INTERNATIONAL JOURNAL FOR INNOVATIVE RESEARCH IN MULTIDISCIPLINARY FIELD
ISSN(O): 2455-0620 [Impact Factor: 9.47]
Monthly, Peer-Reviewed, Refereed, Indexed Journal with IC Value : 86.87
Volume - 11, Issue - 08, August - 2025

DOIs:10.2015/IJIRMF/202508019 --:-- Research Paper / Article / Review

Influence of Green Supply Chain Finance on Sustainable Accounting Practices and Their Integration into Financial Reporting

[1] Dr. Amrita Chaurasia, [2] Dr. Pallavi Jharia,
[1]Assistant Professor, School of Commerce, Finance and Accounting, Christ (Deemed to be University), Delhi NCR
[2]Assistant Professor, PMCOE Government Science College, Pandhurna, Distt. Pandhurna, Madhya Pradesh
Email - [1]amrita.chaurasia@christuniversity.in, [2]pallavijharia1@gmail.com

Abstract: *The relationship between sustainability accounting methods, green supply chain finance (GSCF), and how these elements work together to form financial reporting frameworks is examined in this study. Businesses are feeling increasing pressure to integrate eco-friendly practices throughout their supply chains as environmental sustainability gains popularity. Green supply chain finance (GSCF) uses financial solutions and incentives to promote sustainable behaviours, thereby helping to connect financial and environmental goals. Furthermore, blockchain technology offers GSCF an attractive tool for improving accountability, efficiency, and transparency. In order to explore the potential integration of GSCF with blockchain technology and sustainable accounting, this research examines scholarly sources, with a focus on the function of GSCF in improving financial reporting procedures. The study comes to the conclusion that corporate financial reporting might be reshaped and brought into line with global sustainability goals by incorporating blockchain technology into GSCF and sustainability accounting.*

Key Words: *Supply Chain Finance (SCF); Green Supply Chain Finance (GSCF); Sustainability Accounting; Blockchain Technology; Financial Reporting; Environmental Sustainability.*

1. INTRODUCTION:

A complex system of institutions, people, and procedures come together in supply chain management to transfer goods and services from suppliers to consumers. The flow of goods, information, and money through this network connects suppliers, manufacturers, distributors, and customers as important players. The physical flow of goods and services is closely linked to the financial parts of supply chain operations, including financing, cash flow, and payments, within this network. For the distribution network to run smoothly and effectively, effective financial management is crucial. However, there are typically issues with the conventional approaches to working capital (WC) management. For example, cutting inventory to increase WC can result in stock outs and unhappy customers; while giving suppliers longer terms of payment may cause undue financial pressure on them and affect the supply chain's stability as a whole.

Supply Chain Finance (SCF) has become a key way to address these problems. By giving companies access to flexible financing solutions such approved payables financing, dynamic discounting, and inventory financing, supply chain finance (SCF) maximizes the management of financial flows throughout the supply chain. By using these solutions, businesses may ensure that suppliers are paid on time while also improving liquidity, managing cash flow with greater proficiency, and lowering financing costs. Financial Service Providers (FSPs)—which include banks and non-banking financial companies (NBFCs)—are essential in enabling supply chain finance (SCF) since they provide the capital required to maintain operations in the event of payment delays.

In recent years, SCF has become increasingly important in academic study as well as business applications. SCF is a crucial tool for entrepreneurs to lower financing costs and improve financial efficiency, facilitating smoother business operations and growth, especially in industries with lengthy payment cycles. SCF's reliance on technology, however,

creates risks like security breaches, cybersecurity threats, and system breakdowns that could impair supply chain operations' efficiency. Integrating reliable technology solutions that provide security and transparency throughout the whole supply chain is therefore essential.

In this regard, blockchain technology has become more well-known as a decentralized, transparent, and safe way to record supply chain transactions. Blockchain functions as a distributed ledger in which transactions are recorded in chronological order and kept in blocks. Every transaction on the network is time-stamped, irreversible, and open to verification by all users. This guarantees that supply chain financial transactions, material movements, and data exchanges are protected from manipulation or unwanted access. Blockchain gives supply chain participants real-time visibility into activities, enabling them to track the origin, flow, and status of products as well as financial transactions with unmatched transparency. This solution lowers the risk of fraud and increases collaboration among supply chain participants by fostering trust in addition to improving security.

Green Supply Chain Finance (GSCF), an innovative model that incorporates environmental sustainability into SCF procedures, has evolved in response to growing concerns about climate change and environmental deterioration. By providing financing options that recognize sustainability efforts, GSCF encourages supply chain participants—such as manufacturers, purchasers, and suppliers—to adopt environmentally friendly practices. sss

Concurrently, there has been an increase in interest in sustainability accounting as companies look more and more for ways to measure, record, and control their environmental effect. In order to help businesses evaluate the environmental costs and benefits of their operations, sustainability accounting includes the systematic collection, analysis, and reporting of environmental, social, and governance (ESG) measures. Businesses may demonstrate their commitment to sustainability and ethical practices and increase transparency to stakeholders by incorporating sustainability measures into financial reporting. However, there are many difficulties in monitoring and validating sustainability measures, especially when doing so across international and distributed supply chains. Complex tracking techniques are necessary to ensure the precision, consistency, and dependability of sustainability data, which may be difficult to achieve with traditional systems.

Blockchain technology provides an effective way to address these issues by establishing an unchangeable, safe method for logging sustainability data all the way through the supply chain. Sustainability accounting procedures are transparent and verifiable because to blockchain's decentralized ledger, which can track and validate environmental parameters in real-time. Businesses may produce more accurate and dependable sustainability reports that meet their financial and environmental objectives by integrating blockchain technology with GSCF. Increased accountability is encouraged by this integration, which also helps businesses to satisfy the increasing demands of investors, consumers, and regulators for transparency.

Major banks and NBFCs, among other financial institutions, have shown an enormous amount of support for SCF in India. State Bank of India (SBI), Punjab National Bank (PNB), ICICI Bank, and Bank of Baroda are just a few of the banks that have implemented SCF programs, which assist companies in managing their working capital while guaranteeing that suppliers are paid on time. Furthermore, the Ministry of Electronics and Information Technology of the Indian government has produced the National Strategy on Blockchain, which emphasizes the nation's commitment to constructing a strong and secure digital infrastructure for supply chain management. In order to increase security, efficiency, and transparency, this plan seeks to promote the application of blockchain technology in a variety of industries, including SCF.

Using a mixed-method approach that includes literature reviews, surveys, and interviews conducted across sectors such as food and beverages, fashion, real estate, medicine, and financial institutions, this research investigates how the convergence of these innovations can drive sustainability, improve financial performance, and provide a competitive edge in the marketplace. The goal of this paper is to explore the integration of Green Supply Chain Finance (GSCF), sustainability accounting, and blockchain technology, with a focus on their potential to transform corporate financial reporting and align business practices with sustainability goals.

2. LITERATURE REVIEW:

Due to their global nature, supply chains now require advanced coordination amongst multiple parties, longer lead times, and risk management concerns. With the advent of globalization, supply chains have become longer, requiring enhanced

visibility and control over activities [1] (Christopher, 2016). Supply Chain Management (SCM) is the integrated process of planning, executing, and monitoring supply chain activities to maximize customer value and gain a competitive advantage [2] (Hugos, 2018). Effective SCM is critical for modern businesses, as it directly impacts operational performance, profitability, and customer satisfaction [1] (Christopher, 2016). The integration of SCM systems can improve information sharing between supply chain partners, reduce inventory levels, and enhance order fulfillment capabilities [3] (Frohlich & Westbrook, 2001).

With developments like big data analytics, cloud computing, and the Internet of Things (IoT) challenging traditional supply chain frameworks, digital technologies are becoming more and more important in supply chain management (SCM). The use of blockchain technology, for instance, enhances transparency and traceability, allowing all participants in the supply chain to access real-time, verified data on product movements, thus reducing fraud and inefficiencies [4] (Kouhizadeh et al., 2021). The rise of digitalization and technologies like artificial intelligence and blockchain have introduced new ways to improve supply chain efficiency, transparency, and accountability [5] (Saberi et al., 2019).

The adoption of SCF is driven by the need to address liquidity challenges, particularly in industries where suppliers often face long payment cycles and limited access to credit [6] (Gelsomino et al., 2016). Moreover, SCF and supply chain risk management go hand in hand because financial instability and liquidity issues may restrict the seamless movement of goods and services. By adopting SCF solutions, organizations can minimize financial risks within their supply chains, ensure the continuity of operations, and create a more resilient supply chain network [7] (Lekkakos & Serrano, 2016).

Blockchain technology offers an immutable and decentralized ledger that records transactions in real-time, ensuring traceability and trust among supply chain participants [4] (Kouhizadeh et al., 2021). Blockchain can also facilitate faster and more secure financial transactions, reduce the reliance on intermediaries, and improve the overall efficiency of supply chain finance processes [8] (Zhang et al., 2020). In supply chains, blockchain is increasingly used for tracking the movement of goods, ensuring the authenticity of products, and providing proof of compliance with environmental standards [5] (Saberi et al., 2019). A blockchain-based SCF platform enhances trust among supply chain participants and reduces the reliance on intermediaries, such as banks, by automating processes like invoice verification, contract execution (via smart contracts), and payment settlement [9] (Tapscott & Tapscott, 2017).

Green Supply Chain Finance (GSCF) refers to financial initiatives that aim to improve the environmental sustainability of supply chains by incentivizing eco-friendly practices [10] (Zhang & Wang, 2014). Companies can leverage GSCF to access finance for sustainability projects, such as renewable energy adoption, waste reduction, or carbon footprint minimization. It encourages suppliers and buyers to engage in green activities by offering better financial terms, discounts, or easier access to credit. [20] (Zhang et al., 2021). The rise of GSCF is closely aligned with the global focus on corporate social responsibility (CSR) and environmental, social, and governance (ESG) factors [11] (Zhu et al., 2021). According to [12] Wang et al. (2021), GSCF facilitates the transition to a green economy by providing essential financial support to firms undertaking sustainability initiatives, such as reducing energy consumption and waste. Green bonds, reverse factoring, dynamic discounting, green bonds, and other financial instruments that support sustainability projects are important parts of the GSCF.Reverse factoring, in particular, is highlighted as a critical tool within GSCF, where financial institutions provide early payment to suppliers who adhere to green criteria set by buyers [13] (Zhou et al., 2020). The Five Capitals Model, presented in the Sigma Guiding Principles (2003), disaggregates sustainability accounting into five capital types: manufacturing, financial, human, social, and natural. Blockchain technology is increasingly recognized for its potential to ensure transparency and traceability in green supply chains [20] (Zhang et al., 2021). Moreover, blockchain reduces the administrative burden of monitoring sustainability compliance and streamlines the auditing process, thus making GSCF more efficient and scalable [14] (Yuan et al., 2020). A supplier that meets certain sustainability criteria, such as reducing its carbon footprint or using renewable energy, may receive better financing terms or faster access to credit [13] (Zhou et al., 2020). A smart contract could automatically trigger a payment to a supplier once it is verified that they have met green criteria, such as reducing energy consumption or minimizing waste. This automation reduces administrative costs and improves the efficiency of GSCF systems [12] (Wang et al., 2021). Blockchain can provide real-time data on the environmental and social impacts of business activities, making it easier for organizations to report on their sustainability performance [15] (Casino et al., 2019).

The Global Reporting Initiative (GRI) sets standards for companies to report on various ESG (environmental, social, and governance) metrics [16] (GRI, 2016). The Task Force on Climate-related Financial Disclosures (TCFD) encourages companies to disclose climate-related risks and opportunities in their financial reports, which is crucial for

assessing the long-term sustainability of businesses [17] (TCFD, 2017). The International Integrated Reporting Council (IIRC) promotes integrated reporting, which combines financial and sustainability information into a single, cohesive report [18] (IIRC, 2013).

3. OBJECTIVES

To find out the relationship between sustainability accounting methods, green supply chain finance (GSCF), and how these elements work together to form financial reporting frameworks?

4. RESEARCH METHOD

Framework of Supply Chain Finance with Blockchain

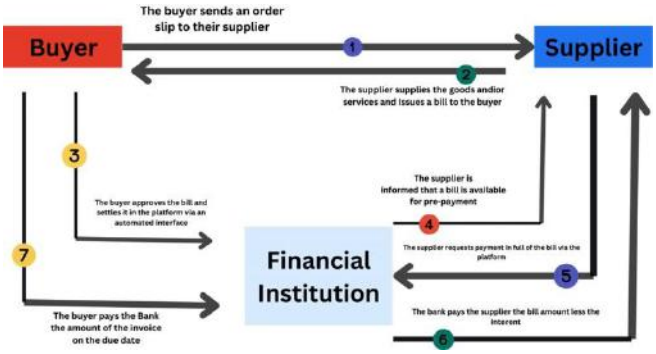

fig.1 Supply Chain Finance without Blockchain Source: Authors own

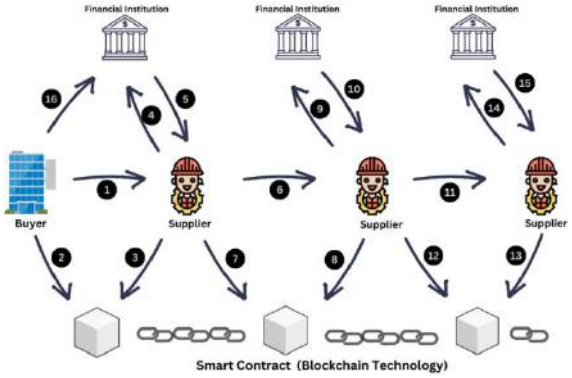

fig.2 Supply Chain Finance with Blockchain Source: Authors own

1. Buyer issue trade receivable after delivery.
2. Buyer registers for trade contract, receivable & payment commitment on Blockchain.
3. Supplier1: Sign for the receivable on Blockchain.
4. S1 Apply for loan.
5. Financial Institution verify ownership on blockchain, grant credit & invoice financing to S1.
6. Transfer/split receivable

   (Now, supplier1 becomes Buyer for Supplier2, same procedures will follow...)
7. Register for trade contract & issue receivable transfer or split on Blockchain.
8. Sign for the receivable on blockchain
9. Apply for loan
10. Verify ownership on blockchain, grant credit and invoice financing
11. Transfer split receivable
12. Register for trade contract & issue receivable transfer or split on Blockchain.
13. Sign for the receivable on blockchain
14. Apply for loan
15. Verify ownership on blockchain
16. Invoice payment after period

5. FINDINGS :

Businesses looking to increase their footprint in international supply chains face a number of obstacles as well as major opportunities when analysing Green Supply Chain Finance (GSCF) in India. India's economy, which is expanding at the fastest rate in the world, is positioned to advance in global value chains, since its population exceeds. China's

International investors and multinational corporations (MNCs) are now demanding that Indian enterprises adopt sustainability practices in order to fully realize this potential.

India has significant economic and demographic advantages, but social and environmental impacts are being scrutinized more closely as global supply chains reorganize. Multinational corporations (MNCs) have imposed environmental standards on their suppliers, particularly those based in the US and Europe. But when it comes to implementing these policies, many Indian companies—especially small and medium-sized ones (SMEs)—fall behind their international competitors. Prominent producers including the Shahi Group, Godrej Group, and Tata Group are advancing sustainability significantly. To reach 100% renewable energy by 2026, Shahi Group, for example, is investing in wind and solar farms. Large corporations that have made similar commitments to sustainable supply chain efforts include Godrej and Tata. By committing to lowering their environmental effect, these businesses are showcasing their dedication to global sustainability objectives.

It is crucial that Indian enterprises embrace sustainability reporting standards, such as measuring and disclosing their carbon footprint and other environmental metrics, in order to draw in and keep foreign clientele. Regulations such as the German Supply Chain Due Diligence Act and the International Sustainability Standards Board's climate disclosure framework are establishing new standards for accountability and transparency in international supply chains. Indian businesses that fit these requirements have a stronger chance of competing in global marketplaces.

Since 75% of India's energy is produced from coal, firms that depend on the national grid face significant challenges due to the country's high energy intensity. Given the European Union's Carbon Border Adjustment Mechanism, which levies tariffs on carbon-intensive products like steel, cement, and aluminium depending on their emissions intensity, Indian industries are particularly vulnerable to low-carbon competition because of their dependency on these imports. On the other hand, businesses that switch to renewable energy sources and boost energy efficiency will be a step above the competition.

The lack of reliable regulatory requirements for blockchain technology in GSCF has been recognized by the research as a significant problem. For companies looking to integrate blockchain into their operations, especially SMEs, this generates uncertainty. Blockchain and Internet of Things (IoT) technologies have the potential to simplify GSCF, but their adoption by smaller businesses may be limited by their high implementation costs.

So, Indian businesses have a fantastic chance to increase their market share globally by incorporating sustainability into their supply chains. They may establish themselves as global leaders in the transition to greener supply chains by embracing renewable energy, enhancing energy efficiency, upholding international sustainability standards, and utilizing cutting-edge technology like blockchain. On the other hand, GSCF success depends on resolving issues with technology adoption, legal clarity, and matching financial incentives with sustainability objectives.

Sustainability Accounting with Blockchain Integration

Environmental, social, and economic factors are added to standard financial accounting through sustainability accounting. While an organization's stock (Balance Sheet) and financial flows (Profit and Loss Account) are the main topics of traditional financial accounting, sustainable accounting extends on this. Blockchain technology can improve each of the three crucial elements it covers by enabling the secure, transparent, and verifiable tracking of sustainability measures.

Sustainability accounting tries to provide information in three different dimensions:

Timing: Sustainability accounting focuses at how well an organization records a transient inventory or tracks the continuous movement of products and services throughout time. It is essential for evaluating sustainability over the long run. Real-time data on these flows can be recorded with the help of blockchain, ensuring accurate and unchangeable records throughout time. Blockchain guarantees long-term, dependable tracking of all stock and flow data by offering a time-stamped, secure record of transactions.

Location: This dimension makes a distinction between external effects that go outside the scope of standard financial reporting and internal effects that occur inside the company's financial boundaries. Transparency throughout the supply chain is made feasible by blockchain, allowing for the tracking of both internal and external effects. To monitor sustainability KPIs consistently across organizational boundaries, for example, suppliers, customers, and third-party

organizations can be included to a common blockchain ledger. This guarantees that the verification of internal and external contributions to environmental and social impacts can be carried out by all parties.

Type: In line with the Triple Bottom Line method, which emphasizes economic, social, and environmental factors, sustainability accounting evaluates effects in the environmental, social, and financial sectors. Because blockchain technology securely records and validates these various kinds of impacts, it can play a critical role. A blockchain can be used to record, for instance, social measurements (like fair labor practices), environmental data (like carbon emissions), and economic aspects (like expenses and revenues). This openness promotes compliance and guarantees that companies fulfil their sustainability goals without falsifying or manipulating data.

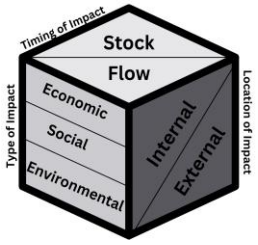

fig.3 Sustainability Accounting in three dimensions Source: Authors own

The Five Capitals Model:

Blockchain technology can be very beneficial to the Five Capitals Model, which breaks down the triple bottom line into manufacturing, financial, human, social, and natural capital. Assets that support an organization's long-term viability are represented by each category of capital. As an example:

Manufacturing Capital: The use of sustainable resources and production techniques can be tracked using blockchain technology.

Financial Capital: By guaranteeing transparent financial transactions, blockchain lowers the possibility of fraud.

Human Capital: Blockchain technology can confirm training, credentials, and equitable compensation policies for employees.

Social Capital: Blockchain technology may testify to the compliance with CSR guidelines.

Natural Capital: Blockchain technology can track resource consumption and environmental effects in great detail, including water and carbon emissions.

Sustainability Accounting's Integration with Blockchain:

Currently, economic, environmental, and social issues are mostly handled separately in sustainability accounting. Nevertheless, blockchain technology can connect these three pillars by offering a decentralized ledger that guarantees linked sustainability indicators are transparent and unchangeable. A business might use blockchain, for instance, to monitor the sustainability of its supply chain from the procurement of raw materials to the delivery of the finished product, guaranteeing that the effects on the environment, society, and economy are precisely documented and coordinated.

Furthermore, as a result of inflows and outflows, sustainability accounting aims to recognize changes in stock. Blockchain technology can be used to track these flows in a verifiable way, giving all stakeholders access to trustworthy information regarding sustainability practices and assisting businesses in meeting customer and regulatory demands for ethical business operations.

Transitioning from Traditional Accounting to Blockchain-Enhanced Sustainability Accounting:

Three significant changes must be made in order to move from standard financial accounting to blockchain-enhanced sustainable accounting:

Restating the Profit and Loss Account: Blockchain enables the restatement of the Profit and Loss Account by monitoring the ways in which sustainability-related expenses and gains have a direct influence on the bottom line. This enables companies to present the financial advantages of sustainable practices in an authentic way.

Expansion of the Profit and Loss Statement: Businesses can monitor and verify external expenses and advantages related to the economy, society, and environment with blockchain technology. The entire extent of an organization's influence on the environment and society is reflected in this openness. Blockchain-based solutions may keep track of energy savings, trash management, and carbon credits, guaranteeing accurate reporting.

Expansion of the Balance Sheet: Intangible assets such as brand reputation, human capital, as well as "shadow liabilities" related to sustainability issues can all be included in blockchain. A clearer view of an organization's overall financial health can be obtained by using blockchain to store verified data on environmental liabilities, such as future expenditures associated with carbon taxes or pollution clean-up.

Sustainability accounting is made more transparent, dependable, and safe by integrating blockchain. Blockchain technology guarantees the integrity of sustainability data, thereby simplifying the process for companies to prove adherence to sustainability guidelines and provide authentic reports to regulatory bodies, clients, and investors. Organizations may reduce risks, maximize resources, and satisfy the increasing demand for corporate sustainability procedures to be transparent by implementing this blockchain-enhanced approach to sustainability accounting.

Important rules, regulations, and norms that affect sustainable accounting include as follows, especially when incorporating blockchain technology:

By establishing standards for environmental, social, and governance (ESG) reporting, international regulatory frameworks and guidelines like the Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative (GRI) build the groundwork for sustainability accounting. The International Integrated Reporting Council (IIRC) supports comprehensive integrated reporting, which offers a holistic perspective of company performance by merging financial and sustainability measures. Blockchain's real-time, immutable data recording capabilities can help both the Task Force on Climate-related Financial Disclosures (TCFD) and the Carbon Disclosure Project (CDP), which are focused on environmental disclosures and financial hazards related to climate change, respectively. The UN's Principles for Responsible Investment (PRI) promotes responsible investing with an emphasis on environmental, social, and governance (ESG) factors, while the Sustainable Development Goals (SDGs) act as a global standard for sustainability practices. Blockchain makes it possible to track ESG data in a transparent and verifiable manner, which can help organizations satisfy these criteria.

Apart from these guidelines, the ISO 14000 series offer an environmental management framework, and large corporations are required by the European Union's Non-Financial Reporting Directive (NFRD) to disclose their sustainability. Blockchain technology can facilitate these requirements by guaranteeing dependable and precise data reporting.

When combined with blockchain technology, these rules and regulations provide a strong foundation for sustainable accounting. They make sure that companies fulfill investor and regulatory demands for increased accountability while also complying with global efforts to solve environmental and social concerns and reporting on sustainability in a more transparent manner.

8. CONCLUSION

The study "Exploration of Green Supply Chain Finance, Sustainability Accounting Practices, and Their Integration into Financial Reporting" focuses on how important sustainability is to global supply chains and how Indian businesses can take advantage of these opportunities to become more competitive by utilizing Green Supply Chain Finance (GSCF). Supply chain finance is set to change in the future due to the integration of blockchain technology, sustainability accounting practices, and changing regulatory frameworks. This is particularly true for Indian enterprises that operate in increasingly environmentally concerned global marketplaces.

India has a special chance to advance in global value chains due to its macroeconomic characteristics, which include having the fastest-growing major economy in the world and a population that has surpassed China's. But in order to realize this potential, Indian businesses need to satisfy global investors' and multinational corporations' (MNCs) growing

need for sustainable practices. The absence of resources, experience, and legislative guidelines poses a huge obstacle for many Indian firms, especially small and medium-sized organizations (SMEs), when it comes to adopting sustainable practices. Even though significant manufacturers like Shahi Group and companies like Godrej Group and Tata Group are investing in sustainable supply chain and renewable energy projects, there is still a long way to go before these initiatives are widely adopted.

The growing significance of sustainability accounting in leading this change is emphasized throughout the report. Monitoring and reporting on sustainability indicators, such as carbon emissions, energy use, and the impact on the environment, is a part of sustainability accounting. In order to comply with global regulatory frameworks like the German Supply Chain Due Diligence Act, which established new requirements for environmental transparency, and the climate disclosure framework of the International Sustainability Standards Board, these techniques are becoming more and more important for Indian firms. By measuring and disclosing their carbon footprints, businesses can get a competitive advantage by meeting international standards for ethical supply chain management.

The efficiency and transparency of GSCF systems could be greatly increased with the use of blockchain technology. Blockchain-enabled smart contracts can be set up to pay suppliers automatically when they fulfill certain green criteria, including cutting down on waste or energy use. With real-time sustainability compliance verification, this automation lowers administrative expenses and boosts the performance of GSCF systems. But in India, the lack of clear regulations and the massive implementation costs especially for smaller enterprises make it difficult for GSCF to utilize blockchain technology. Though its immediate advantages in supply chain financing and sustainability reporting, blockchain technology's widespread adoption is constrained by the absence of clear regulations.

The study also shows that conventional supply chain finance (SCF) models frequently give financial performance priority over social and environmental considerations. This is a lost chance for businesses to take advantage of the rewards of implementing more environmentally friendly procedures. Under the GSCF, suppliers can obtain better financing conditions or quicker credit access if they meet specific sustainability criteria, like lowering their carbon footprint or moving to renewable energy.

Energy intensity is still a major problem for exporters from India. Given that coal accounts for 75% of India's energy production, businesses that significantly rely on the national grid will have a significant carbon footprint. Steel, cement, and aluminium producers in India may suffer more from the European Union's Carbon Border Adjustment Mechanism, which levies taxes on imports depending on emissions intensity. Businesses will be more competitive in international markets if they switch to renewable energy sources and use circular practices, like using less primary resources. To set a good example for the business, Shahi Group, for instance, has invested in wind and solar farms with the goal of achieving 100% renewable energy by 2026.

Finally, Indian companies have a great chance to use GSCF to increase their market share abroad; however, in order to achieve this, they will need to overcome obstacles pertaining to technology intake, regulatory alignment, and sustainability accounting. Indian companies may establish themselves as leaders in the shift toward sustainable supply chains and improve their green credentials by incorporating sustainability into their financial reporting, adopting blockchain and other cutting-edge technology, and complying by international regulatory requirements. In order to establish an ecosystem that promotes sustainability and economic progress, companies, financial institutions, and policymakers must work together to ensure the future success of GSCF in India.

REFERENCES

1. Christopher, M. (2016). “Logistics and supply chain management” (5th ed.). Pearson.
2. Hugos, M. H. (2018). “Essentials of supply chain management” (4th ed.). Wiley.
3. Frohlich, M. T., & Westbrook, R. (2001). Arcs of integration: An international study of supply chain strategies. “Journal of Operations Management”, 19(2), 185–200. https://doi.org/10.1016/S0272-6963(00)00055-3
4. Kouhizadeh, M., Saberi, S., & Sarkis, J. (2021). Blockchain technology and its relationships to sustainable supply chain management. “International Journal of Production Research”, 59(5), 1435–1455. https://doi.org/10.1080/00207543.2020.1722860
5. Saberi, S., Kouhizadeh, M., Sarkis, J., & Shen, L. (2019). Blockchain technology and its relationships to sustainable supply chain management. “International Journal of Production Research”, 57(7), 2117–2135. https://doi.org/10.1080/00207543.2018.1533261

6. Gelsomino, L. M., Mangiaracina, R., Perego, A., & Tumino, A. (2016). Supply chain finance: A literature review. "International Journal of Physical Distribution & Logistics Management", 46(4), 348–366. https://doi.org/10.1108/IJPDLM-08-2014-0173
7. Lekkakos, S. D., & Serrano, A. (2016). Supply chain finance for small and medium-sized enterprises: The case of reverse factoring. "International Journal of Physical Distribution & Logistics Management", 46(4), 367–392. https://doi.org/10.1108/IJPDLM-04-2015-0092
8. Zhang, Y., Lee, C. K. M., & Xu, Q. (2020). Blockchain-based smart contracts for green supply chain finance. "Procedia Computer Science", 162, 737–745. https://doi.org/10.1016/j.procs.2019.12.037
9. Tapscott, D., & Tapscott, A. (2017). How blockchain is changing finance. "Harvard Business Review", 95(5), 2–5.
10. Zhang, Y., & Wang, H. (2014). Green supply chain finance. "Energy Procedia", 61, 1008–1011. https://doi.org/10.1016/j.egypro.2014.11.1026
11. Zhu, Q., Liu, J., & Lai, K. H. (2021). Sustainable supply chain finance: A comprehensive review and future research directions. "International Journal of Production Economics", 241, 108269. https://doi.org/10.1016/j.ijpe.2021.108269
12. Wang, L., Zhang, J., & Cheng, J. (2021). Green supply chain finance: A systematic literature review and future research agenda. "Journal of Cleaner Production", 278, 123448. https://doi.org/10.1016/j.jclepro.2020.123448
13. Zhou, X., Sun, H., & Zhang, H. (2020). Application of blockchain technology in green supply chain finance: The role of transparency and trust. "Sustainability", 12(5), 2045. https://doi.org/10.3390/su12052045
14. Yuan, Y., Wang, C., & Liu, H. (2020). Blockchain adoption in supply chain finance: A literature review and future research directions. "Journal of Cleaner Production", 277, 123529. https://doi.org/10.1016/j.jclepro.2020.123529
15. Casino, F., Dasaklis, T. K., & Patsakis, C. (2019). A systematic literature review of blockchain-based applications: Current status, classification and open issues. "Telematics and Informatics", 36, 55–81. https://doi.org/10.1016/j.tele.2018.11.006
16. Global Reporting Initiative (GRI). (2016). "GRI sustainability reporting standards". GRI.
17. Task Force on Climate-related Financial Disclosures (TCFD). (2017). "Final report: Recommendations of the Task Force on Climate-related Financial Disclosures". TCFD.
18. International Integrated Reporting Council (IIRC). (2013). "The International <IR> Framework". IIRC.
19. Treiblmaier, H. (2018). The impact of the blockchain on the supply chain: A theory-based research framework and a call for action. "Supply Chain Management: An International Journal", 23(6), 545–559. https://doi.org/10.1108/SCM-01-2018-0029
20. https://hbr.org/2017/01/the-truth-about-blockchain
21. https://davidbent.files.wordpress.com/2013/01/sigmasustainabilityaccounting.pdf