

# The Challenges For SMEs In Green Finance Initiatives Adoption

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## **ABSTRACT**

In the present scenario Green Economy can transform the entire functionality of the Indian economy. It is the only thing which can help in sustainable development of the country. For greening the economy green finance is required. SMEs need to adopt the Green Finance Initiatives (GFIs) for turning their operations green i.e. containing the harmful impact on the environment. Green finance initiatives promote green investments in the economy, means the investments which reduces the harmful effect on the environment and promoted sustainable development. Government, business, and financial institutions all need to consider and act in ways that will help the SME sector become more environmentally friendly. The paper attempts to identify various barriers and challenges in the adoption of GFIs.

**Keywords:** Green economy, Green Finance, Green finance initiatives, Sustainability, Indian SMEs.

## **I. Introduction**

The role of Small and Medium Enterprises (MSME) with regards to the Indian context is pertinent in the grassroots level economic development. These SMEs employs more than 111 million people directly or indirectly. The SMEs are popular because of the government emphasis on support in developing SMEs and easy and subsidized loans, the low capital requirement and offering huge employment opportunities. This sector can be very promising provided the methods of production and consumption becomes more sustainable and environment friendly as environmental degradation leads to the deterioration in the performance and operational excellence of the SMEs. Climate-sensitive sectors such as fisheries, agriculture and food processing are the most affected due to unsustainable methods of production and consumption which can have a detrimental impact on the SMEs and the national

economy. It is an accepted fact that SMEs are the backbone of developing countries and also in the generation of employment opportunities, apart from this SMEs are also the hubs of entrepreneurship and innovation. In the future, the adoption of greener technologies by SMEs can potentially have massively positive implications. The adoption of greener technologies would help in integrating economic efficiency, environmental friendliness, and societal wellbeing. Environmentally friendly Small and Medium Enterprises should focus on building the business on the principles of resource conservation, waste management and sustainable development which are critical for the green economy. The adoption of green technologies /environmentally friendly practices is a challenge for SMEs due to a lack of resources, awareness and knowledge. Apart from the infrastructural problems the SMEs are problems related to financing which are denied to them which leads to the deterioration of SMEs health

and puts a question mark on their survival and growth. Financing is important for SMEs to expand their operations, and develop innovative products. The financial institutions should cater to various financial needs of the MSMEs and other industries. Concerning financing Small industries and development bank of India (SIDBI) has initiated many steps to maximize the adoption of green technologies in the SME sector. It has been instrumental in marketing the benefits of green technologies adoption under bilateral Lines of credit from countries such as Germany and Japan. The schemes promoted by SIDBI have a dual strategy, which is to offer concessional lending to encourage investment in greener technologies and launching of specific information, the SMEs, therefore should on adopting appropriate technologies to maximize energy conservation. For adoption of greener technologies Reduce (waste), Reuse and Recycle are the three key areas of operational importance of SMEs. These practices open avenues for innovative policies that may require more ground-level work. The concepts of reducing, reuse and recycle are the key concepts with regards to the implementation of clean technologies, any area which lacks the understanding of these three concepts would not be able to grab the opportunities or advantages that such technologies provide to the SMEs. It has been observed that SMEs which do not adhere to the basic principles of Reduce, Reuse and Recycle or any resistance in adopting these concepts leads to the lagging in the up-gradation and modernization of SMEs. To cope with this problem of non-implementation, SIDBI has been offering many schemes which can play a pivotal role in the sustainable development of the SME sector. The financial difficulties of the SMEs are also being taken care of by SIDBI, these offered funds focus on improving the overall business

climate for MSMEs. For effective implementation of the finances provided by SIDBI, the information gap between banks and SMEs needs to be reduced by the adoption of new technology and introduction of best accounting practices to understand the practical problems faced by the MSMEs. Secondly, new financial institutions apart from SIDBI need to be started by the government to meet the financing requirements of MSMEs and start-ups. These may include specialized banks, non-bank financial institutions (NBFIs), and other lending agencies. These NBFIs are comparatively better in monitoring small business firms as they offer microfinance initiatives that help poor households to support small businesses. And lastly, the government can help SMEs financing by putting in place better financial infrastructure for information sharing about the creditworthiness of SMEs. Credit rating agencies and bureaus can help generate creditworthiness ratings of the SMEs. To sum up, the concept of Green finance focuses on providing environmentally friendly or green economic activities for firms that may be small or midsize. The concept of green finance serves two main functions:

1. Financing to support environmentally friendly growth and
2. Financing to minimize the environmental costs.

The promotion of green finance and green finance initiatives i.e. the efforts that boost the green practices adoption in SMEs by promoting its availability, affordability and awareness among them. When SMEs adopt green finance initiatives it develops an economy which is green and circular as compared to normal linear economy.

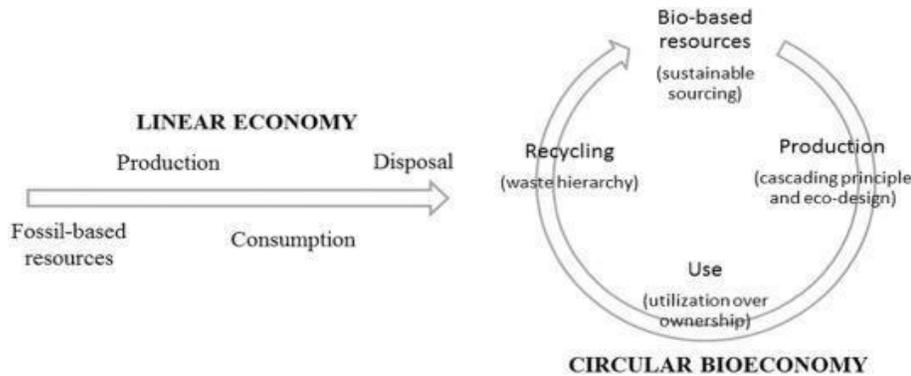


Fig 1: The circular Bio-economy as a sustainability transition away from a linear economy

The following five factors are used in the development of Green Finance:

1. Conceptual understanding of green finance and its awareness
2. Creating the basic infrastructure and strategies for green finance implementation.
3. The role of the Green financial institutions to be strengthened.
4. Nurturing of green investors.
5. To regulate global greenhouse gases, the development support of the carbon market.

The capacity of SMEs to respond to climate impacts depends on addressing the barriers which include market access, access to information, insufficient knowledge about climate risks, low level of ability to evaluate that exist through targeted policies and lack of policies and regulations.

## 2. Review of Literature

Over the last decade, various models have been proposed to address environmental issues, biodiversity losses, water problems and key social and economic challenges. The environmental which took place in 2008–2009 lead to the discussion about environmentalism (Barbier,2010), which subsequently lead to the conceptualizing of the 'green economy. Now the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals have been adopted globally by most of the countries to address environmental problems. Above mentioned goals focus on eliminating world poverty and facilitating economic growth along with addressing critical issues related to education, health, social protection, and job creation, environmental pollution and climate change. These goals thus create a link between the ecological and the economic system. These goals reinforce the need for a greener economy, i.e., shifting to more sustainable modes of production and consumption. Climate changes and environmental issues require a scientific understanding of the concepts towards strategy formulation which would help to mitigate the negative impacts. The literature highlights that the sectors such as energy, water, land, flora and fauna and supply chain etc., can be conceptualized as innovation systems (Geels,2004) in the area of environmental conservation. Based on this premise the sustainable development and the adoption of

environmentally friendly practices have received increased attention in academic research. The objective of this paper is to discuss significant societal challenges and outlining key insights for policymakers. The study is centered around challenges such as environmental risks, sustainable technological change and the uncertain business scenario. The studies suggest that due to the myopic behaviour of the corporates there is an increasing problem with green financing in the presence of fully efficient capital markets (Stein,1989). The private investors offer weak incentives to pursue investments in long-term technological development. (Lehman et.al.,2018). The new technologies face competition from incumbent technologies, but if the new technologies are superior they can be adopted for efficient results. The new and superior technologies can be a close substitute to their greener competitors, which will offer a relative competitive advantage to the organizations. Existing institutions, laws, codes of conduct, etc., can also contribute to the mission towards environmental conservation since these often favour fossil-fuel-based technologies (Unruh,2000). Most of the developed economies of the world are still not taking fullest benefit of sustainable green initiatives even though the taking up of sustainable green practices is beneficial in the long run (Sarkis, 2001).

The paper by Tsoka et.al., (2014) intended to review possible adjustment of SMEs towards green economy. The paper suggested a conceptual framework based on secondary data collected from government reports and online publications. It is opined by (Epstein and Buhovac, 2014) that developing countries should focus more on developing sustainable green practices as therein is much need and scope of Green practices in the developing countries. In one of the studies by Mansouri et al. (2015) it is contended that there are few multi-objective types of research as compared to a single

objective on topics like sustainable green practices. Moreover, the study says researchers should work harder and focus on multi-objective studies rather than single objectives (Hwang et.al, 2012; Govindan et al. 2015). Georgeson, L (2017) identified the shortcomings for improving measurement for green economy and suggested the broader frameworks for identifying economy–society–environment interactions. The paper suggested that proper measurement of the green economy needs to think beyond GDP to effectively track the ‘transformational green economy’. Ryszawska, B. (2019) suggested that the SMEs needs new business models and a new concept of CSR called as CSR 2.0. The paper focused on the green economy at one hand, and various actors involved in the anticipated transformation of the economy on the other hand. The paper concluded by discussing common values and priorities of radical CSR and green economy. The paper suggested the emerging Sustainable Development Goals and post-COP 21 frameworks. Dalia D'Amato et al., (2020) in their study contented that in the Sustainable Development Goals given by UN 2030, the circular economy concept is gaining more popularity for the companies as compared to the linear economy. A circular economy suggests a more efficient resource management in which the principles of circular economy are incorporated. The study suggested that the circular economy have been well received by the companies irrespective of their scale of operations as they focus on cost reductions, innovation and competitiveness. The research provided insights to SMEs and stakeholders to advance the transition to a circular economy for the management of SME's viability and growth. Söderholm, P (2020) study focussed on five main challenges which deals with environmental risks and achieving radical changes and not just incremental sustainable change next challenge revolves around green capitalism the other challenge is designing of appropriate policy

mixes and finally dealing with distributional concerns. The paper concludes that sustainable technological change requires re-assessment of the industry and SMEs role and the paper suggested that future research should focus on identifying challenges implementing new policies in various organizational contexts. Yıldırım, S. et.al., (2020) opined that Sustainable development focus is to create a balance between economic, social, and environmental elements for balance between humanity and the natural environment. The present scenario and the current economic systems prevent achieving sustainable development in the long term, to counter this problem and the green economy approach is the best approach for sustainable development. The paper investigates the relationship between green economy and sustainable development. The study presents a view of the green economy for achieving sustainable

development goals. The study concludes by discussing the contribution of green economy in achieving sustainable development goals. Another study by Denona Bogovic, N., & Grdic, Z. S. (2020) assessed the possible effects of economic transition as per the European Green Deal strategic framework. The results developed investment scenarios for the green transition the results were further supported by examples for specific sectors and economic activities. The study concluded that transitioning towards green economy, can serve to push sustainable development. Mura, M., Longo, M., & Zanni, S. (2020) contented that the Circular Economy

practices implemented by SMEs, supports the notion that Circular Economy implies a systemic approach to company's value creation. This suggest that Circular Economy represent a source of value creation for companies, particularly SMEs. The study by Ngondjeb, D. Y. (2020) confirm that challenges and opportunities in terms of innovation, entrepreneurship, demand for green products and services, access to finance, social inclusion and equity. Despite the climate and environmental challenges faced, SMEs must engage in sustainable transformation to exploit the opportunities. The paper by Cerminara, I (2020) emphasized that Companies, growth is crucial for the economic system, generate waste in all stages of the production processes; and there is an increasing attention and awareness on waste management, that will lead SMEs to zero waste production. This paper defines their critical innovations domain in order to deliver an effective and scalable innovation transfer concerning circular economy. Sharma, N. K (2021) identified certain impediments associated with awareness, financial challenges, and weak management of SMEs towards Green Economy implementation. The impediments identified were related to trained employees, lack of experience. Consumer acceptability is also identified as a major concern towards implementing Circular Economy. The study concluded by suggesting major prerequisites towards Circular Economy implementations. The pre-requisites suggested are strong "management will," innovation, technology upgradation, employee training and motivation.

#### Major challenges chalked out through literature review

Challenge	
Green technology	Desai (1983), Ngondjeb, D. Y. (2020) Lehman et.al (2018) Chattopadhyay (1995) Singh et al. (2012) Kumar et al., (2009) Goel (2002) Bala Subrahmanya (2004) Pathak et.al (2014) R Prasanna et.al, (2019)(Gupta and Barua,2018)

Innovation	Lama (2013) Nesta et al. 2014 Murray, Skene & Haynes, 2015 (Laforet S.,2013). (Navickas V et.al., 2013)
Government Policy and support	Kamunge et al(2014), Lama (2013) (Ringel et al. 2016) Popp et.al. 2011) Kamunge, Njeru, and Tirimba (2014) Margaret Mutiria (2017) Lama (2013) Ganguly (1988) Kumar et al., (2009, (Gupta and Barua,2018)
Financial aspects like Government schemes related with credit guarantee programs, technology upgradation.	Ghatak (2010), Morakar (2012), Goel (2002) Chandak (2016) Jha and Bhome (2013). Pathak et.al (2014) SHANKAR, A., & AVNI, T. (2020). Verma, T. L., & Nema, D. K. (2019)
Skilled labour	Morakar (2012) Chattopadhyay (1995) R Prasanna et.al, (2019) .( Junia A. Purwandani and Gilbert Michaud, 2021) (OECD, 2018)
Modernization and modifications	Tsoka et.al (2014), Morakar (2012)
Marketing assistance	Morakar (2012) Mwaniki, Moffat Karo (2012) Subramanian and Pillai (1994) Sanchita (2010) Kumar et al., (2009)
Tax incentives	Morakar (2012) Mwaniki, Moffat Karo (2012)
Green funds/loan access, availability, and affordability of funds to SMEs	Anju Singla &Parul Grover (2012), Margaret Mutiria (2017) Kamugne et al (2014), Ngondjeb, D. Y. (2020), Zahid K. Jadoon (2017) Babajide and Abiola (2011) Kamunge, Njeru, and Tirimba (2014) Chandak (2016) Ganguly (1988)Balu (1991) Subramanian and Pillai (1994) Sanchita (2010) Singh et al. (2012) Jitendra Kumar (2016) Bala Subrahmanya (2004) Acosta, L. A., & Suresh, S. (2016)
Infrastructural facility	Kamugne et al (2014)
Bond market access to SMEs	Jaimin R. Vasu (Ngondjeb, D. Y. (2020) Jaimin R. Vasa (2016)
Lack of awareness	Chandak (2016) Sharma, Gopal et al. (2014) Bahl (2012) Verma, T. L., & Nema, D. K. (2019)(Gupta and Barua,2018)
Exclusive bank loan products for SMEs	Margaret Mutiria (2017)
Demand for green products and services	Ngondjeb, D. Y. (2020) Chattopadhyay (1995), (Gupta and Barua,2018)
Waste management	Cerminara, et al., (2020) Verma, T. L., & Nema, D. K. (2019)
Cost of adoption of GFI	(Wu 2017)( Gupta and Barua,2018)

After reviewing the literature, we can conclude that the key issue that required attention towards technology, innovation, accessibility, availability, and affordability of funding.

### **3. Research Methodology**

#### **3.2 Research Objectives:-**

To investigate the challenges in implementation of Green Finance Initiatives (GFIs) in SMEs

#### **3.4 Research Methods:**

A self-designed questionnaire to collect data. A five-point Likert scale starting from “strongly disagree” to “strongly agree” was used. On a scale of 1 to 5 i.e. Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree. It is economical way of collecting data from a large population (Sekaran, 2003).

#### **3.5 Data Collection Method:-**

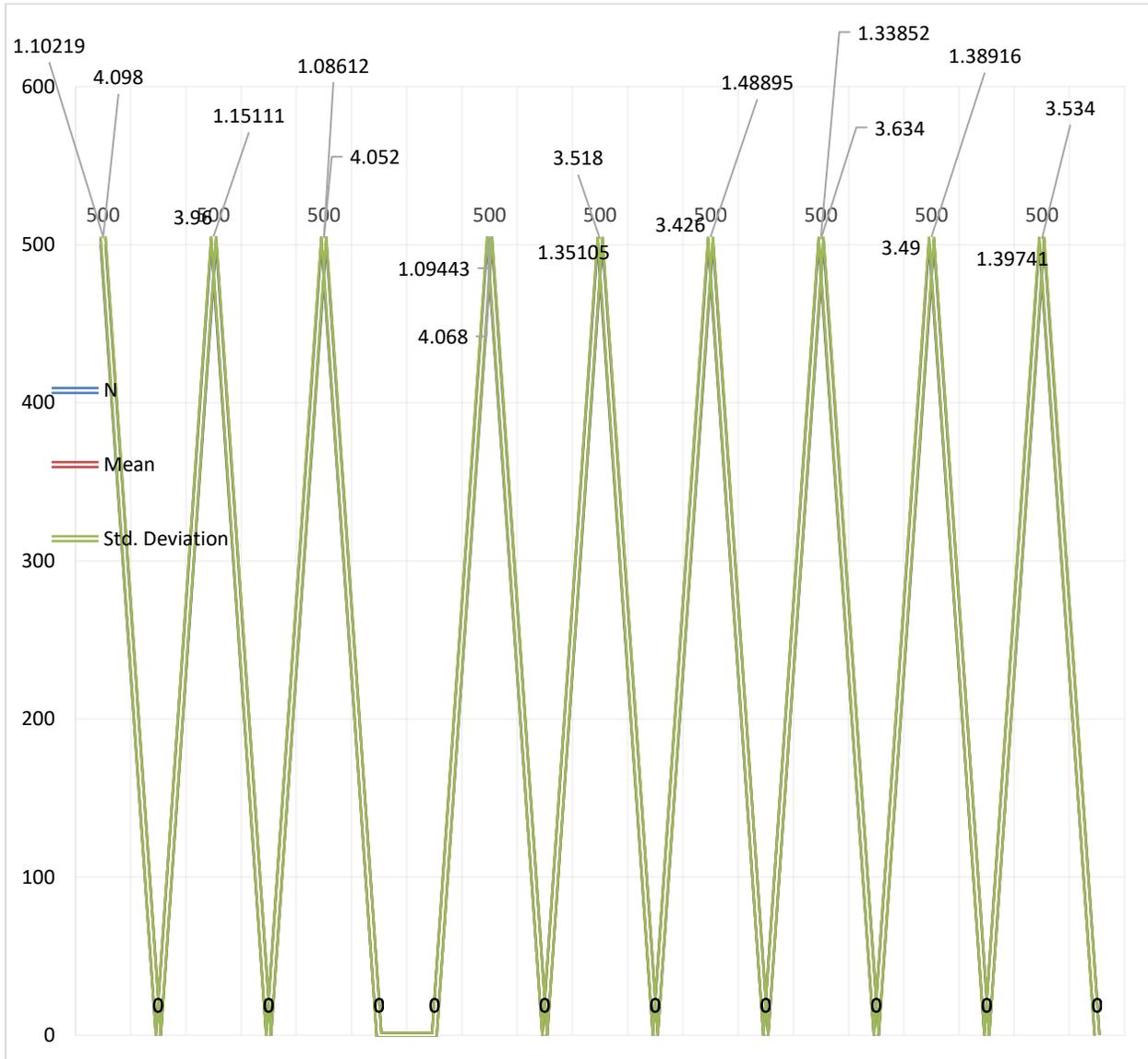
The Sample is taken from SMEs from Haryana state comprising sectors such as food and beverage, textile, electrical and electronics etc. The respondents were senior professionals of the department mainly manufacturing SMEs. The selection of these professionals was based on their knowledge and updated information on green issues and initiatives about their respective organizations.

#### **3.6 Constructs Measure :-**

The construct challenges in the questionnaire was divided into three sub constructs related with government policies, cost and skilled labour. Each sub constructs consists of three variables which elaborates the challenges like whether environmental norms and government policies are supportive or not. Are there sufficient green finance initiatives taken by the government? , whether cost of adopting these initiatives is high? Is their easy availability and affordability of green funds?

### **4. Data Analysis**

As a result of the regulatory environment's lack of support and the lack of clear government policies pertaining to the green finance initiative for SMEs, it has been determined that the fundamental challenges faced by SMEs include very complex environmental norms, a cost issue stemming from the need for additional fees for licences and certifications, and an environmental burden that places a financial burden on small and medium-sized businesses. Additionally, the adoption of the green finance programme requires professional staff, which increases the cost to small and medium-sized businesses. Additionally, it is necessary to provide training in order to develop the skills of the workforce, and this comes at an additional expense. The study's findings showed that, on a scale of 1 to 5, the mean and standard deviation were, on average, 4, indicating that the situation is challenging. The regulatory regime is unsupportive (Mean = 3.96, Standard Deviation = 1.15), there are no clear government policies towards a green finance for small scale enterprises (Mean = 4.05, Standard Deviation = 1.08), the costs of implementing the green finance initiative is so high (Mean = 4.06, Standard Deviation = 1.09), and there are extra costs for due diligence and certification (Mean = 3.51, Standard Deviation = 1.35) Green finance initiative adoption required skilled labourers (Mean = 3.63, Standard Deviation = 1.33), skilled labour cost more to the small scale enterprises (Mean = 3.49, Standard Deviation = 1.38), provide Training and skills to employees generates additional cost (Mean = 3.53, Standard Deviation = 1.39), and providing skills to employees generates additional cost (Mean = 3.53, Standard Deviation = 1.39). Environmental burden imposed financial burden on small scale enterprises (Mean = 3.53, Standard Deviation = 1.39)



**Findings of the study**

The study's findings indicated that the regulatory standards for the environment are sufficiently complex and that the regulatory regime is not helpful. Clear government regulations on green financing for small businesses are lacking. The cost of adopting the green financing initiative is quite high, and there are additional costs for certification and due diligence. This places a financial strain on SMEs owing to the environmental burden. Adoption of the green

finance project required qualified workers, but skilled labour was more expensive for these SMEs since it costs more to train and skill people. Regulative policies, proper support and encouragement to achieve its full potential is important for the expansion of any business. Therefore, policymakers ought to offer the incentive support to make the path to achieve green finance initiatives by SMEs for their long term sustainability and for the overall benefit of economy.

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