurance and investments towards the sustainable development. The key motivation of this concept is to manage both environmental risks and social risks and also in the meantime to earn a reasonable rate of return with some environmental benefit to the society. Through various regulatory frameworks a country can improve the green financing by the various sectors towards sustainable development goals in the view of environmental part. This will result in increasing clean and green environment and reduces the climate risks involved. Also, in stock market the financial instruments like green bonds, carbon market instruments also been established to meet the demand for green finance. This paper aims to study the green financing towards sustainable energy sources and also studies the preference of consumers over green financing. The paper also concludes that government should impose a mandatory regulation to adopt sustainability in their energy source by starting to green financing from households so as to have a healthy environment. The Government have to mandate the large industries to utilize non-pollutant energy source and have to finance towards green projects. The price for installing should be made reasonable for all the households. The power is abundant in nature but the medium to absorb the power have to be produced reasonable so as to all the category of consumers and households.*

*Keywords: Green finance, sustainability, price, consumer, preference*

*Jel Classification: G12, E3, D1, D110*

## 1. Introduction

The concept of Green Financing has been introduced to increase the level of flow of finance from public, private and non – profit organizations which includes banks, micro – credits, insurance

and investments towards the sustainable development. The key motivation of this concept is to manage both environmental risks and social risks and also in the mean time to earn a reasonable rate of return with some environmental benefit to the society. Through various regulatory frameworks a country can improve the green financing by the various sectors towards sustainable development goals in the view of environmental part. This will result in increasing clean and green environment and reduces the climate risks involved. Also, in stock market the financial instruments like green bonds, carbon market instruments also been established to meet the demand for green finance. The green finance in the view of sustainability focuses on environmental, social and governance (ESG). This paper aims to study the green financing towards sustainable energy sources and also studies the preference of consumers over green financing.

## 2. Literature Review

Study	Author(s)	Key insights
Sustainable solutions for Green Financing and Investment in Renewable Energy Projects	Farhad Taghizadeh-Hesary	Increasing the investments of Public Financial institutions and non – Banking financial institutions in long – term green investments and increasing the green projects.
Adoption of green finance and green innovation for achieving circularity: An exploratory review and future directions	Rohit Agrawal, Shruti Agrawal	Environmental pollution creates the need for green innovation and green finance distributed for development for clean energy and products which are environmentally good is the solution.
A Thematic Study of Green Finance with Special Reference to pollution companies	Akhil Pasupuleti, Lakshmana Rao	The policy of green finance is widely used and needs strengthening in the areas of securities, insurance, bonds.
Green Finance research around the world: A review of literature	Peterson K. Ozili	The green finance will make a viable difference in the society, environment on the matter of climate change mitigation.

Green Development Environmental sustainability	Finance and	Soha Khan, Ahsan Akbar, Ismat Nasim	The increased production of sustainable energy from renewable resources, R&D and investment of public and private partnership.
---	----------------	---	--

**Table 1 Literature Review**

### 3.Unique Approach

The study examines four consumer constructs: price acceptance, awareness about sustainable energy sources, preference for green finance, and overall awareness of green financing and sustainable energy sources. The study finishes with key findings and recommendations for green funding and sustainable energy sources.

### 4.Methodology

The study adopted a streamlined methodology for analyzing consumer preferences towards sustainable energy sources in Madurai city. The approaches were designed to study and analyze the stated variables efficiently.

### 5.Survey Design

A well - written questionnaire is the primary tool for data collecting. It is intended to examine a wide range of factors, including price acceptability, green finance choice, motivation, and awareness of sustainability and green financing.

### 6.Sample Selection

The samples were chosen by means of purposive sampling, and they represented an array of demographics, including economic class, education level, and income level. Urban people are included in the sample diversity as they place considerable emphasis on sustainability.

### 7.Data Collection

Over the course of two weeks, data were collected through an online survey. Multiple subject matter experts conducted a preliminary evaluation of the questionnaire. Following revisions, it was distributed via mail and social media means to guarantee a broad reach among the sample group.

### 8.Data Analysis

Statistical software assessed the data and tested the hypothesis, employing both descriptive and inferential statistics. Here, percentage method have been used for analyzing the demographic profile of the respondents and Bivariate linear analysis have been used for inferential analysis.

### 8.1 Hypothesis

- ❖ Income level has significant influence on the Price acceptance (P) of the consumers in Green Financing.
- ❖ Education has significant influence on the Awareness (A) of green financing and Sustainable energy sources.
- ❖ Employment has significant influence on the Motivation (M) of the consumers in Green financing towards the sustainable energy sources.
- ❖ Mode of financing has significant influence on Preference (P) to finance towards sustainable energy sources.

### 9. Results

**Table 2 Chi-Square Tests**

<b>PEARSON CHI-SQUARE</b>			
<b>CONSTRUCTS</b>	<b>Value</b>	<b>Df</b>	<b>Asymp. Sig. (2 - sided)</b>
INCOME * P1	2.453 <sup>a</sup>	6	.874
INCOME * P2	6.420 <sup>a</sup>	9	.697
INCOME * P3	9.558 <sup>a</sup>	9	.387
EDUCATION * A1	6.248 <sup>a</sup>	9	.715
EDUCATION * A2	3.413 <sup>a</sup>	6	.756
EDUCATION * A3	6.099 <sup>a</sup>	9	.730
EMPLOYMENT * M1	9.717 <sup>a</sup>	9	.374
EMPLOYMENT * M2	6.718 <sup>a</sup>	9	.666
EMPLOYMENT * M3	.568 <sup>a</sup>	6	.997
MODE OF FINANCING * F1	5.587 <sup>a</sup>	9	.780
MODE OF FINANCING * F1	1.760 <sup>a</sup>	6	.940
MODE OF FINANCING * F1	4.289 <sup>a</sup>	9	.891

(Source: Primary data; P = Price Acceptance, A = Awareness, M = Motivation, F = Preference of Financing)

From the above table, it is inferred that the significant values 0.874, 0.697 and 0.387 ( $p > 0.005$ ) shows that income has a significant influence on price acceptance by the consumers, which indicates that the consumers' price acceptance nature is based on their individual income; higher the income,

higher the price they willing to accept. The values of significance 0.715, 0.756 and 0.730 ( $p > 0.005$ ) shows that education has a positive influence on the awareness level of consumers towards green financing and sustainable energy sources. The education level of the consumers indicates the awareness level of consumers about green financing and sustainable energy sources from various sources like newspaper, television, articles and social media etc. The significant values 0.374, 0.666 and 0.997 ( $p > 0.005$ ) shows that the employment has a positive influence on motivational factor. The nature of employment like government job, private job and own business and its prestige in the society influences the motivational factor of every consumer towards adopting the sustainable energy sources. The significant values 0.780, 0.940 and 0.891 ( $p > 0.005$ ) shows that mode of financing has a positive influence on the preference on consumers green financing towards sustainable energy sources. Based on the mode of financing like borrowing, savings and earnings influences the preference of consumers on green financing towards sustainable energy sources which is installation of solar power.

## **10. Implications of Findings**

- Based on the test conducted, it is inferred that income has a significant influence on price acceptance by the consumers, which indicates that the consumers' price acceptance nature is based on their individual income; higher the income, higher the price they willing to accept.
- The education level of the consumers indicates the awareness level of consumers about green financing and sustainable energy sources from various sources like newspaper, television, articles and social media etc.
- The nature of employment like government job, private job and own business and its prestige in the society influences the motivational factor of every consumer towards adopting the sustainable energy sources.
- Based on the mode of financing like borrowing, savings and earnings influences the preference of consumers on green financing towards sustainable energy sources which is installation of solar power.
- The researcher found that the environmental factors due to the recent climate changes drives the households to prefer greener and sustainability in any one of their day – to – day activities.
- Majority of the households prefer to go green and they see going green as a premium prestige among their working environment.
- The households having the knowledge or awareness about the sustainability prefers to green finance with a view to protect the environment from various impacts due to major carbon emission.

- It is found that the households are aware about green financing and sustainability. They found it ethical to adopt the solar power among this climatically changing environment.
- All the motivations, preferences and awareness about “Going Green” and “Sustainability” drives the households to even pay premium for adopting this abundant energy power.

## 11. Recommendations

- **MOTIVATION**: There should be wide range of advertisements and campaigns which deliberately mentions the need and benefits of going green made to motivate. It should motivate the households, companies and industries by knowing the environmental impacts.
- **ADOPTION**: The sustainable energy source like solar power should be adopted by majority of the households to reduce the carbon footprints from their part.
- **REASONABILITY**: The price for installing should be made reasonable for all the households. The power is abundant in nature but the medium to absorb the power have to be produced reasonable so as to all the category of consumers and households.
- **INSTITUTIONAL INSTALLATIONS**: Various institutions companies, industries, government offices, colleges and schools should install the solar power to maintain the ecosystem of their environment and also to promote the concept of green financing.
- **GOVERNMENT REGULATIONS**: Government should impose a mandatory regulation to adopt sustainability in their energy source by starting to green financing from households so as to have a healthy environment. The Government have to mandate the large industries to utilize non-pollutant energy source and have to finance towards green projects.

## 12. Conclusion

The paper had studied various aspects of Green financing and also the preference of consumers on green financing towards the sustainable energy sources. This preferential study covers the awareness level and preferences of the consumers. The study also found that Majority of the households prefer to go green and they see going green as a premium prestige among their working environment. The households having the knowledge or awareness about the sustainability prefers to green finance with a view to protect the environment from various impacts due to major carbon emission. Various findings shows that people became aware of the environmental changes due to climatical risks and understands the need to go for greener environment. This made the consumers choose wisely by sustainability. The researcher also has made many suggestions for the consumers, institutions and also to the government. The price for installing should be made reasonable for all the

households. The power is abundant in nature but the medium to absorb the power have to be produced reasonable so as to all the category of consumers and households. Government should impose a mandatory regulation to adopt sustainability in their energy source by starting to green financing from households so as to have a healthy environment. The Government have to mandate the large industries to utilize non-pollutant energy source and have to finance towards green projects.

## References

- 1) Naoyuki Yoshino, Farhad Taghizadeh - Hesary, "Sustainable solutions for Green Financing and Investment in Renewable Energy Projects", *Energies* 2020, 2019, 13(4), 788
- 2) Rohit Agrawal, Shruti Agrawal, Ashutosh Samadhiya, Anil Kumar, Sunil Luthra, Vranda Jain, "Adoption of green finance and green innovation for achieving circularity: An exploratory review and future directions", *Geoscience Frontiers*, 2023, 101669
- 3) Akhil Pasupuleti & Lakshmana Rao Ayyagari, "A Thematic Study of Green Finance with Special Reference to pollution companies: A Review and Future Direction", *Environmental Processes*, 2023, Volume 10, article number 24
- 4) Peterson K. Ozili, "Green Finance research around the world: A review of literature", *International Journal of Green Economics*, April 2022, 16(1)
- 5) Soha Khan, Ahsan Akbar, Ismat Nasim, Martina Hedvicakova, Furrukh Bashir, "Green Finance Development and Environmental sustainability: A panel data analysis",