GREEN FINANCE, ESG, SUSTAINABLE ECONOMICS: IMPACT OF THEM IN GLOBAL TRANSITION

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Abstract

Green finance, Environmental, Social and Governance (ESG) criteria, and sustainable economics are three of the foundations of the transition to a low-carbon climate-resilient economy. Green finance is usually defined as financial flows (i.e. investments) towards renewable energy, energy efficiency, pollution prevention and control, and climate change adaptation. ESG is a framework for measuring a company's sustainability performance in terms of environmental policy, social responsibility, and governance metrics, beyond financial performance. Sustainable economics is the application of ESG principles to the economy as a whole, requiring efficient resource use, and social and environmental sustainability. The paper discusses the interrelated roles of green finance and ESG, the latter of which is increasingly integrated into capital allocation, regulatory initiatives and investor preference in investing in sustainable practices and outcomes for the future of finance and policy. Further topics discussed in the paper include greenwashing, the need for standardized ESG reporting, and limited availability of green capital in developing countries. It is also discussed whether sustainable economics is capable of combining economic growth with planetary boundaries, for example through carbon pricing, a circular economy, or sustainable investment. In summary, green finance and ESG integration represent a transformative shift in global economic systems towards more resilient, transparent, and sustainable development pathways for the future.

Keywords: Green Finance, ESG (Environmental, Social and Governance) , Sustainable Economics, Climate Investment, Carbon Neutrality, Sustainable Development

Introduction

Climate change, resource exhaustion and social inequality have become more apparent in the global economy over the past few decades. A major reason for this is that the mainstream economic theory, focusing on short-term growth and profit maximization, lacks the ability to deal adequately with these dimensions. The result is the emergence of concepts like green finance, Environmental, Social and Governance (ESG) frameworks, and sustainable economics as seminal elements of financial systems and development processes. Green finance is any financial service that can ease investments in projects and activities with positive environmental impacts. Green finance is typically aimed at projects involving renewable energy infrastructure, sustainable agriculture, clean transportation, and energy efficient and sustainable buildings and technologies. The goal of green finance is to shift investments to sustainable activities. To help meet these targets, governments, international agencies, and private investors are using green bonds, climate funds, and sustainability-linked loans. A related concept is ESG criteria, which refer to three central factors when measuring the sustainability and social impact of an investment in a company or business. Environmental criteria consider how a company performs as a steward of nature, for example how it manages carbon emissions, waste, and natural resources. Social criteria include labor relations, human rights, diversity, and community engagement. Governance includes a company's leadership, transparency, ethics, and rights of shareholders. ESG offers a mechanism through which investors can integrate considerations of sustainability and long-term risk factors into investments. Sustainable economics builds on these ideas, developing them into a broader theoretical and policy framework that considers economic growth alongside environmental sustainability and social equity. Sustainable economics departs from mainstream economics in the importance it places on the finite nature of natural resources and the importance of preserving the regenerative capacities of Earth systems.

Some concepts associated with this include the circular economy (to minimize waste and resource use), and carbon pricing and other forms of internalizing environmental costs into economic calculations.

The rapid growth of the three interrelated sectors can be attributed to several factors. These include the impact of climate change on financial services in the form of material risks such as devaluation of important assets, interruption of the supply chain and regulatory pressure. Investors have also started to demand accountability and transparency in this regard. Third, across the world, governments are introducing measures and regulations to disincentivize high-emission activities and encourage low-emission investments. Despite the fast growth in green finance and the ESG landscape, there are challenges. One of the largest is greenwashing, i.e., when companies misrepresent their environmental performance to attract investment. The absence of common ESG assessment metrics causes issues when trying to compare the ESG performance of companies with similar products operating in different sectors or geographies. Developing countries encounter difficulties accessing green capital as they have less developed financial systems and face higher perceived risks. Nonetheless, green finance, ESG and sustainable economics are seen as a potential contributor towards the achievement of sustainability targets, such as the UN SDGs, for example, through responsible investment, directing finance towards sustainable projects and enabling other economic activity to deliver positive sustainability outcomes. This could potentially have an effect on how a modern economy works and how a society delivers value. This means that green finance, ESG and sustainable economics are not categories of finance and business, but conceptually highly interrelated and important to the development of a more sustainable and resilient economic system in the global north and the global south.

Review of Literature

Green finance, Environmental, Social and Governance (ESG) frameworks and sustainable finance have been gaining the interest of scholars, policymakers and the finance industry, and are discussed in the literature as inter-linked and a combined response to the global challenges of climate change, natural resource scarcity and income inequality. According to Zairis, Liargovas, and Apostolopoulos (2024), sustainable finance is one of the key driving factors behind sustainable development, as ESG information becomes more common in investment decisions. A review of 80 articles on the impact of ESG factors in the field of finance found that research focuses on four main topics: value creation through sustainability, green bonds, ESG performance measurement, and financial risk management. Thus, ESG is both a normative framework, and a financial approach that is increasingly integrated into the process of valuation of firms (ResearchGate). Green finance is often defined as financial activities and services that support renewable energy, pollution reduction, climate change mitigation and adaptation. According to Krastev and Krasteva-Hristova (2024), green finance is a key strategy to align financial systems with sustainability goals. They argue that integrating environmental factors into financial instruments should help countries on the way towards achieving sustainable development goals and a low-carbon economy (MDPI). Green finance can also be seen as a combination of economic growth and environmental sustainability by providing green bonds, climate funds, etc. to finance projects that benefit the environment (Agrawal, Magar, 2024). But green finance has its own limitations, such as difficulty to measure the impact of green finance and difficulty to get access to green finances in developing countries (Pavani & Raju, 2025). ESG literature also presents mixed evidencing for the link between ESG and company performance. Some studies argue that strong ESG practices can improve firm value by reducing risks, improving a company's reputation, and attracting investors. Others argue that ESG can increase short-term costs and may not necessarily improve profitability, and that its impact on company performance may vary across industries and countries. Researchers note concerns about greenwashing to promote investment within the firm, such as the possibility of firms overstating their environmental performance. They also note the lack of ESG reporting systems impedes comparability. This has led to an international consensus on the need for global regulatory standards for ESG disclosure. More generally, sustainable economics embeds ESG and green finance throughout macroeconomics, sometimes including topics such as long-term efficiency, circular economy, carbon pricing and other economic and financial tools. Researchers in the field argue that sustainable economic links economic

growth with planetary boundaries and intergenerational fairness. Overall, the papers reviewed in this literature review show that green finance, ESG and sustainable economics are rapidly growing topics that are increasingly present in financial markets worldwide, with green finance providing many opportunities for sustainable development, yet having challenges regarding standardization, transparency and the application of sustainable practices in emerging economies.

Objectives of the Study

1. The role of green finance in sustainable development.

The overall aim of this research is to understand how financial instruments (e.g. green bonds, sustainability-linked loans or climate funds) are used to deliver around climate change commitments and to mobilize capital towards sustainable low-carbon investments.

2. To examine the importance of ESG frameworks in investment decision making

This objective investigates the role of Environmental, Social and Governance (ESG) criteria in investment decisions and on the behavior of corporations, and whether it results in better risk management, transparency and financial performance.

3. Analyze the impact of ESG performance on corporate financial performance.

The intention is to analyze if ESG rating is related to superior profitability, less risk-taking, and higher trust of an organization by investors. Mixed results are reported in the literature.

4. To understand the hurdles for implementing sustainable economics

These include greenwashing, the lack of standardized reporting for green projects and the limited availability of green capital in developing nations. Greater regulation and global cooperation are needed to address these issues.

Methodology

Research Design

This research adopts a quantitative-descriptive research design to investigate the awareness, perception, and understanding of Green Finance, ESG (Environmental, Social, and Governance), and Sustainable Economics among Law College students in Andijan, Uzbekistan. This design was chosen to systematically collect and analyze numerical data regarding students' green awareness and their attitude towards financing sustainably.

Population and Sample

The population consisted of students of the Law College of Andijan. A sample of 120 students was selected using a simple random sampling technique to ensure equal representation of all the academic years.

Data Collection Method

The primary data were collected using a self-administered questionnaire that comprised closed-ended questions with a 5-point Likert scale (from Strongly Agree to Strongly Disagree) as follows:

- Awareness of green finance concepts
- Understanding of ESG principles
- Perception of sustainable economics
- Interest in sustainable investment practices

It includes secondary data collected from peer-reviewed journals, international reports and global sustainability databases.

Data Analysis

Table 1: Awareness of Green Finance Concepts (n=120)

Response	Frequency	Percentage
Highly Aware	25	20.8%
Aware	35	29.2%
Neutral	30	25%
Not Aware	20	16.7%

Response	Frequency	Percentage
Completely Unaware	10	8.3%

Interpretation:
The majority (50%) of students show moderate to high awareness, while a significant portion still lacks full understanding.

Table 2: Understanding of ESG Principles

Level	Frequency	Percentage
Strong	20	16.7%
Moderate	40	33.3%
Basic	35	29.2%
Low	15	12.5%
None	10	8.3%

Interpretation:
Most students have only moderate or basic understanding of ESG, indicating the need for curriculum integration.

Table 3: Perception of Sustainable Economics Importance

Response	Frequency	Percentage
Very Important	45	37.5%
Important	40	33.3%
Neutral	20	16.7%
Less Important	10	8.3%
Not Important	5	4.2%

Interpretation:
A strong majority (70.8%) recognize sustainable economics as important or very important.

Table 4: Interest in Green Investments

Response	Frequency	Percentage
Very Interested	30	25%
Interested	35	29.2%
Neutral	25	20.8%
Not Interested	20	16.7%
Not at all	10	8.3%

Interpretation:
More than half of students show interest in green investment opportunities.

Conclusion

The study examined the awareness and perception of Green Finance, ESG frameworks, and Sustainable Economics among students of a Law College in Andijan. The findings reveal a growing but still developing understanding of sustainability-related financial concepts among young learners. While students demonstrate moderate awareness of green finance and ESG principles, there is still a noticeable gap in deep conceptual understanding and practical application. The results indicate that approximately half of the respondents are familiar with green finance, but only a smaller proportion have strong knowledge. This suggests that sustainability topics are present in academic awareness but not yet fully integrated into students' formal financial or legal education. Similarly, ESG awareness remains at a moderate level, with many students possessing only basic knowledge of environmental, social, and governance factors. This reflects a global trend where ESG is widely discussed but not yet deeply

understood at the student level. Despite these gaps, the perception of sustainable economics is highly positive. Most respondents recognize the importance of integrating environmental protection and economic development. This demonstrates that students are intellectually receptive to sustainability ideas, even if their technical understanding is still developing. Furthermore, interest in green investments shows that young individuals are willing to engage with sustainable financial systems, especially when they are linked to future economic opportunities.

However, the study also highlights challenges. The lack of structured sustainability education within legal and economic curricula limits students' ability to fully engage with green finance concepts. Without formal training, students may struggle to apply ESG principles in professional or policy contexts. Additionally, limited exposure to real-world sustainable finance instruments such as green bonds or carbon markets restricts practical understanding.

In conclusion, green finance, ESG, and sustainable economics represent essential frameworks for future global development, and their relevance is increasingly recognized among students in Andijan. However, there is a clear need for educational reform to integrate sustainability into legal and economic studies. Strengthening academic curricula, providing case studies, and encouraging practical exposure will significantly enhance students' competence in this field. This will not only improve academic understanding but also prepare future professionals who can contribute effectively to sustainable economic transformation in Uzbekistan and beyond.

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