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**INDIAN KNOWLEDGE SYSTEMS (IKS) AND MSME DEVELOPMENT: A PATHWAY TO SUSTAINABLE ECONOMIC GROWTH IN INDIA**

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**ABSTRACT**

*Indian Knowledge Systems (IKS) represent the indigenous knowledge traditions rooted in India's civilizational heritage, encompassing traditional crafts, agriculture, medicine, architecture, metallurgy, and community-based enterprises. Micro, Small, and Medium Enterprises (MSMEs) play a critical role in India's economic development by contributing to employment, exports, and industrial output. This paper explores the integration of Indian Knowledge Systems with MSME development as a strategic pathway for sustainable growth, self-reliance (Atmanirbhar Bharat), and cultural preservation. It examines policy frameworks, economic contributions, challenges, and opportunities while highlighting case examples from traditional industries such as Ayurveda, handloom, handicrafts, and village industries. The study concludes that strengthening IKS-driven MSMEs can enhance innovation, rural employment, global competitiveness, and inclusive growth.*

**Keywords:** Indian Knowledge Systems, MSME, traditional knowledge, sustainable development, Atmanirbhar Bharat, rural entrepreneurship

**1. INTRODUCTION**

India's economic development has long been supported by its vibrant traditional industries and knowledge systems. Indian Knowledge Systems (IKS) include centuries-old practices in medicine, agriculture, textile production, metallurgy, architecture, water management, and artisanal crafts.

The Micro, Small, and Medium Enterprises (MSMEs) sector is regulated by the Ministry of Micro, Small and Medium Enterprises and constitutes the backbone of India's industrial economy. According to government estimates, MSMEs contribute approximately 30% to India's GDP and generate significant employment, particularly in rural and semi-urban areas.

The integration of IKS into MSME development provides a sustainable model that combines tradition with modern entrepreneurship.

**2. CONCEPTUAL FRAMEWORK****2.1 Indian Knowledge Systems (IKS)**

Indian Knowledge Systems refer to indigenous scientific, technological, and cultural knowledge developed over thousands of years. These include:

- Ayurveda and traditional medicine
- Handloom and handicrafts
- Traditional agriculture and organic farming
- Vastu Shastra and traditional architecture
- Metallurgy and temple construction
- Water harvesting systems

Institutions such as Indian Council of Agricultural Research and the Ministry of Education have initiated programs to integrate IKS into modern curricula and innovation frameworks.

**2.2 MSME Sector in India**

The MSME sector in India includes manufacturing and service enterprises classified based on investment and turnover. Policy support is provided under the MSME Development Act, 2006.

**Major institutions supporting MSMEs include:**

- Khadi and Village Industries Commission
- National Small Industries Corporation
- Small Industries Development Bank of India

These institutions promote traditional industries, credit access, marketing, and technology upgrades.

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### 3. LINKAGES BETWEEN IKS AND MSME DEVELOPMENT

#### 3.1 Traditional Industries as MSMEs

**Many MSMEs are directly rooted in IKS:**

- Khadi and handloom industries
- Ayurveda-based pharmaceutical units
- Traditional pottery and metal crafts
- Bamboo and cane industries
- Tribal forest-based enterprises

For example, the Khadi and Village Industries Commission has revitalized khadi production through modernization and digital marketing initiatives.

#### 3.2 Employment Generation

**IKS-based MSMEs are labor-intensive and promote rural employment. They:**

- Reduce rural-urban migration
- Empower women entrepreneurs
- Preserve traditional skills

These enterprises contribute significantly to inclusive development.

#### 3.3 Sustainable and Eco-Friendly Production

**Traditional knowledge systems emphasize:**

- Use of natural raw materials
- Low carbon footprint
- Circular economy practices

For example, Ayurveda industries regulated by the Ministry of AYUSH promote plant-based medicine and sustainable harvesting.

#### 3.4 Cultural Preservation and Global Branding

IKS-based MSMEs enhance India's soft power and export potential. Products such as yoga accessories, Ayurvedic products, handicrafts, and handloom textiles have global demand.

India's Geographical Indication (GI) tagging further protects traditional products like Banarasi silk and Kanchipuram sarees.

### 4. GOVERNMENT INITIATIVES SUPPORTING IKS-BASED MSMEs

#### 4.1 Atmanirbhar Bharat Abhiyan

The Atmanirbhar Bharat initiative promotes local manufacturing and traditional industries through financial packages and reforms.

#### 4.2 Make in India

Launched by the Government of India, Make in India supports manufacturing-based MSMEs, including traditional sectors.

#### 4.3 ODOP (One District One Product)

The One District One Product scheme promotes region-specific traditional industries.

#### 4.4 Digital India and E-commerce Integration

Digital platforms enable traditional MSMEs to access national and global markets through online marketplaces.

### 5. CHALLENGES IN INTEGRATING IKS WITH MSMEs

**Despite the potential, several challenges exist:**

1. Lack of modernization and technology integration
2. Limited access to credit
3. Intellectual Property Rights (IPR) concerns

4. Poor market linkages
5. Skill gaps among artisans
6. Competition from mass-produced goods

Protection of traditional knowledge through documentation and patents remains critical.

## 6. CASE STUDIES

### 6.1 Khadi Sector

Under the Khadi and Village Industries Commission, khadi production has expanded significantly, generating rural employment and increasing exports.

### 6.2 Ayurveda MSMEs

With support from the Ministry of AYUSH, Ayurveda-based MSMEs have grown in domestic and international markets.

### 6.3 Handloom Industry

India's handloom sector remains one of the largest cottage industries, sustaining millions of weavers.

### 6.1 Khadi Sector

The Khadi sector represents one of the most significant examples of Indian Knowledge Systems (IKS) integrated into the Micro, Small, and Medium Enterprises (MSME) ecosystem. Rooted in India's freedom movement and popularized by Mahatma Gandhi, khadi symbolizes self-reliance, sustainability, and decentralized rural production. Today, it functions as a structured MSME-driven rural industry supported by the Khadi and Village Industries Commission (KVIC) under the Ministry of Micro, Small and Medium Enterprises.

#### 6.1.1 Historical Background and IKS Foundation

Khadi is hand-spun and handwoven fabric made primarily from cotton, silk, or wool. The production process is embedded in traditional spinning (charkha) and weaving techniques, representing indigenous knowledge in:

- Fiber processing
- Natural dyeing
- Manual spinning technology
- Community-based cooperative production

Unlike industrial textile production, khadi relies on decentralized village-level artisans, reflecting Gandhian economic philosophy of "production by the masses."

#### 6.1.2 Economic Performance and Statistical Overview

The khadi sector has witnessed significant growth in recent years.

**Table 6.1:** Khadi Sector Performance (Recent Years)

Indicator	Value
Total KVIC Sales (2022–23)	₹1.34 lakh crore (approx.)
Khadi Production Growth	~20% annual growth (recent years)
Employment Generated	Over 4.9 million persons
Women Participation	Over 50% workforce
Village Industries Share	Majority rural-based units

*Source: KVIC Annual Reports & MSME Ministry Data*

Notably, khadi sales have grown substantially due to branding initiatives, digital marketing, and government promotion campaigns. The sector recorded historic sales growth post-2015 due to modernization strategies

#### 6.1.3 Employment and Women Empowerment

**Khadi is one of the largest rural employment generators in India's traditional industries. The sector:**

- Employs approximately 49 lakh individuals
- Has strong female participation (especially in spinning)
- Promotes home-based and flexible employment

This supports **Hypothesis H1**, as khadi-based MSMEs show high employment intensity compared to capital-intensive industries.

Women constitute a majority of spinners, contributing significantly to rural household income. However, managerial and ownership roles still require policy strengthening.

#### **6.1.4 Sustainability and Environmental Advantage**

**The khadi sector aligns with global sustainability goals due to:**

- Minimal electricity usage
- Low carbon footprint
- Natural fibers and eco-friendly dyes
- Water conservation in traditional processes

Studies show that khadi production consumes significantly less energy compared to mill-made cloth, making it a sustainable textile alternative.

This reinforces the role of IKS in promoting environmentally responsible MSME development.

#### **6.1.5 Export Potential and Branding**

**Khadi products now include:**

- Apparel and garments
- Herbal cosmetics
- Handmade soaps
- Leather goods
- Honey and village industry products

The “Khadi India” brand has expanded into global markets, supporting **Hypothesis H2** regarding export potential of IKS-based MSMEs.

Modern marketing initiatives include:

- Online platforms
- Fashion collaborations
- Youth-targeted branding campaigns

#### **6.1.6 Government Support Mechanisms**

**The khadi sector is supported by:**

- Prime Minister’s Employment Generation Programme (PMEGP)
- Interest Subsidy Eligibility Certificate Scheme (ISEC)
- Skill development programs
- Marketing Development Assistance (MDA)

These interventions aim to modernize traditional production without compromising authenticity.

#### **6.1.7 Challenges in the Khadi Sector**

**Despite growth, the sector faces several constraints:**

1. Competition from powerloom and synthetic textiles
2. Raw material price volatility
3. Limited technology adoption
4. Aging artisan population
5. Branding perception issues among youth

Addressing these challenges requires technological integration while preserving traditional craftsmanship.

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**6.1.8 Role of Khadi in Atmanirbhar Bharat**

Khadi embodies the principles of self-reliance promoted under Atmanirbhar Bharat. By strengthening rural supply chains and encouraging local production, it reduces dependency on imports and supports decentralized economic growth.

**6.1.9 Analytical Insights**

**The khadi sector demonstrates:**

- High employment elasticity
- Strong women participation
- Sustainable production practices
- Strong policy backing

Empirical observations indicate that khadi-based MSMEs perform better in rural employment generation compared to non-IKS industrial MSMEs, partially validating the research hypotheses.

**Conclusion of Section 6.1**

The khadi sector stands as a model of how Indian Knowledge Systems can be successfully institutionalized within the MSME framework. It combines heritage, sustainability, women empowerment, and rural entrepreneurship. Strengthening technological innovation, improving market access, and enhancing youth engagement can further amplify its impact on India's inclusive economic growth.

**Policy Recommendations**

1. Establish IKS innovation clusters linked with MSMEs.
2. Increase funding for research and development in traditional industries.
3. Provide digital literacy and e-commerce training to artisans.
4. Strengthen GI tagging and intellectual property protection.
5. Promote public-private partnerships for global branding.
6. Introduce IKS-focused incubation centers in universities.

**8. CONCLUSION**

The integration of Indian Knowledge Systems with MSME development presents a transformative model for sustainable and inclusive economic growth. By combining tradition with innovation, India can strengthen rural entrepreneurship, preserve cultural heritage, enhance exports, and achieve self-reliance. Policymakers, academic institutions, and industry stakeholders must collaborate to harness the full potential of IKS-based MSMEs. This synergy can position India as a global leader in sustainable and culturally rooted economic development.

**REFERENCES**

- Ministry of Micro, Small and Medium Enterprises (Annual Reports)
- Ministry of AYUSH Reports
- Government of India Economic Survey
- MSME Development Act, 2006
- ICAR Publications