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KHADI AND SDGS: EXPLORING ITS POTENTIAL ROLE IN ACHIEVING INDIA'S DEVELOPMENT GOALS

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ABSTRACT
Khadi, the national fabric of India, played an impactful role during the freedom struggle, symbolising India's potential for self-sustenance. Since Independence, despite the growth in production and sales, the sector is underperforming in varied dimensions in comparison to the other textile producers. On the other hand, India, as a developing country has been aspiring to be a front-runner in achieving the United Nations Sustainable Development Goals (SDGs) ranging from poverty alleviation, gender equality to conserving the environment and, nurturing global partnerships. Using secondary data sources, this paper explores how the expansion of Indian Khadi sector can directly contribute to 10 out of 17 SDGs, and examines the Goal-specific challenges faced by the Khadi artisans and industries in the national arena. By aligning Khadi with SDGs, the paper highlights India's potential to attain the global development goals through promotion of its indigenous industries.

KEYWORDS – *Khadi, Sustainable Development Goals (SDGs), Rural Employment, women empowerment, Sustainability.*

INTRODUCTION
In the Pre-independence era of India, Khadi emerged as a colossal tool to foster self-reliance, national spirit and economic independence especially in rural India. This fabric was popularised by Mahatma Gandhi, through the Khadi movement in 1918 to empower the rural economy and revive its indigenous practices. This movement served dual purpose, as it supported the nation to boycott the imported British goods, while promoted self-sufficiency through mass employment generation in the rural areas. To promote Khadi production and sales, All India Spinners Association was established in 1925.

In the Post-Independence era, the Khadi and Village Industries Commission (KVIC) was established as a statutory body under the ministry of Agro and rural industries through Khadi and Village industries Commission Act of 1956. Later, KVIC was merged with Ministry of Micro, Small and Medium enterprises in 2007 to strengthen its role in promoting rural industries and development. Each state in India has its own Khadi and Village Industries Board (KVIB) that operates under the KVIC and are responsible for promoting and regulating Khadi industries of their respective states. KVIBs are responsible for implementing the policies and programmes formulated by KVIC, coordinating with banks for financial aid, subsidies and credit assistance to the artisans, and managing the state production clusters of Khadi.

India and Sustainable Development Goals
Sustainable Development Goals (SDGs) are a set of 17 interlinked goals focusing on the economic, social and environmental sustainability, adopted by the 193 member countries of United Nations in 2015. The SDGs are established on the basis of five principles - People, Planet, prosperity, Peace and Partnership and are evaluated using 169 targets and 247 indicators.

According to SDG report 2024, India ranks 109th out of 166 countries with a score of 63.99. The report highlights that India is on track to achieving SDG 1 (No Poverty) and SDG 4 (Quality Education)**.** The country is showing moderate improvement in SDG 3 (Good Health and Well-being), SDG 5 (Gender Equality), SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), SDG 8 (Decent Work and Economic Growth), SDG 9 (Sector, Innovation, and Infrastructure), SDG 14 (Life below Water), and SDG 17 (Partnerships for the Goals)**.** However, India is stagnated in SDG 2 (Zero Hunger), SDG 10 (Reduced Inequalities), SDG 12 (Responsible Consumption and Production), SDG 15 (Life on Land), and SDG 16 (Peace, Justice, and Strong Institutions)**,** and is regressing in SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Action)**.** (*Sustainable Development Report 2024*, n.d.).

REVIEW OF LITERATURE
Gandhi's constructive 18-point programme and SDGs share the same core values with a strong emphasis on economic, social and ecological well-being. Gandhi's aim of communal unity, village sanitation, Khadi, Social inclusion and economic equality are similar to the SDGs framed for improving all the development aspects of a country (Babu & Baby, 2023)**.** MSMEs can directly influence SDG achievement through their potential to create employment, uplift people out of poverty, can provide health care and educational services, can create inclusive environment by bridging gender gap through empowerment, promote international relations through trade and innovation, can adopt sustainable business practices and

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can promote good governance principles for the country (Sobir, 2020). In Khadi and Village industries, the author identifies that between the years 2018-22, growth in production has been the highest in 2021 and growth in sales was the highest in the year 2019. The employment generation by KVIC has been gradually rising every year. (Saravanan & Selvan, 2024). The global shift in the consumer's pattern in clothing as the majority of millennials and Gen Z are willing to pay more for sustainable products is a potential opportunity for the growth of Indian Khadi sector (Nautiyal & Atre, 2020).

Thus, the review of past literature highlight that Gandhian ideologies share similar values with SDGs and with conscious efforts the Indian Khadi sector can contribute for greater good of the economy.

OBJECTIVES

1. To assess the potential of Khadi sector in contributing to India's SDGs
2. To identify the key challenges of the Khadi sector in context of India's SDGs

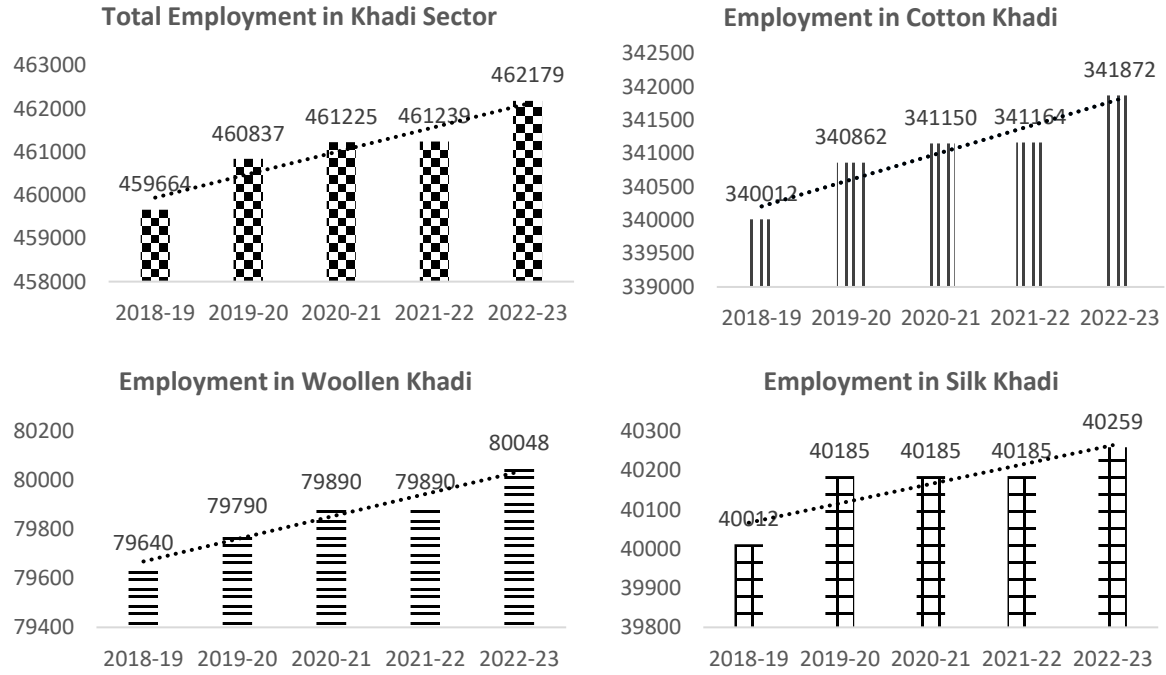
METHODOLOGY

The study adopts a descriptive research approach to explain the potential of the Indian Khadi sector in contributing to the SDGs of India. Thus, the paper is based on secondary sources of data published in the Khadi and Village Industries Commission (KVIC) reports, SDG reports, Ministry of MSME website and reputed journals for the period between 2018 - 2023 to provide insights about the current scenario of the Indian Khadi sector.

Khadi Sector in India

The Khadi sector affects multiple spheres of the country including employment generation in the rural areas, promoting eco-friendly production techniques and in creating a gender inclusive rural empowerment in the country. Thus, the sector has the potential to foster inclusive and sustainable growth in the country. The following are the components of Indian Khadi sector that can contribute to the various SDGs of India.

Fig 1: Employment pattern in Khadi sector (2018-23)

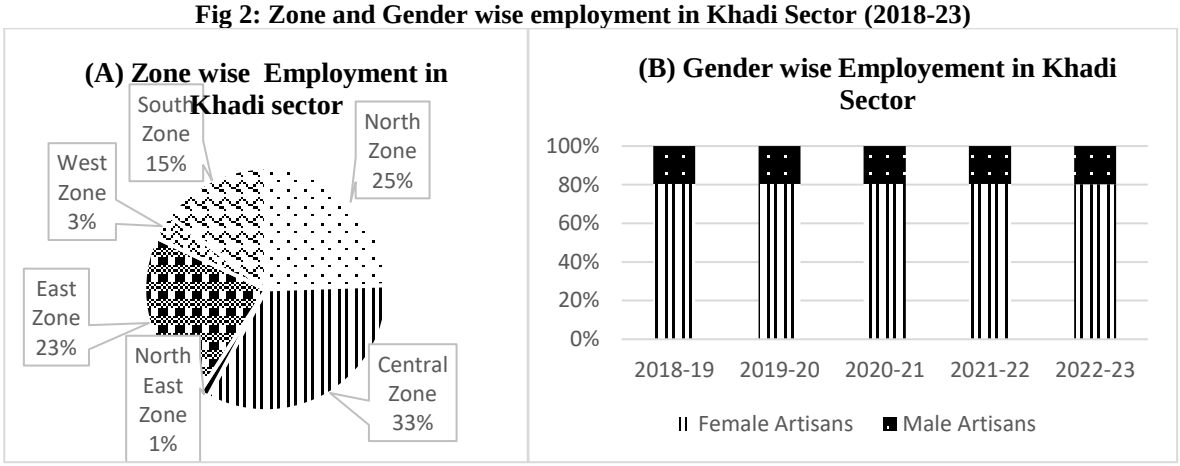


Source: Author's compilation based on KVIC reports 2018-23

Fig 1 shows the employment trends between 2018-2023 across various Khadi sectors where, despite the rising trend, the rate of growth is minimal. The Khadi sector sustains over 4.6 lakh jobs, primarily in cotton (74%), woollen (17%), and silk (9%) Khadi.

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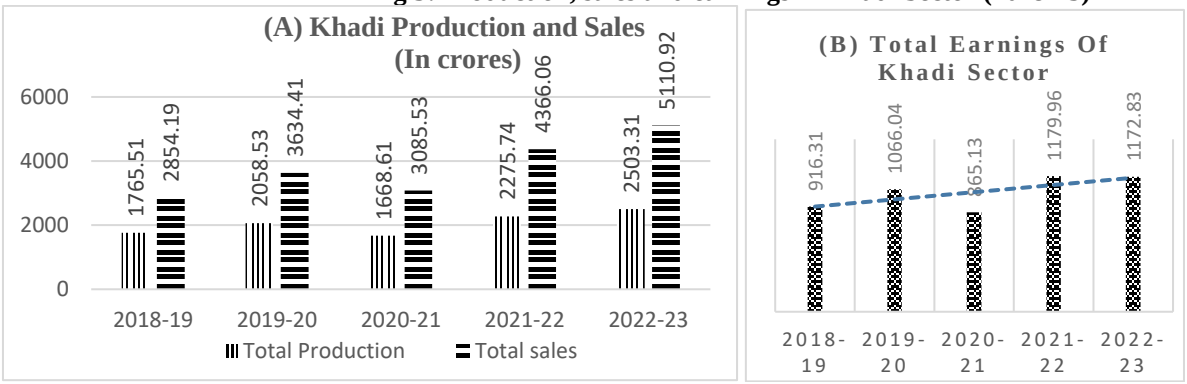
Fig 2: Zone and Gender wise employment in Khadi Sector (2018-23)



Source: Author's compilation based on KVIC reports 2018-23

Fig 2(A) shows that the central zone comprising of Uttar Pradesh, Uttarakhand, Chhattisgarh and Madhya Pradesh contributes maximum (33%) in Khadi employment, and North East Zone comprising of states like Assam, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Meghalaya and Tripura has the lowest (1%) Khadi employment. It can be inferred that states with highest rural population like Uttar Pradesh, Bihar (Census, 2011) have large workforce engaged in Khadi sector emphasising Khadi's potential to penetrate into the rural economy and to foster inclusive and equitable growth opportunities for all regions. Fig 2 (B) shows that the Khadi sector is a significant employer of Women as 80 % of the Khadi workers are women in India.

Fig 3: Production, sales and earnings in Khadi Sector (2018-23)



Source: Author's compilation based on KVIC reports 2018-23

Fig 3(A) shows that value of production and sales in crores, which have increased consistently over the years, indicating a rising demand for Khadi. The sales value being higher than production indicates market expansion and consumer interest in the Khadi sector. Fig 3(B) shows that earnings of Khadi sector is in a rising trend, with peak in 2019-20, fall in 2020-21 due to pandemic disruptions, followed by a strong recovery in 2021-22.

Production Practices of Khadi

Energy Consumption - A study conducted to analyse the production stages of Khadi fabrics, highlights that the energy demand in handwoven fabric is 97.6 MJ/kg, whereas the mill woven cotton uses 170.5MJ/kg. Similarly, water usage in different stages of fabric production highlights that the use phase has the highest water consumption, followed by cultivation and garment processing (Bhalla, Kumar, & Rangaswamy, 2018).

Carbon Footprint - In a study, conducted to assess the environmental impact of Khadi production, the authors calculated the carbon footprint across different production stages of Khadi and identified that the carbon footprint of cotton Khadi during spinning one Kg cotton releases 0.02 of Carbon dioxide (CO_2) equivalent and weaving one metre releases 0.01 of CO_2 equivalent. This is inferred to be minimal in comparison to the mill woven fabrics. Further, the study states that there are no air pollutants or toxins released or involved during the fabric production (Gupta, Rastogi, & Mathur, 2021).

Adoption of Solar Charkhas - KVIC has also introduced solar powered charkhas and looms in various clusters in Uttar Pradesh, Bihar, West Bengal, Gujarat, Andhra Pradesh and Tamil Nadu. The fabric woven in solar charkhas are termed as **solarvastra**. This technique can help in reducing the dependency on non-renewable energy sources and can reduce the sector's carbon footprint. (KVIC, 2020-21)

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Potential of the Khadi sector in contributing to the SDGs of India

From the above data, we can infer that the nature of Khadi employment, its composition and production practices has the potential to contribute to the following SDGs

- **SDG 1 (No poverty)** - India suffers with 25.7% of rural poverty (Commission, 2011). A well-structured Khadi sector has the potential to empower the poverty-stricken regions of the country by generating large-scale rural employment and financial stability, which will in turn contribute to the poverty alleviation in rural areas.
- **SDG 5 (Gender equality)** – With a significant portion of women employed (80%) in Khadi sector, the Khadi sector plays a crucial role in promoting gender inclusive growth and participation in the economic activities. By providing large employment opportunities, Khadi has the potential to promote economic independence and improve the social status of women in the rural areas.
- **SDG 6 (Clean water)** – Khadi production consumes comparatively less water than the other textile industries, making Khadi a sustainable choice of clothing. This helps in reducing the stress on exisitng water bodies and preserving freshwater resources.
- **SDG 7 (Affordable and Clean energy)** –The adoption of Solar powered production practices as observed in solarvastra has the potential to promote renewable energy integration into the textile sector. This reduces dependence on conventional energy sources, and help in transforming the energy consumption pattern of the country.
- **SDG 8 (Decent work and Economic growth)** – The Khadi sector plays a vital role in promoting sustainable livelihood in rural areas by ensuring steady income and employment. A strong Khadi sector can build an inclusive economy and foster economic growth.
- **SDG 10 (Reducing inequalities)** –By creating job opportunities in rural areas, the Khadi sector has the potential to reduce urban-rural migration in search of employment and strengthen the rural economy. By empowering the economically weaker sections of rural areas, the sector can create a well-balanced economic landscape across regions.
- **SDG 12 (Responsible consumption and production)** – The eco-friendly production practices of Khadi minimises waste and reduces environmental impact. By emphasising on organic dyes and water efficient methods, the sector has the potential to encourage conscious consumption, and long term environmental benefits for the country.
- **SDG 13 (Climate action)** – As discussed in the above sections, Khadi sector releases relatively low carbon footprint due to its indigenous production process. These practices help in reducing overall carbon emission of the whole sector, thus making Khadi a climate friendly alternative to the other textile fabrics. (Writer, 2023)

Further implications of a well-developed Indian Khadi sector on SDGs

- **SDG 9 (Sector, innovation and infrastructure)** – A Strong Khadi sector can strengthen small-scale industries and encourage technological innovation in the indigenous textile practices. This will help in developing a sustainable textile sector that supports rural artisans, promotes self-reliance, and integrates traditional practices with technology, contributing to rapid industrial growth in India.
- **SDG 17 (Partnership for goals)** – A strong Khadi sector can boost international trade through quality Khadi exports, creating trade partnerships between nations. Expanding Khadi production and improving in designs and quality can attract global sustainable fashion brands, enhancing India's export potential. For instance, an American brand Patagonia, collaborated with KVIC through Arvind mills in 2020, for the purchase of Khadi denim fabric for Rs. 1.08 crore, which generated 1.80 lakh hours of employment for the artisans. The same brand placed another order in 2021, highlighting Khadi's global appeal and its potential to create international partnerships.

Out of 17 SDGs, Indian Khadi sector can directly influence eight SDGs, which upon attainment, may further create a ripple effect, leading to indirect improvement of the remaining SDGs. Further, a well-established Khadi sector can contribute to two more SDGs, highlighting how the sustainable development can be achieved by integrating the global goals with our indigenous practices.

Key Challenges of the Khadi Sector in context of SDGs

To achieve SDGs through Khadi, the policy makers must realise the following goal-specific challenges faced by artisans and the sector in context of SDGs,

1. **In achieving SDG 1 - Low wages and lack of awareness on government initiatives-** Despite the labour intensive nature of Khadi production, the artisans earn low and irregular wages as minimum as Rs.150-200 per day, making it difficult to sustain a livelihood. This is lower than the wages in other textile sectors. (Babu, 2019). Further, Many artisans from remote rural areas are unaware of existing government initiatives, which prevents them from accessing financial aid, skill development programmes and other opportunities.
2. **In achieving SDG 5 – Financial instability and cultural barriers –** Despite women comprising of 80% of the workforce, their wages remain low and inconsistent, thus widening the gender pay gap and making them financially vulnerable.
3. **In achieving SDG 7 and SDG 13 – Limited solar chakra adoption and funding** – Despite the success of the pilot project on adoption of Solar Charkhas in 2016 in Nawada, the pilot centre was closed in 2019, without any prior notice. The majority of Khadi production clusters still operate using conventional charkhas, limiting the sector's potential to contribute to the energy targets of SDGs.
4. **In achieving SDG 8 – Traditional production processes and struggling livelihoods of artisans –** The handmade production processes makes it difficult to meet market demand, limits productivity and results in a slow process. Khadi artisans earn less than the workers in other textile industries which limits their financial stability. The absence of long-term financial stability and structured career path discourages young artisans to enter the sector.

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For instance, in Andhra Pradesh, the famous Ponduru Khadi sector has been struggling with number of handlooms, falling from 100 to 40 and the weavers dropped from 1500 to 1100 (Babu, 2019).

5. **In achieving SDG 9 – Limited R&D and weak supply chain -** Since Khadi depends on agriculture for its raw materials such as cotton and wool, any disruption in agricultural production, hampers the supply chain of the sector. Further, there is minimal research focus on improving the Khadi production processes, quality and designs, restricting its ability to widen its consumer base.
6. **In achieving SDG 12 –high production costs, dependence on government subsidies and consumption difficulties** - The Khadi sector faces intense competition from other power loom fabrics, as they are more affordable due to their advanced machinery and mass production techniques that lowers their production cost. The heavy dependence of the sector on government subsidies and financial assistance creates a long-term vulnerability, as the sector may struggle to survive, if the government funds are restricted in the future. For consumers, high prices, high maintenance requirements of the fabric, limited designs and scarcity of Khadi retail stores are barriers to purchasing Khadi. Additionally, while other fabrics are marketed as trendy and fashionable clothing, Khadi is perceived as a traditional and outdated, limiting its competitiveness in both domestic and global markets.
7. **In achieving SDG 17 – Ineffective branding and limited global reach -** Despite its historical significance, Khadi continues to struggle in capturing and retaining a significant market share primarily due to the lack of a strong brand identity, absence of global quality assurances, lack of innovative designs, and limited access to the markets.

Policy Recommendations

The following strategic actions are recommended to overcome the barriers of Khadi sector and to contribute to the specific goals of sustainable development,

1. **Creation of Sustained Demand –** One of the major challenges of Khadi is the lack of consistent demand. Thus to provide the initial big push, the government must mandate Khadi as the uniform for all the government employees, bureaucrats and politicians to create sustained demand and to attract more artisans to take up Khadi production.
2. **Rebranding and Repositioning –** A brand identity emphasising on Khadi's sustainable and eco-friendly production must be built, to position Khadi as a high value, luxury brand in the market and to promote conscious buying among consumers.
3. **Acquiring Global quality certifications and export promotion –**Government must assist the sector in procuring global quality certifications, to easily promote and export Khadi in markets like Japan and Europe. Additionally, export hubs should be set up to assist the local artisans to access the international markets.
4. **Specialised Khadi markets and promotion boards –** Setting up of specialised Khadi markets can help the artisans directly connect with the consumers. Khadi Promotion boards must be set up to promote visibility and improve sales through attractive advertisements campaigns, international exhibitions, and fashion shows.
5. **Updating Production technology and innovation** –The government must invest in research and innovation related to Khadi's production efficiency, design and fabric patterns in order to expand its market and improve its technical efficiency.
6. **Setting up of Khadi Economic Zones** – Establishing Khadi Economic Zones near the production sites will ensure an uninterrupted supply chain by integrating production, marketing and markets at the same place. These zones can create rural employment and can improve the livelihoods of the neighbouring districts. Additionally these zones can act as the pilot projects for promoting renewable production technologies like the Solar Charkha mission and can transform the sector into a globally competitive one.
7. **Establishing a strong digital presence through E-Commerce and E-marketing** – The Khadi promotion board must actively promote Khadi through online websites and through partnerships with major online e-commerce companies like Amazon, Myntra and Flipkart to expand its consumer base.

Further Scope of study

The current study provides a macro level perspective on Khadi's role in contributing to SDGs. The future studies can study in detail at a micro level, on how Khadi Sector can contribute to each SDG and can develop frameworks to promote the achievement of SDGs through Indian traditional industries like Khadi.

CONCLUSION

The Khadi sector holds immense potential to create rural employment, poverty alleviation and economic growth, through its traditional eco-friendly sustainable practice of production. Its minimal impact on the environment and efficient resource utilisation makes it not only beneficial for the current scenario but also crucial for the future. However, to realise its optimum potential, the sector must overcome its existing challenges in all dimensions.

It is crucial for the Khadi sector, to position itself effectively in the modern market. Adopting advanced production techniques while preserving the traditional essence, improving the marketing strategies to widen its consumer base, innovations in designs, pattern and quality improvement are essential to attract global demand and investors. Additionally, Government must regulate the implementation of the policies through appropriate accounting mechanisms and setting up of specialised Khadi support organisations to create a conducive environment for the growth of Indian Khadi sector. With a combined effort of innovation, strong institutional support, and policy reforms, Khadi can emerge as a resilient, sustainable and green sector, contributing its fullest to the Global sustainable goals and promoting a self-reliant India for the future.

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