

From Traditional Artisans to Modern Entrepreneurs: Unlocking the Value Chain in the Indian Footwear Industry

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Abstract: The handcrafted footwear industry of India is undergoing a historic transformation in its organization, which includes famous footwear craft clusters such as Kolhapuri belt (Maharashtra and Karnataka), Mojari and Jutti (Rajasthan and Punjab), huge leather craftsman complexes in Ambur, Kanpur and Agra. The traditional footwear making artisans who are trapped in unorganized supply chain, unequal access to markets, informal debt traps with high interest rates and with a lack of adequate sizing and ergonomic features are fast becoming self-directed micro, small and medium scale entrepreneurs (MSMEs). Within this extensive research monograph, a multi-faceted investigation into this transition is given. It highlights the direct-to-consumer (D2C) e-commerce, public credit interventions for targeted categories (MUDRA, PM-Vishwakarma, SFURTI), collaborations for design modernization with the top institutes (NIFT, FDDI, CFTIs) and cash-flow underwriting through the fintech mechanisms. The study gives a detailed map for scaling up ALD entrepreneurship in all parts of India, with detailed cluster-by-cluster case studies, comparative value-chain mapping, socio-economic impact indicators, operational bottleneck diagnostic tools and an action oriented 10-point policy road map.

Keywords: Indian footwear industry, traditional artisans, entrepreneurs, value chain, MSMEs, innovation, skill development, market access, sustainability, and digital transformation.

1. Macroeconomic Overview and Industrial Context

The Indian footwear industry is undoubtedly one of the key sectors in the Indian manufacturing industry and has carved a strong niche in the global market. India is the second largest footwear producing country in the world after China. Indian manufacturing clusters account for around 13% of the total world footwear production and are responsible for the production of 2.2 billion to 2.4 billion pairs of footwear every year. The sector has great socio-economic value with a very high level of labour intensity with estimates of more than 4.5 million livelihoods (direct and indirect) supported by the sector in the country, which for a large proportion, are of those belonging to the marginalised rural communities, women and the traditional artisan households.

Nevertheless, despite all these impressive macroeconomic numbers, there has always been a very fundamental dichotomy in the Indian footwear market. At one extreme is the corporate sector, organized and capital-intensive, with automated lasting machines and imports of synthetic leather, and established retail chains that are geared towards primarily urban middle class and export markets. At the other end is the large, dispersed and greatly divided informal artisanal market. In the informal sector, there are thousands of cottage workshops ('karkhanas') and home-based units making footwear, which is an occupational craft inherited from ancestors and is skill intensive and is practised by certain social groups, particularly the Charmakar community and certain leather working occupational guilds.

These local craft footwear styles that use vegetable tanned leather from Maharashtra and Karnataka (Kolhapuri chappal, oil treated leather), hand embroidered leather in metallic threads from Rajasthan and Punjab (Mojaris, Juttis) and hand stitched leather upper structures from Agra and Kanpur are an uncommon fusion of culture, utility and the use of local resources. During most of the period since Independence, however, this rich craft heritage did not manifest itself in economic gains for the craftsmen. Artisans continued in their chronic-poor status and were

producers who took prices and were employed through local raw material suppliers, wholesale commission agents and merchants.

But in the previous decade (2015-2026), a new realignment has been developing. Today's footwear artisan has a complex range of challenges to face, given the rapid technological democratization, the omnipresent mobile internet, e-commerce logistics networks, the revamped institutional credit system, and the design modernization. The understanding of the mechanism, triggers, obstacles and future effects of this change are crucial for developing sound industrial development and rural development policies.

2. Geographical Topography and Micro-Ecosystems of Major Clusters

To grasp the multiple layers of the artisan-to-entrepreneur shift, the focus has to shift towards the micro-ecosystems of India's key footwear clusters, both geographical and material and cultural. The production practices of each cluster are unique in terms of methods, inputs, gender relationships and structural challenges:

2.1 The Agra Leather Footwear Cluster (Uttar Pradesh)

Agra is a well-known name as one of the biggest home based footwear manufacturing centres in Asia. The cluster sells more than 65% of the domestic leather footwear in India and exports almost 28-30% of the leather footwear from India. More than 10000 micro-units of the informal sector and 'cottage karkhanas' work out of the densely populated neighborhoods like Hing Ki Mandi, Shahganj and Jagdishpura of Agra. In the past, Hing Ki Mandi served as the main physical daily trading centre where master artisans would take their finished shoe upper and/or complete shoes to sell at extremely high pressure from the trader-middlemen. The cluster focuses on leather formal shoes, boots and upper assembly, which has a high level of skill for hand-lasting, upper stitching and sole attachment.

2.2 The Kolhapuri Belt (Maharashtra & Northern Karnataka)

This cluster is famous for the famous brand 'Kolhapuri Chappal,' a product which got joint Geographical Indication (GI) tag in eight districts in Maharashtra and Karnataka and is a product of the Kolhapur, Sangli, Solapur districts of Maharashtra and Athani, Nipani, Belagavi districts of Karnataka. The cluster's production is very artisanal and rural. In Kolhapuri traditional shoes are made exclusively with the heavy vegetable tanned leather (the leather is tanned using babool bark and myrobalan nuts) and there is no metal nail or synthetic adhesive used in the shoe. All the pieces are secured by elaborate leather thong stitching, hand-braided straps, and coated with sesame oil to make them flexible and have rich terracotta colors. The cluster is largely dependent on the family labour of the house, the women performing the very complex upper braiding and the men doing the heavy work of lasting and making the sole.

2.3 The Rajasthan Mojari and Punjab Jutti Clusters

The clusters are widely spread across Jaipur, Jodhpur, Nagaur and Jformat oriented villages in Rajasthan with Patiala, Abohar and Muktsar in Punjab; they are known for royal handcrafted footwear with colorful linings in textiles and velvets, and intricate embroidery of Zari (gold/silver metallic thread), beads and mirror work. The production model is very decentralised, with male artisans building the leather base/sole in the workshop, and female artisans creating embroidery at home, following instructions and forms sent by the female artisans in the hub. Traditionally the main concern of these clusters has been fit standardization (without distinction of left and right foot) due to the symmetrical construction of traditional Mojaris and Juttis.

2.4 The Kanpur, Chennai, and Ambur Industrial-Artisanal Interlinks

The traditional leather craftsman meets large scale tannery and export infrastructure in big industrial leather centres like Kanpur (Uttar Pradesh) and in the Chennai-Ambur-Vaniyambadi belt in Tamil Nadu. These centres have high-tech automated factories, but the export factories are closely dependent on informal networks of artisan sub-contractors for labour-intensive, high-value processing and finishing tasks like hand-patina colouring, welt-

stitching, complex hand-weaving and moccasin stitching. This is a big opportunity for industrial upgrading to help these sub-contracted artisans become independent micro business enterprises.

3. Historical Value-Chain Exploitation and Structural Vulnerabilities

A rigorous analytical framework requires examining the chronic structural vulnerabilities that historically kept traditional footwear artisans in socio-economic subjugation. The traditional craft ecosystem suffered from severe structural failures across four core axes:

3.1 Extreme Value Disparity and Intermediary Rent-Seeking

Traditional supply chain facilitated the non-producing intermediaries to reap disproportionate benefits in the form of economic surplus. The major artisan made ₹200-400 (6% – 10% of the retail price) for selling a handcrafted leather shoe or good Kolhapuri chappal, which sold in the metropolitan showrooms or export markets for ₹3000-5000. More than 80% of the profit margins were swallowed by multi-layered networks of local traders ('saukars'), wholesale stockists, regional distributors, and retail markups, leaving the primary producer with little or no income left to support basic raw material costs and to live on.

3.2 Raw Material Debt Traps and Asymmetric Credit

As the traditional artisans did not have a liquid working capital and a formal credit line to purchase raw leather, soles, rubber sheets, or adhesives at the wholesale price, they were unable to do so. This was exploited by local raw material traders who were able to provide materials on credit at a premium. In exchange, artisans were compelled into 'buyback agreements' with the material trader which were exclusive, with no negotiation for prices, and the price was determined at the price supplier. This ongoing debt bondage removed any negotiating power from the artisans, and prevented them from building up capital.

3.3 Technological Stagnation, Ergonomic Deficits, and Quality Variance

Artisanal production of footwear was based on crude tools, hand made cutting knives and hand carved wooden lasts whose sizing varied from one workshop to another for generations. It was found that the lack of uniformity of sizing molds resulted in a lot of inconsistencies in size. In addition, traditional handmade footwear typically lacked modern ergonomic attributes, including arch support, cushioned insoles, shock-absorbing EVA midsoles and slip-resistant outsoles. With a growing health-conscious and comfort-based consumer market, these ergonomic shortcomings limited traditional footwear to only special occasions, greatly limiting consumer demand.

3.4 Financial Exclusion, Lack of Collateral, and Informal Usury

Traditional footwear artisans were considered as 'high risk' borrowers or 'un-bankable' by the commercial banks and formal financial institutions in the past. Artisans would not meet the asset-collateral requirements as it is a condition for securing loans in the formal banking system without having their property registered as land, having a formal business registration (GST/Udyam) and financial accounts documented. As a result, when the artisans needed money for raw materials, to fix machinery, or for medical expenses they resorted to informal money-lenders who charged usurious interest ranging from 3% to 5% per month (36% to 60% per year), taking it all from their operations and leaving them without cash-flow.

4. Catalysts of Transformation: Digital Commerce, Policy, and Design

Four macro drivers have converged to drive the transformation from artisan wage work to modern entrepreneurship: digital marketplace infrastructure, institutional credit expansion, design-driven product evolution and cluster development initiatives of the state.

4.1 Democratization of Digital Commerce, ONDC, and D2C Models

The broad proliferation of high-speed internet, digital payments (UPI) and national logistics networks has transformed the access of artisans. Ecommerce platforms such as Amazon, Flipkart, Etsy, and Myntra, and social

media platforms like Instagram Shopping and WhatsApp Business, have helped the artisan workshops reach directly to consumers across the country and the world without involving the regional middlemen entirely.

One of the key steps in this digital transformation is the implementation of Open Network for Digital Commerce (ONDC). The ONDC will enable small cluster micro enterprises to register on a single platform and get access to all buyer apps without paying the crippling 25% – 35% platform commission fees that has been the norm for the legacy e-commerce aggregators. Moreover, the second generation educated artisan youth is creating Direct-to-Consumer (D2C) brands. These D2C brands have built their premium positioning by emphasizing on the vegetable tanning, zero chemical processes and heritage craftsmanship involved in the making of handmade leather products, commanding price points in the range of ₹2,500 to ₹7,500 per pair with 40% to 50% net operating margins.

4.2 Institutional Credit Architecture and Public Policy Schemes

Government policy interventions over the past decade have focused on breaking informal debt dependency and injecting formal capital into craft clusters:

The PM Vishwakarma Scheme aims to give traditional artisans such as ‘Charmakars’, shoe-makers, etc., end-to-end support by formalizing their skills, incentivizing them with the use of modern tools amounting to ₹15,000 and providing collateral-free working capital loans of up to ₹3 Lakhs at a reduced interest rate of 5%.

Micro-loans under Pradhan Mantri MUDRA Yojana (PMMY) have distributed billions of rupees in micro-loans under three categories—Shishu (up to ₹50,000), Kishor (up to ₹5 Lakhs), and Tarun (up to ₹10 Lakhs)—directly to small footwear workshops, where artisans have taken micro-loans to purchase motorized sewing machines, leather splitting machinery, and raw material.

SFURTI (Scheme of Fund for Regeneration of Traditional Industries): Organizes the scattered artisans in the form of Producer Companies/Co-operatives and provides funding for establishing Common Facility Centers (CFCs) with heavy machinery that is not accessible to individual artisans.

Indian Footwear and Leather Development Programme (IFLDP): It offers huge assistance to the center government for infrastructure modernization, environmental compliance, tannery effluent management, and mega-footwear cluster development.

4.3 Design Modernization, Ergonomics, and Institutional Collaboration

Institutional tie-ups with top-notch institutes like Footwear Design & Development Institute (FDDI), Central Footwear Training Institutes (CFTIs) and the National Institute of Fashion Technology (NIFT) have brought in an updated approach of design thinking in the traditional clusters. Designed in collaboration with master artisans, these traditional silhouettes are updated to modern times, while retaining their authentic character. Some of the key design features are:

Ergonomic Cushioning Integration: There is high density memory foam, latex foam and shock absorbing EVA cushion in between leather insole and outsole, which eliminates foot fatigue.

Fusion Styling: Mixing handmade Jutti and Mojari upper embroidery with contemporary casual sneaker soles, creating a hybrid footwear that's desired by younger urban customers and worldwide markets.

Sustainable & Non-Leather Vegan Innovations – Train artisans to use eco-friendly vegetable-tanned leathers, cork soles, natural rubber and high-performance plant-based vegan materials (cactus, pineapple leaf and apple leather) to tap in on the growing eco-conscious export markets.

5. Detailed Comparative Analysis Framework

The operational, financial, and structural differences between the legacy artisan model and the emerging artisan-entrepreneur model are synthesized in the comprehensive comparison table below:

Table 1: Comparison of the Traditional Artisan Model and the Emerging Modern Artisan-Entrepreneur Model in the Indian Footwear Value Chain

Operational Dimension	Legacy Traditional Artisan Model	Emerging Modern Artisan-Entrepreneur Model
Value Chain Position	Piece-rate wage laborer / Contracted workshop worker	Independent enterprise owner / D2C Brand operator / Equity holder
Market Access & Reach	Confined to local weekly haats, local traders, wholesale stockists	National e-commerce, ONDC, D2C portals, export agents, social media
Margin Capture	Extremely low margin capture (8%–12% of final retail value)	High value retention (35%–50% net operational profit margin)
Financing & Capital	High-cost informal debt from moneylenders (36%–60% interest)	Institutional credit (MUDRA, PM Vishwakarma, Fintech cash-flow loans)
Manufacturing Tech	100% manual hand cutting, uncalibrated wooden lasts, hand stitching	Precision CAD pattern-making, standardized lasts, CFC motorized machinery
Ergonomics & Quality	Variable dimensions, no arch support, fit inconsistency, unstandardized	Standardized sizing ('Bha'), high-density cushioned insoles, QA checks
Raw Material Sourcing	Purchased in small quantities on credit from local middleman at inflated rates	Bulk procurement directly from tanneries or via Producer Collectives
Branding & IP Control	Unbranded commodity goods; GI tags severely underutilized	Registered brand trademark, GI-certified authentic packaging, QR origin tags
Customer Data Loop	Zero contact with end-consumers; no market feedback	Direct digital customer interaction, real-time feedback, custom orders

6. Micro and Macro Socio-Economic Impact Assessment

The transformation in the structure of wages employment to self-employment has a significant impact on the micro-level economic behaviour of these households, and macro-level rural development:

Empirical evidence from modernizing micro-units in Agra, Kolhapur and Jaipur shows that switching to direct ecommerce and D2C selling can lead to an increase in the net monthly income of the household of 180% to 350%. This capital flow can help families establish asset reserves and avoid getting into generational debt.

Gender Empowerment and Economic Autonomy for Women: In clusters such as Rajasthan (Mojari) and Punjab (Jutti), female artisans historically performed home-based embroidery as uncompensated domestic labor. Under new micro-enterprise structures and SHG Producer Collectives, female craftswomen receive direct electronic payments, establish independent bank accounts, and assume executive leadership roles in enterprise management.

Youth Retention and Counter-Migration: Educated youth in artisan families historically fled traditional footwear manufacturing due to social stigma, poor working conditions, and low financial return. The introduction of digital branding, digital marketing, CAD design, and e-commerce logistics has transformed footwear manufacturing into an attractive high-tech career, reversing rural-to-urban youth distress migration.

Formalization of the Informal Craft Economy: As artisan workshops register on Udyam, obtain GST numbers, and open corporate bank accounts to access e-commerce platforms and government credit schemes, the historically informal craft sector is systematically integrating into India's formal tax and financial architecture.

Preservation of Intangible Cultural Heritage (ICH): By transforming traditional craft skills into lucrative, modern commercial businesses, entrepreneurship provides the strongest incentive for preserving rare, centuries-old techniques—such as natural bag-tanning, hand-thonging, and Zari embroidery—that were previously at risk of extinction.

7. Operational Bottlenecks, Challenges, and Structural Risks

While the entrepreneurial transition is yielding remarkable success stories, systemic operational friction continues to impede widespread scalability across all craft clusters:

Digital Divide and E-Commerce Dashboard Illiteracy: While younger artisans easily navigate smartphone apps, older master artisans—who possess the highest level of craftsmanship—struggle with complex e-commerce order management software, automated inventory tracking, GST invoice compliance, and digital advertising optimization.

High return to origin (RTO) rates in the Online Footwear Retail segment: With return rates from 20% to 28% across the Consumer Goods segment, there is a significant return rate in online footwear retail, mostly due to fit dissatisfaction and sizing issues between different brands. The high reverse logistics cost and damaged packaging greatly empties the meager cash reserves of micro-enterprises.

The Weak Enforcement of Geographical Indication (GI) Protection: Even though the Kolhapuri Chappal is a well-known product, there is low enforcement against unauthorized Kolhapuris. Synthetic PVC/PU products cheaply made by large industrial units clog up the markets of retail outlets and are sold as real handcrafted hand bags at lower price, thereby reducing the price of real artisans.

Strict environmental controls on industrial leather tanneries which demand Zero Liquid Discharge (ZLD) effluent treatment have increased the cost of finished leather production. Micro-workshops, which have no bulk purchasing power, are under pressure from price fluctuations of raw materials and it is squeezing their operating margins.

In the context of Marketplace Payment Cycles, eCommerce marketplaces usually suspend the payment of vendors for 14-21 days after delivery, whereas the local markets have a shorter payment cycle. It causes serious cash shortages for micro-enterprises, which have tight cash flows, in the peak production seasons.

8. Comprehensive 10-Point Policy Roadmap and Actionable Framework

A coordinated, multi-stakeholder approach by policy-makers, industry, institutions, and technology providers is needed to address the challenges of resolving operational constraints and supporting millions of traditional footwear artisans to become high-growth entrepreneurs:

1. **Creation of Cluster ‘Digital Enabling Kiosks’ (DEKs):** Create physical (government supported) facilitation centres in each of the major clusters of footwear (such as Hing Ki Mandi, Agra; Kolhapur, Maharashtra, Jalandhar, Punjab, Jaipur & Jodhpur, Rajasthan, Athani, Karnataka). DEKs should provide free product photography studios, e-commerce cataloging support, inventory digitization, and the help of onboarding ONDC.

2. Nationwide adoption of 'Bha' Sizing Standard: Make 'Bha' lasts available and encourage their use throughout the country, where CSIR-CLRI has developed a foot anthropometric survey to establish the sizing system. When artisanal units are uniformly stocked with 'Bha', it will reduce the rate of returns on the internet by more than 15% and eliminate sizing mismatches.
3. Fintech Cash-Flow Based Revenue Financing: Formulate partnerships between public sector banks, ONDC, and fintech lenders to refinance working capital loans based on verified cash-flow as part of digital sales receipts instead of physical assets known as real estate.
4. Infrastructure Development of Common Facility Centers (CFCs): Double the central funding support for SFURTI and IFLDP schemes to provide all footwear clusters with modern CFCs, which will include high precision CAD/CAM pattern cutting machine, computerized upper stitching machine, automated lasting machine and eco-friendly leather splitting technology.
5. QR-Code GI Authenticity and Traceability Tags: Embed QR-Code tags for authenticity and traceability in all handmade footwear, which are GI certified. The QR code also enables a consumer to check a particular artisan, a cluster of artisans, and the authenticity of their material, in order to prevent industrial knockoffs of genuine artisans.
6. Raw Material Bank (RMB) Networks for Bulk Procurement: Make Raw Material Procurement Collectives (RMPC) under Artisan Producer Companies to procure good quality vegetable-tanned leather, eco-friendly adhesives and high-density soles from the certified tanneries and reduce the raw material cost to the individual artisans by 20-25%.
7. Design Incubator Partnerships with FDDI, CFTIs and NIFT: Establish permanent 'Craft Design Labs' within FDDI and NIFT campuses where design students undergo mandatory residencies in craft clusters, co-creating modern, ergonomic footwear collections with master artisans for export markets.
8. Dedicated Rural E-Commerce Logistics Corridors: Collaborate with India Post and private logistics aggregators to establish subsidized daily pick-up networks directly from rural craft workshops, lowering fulfillment times and reverse-logistics costs for micro-enterprises.
9. Subsidized Export Certification and Fair-Trade Branding: Provide 100% government fee waivers for micro-artisan enterprises seeking international certifications—such as Leather Working Group (LWG) compliance, Fair-Trade certification, and Vegan/Eco-labeling—enabling direct cross-border e-commerce exports.
10. Micro-Insurance and Social Security Nets for Artisan Families: Integrate all Udyam-registered footwear artisans into automated micro-insurance coverage (PM Jeevan Jyoti & Suraksha Bima) alongside occupational health programs protecting artisans against chemical exposure and musculoskeletal disorders.

9. Conclusion

The shift of Indian footwear artisans to tech-enabled entrepreneurs is a huge milestone in India's rural craft economic revolution. This shift eliminates intermediary exploitation, increases institutional credit, and opens up digital e-commerce to all through ONDC, while incorporating ergonomic design. As a master craftsman in Agra, Kolhapur or Jaipur becomes an entrepreneur, the impact reverberates throughout the socio-economic fabric: incomes rise ten fold, women become financially empowered, youth with literacy skills stay put and keep innovating in their villages, and the intangible skills of the craftsmen are brought under protection. To maintain and drive this momentum, there is a need for consistent involvement of multiple stakeholders. With the execution of the strategic roadmap defined in this study, India can make its clusters of traditional footwear some of the most resilient, world-class entrepreneurial powerhouses, while the master craftspeople, who would build the legacy of India's footwear, become equal and prosperous owners of the economic future of India.

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