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A Study on the Evolution of Green Finance: Investing in a Sustainable Future

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Abstract: ***The decision of an individual may have direct or indirect effects on the financial environment. The performance of investments is also impacted by the financial environment. However, in this research, green finance is simply categorized by sustainable finance and climate finance. There are many scholars who have defined green finance in the various elements. Sustainable finance is the practice of an investor considering the environmental, social considerations in addition to the investment's profits while investing in any financial instrument. In this study, data from a structured questionnaire on Respondents knowledge on green finance.***

I. INTRODUCTION

In particular, the emergence of green finance and the need to assist businesses in adapting to the effects of climate change would require an unprecedented level of fresh capital investment as a result of the rise of green finance on a decarburized market. In the last ten years, global green financing, which supports ecologically friendly initiatives worldwide, has multiplied over 100 times.

Sustainable economic growth is crucial to the discussion at large and is also referred to as green finance. Green financing is an indication for financial increase using the green growth. This is a combination of business and finance with friendly environment behaviour. A variety of cutting-edge financial tools and methods are referred to as "green finance" when they are used to promote green investment. As a result, more capital flows to sustainable users and less to unsustainable industries like coal, minerals, metals, and mechanicals.

The green finance varies based on each and every participant it is mostly led by financial incentives with a motive to save the planet. This green finance avoids the business which may damage the environment either now or it may affect in future or for future generation.

The International Institute for Sustainable Development is working with the financial and public sectors to put the appropriate rules in place since the European Union requires publicly traded corporations to disclose their social and environmental policies. As China deals with its environmental crisis, green financing is becoming increasingly important to decision-makers in the nation. The environment frequently suffers as a result of rapid economic growth.

Global borrowing through the issuance of green bonds and loans, as well as equity finance through IPOs aimed at green projects. The increase in issuance, according to the research, highlights the increased effort being made by businesses and governments to reduce carbon emissions and meet climate targets. According to the data, between 2012 and 2021, green bonds represented 93.1% of all green funding globally.[1]

II. EVOLUTION OF GREEN FINANCING

The green financing was introduced in 1960's in US by the socially responsible philanthropists and the investors whose plan was to build their investments with sustainability in the financial world.

Consumers, corporations, and governments are rapidly prioritising environmental sustainability as a result of climate change's growing rate and discernible effects. Leading financial services firms in the banking, investment, and insurance sectors have launched a variety of green finance services and goods to promote the goals related to resolving global warming.

[1] https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/04AR_2101202185D9B6905ADD465CB7DD280B88266F77.PDF

"Green finance" and "sustainable finance" are sometimes used interchangeably but are not the same. The corporate started to grow with the help of capital markets during the 1980's and 1990's and this has helped in creating a great corporate governance without any focus on social and economic factors.

in 2019 the situation have reversed due to some political and economic factors which lead to financial crisis which raised the people to look into the social , economic elements in the economy to save the planet.[2]

A. Components of Green Finance

The main elements which are included in the new financial instruments of green finance such as

1) Green Bonds: For financing "green" initiatives like the insertion of renewable energy range is the green bond. Like other normal bond, it is a fixed income instrument, but the only difference is that the money raised will be used to fund green initiatives.
2) Green Banks: This will deal with the sustainable development by banks. Motivating environmentally friendly behaviour and over casting the carbon impact of banking operations. This is also called as sustainable banking.
3) Carbon Market: It is market- based point of view to reduce emissions that can cause global warming.
4) Fiscal policy: According to a recent research an environmentally responsible bank can participate in the production and distribution sectors of the economy by implementing green banking policies that will impact the ability to support pollution-free environments and high standards of life.
5) Fintech: It is environmentally friendly and it aids sustainable development in at least some factors such as: by securing green finance, lowering costs and fostering efficiency, valuing the assets of nature.[3]

III. OBJECTIVES OF THE STUDY

1) To know the interests of individual in green initiatives.
2) To analyse the level of green finance among the respondents and create awareness among the respondents of risk-reducing features of green finance.

IV. LITERATURE REVIEW

Green finance, as highlighted by Yao Wang and Qiang Zhi (2016), represents an innovative financial strategy that not only safeguards the environment but also ensures the sustainable use of resources. By fostering effective market mechanisms, it directs financial flows to mitigate environmental risks and optimize resource allocation. Bhattacharya (2016) emphasizes that sustainable infrastructure plays a pivotal role in addressing resource shortages, enhancing access to essential services, and improving quality of life while fostering social harmony. However, fiscal limitations in many economies hinder progress, requiring innovative financial solutions. Bielenberg et al. (2016) further explore the complexities of infrastructure development, noting the lack of quick fixes and the need for urgent, innovative approaches. They stress that while various financial instruments can aid infrastructure financing, they often fall short in improving risk-adjusted returns, a critical factor for investors. Blakstad and Allen (2018) highlight the rise of alternative financial models that bypass traditional banking systems, significantly expanding financial inclusion in developing regions by providing access to finance without the need for conventional depositories. Additionally, a policy document by FMDV underscores the role of Sub-National Pooled Financing Mechanisms (SPFMs) in mobilizing public and private capital for infrastructure projects. These mechanisms enable local and regional governments to access credit markets, facilitating investments in critical sectors like energy, transportation, and education, thereby bridging the financing gap and driving sustainable development globally.

[2] https://ww.bechtel.com/blog/sustainability/april-2021/green-financing-history-and-options-available/
[3] https://www.weforum.org/agenda/2020/11/what-is-green-finance/
[4] The Authors, Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license 1876-6102 © 2016 (http://creativecommons.org/licenses/by-nc-nd/4.0/)
[5] Peer-review under responsibility of the scientific committee of the Applied Energy Symposium and Forum, CUE2016: Low carbon cities and urban energy systems
[6] Bhattacharya A et al , Delivering on sustainable infrastructure for better development and better climate. Brookings Institution, Washington DC, (2016) https://www.brookings.edu/wp-content/uploads/2016/12/global_122316_delivering-on-sustainable-infrastructure.pdf. Accessed 1 Aug 2018

V. RESEARCH METHODOLOGY

The research adopts an exploratory design and incorporates both exploratory and descriptive research approaches to gain comprehensive insights into the subject matter. Data collection is conducted through primary and secondary sources. Primary data is gathered personally using a standardized structured questionnaire, ensuring first hand and relevant responses.

Secondary data is sourced from diverse materials such as books, websites, journals, and articles, providing a robust foundation of background information.

The study engages a sample size of 105 respondents, selected through the simple random sampling method to ensure a fair representation of the population. For data analysis, statistical tools such as Chi-Square tests and ANOVA are utilized to evaluate relationships and differences within the data, ensuring thorough and reliable insights. This structured approach allows for a comprehensive understanding of the research objectives.

VI. HYPOTHESIS AND DATA ANALYSIS

H0: There is no significance relationship between gender and factors influencing the government incentives for green finance.

H1: There is a significance relationship between gender and factors influencing the government incentives for green finance.

Observed Values

Government incentives / Gender	Male (observed)	Female (observed)	Total
Strongly disagree	2	1	3
Disagree	3	3	6
Neutral	18	35	53
Agree	13	23	36
Strongly agree	3	4	7
Total	39	66	105

Calculation of expected values on the basis of observed values:

Government incentives / Gender	Male (observed)	Male (expected)	Female (observed)	Female (expected)	Total
Strongly disagree	2	1.11	1	1.88	3
Disagree	3	2.22	3	3.77	6
Neutral	18	19.68	35	33.31	53
Agree	13	13.37	23	22.62	36
Strongly agree	3	2.6	4	4.4	7
total	39	39	66	66	105

Chi Square Test: 0.001753

Degree of freedom 0.05: (R-1) (C-1) = (5-1) (2-1) = 4

Table value: 9.488

Interpretation:

From the calculations above, it can be concluded that the estimated value (i.e., 0.001753 9.488) is lower than the table value. Accept the null hypothesis while disproving the alternative. As a result, it is claimed that the impact of government incentives on gender on investing in green finance makes a big difference.

Hypothesis 2:

H0: There is no significance difference in age, occupation for investing in green financial products

H1: There is a significance difference in age, occupation for investing in green financial products.

Anova:

Summary

Groups	Count	Sum	Average	Variance
Group 1	105	263	2.504761905	0.348534799
Group 2	105	287	2.733333333	0.832051282
Group 3	105	202	1.923809524	0.263369963

ANOVA

Source of variance	SS	df	MS	F	P-value	F crit
Between groups	36.5777778	2	18.288889	37.99746322	1.70315E-15	3.024681
Within groups	150.1714286	312	0.4818681			
total	186.7492063	314				

F-statistic (F): 37.997-The calculated F-statistic is 37.997, which is much larger than the critical F-value (F crit = 3.025).
P-value: 1.70315E-15 (approximately 0.0000000000000017)-The p-value is significantly smaller than the typical significance level of 0.05.
Interpretation: The analysis reveals a statistically significant difference in the influence of age and occupation on investing in green financial products. With an F-statistic of 37.997, which is much larger than the critical F-value (3.025), and a p-value (1.70315E-15) far below the threshold of 0.05, we reject the null hypothesis (H_0). This confirms that the factors of age and occupation significantly affect investment decisions in green financial products.

VII. FINDINGS

1) 27% of the respondents are having dematerialised account and 60% of them don't have dematerialised account and remaining are not sure.
2) Majority of the respondents are gaining the knowledge about green finance. 10% of the respondents are gaining the knowledge from the newspapers, 29% of the respondents are known about green finance through websites, 56% of the respondents gain their knowledge from social media and 5% of them are gaining knowledge from friends.
3) 57% of respondents said they would participate in the financial decisions made by their family when it came to investments, while 25% said they would not participate.
4) The respondents consideration regarding the sustainable development factor in their investments, the main motive to look into green finance, 32% of them have said that their main motive is to increase the level of financial flows, 36% have said for sustainable development priorities, 30% have said their main motive is to promote long term growth and rest 2% are of other option.
5) 73% of respondents have not invested in any green financial products, whereas 17% of respondents have. The majority of respondents believe that investing in green financial products is a good idea.
6) The respondents towards the concept of which green finance helps in taking investment decisions, 53% of the respondents have said that green finance helps in taking the investment decision, 8% of them said no for this and 39% of them are might not be sure about this.
7) The majority of the respondents opinion on the education and awareness level on green finance, 75% of the respondents have chosen yes which says that there should the education and awareness on green finance, 5% of them said no for this and 20% of the respondents chosen maybe because they may not know about this concept.

VIII. SUGGESTIONS

1) Since 25% of respondents do not participate in their family's financial decisions, it is recommended that they become more involved in financial planning and decision-making, as this would help them better organize and manage their finances.
2) The perception of green financing among students is unclear. With proper awareness, they would be able to provide a better understanding and definition of green finance.

3) Similarly, the perception of green financing among investors is not well-defined. Providing awareness would help them gain a clearer and more accurate definition of green finance.

4) To improve awareness, campaigns, social media efforts, and online sessions should be organized to educate students about the concept of green financing.

IX. CONCLUSION

The study emphasizes the importance of green finance, particularly in the context of sustainable and climate finance. It highlights that demographic factors, such as gender, age, and occupation, can influence individuals' attitudes and decisions regarding investments in green financial products. The findings suggest that government incentives and personal characteristics play a crucial role in shaping investment behavior. Encouraging broader participation in green finance may require tailored approaches that consider these demographic factors. This underscores the need for policies that promote awareness and provide targeted incentives to foster sustainable investment practices.

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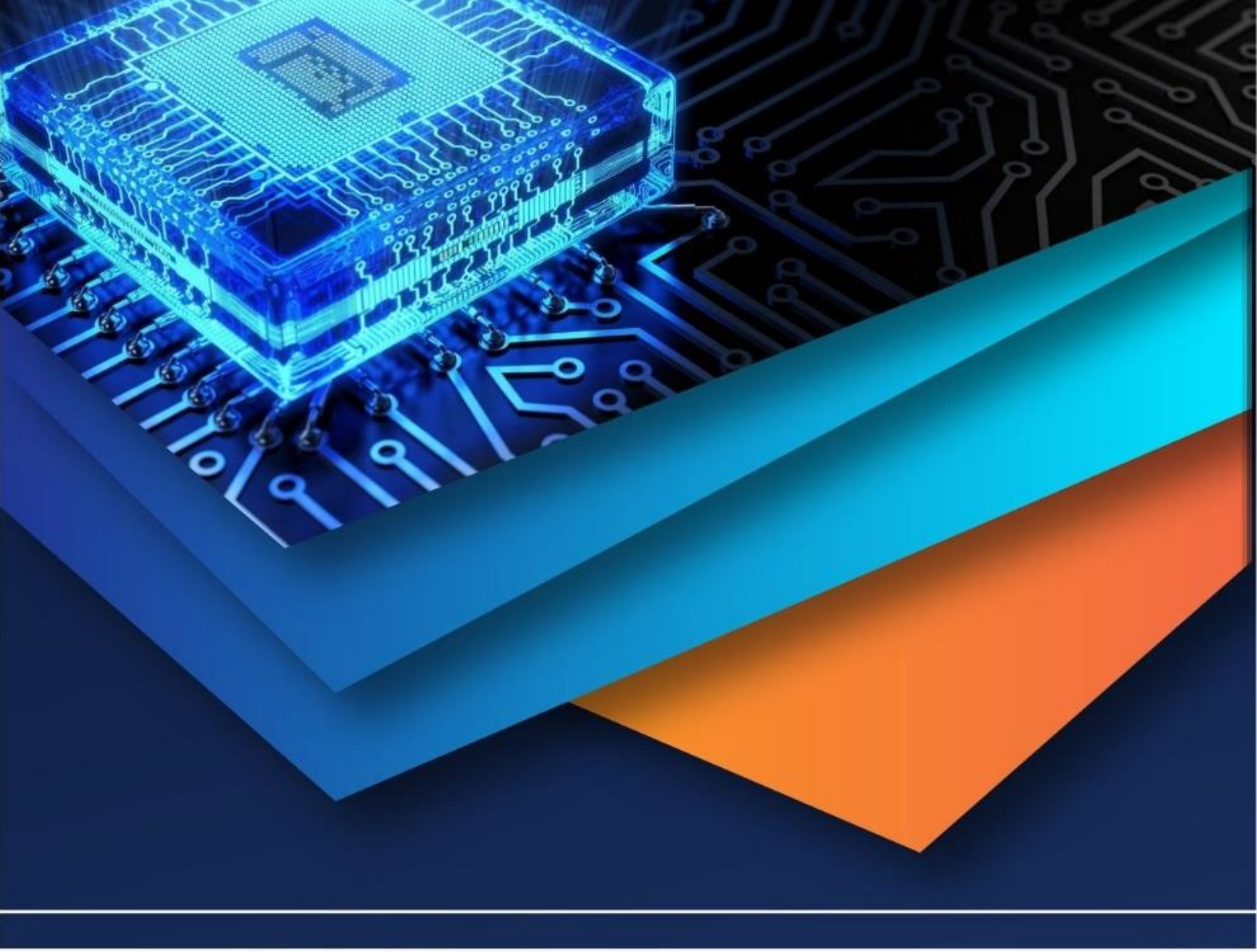

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