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NITI Aayog

Unlocking $25+ Billion Exports: India's Hand & Power Tools Sector

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UNLOCKING $25+ BILLION EXPORTS: INDIA'S HAND & POWER TOOLS SECTOR

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MESSAGE

India's ambition to become a 'global manufacturing hub' hinges on our ability to go beyond meeting domestic demand to excel in the global export market. The Hand Tools and Power Tools sector, the subject of this comprehensive report, represents a significant opportunity to realise this ambition.

Projections undertaken in the report indicate a robust market, fueled partly by our growing capabilities to serve the international market. The research underlines the rising prominence of the power tools segment, propelled by construction activities worldwide. It underscores the potential for Indian manufacturers to capture a significant share of this expanding market.

Additionally, the report addresses the challenges that must be overcome to fully realise our export potential. Cost inflation, infrastructure bottlenecks, and trade facilitation inefficiencies require our immediate attention. We are committed to addressing these hurdles through targeted interventions, including streamlined customs processes, investments in infrastructure development, and policies that foster innovation, efficiency and skilling in the sector.

The analysis emphasises quality, innovation, and adherence to international standards in driving export success. By investing in skill development, technological upgrades, and robust quality control measures, we can ensure that Indian-made tools are recognized globally for their quality and reliability.

I thank Shri BVR Subramanyam, CEO, NITI Aayog for his unwavering support and efforts to bring out such insightful research and to Shri Sanjeet Singh, Program Director, E&F II, and his team members, who contributed for this valuable report crucial to our manufacturers in hand and power tools industry. Also, I would like to thank Foundation for Economic Development (FED) for providing the academic support in finalising this report. I trust that the report will serve its purpose with the detailed insights and recommendations.

(Suman Bery)

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FOREWORD

This report is a call to action for Indian ambition for becoming leading exporters in world market. It provides policymakers, industry leaders, and researchers with a roadmap to unlock India's full export potential in the Hand Tools and Power Tools sector. We encourage a collaborative approach, leveraging the insights contained within these pages to create a thriving export-oriented ecosystem.

India boasts a robust ecosystem for hand tool manufacturing and exports, yet most of the global market share is dominated by China, primarily due to its superior cost competitiveness. However, shifting geopolitical dynamics present a unique opportunity for India to strengthen its position in the global hand tools Market. India has a strong presence in hand tool segment, primarily due to its labor-intensive nature and relatively lower technical requirements. This advantage has fostered a thriving ecosystem dominated by MSMEs.

This report is to illuminate the importance of innovation, technological advancement, and skill development. By fostering these elements, we can enhance the quality and competitiveness of our products, enabling us to capture a larger share of the global market. By working collaboratively and with a clear vision, we can unlock the full potential of the Hand Tools and Power Tools sector, driving job creation, fostering innovation, and contributing significantly to the realization of a self-reliant and prosperous India.

I am confident that the insights and recommendations contained within these pages will be instrumental in overcoming existing obstacles and driving the effective implementation of targeted measures. At the end, I would like to express my sincere gratitude to BVR Subrahmanyam, for his instrumental support in addressing the key sectors in India and enhancing its potential for Vision 2047 of Viksit Bharat. I commend the FED and E&F II team role, under the leadership of Sanjeet Singh, PD, E&F II for their dedication and efforts to bring out this report in time and very aptly addressing the industry needs and challenges.

New Delhi

April, 2025

Arvind Virmani

(Arvind Virmani)

बी. वी. आर. सुब्रह्मण्यम
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MESSAGE

As India stands on the cusp of becoming a developed nation with its goal for Viksit Bharat @ 2047, The strength of our industrial ecosystem is paramount to achieving this vision. A critical, often overlooked. component of this ecosystem is the Hand Tools and Power Tools sector. This report, a comprehensive analysis of this vital industry in India, arrives at a timely moment as we accelerate our efforts to enhance domestic manufacturing and expand our global footprint.

This report paints a compelling picture of significant growth potential. Indian market fueled by robust domestic demand and expanding export opportunities of around USD 25 billion export in coming 10 years, the Hand Tools and Power Tools sector is poised to contribute substantially to our economic progress. We are encouraged by the dynamism within the power tools segment, driven by growth in the construction and DIY markets.

The findings emphasize the importance of cost competitiveness, strategic investments, and a skilled workforce. The "Make in India" initiative and other government support measures are playing a crucial role in fostering a conducive environment for domestic manufacturing and attracting both domestic and international investments. We are particularly encouraged by our local manufacturers who are committed to boosting exports and contributing to our nation's economic growth.

This report is a timely and critical assessment of our position. While India has demonstrated encouraging growth in hand tool manufacturing, spurred by a growing entrepreneurial spirit and improvements in our domestic ecosystem, structural impediments continue to hold us back.

I congratulate Shri Sanjeet, Program Director, NITI Aayog and his E&F II team as well as the team from FED who contributed to this report and for their meticulous efforts in preparing this report. I hope the report serves as a valuable resource for policymakers, industry stakeholders, and researchers alike. We encourage its careful consideration and the proactive implementation of its recommendations.

Dated: 2nd April, 2025

[B.V.R. Subrahmanyam]

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MESSAGE

India stands at the cusp of a transformative opportunity in the global hand tools and power tools industry-a sector integral to the backbone of manufacturing ecosystems worldwide. With the global trade market for tools valued at USD 90 billion and projected to double to USD 180 billion by 2035, the potential for growth is immense. China currently dominates this space with nearly 50% market share, while India, despite its abundant low-cost labour and manufacturing potential, holds a modest 1.8% share in hand tools and 0.7% in power tools. This report, a collaborative effort by NITI Aayog and the Foundation for Economic Development outlines a strategic roadmap to unlock India's latent potential and achieve a USD 25+ billion export opportunity over the next decade.

The tools industry is not just about economic output; it's about jobs, innovation, and global competitiveness. India's current exports-USD 600 million in hand tools and USD 425 million in power tools, is but a small fraction of our true capabilities. With the right interventions, India could capture 25% of the global hand tools market and 10% of the world's power tools market, generating 35 lakh jobs. Yet, challenges like a 14-17% cost disadvantage compared to China, driven by structural inefficiencies in raw material costs, labour productivity, logistics, and financing, hold us back.

This report, informed by six months of in-depth research and consultations with a number of industry leaders and other stakeholders, proposes actionable solutions: establishing world-class tool clusters on 4,000 acres, reforming factor markets to reduce structural costs, and, if needed, providing bridge support of Rs.5,800 crores over five years. These measures promise not just economic returns-yielding 2-3 times the investment in tax revenue-but a repositioning of India as a global manufacturing hub. The report drives home the very important message - The time to act is now; the opportunity is ours to seize.

I would like to thank Hon'ble Vice chairman, NITI Aayog for his guidance and encouragement. My sincere thanks to CEO, NITI Aayog, who has been the source of constant support and guidance throughout the preparation of this report. The team from FED, led by Mr Piyush Doshi along with Mohit Gupta have put in invaluable support towards the report. The team at Trade and Commerce vertical, NITI Aayog have provided unstinting efforts towards the finalisation of this report. Appreciation also goes to the various industry leaders and stakeholders who shared their invaluable inputs and spared many hours towards this initiative.

Dated 8th April, 2025

(Sanjeet Singh)

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MESSAGE

Heavy and engineering goods form the backbone of any country's manufacturing sector, serving as essential capital inputs across industries and offers a significant opportunity for exports. Among engineering goods, tools represent a crucial category—characterized by their low complexity, labor intensity and broad application—supporting key sectors such as automobiles, construction, and infrastructure development. Enhancing competitiveness in the tools industry is a vital first step in establishing India's prominence in the global heavy and engineering goods sector.

Over the past two decades, India has experienced steady growth in hand tools manufacturing, driven by improvements in its manufacturing ecosystem and the entrepreneurial ambition of Indian players. However, despite these positive developments, several structural challenges hinder India's ability to scale and compete effectively in the global market. High raw material costs, expensive financing options, and inefficiencies in labor and land utilization due to stringent regulatory requirements pose significant barriers to growth. On the other hand, production of power tools is concentrated with few global players, necessitating foreign investment for growth. It is estimated that India could export $25 billion worth of tools and create 3.5 million jobs by 2035 with a competitive and strong manufacturing ecosystem.

Recent geopolitical shifts have created an opportune moment for India to act. The U.S. has adopted a firm stance on import duties for Chinese goods, and Vietnam has emerged as a strong competitor in power tools manufacturing. Global markets are actively seeking alternatives to China to diversify and de-risk their supply chains. To capitalize on these shifts, India must act swiftly before global supply chains establish a new equilibrium, solidifying alternative manufacturing hubs.

This report delves deeper into India's competitive challenges and explores key policy and industry interventions required to scale up production, attract investment, and strengthen its global positioning. I trust that this report will contribute to overcoming the existing obstacles and support effective implementation of proposed measures. Foundation for Economic Development will continue to support the government in this initiative.

[Ramesh Mangaleswaran]

Preface

India stands at a defining juncture in its economic journey, poised to harness its latent potential and emerge as a global leader in manufacturing and trade. The tools industry, encompassing hand and power tools, represents a critical yet underexplored avenue for this transformation. As the backbone of the global manufacturing ecosystem, tools enable production across sectors, from infrastructure to automotive, and hold the key to unlocking significant economic value. It is with this vision that we present “Unlocking $25+ Billion Exports: India’s Hand & Power Tools Sector”, a collaborative effort by NITI Aayog and the Foundation for Economic Development, published in April 2025. This report is both a clarion call and a roadmap, urging policymakers, industry leaders, and stakeholders to seize a transformative export opportunity worth over $25 billion in the next decade.

The genesis of this report lies in a recognition of India’s unique strengths i.e abundant low-cost labour, a growing manufacturing base, and strategic trade positioning—juxtaposed against its modest global presence in the tools sector. While the global trade market for tools stands at ~$100 billion in 2022, projected to reach $190 billion by 2035, India’s share remains a fraction, with exports of $600 million in hand tools and $425 million in power tools. China’s near - 50% market dominance underscores the scale of the challenge, yet recent shifts, such as tariffs on Chinese goods and rising costs, offer India a rare window to redefine its role. This report emerges from six months of rigorous research, including consultations with 15 industry players and vendors, to distil actionable insights that can propel India toward a 10% share in power tools and 25% in hand tools, generating 3.5 million jobs along the way.

Our objective is clear: to create a competitive ecosystem that empowers India’s tools industry to thrive globally. The challenges are multifaceted such as cost disadvantages, limited technical know- how, and inadequate infrastructure, but they are not insurmountable. Through this report, we propose a strategic framework anchored in three pillars: building world-class industrial clusters, reforming structural cost barriers, and providing targeted support where needed. These interventions, developed with inputs from global best practices and local realities, aim to bridge the 14-17% cost gap with competitors and position India as a hub for high-quality, cost- effective tools.

As we release this report in April 2025, we are mindful of the urgency. The tools industry is not merely an economic lever; it is a catalyst for inclusive growth, empowering small and medium enterprises and regions like Punjab and Maharashtra. We invite policymakers to act decisively, industry to innovate boldly, and partners to collaborate earnestly. Together, we can transform this $25 billion opportunity into a reality, strengthening India’s economic fabric and its standing on the world stage. This report is a beginning and tries to put forward a blueprint for a future where India’s tools shape not just products, but progress.

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Executive Summary

The tools industry, encompassing both hand and power tools, serves as a foundational pillar of the global manufacturing ecosystem, enabling production across a wide array of sectors, from construction to automotive and beyond. The report "Unlocking $25+ Billion Exports: India's Hand & Power Tools Sector," jointly published by NITI Aayog and the Foundation for Economic Development in April 2025, underscores the transformative potential of this industry for India's economic growth. With a global trade market valued at ~$100 billion in 2022, projected to reach $190 billion by 2035, the tools sector presents a significant opportunity for India to enhance its export footprint, create millions of jobs, and establish itself as a competitive player on the world stage. This executive summary encapsulates the report's findings, highlighting the global market dynamics, India's current position, the export opportunity worth over $25 billion, the challenges impeding progress, and a strategic roadmap to unlock this potential.

Global Market Overview and Trends

The global tools market is segmented into hand tools and power tools, with distinct growth trajectories and competitive landscapes. As of 2025, hand tools account for $34 billion of the ~$100 billion of market, expected to grow to $60 billion by 2035. Power tools including tools accessories, predominantly electrical, constitute $63 billion and are also projected to reach $134 billion by 2035, reflecting a balanced growth pattern across both categories. This expansion is driven by rising industrialization, infrastructure development, and technological advancements in tool manufacturing, particularly in power tools where electrification and automation are key trends.

China dominates the global export market, commanding nearly 50% of the trade with $16 billion in hand tools and $22 billion in power tools exports. This dominance is attributed to its scale of operations, cost efficiencies, and well-established supply chains. However, shifts in global trade dynamics—such as the additional tariffs imposed by the United States on China between 2016 and 2019—have opened opportunities for other nations. Vietnam, for instance, has capitalized on this shift, doubling its exports annually, while India's exports have grown at a modest 25% rate. This disparity underscores both the potential and the challenges India faces in seizing a larger share of the market.

India's Position in the Tools Industry

India's tools industry, though promising, remains a small player globally. In 2025, the country exports $600 million in hand tools, representing a 1.8% market share, and $425 million in power tools, equating to a mere 0.7% share. Key products exported include wrenches, pliers, screwdrivers, and drills, with major exporters concentrated in states like Punjab and Maharashtra. Despite its advantages, such as low-cost labour and a growing manufacturing base. India struggles to compete effectively due to structural inefficiencies and a lack of scale. The report identifies a $25 billion export opportunity over the next decade, achievable by targeting a 10% market share in

power tools and a 25% share in hand tools. This ambition could generate approximately 35 lakh (3.5 million) jobs, significantly boosting employment and economic development.

The $25+ Billion Opportunity

The $25 billion export target is not merely aspirational but grounded in India's inherent strengths and emerging global opportunities. The decline in China's cost advantage due to tariffs and rising labour costs, coupled with India's proximity to key markets and trade agreements, positions the country favourably. However, realizing this potential requires overcoming a 14-17% cost disadvantage compared to China, driven by higher structural costs and smaller operational scales. The report breaks down this disadvantage into specific components: 10-12% stems from structural issues, including higher raw material costs (e.g., steel, plastic, motors), lower labour productivity due to restrictive overtime regulations, elevated interest rates, and logistics costs for transporting goods from inland states to ports. Addressing these challenges systematically could propel India toward its export goals.

Challenges Facing the Tools Industry

The report identifies several critical challenges that hinder India's tools industry from achieving its full potential:

1. **Cost Competitiveness**: India's 14-17% cost disadvantage is a significant barrier. Higher raw material costs, exacerbated by import restrictions like Quality Control Orders (QCOs), increase production expenses. Labour productivity is hampered by overtime wage requirements and limits, while high interest rates and inland logistics costs further erode competitiveness.
2. **Technical Know-How**: The industry suffers from limited access to advanced manufacturing technologies and research and development (R&D) capabilities, constraining innovation and quality improvements.
3. **Limited Availability of Land**: The lack of sufficient land for industrial cluster expansion restricts scalability, a critical factor in competing with China's large-scale operations.
4. **Government Schemes**: Existing support mechanisms, such as the Remission of Duties and Taxes on Exported Products (RoDTEP) and duty drawback schemes, are limited in scope and disbursement efficiency, leaving gaps in financial assistance.

These challenges collectively undermine India's ability to capitalize on global demand and require urgent, targeted interventions.

Strategic Roadmap and Policy Interventions

To unlock the $25 billion export opportunity, the report proposes three categories of interventions, each addressing specific aspects of the identified challenges:

1. Building World-Class Hand Tool Clusters

The creation of advanced industrial clusters is a cornerstone of the strategy. The report recommends establishing 3-4 clusters aggregating approximately 4,000 acres, including one in Punjab, a traditional hub for tool manufacturing. These clusters should feature:

1. **Plug-and-Play Infrastructure**: Ready-to-use facilities to reduce setup times for businesses.
2. **Worker Housing**: Affordable accommodations to attract and retain labour.
3. **Connectivity and Amenities**: Robust transportation links and convention centers to enhance operational efficiency and market access.

Development and operation of these clusters should follow a Public-Private Partnership (PPP) model, drawing on global best practices from countries like Germany and Japan. Investment requirements are substantial, but the PPP approach ensures shared risk and sustainable funding. Governance structures for clusters and dedicated R&D centers are also proposed to foster innovation and quality standards.

2. Addressing Structural Cost Disadvantages Through Market Reforms

Structural reforms are critical to bridge the cost gap with competitors. Key recommendations include:

1. **Rationalizing QCO Restrictions:** Ease import restrictions on essential raw materials like steel to lower production costs.
2. **Reducing Import Duties:** Lower duties on raw materials and machinery to enhance cost competitiveness.
3. **Simplifying Export Promotion Capital Goods (EPCG) Scheme:** Reduce penal provisions and streamline Authorized Economic Operator (AEO) requirements to improve utilization.
4. **Reforming Building and Labour Regulations:** Simplify compliance to reduce operational burdens and enhance labour flexibility.

These reforms aim to eliminate the 10-12% structural cost disadvantage, aligning India's production costs more closely with global benchmarks.

3. Bridge Cost Support

The report evaluates the need for additional financial support to offset cost disadvantages:

1. If factor market interventions are fully implemented and existing incentives (e.g., RoDTEP) are disbursed efficiently, no additional bridge support is required.
2. However, if reforms falter, an additional INR 5,800 crores (approximately $700 million) over five years is estimated to be necessary. This support would complement existing schemes and is framed as an investment, not a subsidy, with a projected 2-3x return in tax revenues over the same period.

This conditional approach ensures fiscal prudence while providing a safety net for industry growth.

Implementation and Impact

The proposed interventions are interconnected, requiring coordinated action across government, industry, and private stakeholders. The establishment of world-class clusters addresses scalability and infrastructure deficits, while market reforms tackle cost competitiveness. Bridge support serves as a contingency to maintain momentum if structural changes lag. Together, these measures could elevate India's tools industry to a global leader, capturing significant market share from competitors like China and Vietnam.

The economic impact is profound: achieving the $25 billion export target by 2035 would not only bolster India's trade balance but also create 3.5 million jobs, many in small and medium enterprises (SMEs) that dominate the sector. This job creation aligns with India's broader goals of inclusive growth and rural development, given the industry's presence in states like Punjab and Maharashtra.

Conclusion

The report **"Unlocking $25+ Billion Exports: India's Hand & Power Tools Sector"** presents a compelling case for strategic investment in the tools industry. India stands at a pivotal moment, with global trade shifts offering a window to challenge China's dominance and establish a robust export ecosystem. By addressing cost disadvantages, scaling operations through world-class clusters, and implementing market reforms, India can transform its tools industry into a $25 billion export powerhouse by 2035. This transformation requires bold policy action, public-private collaboration, and a commitment to overcoming structural barriers. The stakes are high, but so are the rewards: millions of jobs, enhanced global competitiveness, and a stronger economic foundation for India's future.

Chapter - 1

Introduction to Tools Industry

India's goal of becoming a global manufacturing hub requires a robust domestic capital goods sector. The "Make in India" initiative, launched by the Prime Minister in 2014, is a pivotal step toward achieving this vision. The initiative aims to make India a global centre for design and manufacturing, across 15 key sectors, including capital goods. While heavy engineering, machine tools, and automotive sectors are covered under the scope of Department of Heavy Industries, the tools industry, a key part of the capital goods sector, is often overlooked.

Tools, typically hand-held, play a crucial role in processes like drilling, cutting, sanding, and polishing. Like other capital goods, tools are indispensable for supporting manufacturing across a variety of industries. Their applications span both industrial operations (e.g., fastening bolts in cars or cutting pipes) and everyday tasks. Key sectors relying heavily on tools include construction, electronics, automotive, and aerospace.

Tools are broadly classified into two categories:

1. **Hand Tools:** These are non-motorized tools that rely on manual effort. Common examples include wrenches, screwdrivers, pliers, hammers, knives, and handsaws. Hand tools are affordable and ideal for tasks requiring precision and human control.

Category	HS Codes
Hand Tools	8201, 8202, 8203,8204,8205,8206, 820810, 820820, 820830, 820840, 820890, 8210, 842519, 842539, 842541, 842549

Figure 1: HSN codes for hand tools

2. **Power Tools:** Power tools can be classified as electric, hydraulic, and pneumatic. Electric power tools run on electricity and often include motors. These are further divided into:
   - **Corded Tools:** Operate using a direct power connection.
   - **Cordless Tools:** Powered by batteries, offering enhanced mobility.

Examples include electric drills, saws, electric screwdrivers, grinders, and cutters.

Category	HS Codes
Power Tool – Hand Operated	8467, 8468, 842511, 842531, 842542
Tools Accessories (including Interchangeable tools for hand and machine tools)	8207, 420291, 871620, 901780

Figure 2: HSN Codes for Power Tools

While hand tools are affordable, labor-intensive, and ideal for precision tasks, power tools have higher cost and maintenance but enable automation and improve efficiency. Both types of tools are essential for driving industrial growth and enhancing productivity.

Chapter - 2

Global Market Size and Trends

The global tools market, encompassing both hand and power tools, was valued at around $100 billion in 2022. It is projected to grow at a compound annual growth rate (CAGR) of 5.3%, reaching $190 billion by 2035 (Figure 3).

Power tools market represents $63 bn out of $100 billion market and expected to grow to $134 bn at the rate of 6%. The power tools market is particularly experiencing rapid growth driven by increased industrialization, rising disposable income levels, and the growing popularity of Do-it-yourself (DIY) activities. Electric tools dominate the global power tools market, accounting for almost 70% of the segment, with products like angle grinders and ply cutters leading the trade Figure 4.

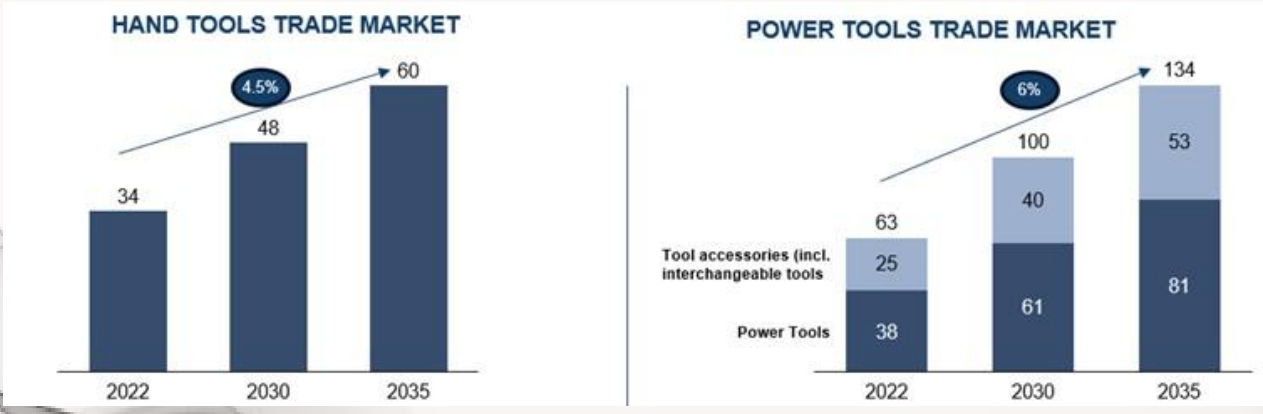


Figure 3: Global hand tools and power tools market in $billion.

The hand tools market of $34 billion, while growing at a slower rate of 4.5%, remain vital for specific applications. Within this segment, hand saws account for 16% of the global hand tool trade market, while spanners and wrenches represent 12% of the market share (Figure 4).

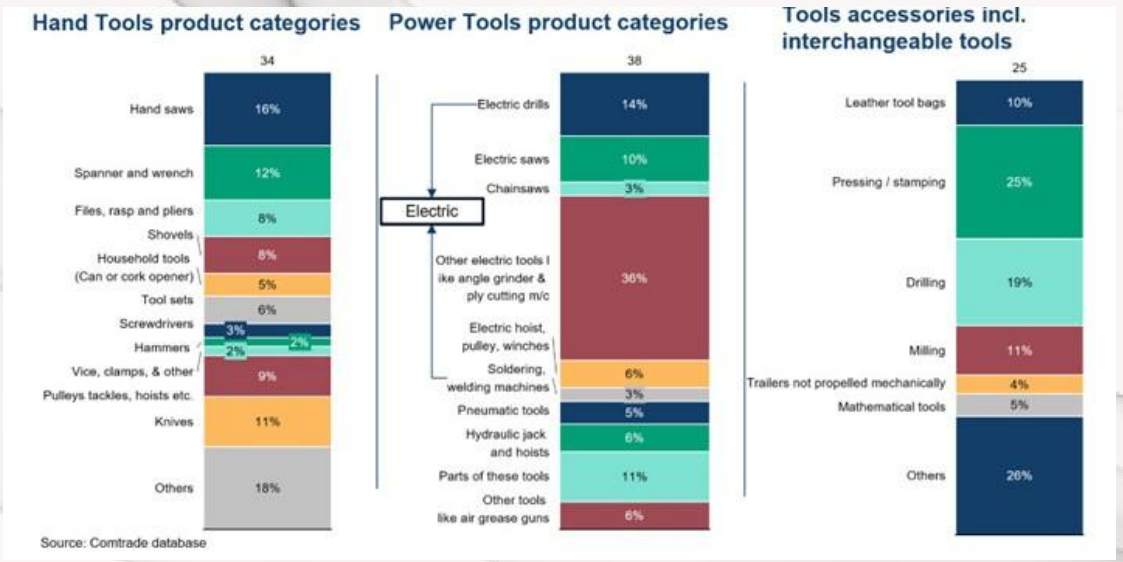


Figure 4: Market share of different types of tools by product categories

Chapter - 3

Global Supply Chain

The supply chains for hand tools and power tools exhibit distinct characteristics, driven by variations in industry structure, manufacturing strategies, and market dynamics.

Hand tools:

The global hand tools industry is highly fragmented, characterized by localized supply chains spread across multiple regions. The top four companies collectively account for only 20% of the market, with manufacturing spread across 10-20 locations worldwide (Figure A. 1). For instance, Apex Tool Group operates 20 factories in countries like the US, Mexico, Germany, and Canada. These facilities rely on diverse suppliers for raw materials such as steel bars, cobalt, and tungsten. This decentralization highlights the localized and diverse nature of hand tool production.

Power tools:

In contrast, the power tools industry is more consolidated, with the top six players controlling 70% of the market (Figure A. 1). Production is concentrated in fewer locations, reflecting the capital-intensive and technology-driven nature of the industry. For example, leading manufacturers such as Makita operate facilities in seven countries, whereas Hilti Corporation operate facilities in four countries. These manufacturers procure raw materials like metals, resins and components, batteries, motors, transmissions, and electronics, primarily from centralized vendors, supplemented occasionally by local suppliers for cost efficiency.

Given the distinct structures and supply chains of these industries, policies should be tailored accordingly. Anchor investors play a critical role in advancing the power tools sector due to its high capital requirements for advanced machinery, automation, and research & development (R&D), as well as the need for sophisticated technological support. In contrast, the hand tools sector, being more labour-intensive and fragmented, thrives on a broader base of smaller players.

Chapter - 4

Global Market Overview

The global tools trade market is valued at approximately $100 billion, with China and the European Union (excluding Germany) leading as the largest exporters. China and Taiwan together account for 46% of hand tools exports (Figure 5) and 37% of power tools exports (Figure 6), while the European Union (excluding Germany) contributes 18% and 22% respectively (Figure 5, Figure 6).

In contrast, India exports represent only 1.8% of the global hand tools trade market and 0.7% of global power tools trade market, highlighting its limited presence in the market and significant potential for growth.

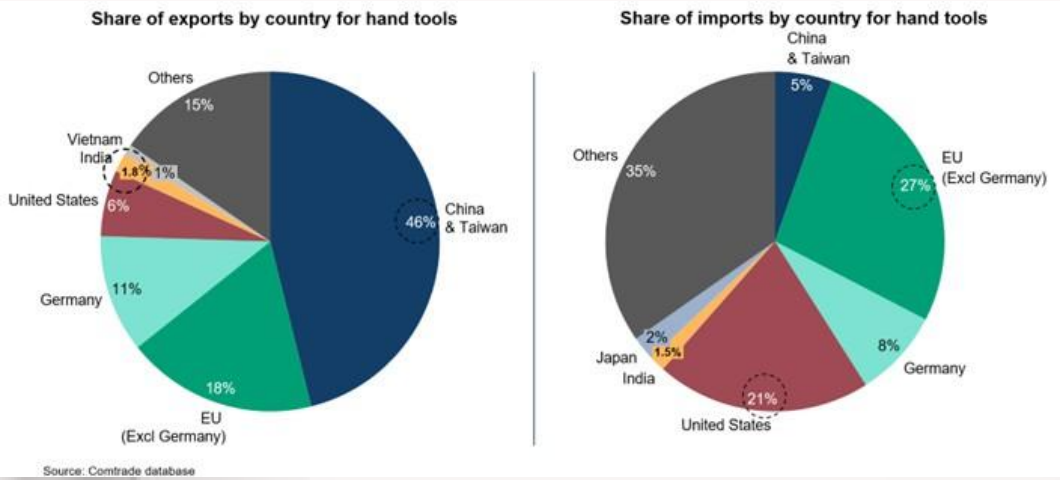


Figure 5: Share of global exports and imports of hand tools

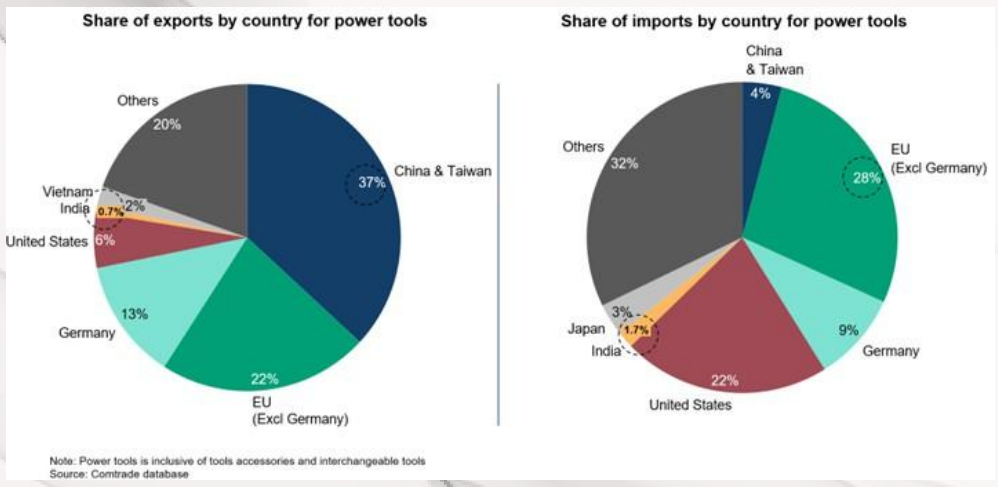


Figure 6: Share of global exports and imports of power tools

Chapter - 5

Opportunities in Exports Markets and Global Trade Barriers

The European Union (EU) and The United States of America (US) are the largest importer of tools, importing 55-60% of overall global trade. These countries offer significant opportunities for India to expand its footprint in the global market.

The US has imposed additional tariffs of 7.5-25% on nearly all hand and power tools imported from China (Figure A. 2 in Appendix), to tackle its unfair trade practices.

While Chinese tools face additional 7.5-25% tariffs when exported to the US, other imports enjoy general tariffs of 0% for hand tools and approximately 5.5% for power tools (Figure A. 2). These additional tariffs have significantly slowed China's export growth, despite its dominance in market share (Figure 7).

Vietnam has capitalized on the situation, increasing its power tools exports from $5 million in 2019 to $1.2 billion in 2022. Although India's exports have also grown by 24% year-on-year (YOY), there remains considerable untapped potential for further expansion.

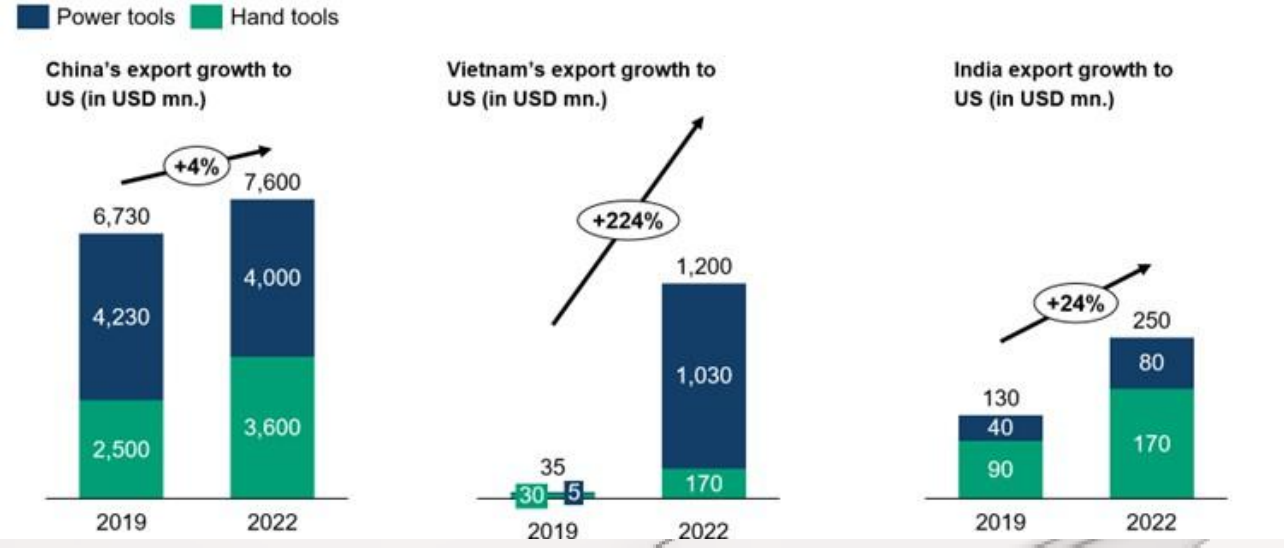


Figure 7: Tools exports to the US by China, Vietnam, and India in 2019 and 2022

Chapter - 6

India's Tool Industry

Key products exported

India's performance varies significantly depending on the type of tools. Notably within the hand tools segment, India exports 5% of global spanner & wrench trade while handsaws trade is less than 1% of global market. Within power tools, India holds 2% market share in pneumatic tools but less than 1% in electric tools like electric drills and saws (Figure 8).

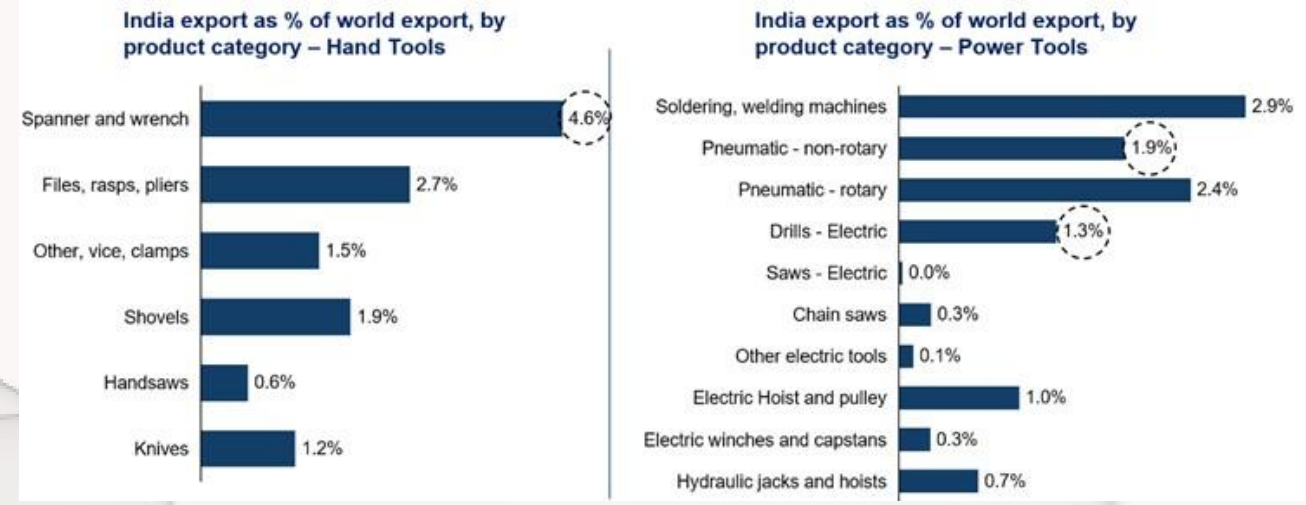
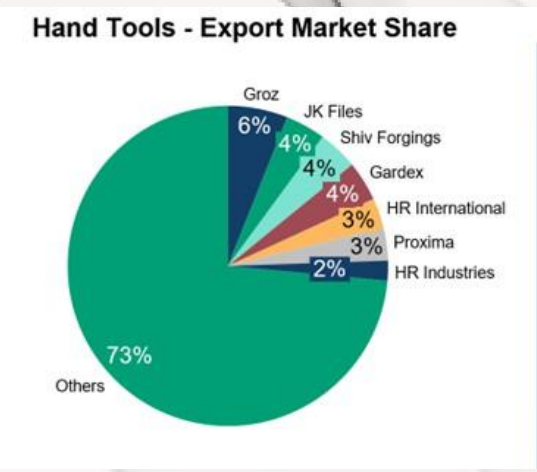


Figure 8: India's exports as a percentage of world exports by product category for hand and power tools

Key exporters

India has a strong presence in hand tool segment, primarily due to its labour-intensive nature and relatively lower technical requirements. This advantage has fostered a thriving ecosystem dominated by MSMEs. Top players include manufacturers like Groz engineering, JK Files, Shiv Forgings, Gardex, HR International, with the top 7 players collectively contributing approximately 25% of India's exports (Figure 9).



List of top exporters for hand tools

Exporter	INR Cr.	% of overall export	Location
Groz Engineering Tools	310	6%	Multiple locations
JK Files	240	4%	5 plants in MH, MP, GJ
Shiv Forgings	230	4%	Ludhiana
Gardex	200	4%	Jalandhar
HR International	170	3%	Jalandhar
Proxima steel forge	150	3%	Jalandhar
HR Industries	130	2%	Jalandhar
PN International	120	2%	Uttar Pradesh
Deep tools	110	2%	Ludhiana
Ramco International	100	2%	Jalandhar
Others	3740	68%	
Total	**5500**	**100%**	

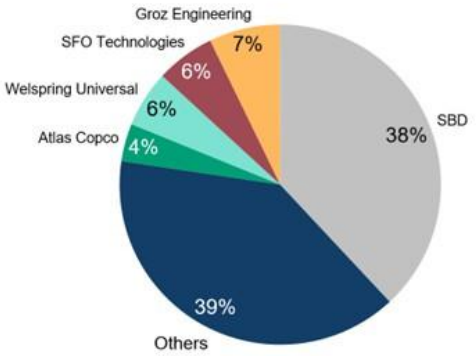
Figure 9: Top exporters of hand tools in India

India's hand tools manufacturing is concentrated in 3-4 major clusters, primarily in Jalandhar and Ludhiana (Punjab), along with Mumbai, Nagpur (Maharashtra), and Nagaur (Rajasthan). Punjab alone accounts for 80% of India's hand tool exports, with 12 out of top 15 players based out of Jalandhar and Ludhiana.

The Jalandhar and Ludhiana clusters emerged during the time of Indian independence in 1947, when skilled labourers migrated from Pakistan and established hand tools manufacturing units. The Punjab State Industrial Development Corporation (PSIDC) further supported this growth by setting up an industrial estate on the outskirts of the city, which has since evolved into a major hub. In 1983, the Central institute of hand tools was established to provide trained manpower and technological support, further boosting the sector.

In contrast, India's power tools sector is less developed than the hand tools sector, with prominent players such as Stanley, Black and Decker, and Groz Engineering leading production holding 45% market share. (Figure 10). Multiple other global players like Hilti, TTI, Makita do not have a decent manufacturing base in India. However, growth in sectors such as automotive, aerospace, heavy engineering, and infrastructure is driving demand for precision tools such as drills, cutters, and grinders.

Power Tools - Export Market Share



List of top exporters for power tools

Exporter	INR Cr.	% of overall export	Location
Stanley Black and Decker	800	38.10%	Pune
Groz Engineering	150	7.14%	Haryana
SFO Technologies	125	5.95%	Kochi
Welspring Universal	120	5.71%	Haryana
Atlas Copco	80	3.81%	Pune
Ingersoll-rand Technologies	50	2.38%	Gujarat
Edicon pneumatic	40	1.90%	Maharashtra
Mindrill systems	40	1.90%	West Bengal
Andreas Stihl	35	1.67%	Pune
Eibenstock Positron	32	1.52%	Maharashtra
Others	628	29.90%	Maharashtra
Total	**2100**	**100.00%**	

(HSN Code included are 8467, 8468, 842511, 842531, 842542)

Figure 10: Top exporters of power tools in India

Chapter - 7

India's Potential to Expand

India boasts a robust ecosystem for hand tool manufacturing and exports, yet most of the global market share is dominated by China, primarily due to its superior cost competitiveness. However, shifting geopolitical dynamics present a unique opportunity for India to strengthen its position in the global hand tools market.

Geopolitical opportunities:

The global push to diversify manufacturing bases away from China, combined with US-imposed additional tariffs on Chinese tools, has created a favourable environment for Indian exports. However, **Vietnam** has been quicker to capitalize on these changes, nearly tripling its exports since 2019, with Chinese companies looking to invest in neighbouring countries in South-East Asia. India must act swiftly to leverage this window of opportunity.

Current ecosystem and capability:

India already has a robust ecosystem in hand tools segment dominated by MSMEs, which can be further scaled and expanded.

1. Cost-effective labour: Labour accounts for 15% of production costs in the hand tools sector. India's manufacturing labour cost is $1 per hour, significantly lower than China's $3.5 per hour, offering a natural competitive edge.
2. Synergies with automotive industry: India's robust automobile industry has created an ecosystem for mechanical processes like forging, stamping, and casting, which are also integral to hand tools manufacturing. Many suppliers involved in automobile parts production also cater to hand tools production, enhancing cost efficiency.
3. Global quality standards: Indian manufacturers already meet global quality standards and export to European countries. Products like spanners and wrenches hold 5% of the global trade market.

In contrast, the power tools industry demands a robust electronic manufacturing ecosystem, particularly for components like batteries and motors. This area is still underdeveloped in India. For example, Bosch produced 17 million power tools and battery packs in Malaysia in 2018, compared to India's 2 million units' capacity. Addressing these gaps would be critical for expanding India's power tools industry.

Policies should leverage existing capabilities within hand tools manufacturing while gradually building the infrastructure and ecosystem necessary for power tools manufacturing.

To support the growth of both industries, customized policies should address their distinct global supply chains requirements and ecosystems. The focus of the government on boosting electronic manufacturing in India is synergistic with power tools.

Chapter - 8

The Tools Opportunity

With opportunities created by geopolitical shifts and strong existing ecosystem, India should target to improve its cost competitiveness to capture 25% of the global hand tools market by 2035. Achieving this target could unlock an export potential of $15 billion by 2035, creating approximately 2.5 million (25 lakh) direct and indirect jobs in the country (Figure 11).

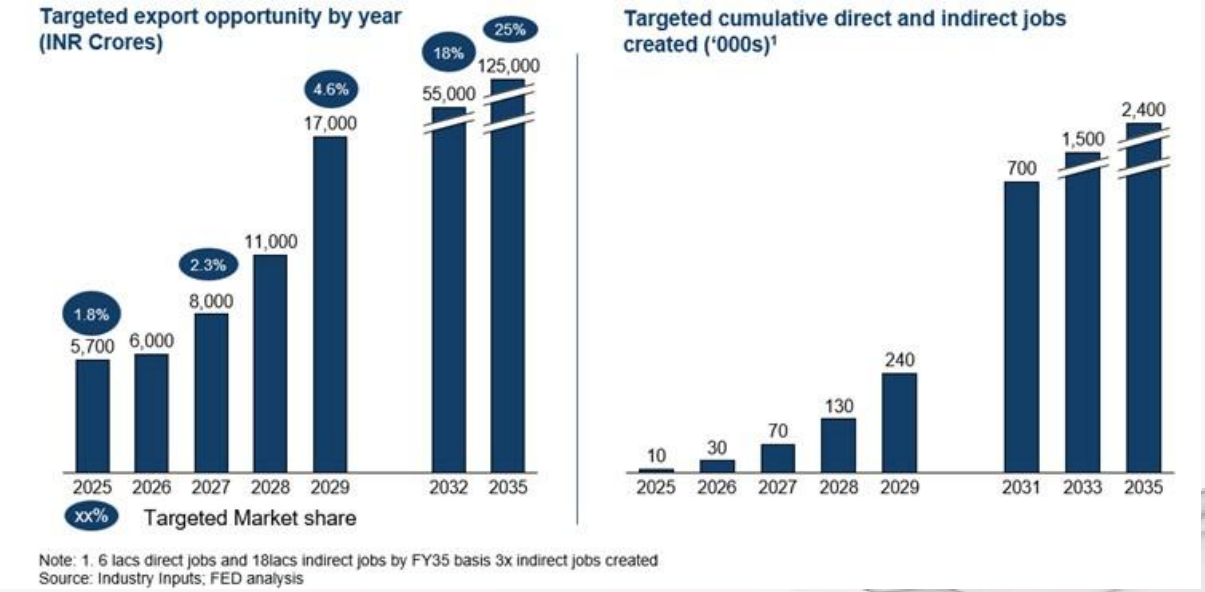


Figure 11: Targeted hand tools export opportunity and cumulative direct and indirect jobs created in India

Similarly, in the power tools segment, where China controls 40% of global exports, India targets a ~10% market share by 2035, translating to an export potential of $12 billion. This growth could generate approximately 1.3 million (13 lakh) direct and indirect jobs (Figure 12).

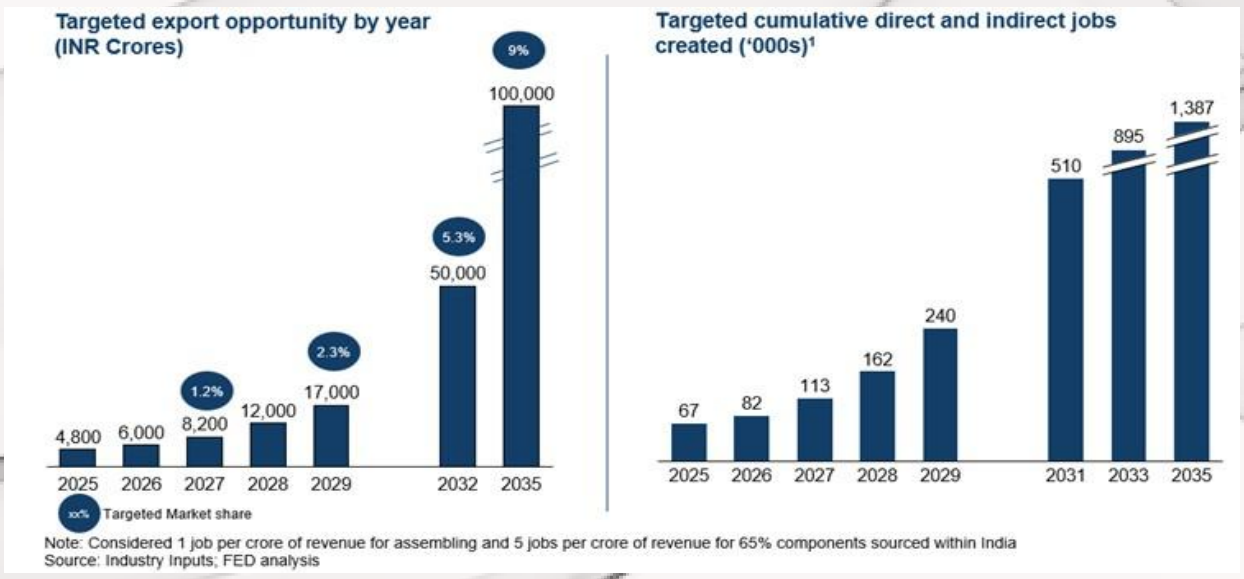


Figure 12: Targeted power tools export opportunity and cumulative direct and indirect jobs created in India

Chapter - 9

Challenges Facing the Tool Industry

Despite a well-established ecosystem for hand tools manufacturing and a potential for expanding power tools sector, India has struggled to scale and compete effectively on the global stage in recent decades. To achieve its ambitious target of 25% of the global market share in hand tools and 10% in power tools, India needs to address several critical challenges:

1. **Cost Competitiveness:** India's manufacturing ecosystem faces higher production costs compared to China due to expensive raw materials like steel, plastic, and motors, higher interest cost and taxes, and limited economies of scale.
2. **Technical Know-how:** A lack of advanced manufacturing capabilities and insufficient investment in R&D prevents India from producing many high-value components domestically. This reliance on imported parts diminishes the industry's competitiveness and profitability.
3. **Scaling Constraints:** Limited availability of affordable industrial land and high upfront capital requirements restrict the expansion of manufacturing operations for hand tools industry.

Addressing these challenges is vital for India to compete globally and capture a larger share of the market.

Cost competitiveness

The Indian tools industry faces two major disadvantages compared to China: **factor cost disadvantage** and **scale disadvantage** (Figure 13).

1. **Factor Cost Disadvantage:** Indian manufacturers incur higher costs due to higher costs of factors of production such as more expensive steel, motors, and PVC resin, higher interest rates, and other ecosystem-related expenses.
2. **Scale Disadvantage:** China benefits from economies of scale, where large-scale production leads to lower costs. In contrast, India's smaller scale results in higher per-unit costs, reducing global competitiveness.

Figure 13 shows a representation of the effect that these cost disadvantages have on India's productivity.

First, the higher factor costs, such as expensive raw material, position India on a higher cost curve compared to China. Second, India's lower scale of production also amplifies the cost of production, as cost efficiency improves with larger production volumes due to economies of scale. The inverse relationship between the scale of production and the cost of production underscores the critical need for India to increase its scale of production.

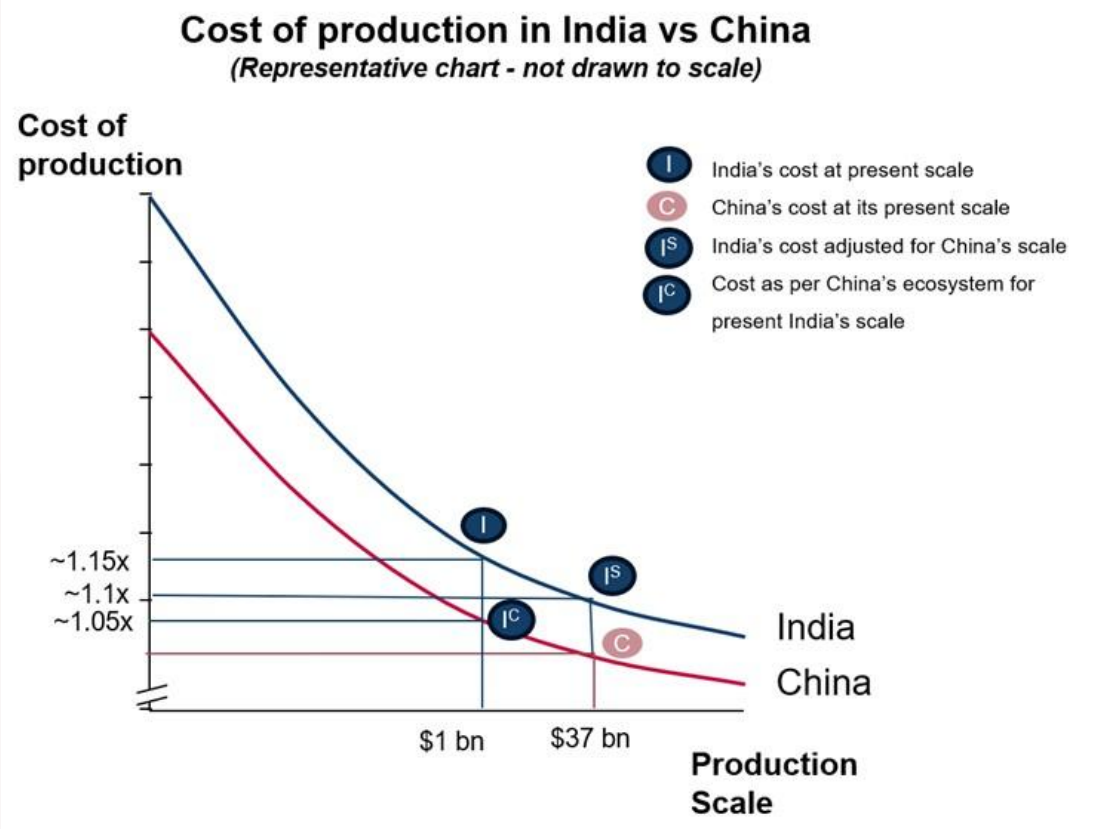


Figure 13: Cost of production in India v/s China

Figure 14 and Figure 15 give a detailed cost comparison of manufacturing hand tools and power tools respectively in India and China. These figures show that India faces a 10-12% structural disability while scale disability increases the total cost of production in India, eventually bringing the costs to approximately 14-17%.

China vs India cost comparison in hand tools (as a % of India's cost)

Cost Head	China's cost	India's cost	Disability	Remarks
Steel	38-42	48-52	8-10	India's steel cost is higher by 15%
Other material	3-5	3-5	0-1	Other material include material like plastic for screwdrivers etc.
Labor cost	15	12	(3)	China's total factor productivity is higher by 50% while wage rate in India is lower by 75%
Electricity	4-6	4-6	0	Electricity rates in Punjab and China are similar. However, some areas in India require power backups that make costs higher
Overheads	12-15	12-15	0	Assuming similar capex & scale, overheads to remain same
Financing cost	1.5	3	1.5	India has higher interest cost of 6% (9% net of subvention of 3%) vs ~3% in China
Machinery depreciation	6-7	7-8	0.5-1	7.5% import duty plus 10% surcharge charged in India
Transportation	0	1	1	Additional 1% cost incurred for transportation from Punjab to ports
Tax paid	3	4	1	India charges 30% tax plus surcharge of 12% and cess of 4% vs 25% in China
Overall cost	**90**	**100**	**10**	
Scale disability			4-6	
Total disability			**14-16**	

Figure 14: Detailed cost comparison of India and China for hand tools sector

China's cost comparison in power tools sector (as a % of India's cost)				
Cost Head	**China's cost**	**India's cost**	**Disability**	**Remarks**
Tool components	31	37	6	15% cost disability in manufacturing tool components used
Motor	15	18	3	15-20% cost disability in manufacturing of motors, (majorly steel & copper)
Electronics	10	11	1	4% cost disability for high transportation freight cost from China
Plastic	5.5	6	0.5-1	~12% cost disability due to import duty
Labor cost	6	5	(1-1.5)	China's total factor productivity is higher by 50% while wage rate in India is lower by 75%
Electricity	2-3	2-4	0-1	Electricity rates in India and China are similar. However, some areas in India require power backups that make costs higher
Overheads	9-12	9-12	0	Assuming similar technology used as scale remains same
Financing cost	0-1	1-2	0.5	India has higher interest cost of 6% (9% net of subvention of 3%) vs ~3% in China
Machinery cost	3.7	4	0.5	7.5% import duty plus 10% surcharge charged in India
Tax paid	2-3	3-4	1	India charges 30% tax+ surcharge of 12%, cess of 4% vs 25% in China
Overall cost	**88**	**100**	**12**	
Scale disability			3-5	
Total disability			15-17	

Figure 15: Detailed cost comparison of India and China for power tools sector

These disadvantages make it challenging for India to compete with China in tools manufacturing, affecting its ability to capture a larger share of the global market. Refer below for further details on higher structural costs in India.

Structural Costs

1 Material Costs

1.1 Cost of raw materials

1.1.1 About 90% of the raw material used in hand tool manufacturing is scrap steel ingots, the price of which is 16-20% higher in India than in China (INR 55,000 per tonne vs. INR 46,000 per tonne - Figure 16).

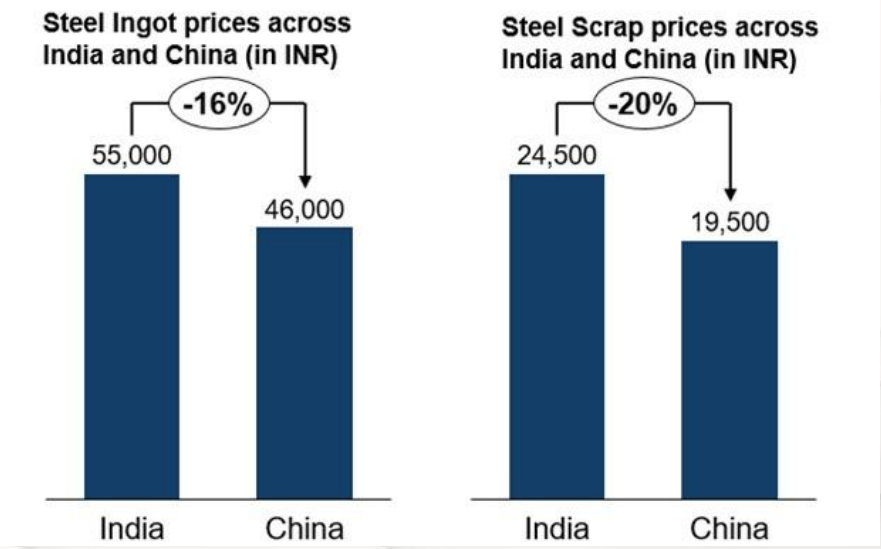


Figure 16: Steel prices across India and China (in INR) (including rolling charges of INR 12k per tonne

1.1.2 As for the power tools sector, other major components are plastic, electronic components, and motors. Electronics components are approximately 5% costlier, whereas motors are approximately 10-15% more expensive in India than in China.

1.1.3 Nylon-6 (a form of plastic used in the production of tools) is 5% costlier than China (INR 154,000 per metric tonne in India versus INR 146,000 per metric tonne in China), and PVC resin is 18% costlier in India with the price of PVC being INR 82,000 per metric tonne in India.

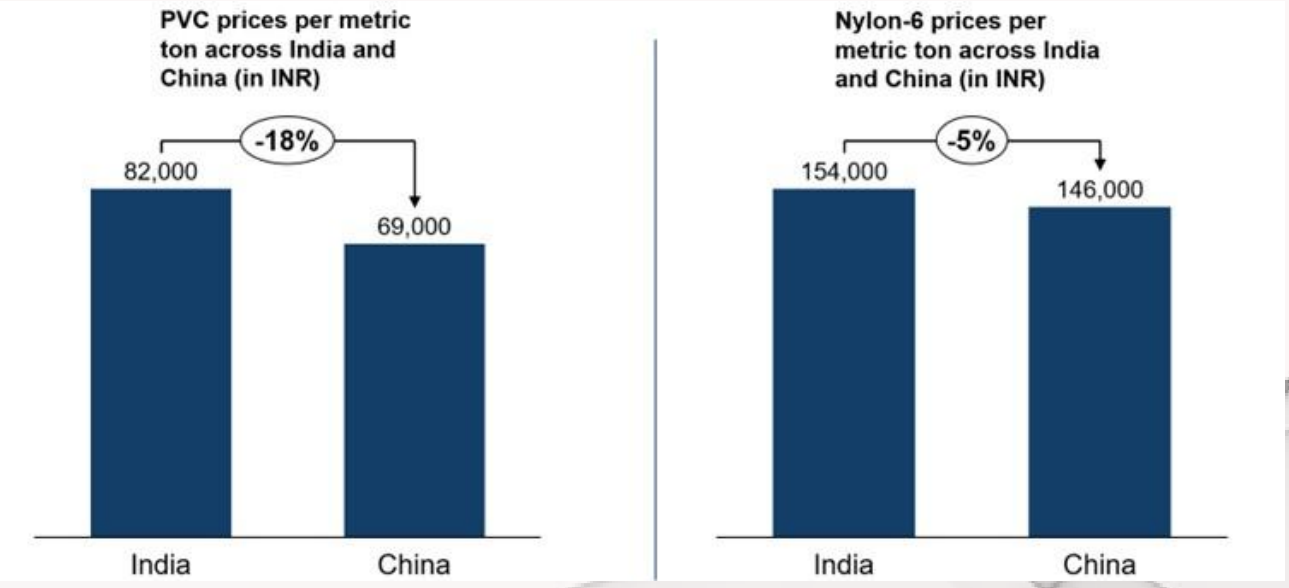


Figure 17: Price of PVC and Nylon-6 across India and China (per metric tonne in INR)

1.2 High import duties and quality control (QCO) restrictions on key raw materials

1.2.1 High import duty levied on key raw materials such as 15% on steel imports, 10-15% on motors, along with 7.5-10% import duty on PVC resins create inefficiencies in India's manufacturing ecosystem.

1.2.2 QCO restrictions on these raw materials such as steel and PVC add to the adversities of Indian manufacturers by increasing their dependence on higher cost domestic industry.

1.2.3 Moreover, India's PVC and Nylon-6 consumption heavily depends on imports, with over **50%** of demand for imported PVC resin and almost 100% of the demand for Nylon-6 met through imports.

1.3 Export Duties

1.3.1 Steel-producing countries like China and Vietnam impose high export duties on scrap steel of 40% and 15-17% respectively, making it difficult to procure directly via imports.

2 Labour Costs

2.1 While labour wages in India are lower than in China, restrictive labour laws reduce flexibility and increase costs. Companies have to pay double the wage rate for overtime, and overtime is restricted to 50 hours per quarter vs 1.25-1.5 times as per international standards. Additionally, the total working hours are limited to 9 hours per day and 48 hours per week, limiting operational efficiency.

3 Logistics Costs

3.1 **Transport to Ports:** Punjab, a key hub for hand tool manufacturing, is landlocked. Products have to be transported to ports like Mundra in Gujarat for export, adding 1-1.5% to the cost of goods based on Freight on Board (FOB) value.

4 Electricity Costs

4.1 **High Electricity Rates:** India's power supply is unreliable due to frequent power cuts, requiring maintenance of captive power generators that cost almost INR 18 / unit as compared to INR 7-8 / unit for electricity procured directly through electricity boards.

4.2 **Solar Power Restrictions:** States like Punjab limits solar power use to 90% of overall electricity consumption due to net metering rules, limiting cost-saving opportunities for manufacturers.

5 Financing Costs

5.1 **High Interest Rates:** India has a higher interest cost structure, with borrowing costs being around 3% higher than in countries like China. The interest subvention scheme provided to industries has been reduced from 5% to 3% for MSMEs and has removed interest subvention for other exporters, further increasing financing costs for manufacturers.

6 Machinery Costs

6.1 **High-tech Machinery:** Machines like CNC machines, essential for manufacturing hand and power tools, are imported from China and incur a 7.5% import duty, along with a 10% surcharge. This adds to the overall cost of manufacturing in India.

7 EPCG Scheme Barriers

7.1 The complex requirements for the Export Promotion Capital Goods (EPCG) scheme, which offers duty drawbacks for machinery used in exports,

discourage small manufacturers and exporters from taking advantage of this scheme.

"Average Export Obligation is risky and difficult to obtain. Requirements are difficult to meet at times due to market fluctuations. High interest rates are required to be paid to custom authority in case of failure to meet obligations"

- Hand tools Manufacturer in Punjab

8 Taxes

8.1 Effective income tax rates in India are high as compared to other countries like China and Vietnam. India has an effective tax rate of 34% vs 25% in China and 20% in Vietnam.

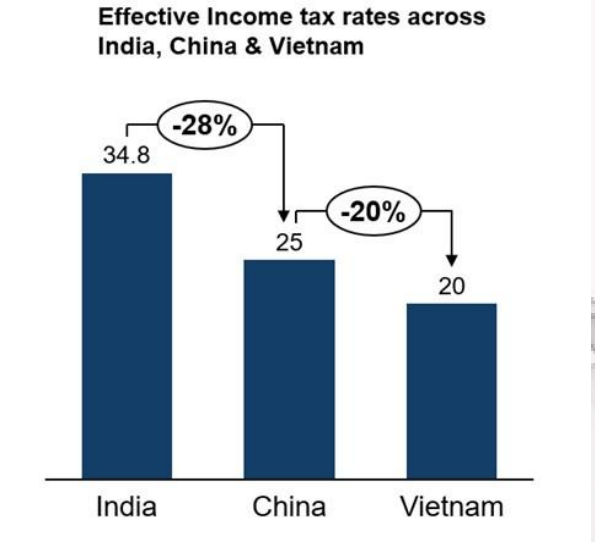


Figure 18: Effective income tax rates across India, China, and Vietnam (in percentage)

1.10.2 In addition, China offers 200% tax deduction on R&D expenses while India has discontinued the practice. China also offers accelerated depreciation for new fixed assets.

1.10.3 In Vietnam, 10% of profits can be appropriated to tax deductible R&D fund. 2-4 year tax exemption is also given in Vietnam for operating out of specific industrial regions or location.

Technical Know-how

The tools market features many innovative products that are well-researched and developed by manufacturers in other countries. However, Indian companies often lack the technical expertise and advanced technologies needed to manufacture these products domestically.

For example, while India manufactures ratchet spanners, the ratchets themselves are imported from China and then assembled with the spanner in India. These imported ratchets account for

20-30% of the total value of the spanner. This reliance on foreign components not only inflates the overall cost of production but also prevents Indian manufacturers to fully capitalize on the value chain. Moreover, limited scale also limits the ability for manufacturers to focus on R&D.

A key factor contributing to this gap is the limited focus on R&D & reverse engineering within the ecosystem. According to a hand tool manufacturer in Jalandhar, "Central Institute of Hand Tools focusses on revenue generation from renting out machines and teaching. Efforts are not focused on R&D." Additionally, visa and import restrictions for Chinese nationals lead to delays in technology transfers.

Limited availability of land for cluster expansion

Scaling production in India faces several barriers, particularly due to high costs of production and limited availability of industrial land.

Land in Punjab is significantly more expensive compared to other states, with prices ranging from INR 3-5 crores per acre. The lack of available industrial land near established manufacturing hubs like Jalandhar and Ludhiana worsens this issue, making it harder for current factory owners to expand or set up new factories. Additionally, India's restrictions on ground coverage and Floor Area Ratio (FAR) for buildings are stricter than international standards. For example, FAR in Pune is 1.1, whereas it is 2.5-9.5 in Hong Kong. This reduces the effective land area available for construction and the usable floor area, further increasing investment requirements for the industry. These challenges limit the ability of manufacturers to scale up their operations efficiently.

Chapter - 10

Government Schemes are Limited by Amounts and Applicability

The central and state governments offer various schemes to support manufacturers, but their scope and impact are limited.

Central Government Schemes:

1. **Remission of duties and taxes on exported products (RoDTEP):** RoDTEP provides rebates to exporters for taxes and duties on exported goods to help make Indian exporters more competitive in international markets. Under this scheme, hand tools exporters get rebates of 1.1% as a percentage of their FOB value, and power tools get rebates of 0.9% as a percentage of their FOB value.
2. **Duty drawbacks:** Duty Free Import Authorisation (DFIA) allows duty-free import of inputs but on a post export basis only. Inputs imported under this scheme are exempted of the Basic Customs Duty only. To qualify, the inputs must be listed under the Standard Input Output Norms (SION), and a minimum value addition of 20% must be achieved. Under this scheme, manufacturers of hand and power tools are eligible for duty drawbacks of 1.5% to 2% on their input costs, as per the Duty drawback rates, 2023.

Punjab government schemes:

The Punjab government, under its Industrial and Business Development Policy 2022, has identified hand tools as a key sector of focus and announced several schemes aimed at supporting the MSME sector. These include:

1. **Capital Subsidy:** 50% subsidy on capital expenditure, with a ceiling of INR 50 lakhs per unit.
2. **Interest Subsidy:** 8% interest subsidy for startups and 5% for MSMEs.
3. **Freight Assistance:** Up to 1% of FOB value for freight costs, aimed at offsetting export logistics expenses.
4. **Electricity duty exemption:** Electricity duty is the duty levied and paid to the State Government on the electricity supplied by Punjab State Power Corporation Limited (PSPCL). Electricity duty is 100% exempted up to 7 years.
5. **Stamp duty exemption:** 100% exemption/reimbursement from stamp duty for purchase or lease of land and building

We computed the estimated annualized benefit in five years for an average medium tools manufacturer with an investment of INR 50 crores in plant and machinery, with INR 175 crores revenue in Punjab. The full list of assumptions used for the computation is given in (Figure 19). We found that even after availing all the benefits given by the state and including RoDTEP and

duty drawbacks given by the central government, the total benefit aggregates to only 3.8% of the revenue (Figure 20), as compared to disability of about 15%. In addition, most of these schemes are limited to MSME manufacturers.

Moreover, as per industry in Punjab, even the existing schemes have not been implemented due to fiscal constraints.

Assumptions	
#	**Amount in 5th yr.**
Investment in P&M	50 crores
Revenue	175 crores
Direct Jobs Generated	~900
Area in acres	6
Cost per acre	3 crores
Stamp duty %	6%
Interest exp	5 crores
Electricity cost	5 crores
CAGR	10%

Figure 19: Assumptions used for computation of estimated benefits from government provided subsidies and incentives

Computation of subsidy / incentives provided to Medium sized enterprise by Punjab Govt.

Type of subsidy	%	Ceiling per unit per year / Restriction on period	Estimated annualized benefit in yr. 5 (INR Crores)	Cumulative 5 yr. benefit (INR Crores)
Capital subsidy	20%	INR 50 lakhs	0.5	2.5
Interest subsidy	5%	INR 5 lakhs	0.05	0.25
Freight assistance	1%	INR 20 lakhs	0.2	1
Electricity duty exemption	100%	7 years	0.8	3.35
Stamp duty exemption	100%	NA	0.2	1
RoDTEP	1.1%	NA	2	8
Duty Drawback	1.7%	NA	3	12.5
Total			**6.7**	**29**

Figure 20: Computation of subsidy/ incentives provided to a medium sized enterprise by the Punjab government

Maharashtra Government Schemes

The Maharashtra government has also provided multiple benefits under its three key industrial policy schemes – Package Scheme of Incentives, 2016, Maharashtra Industrial Policy, 2019, and Export Promotion Policy, 2023.

1. **Power Subsidy:** Maharashtra government provides a location-based tariff subsidy to only underdeveloped and not-developed regions for eligible new units to the extent of INR 0.5-1/- per unit consumed for 3 years from the date of commencement of commercial production.
2. **Interest Subsidy:** Location-based interest subsidy at the rate of 5% per annum is given in underdeveloped and not developed areas, with a maximum cap of the value of electricity consumed and bills paid for that year.
3. **Export Promotion:** Exporting MSMEs are incentivized for the first 5 years on an incremental increase in export turnover at the rate of 1% on incremental export growth on a year-on-year basis.

A similar computation in Maharashtra (including central government's RoDTEP and duty drawback benefits) shows that the aggregate benefit is only 5.3% of the total revenue, still lower than the total cost disability faced by Indian tools manufacturers (Figure 21).

Computation of subsidy / incentives provided to Medium sized enterprise by Maharashtra Govt.

Type of subsidy	Amount / %	Ceiling per unit per year / Restriction on period	Estimated annualized benefit in yr 5 (INR crores)	Cumulative 5-year benefit (INR crores)
Power Subsidy	0.5-1 INR per unit	Limit of 3 years	0	0.86
Interest Subsidy	5%	Not allowed in Category A locations; Limited to electricity expenditure	2.7	11
Export promotion	1% on FoB	First 5 years	1.8	7.5
RoDTEP	1.1%	NA	2	8
Duty Drawback	1.7%	NA	3	12.5
Total			**9.5**	**40**

Figure 21: Computation of subsidy/ incentives provided to a medium sized enterprise by Maharashtra government

Moreover, these schemes primarily cater to smaller MSEs or are limited by location or period. Availing benefits of these schemes is often challenging due to lack of clarity, lengthy processes, and delays in disbursements. Both the central and the state governments offer additional subsidies, but they cater to specific purposes such as technology upgradation and design-related subsidies only. To enable greater competitiveness and scale, policies to encourage scale will be effective.

Chapter - 11

Key Policy Interventions

India's tools industry holds immense export potential but is hindered by challenges in infrastructure, high manufacturing costs, and inadequate scale. To unlock this potential, three key interventions are essential:

1 Creating world-class clusters

2 Implementing structural reforms

3 Providing bridge support to overcome cost disabilities.

Create world scale and world class clusters for hand tools

To enable scaling and attract investments, India should establish world class clusters for the hand tools sector. Drawing inspiration from PM MITRA Parks, which aim to transform the textile and apparel industry, these clusters would integrate advanced infrastructure offering state-of-the-art facilities, plug and play infrastructure, testing labouratories, design centres, and housing for workers.

By 2035, four clusters spanning approximately 4,000 acres cumulatively should be established for the hand tools industry, providing the necessary ecosystem for enhancing production efficiency and attract investment.

These clusters should be located near existing centres of power and hand tools and can also be located near automotive clusters.

Key features of world-class clusters

1. Plug and play infrastructure: Ready-to-use facilities that minimize setup time and costs, allowing industries to operationalize quickly and ensure faster returns on investment.
2. Worker housing: Affordable accommodations within clusters to improve workforce productivity and support labour-intensive manufacturing.
3. Effluent treatment plant: Centralized facilities to ensure compliance with environmental standards.
4. Convention centre: Platforms to facilitate industry collabouration and networking, and the marketing of products.
5. Centre for research and development and testing facilities: Centres to promote innovation, skill development, and quality assurance.
6. Reliable water and power supply: Access to unrestricted water and power supply to reduce operational costs and boost profitability.

Global best practices in cluster development

India can learn from successful international examples to create globally competitive clusters:

1. China provides plug and play clusters wherein building, electricity, waste treatment, all facilities are provided, whereas, Vietnam has clusters with dedicated medium voltage line, multiple centralized wastewater treatment systems. These examples show that to build world class clusters, it is important to invest in infrastructure such as effluent treatment plants, guaranteed 24x7 power supply, and plug and play factories.
2. Germany established a cluster with research facilities and identified research focus in 2012, wherein 80% of cost on technology transfer from local research institutes is reimbursed to SMEs. The cluster is funded through public funding and membership fees and the team formed by members conduct marketing activities to make the cluster more attractive for potential investors.
3. Vietnam has airport / seaport within ~40 km radius of a cluster. It has also developed extensive national highways to connect clusters with Ho Chi Minh City, Mekong Delta, and South-East region. These transformations have ensured 90% occupancy in the developed clusters in Vietnam.

Investment requirements

The total cost of developing these clusters is estimated at INR 12,000 crores. The breakup of the required investment is given in (Figure 22).

Requirement	Size (Acres)	Cost (INR Crores)
Land acquisition	NA	4,000
Convention centre	50-60	125-175
Affluent treatment plant	20-30	125-175
R&D Centre	25-35	60-90
Factory Buildings & other infrastructure	4,000	7,500
Total	**4100**	**~12000**

Figure 22: Investment required for setting up world class industrial clusters

It is important to note that this investment can be recouped through leasing fees and operations and maintenance (O&M) charges recovered from industry players.

Additionally, investment of INR 45,000 crores is required over the next decade from industry players in the industrial park to achieve a target of $25 billion export sales.

Public-private partnership (PPP) model

To ensure effective governance of the tools cluster, a PPP model is proposed with three key components (Figure 23):

1. Special purpose vehicle (SPV): Responsible for planning, developing, and managing the tools clusters.
2. Private developer: Infusing equity and managing infrastructural development
3. Cluster Authority (state government): Ensuring unencumbered land is made available to the SPV, infusing equity along with a private developer, and bridging any viability gaps in the development of the cluster.

Moreover, the central government will have to provide grants for the development of the cluster and the proceeds collected from sub-leasing and operations and maintenance charges will be shared between the private developer and the cluster authority.

Governance of Cluster

1. For efficient governance of clusters, it is important that the respective authorities' roles are clearly defined. To ensure this, the state government should enact regulations for flexible laws including labour, building, factory and environment requirements in specified clusters.
2. It should ensure that the region is planned by the defined cluster authority. SPV should undertake the development of the cluster development, its maintenance, investor outreach, and facilitate investment.
3. Cluster authority should be empowered to process approvals, and it should ensure timebound clearance of projects and facilitate investment along with SPV.

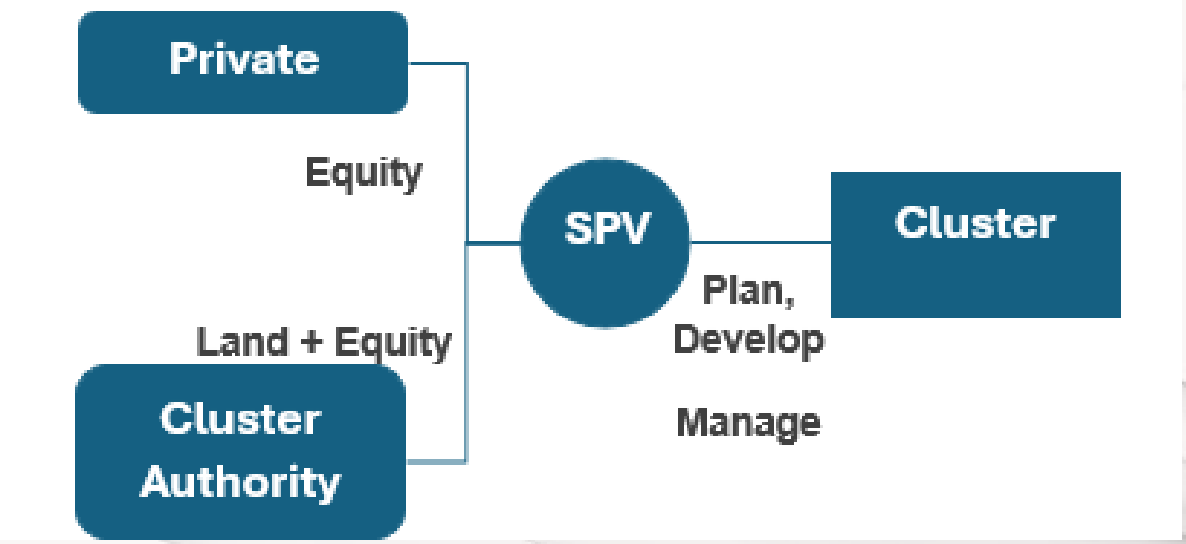


Figure 23: PPP model for cluster development of hand tools

Governance of R&D Centres

1. Research and development centres in the clusters should be governed by and independent governing council.
2. The key role of the council should be to determine research areas for centre and track performance of the industries and the cluster.
3. The governing council should also include industry players and associations, export associations, government officials, and cluster authorities as members for collaboration and providing expertise.
4. Chief executive officers of the industries operating in these clusters should then be accountable to the governing council and not only to respective ministries.

Reduce Factor Market Disabilities Through Structural Reforms

Structural reforms are essential to ensure cost competitiveness for Indian manufacturers.

Key recommendations

1. **Material costs:** Policy measures should focus on rationalizing QCO restrictions and import duties on steel products and PVC products related to exports. Additionally, import processes should be eased for exporters and downstream sectors should be supported through steel and PVC duty compensation.
2. **Labour cost:** Changes to current labour laws are required to reduce labour costs in India such as allowing 300 quarterly overtime hours, increasing allowable working hours to 10 hours per day and 60 hours per week, and by capping overtime wages to 1.25-1.5x rather than the current 2x, in line with international standards.
3. **Land and Building:** Since India restricts ground coverage and FAR of buildings as compared to international benchmarks, policy needs to allow liberal FAR, ground coverage, and green cover norms in line with international standards so that the effective land area available for construction and floor area can be increased and investment requirements by the industry could be lowered.
4. **Machinery:** EPCG requirements (especially requirements around average export obligations) should be reviewed and simplified. Import duty on machinery should be reduced. Penal provisions such as interest penalty should be reduced on non-compliance with EPCG requirements.
5. **High electricity cost:** Reduce electricity costs by ensuring 24x7 electricity access to manufacturers, especially in industrial clusters to reduce reliance on high-cost captive power generators.

6. **Technology and Innovation:** Visa clearance for foreign nationals (including China) should be expedited to improve technology transfer process. This could improve the efficiency and speed of technology transfer on import of machines.

Factor market interventions would bridge the cost disability in the hand and power tools sector

According to FED analysis, if these factor market reforms are implemented, no additional fiscal incentive will be required from the government. Figure 24 shows the effect of certain factor market interventions on the bridge support requirement. For example, if import duty on key raw materials is rationalized then it would reduce the cumulative estimated disability by INR 3,600 crores in hand tools. Similarly, rationalizing import duty on motors, plastic, and capital goods would amount to reduction in disability of INR ~2,000 crores.

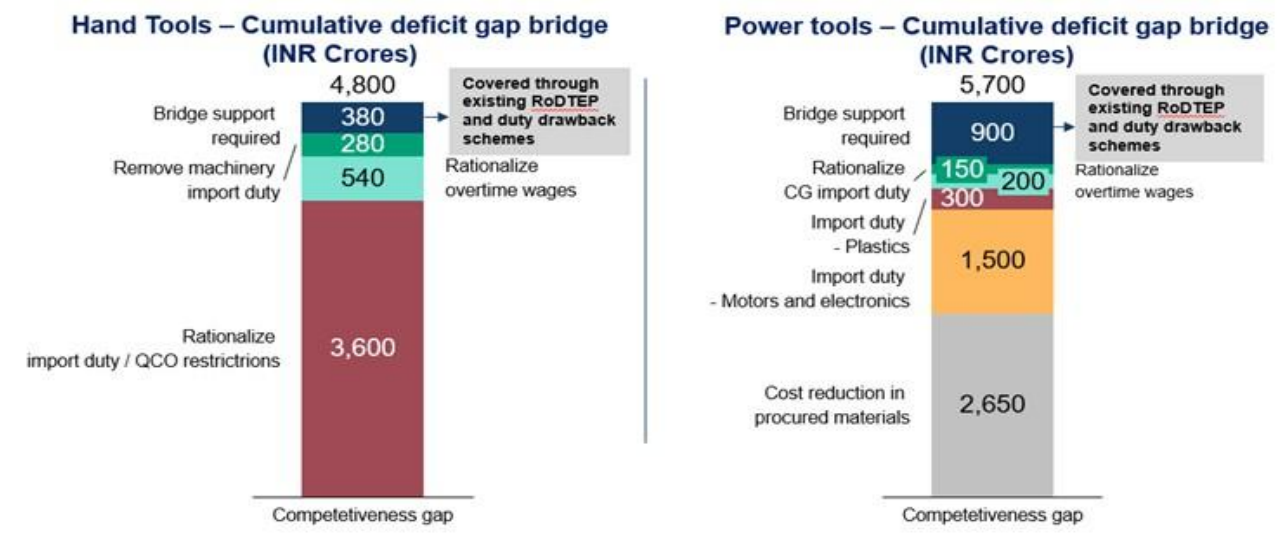


Figure 24: Cumulative deficit gap bridge through factor market interventions

However, if structural reforms are delayed, the government would be required to provide support of approximately INR 8,000 crores over the next 5 years to compensate for the scale and approximately 10% of the cost disability caused by structural factors in the hand tools industry and 12% in the power tools industry. This is in addition to RoDTEP and Duty drawbacks currently provided by the government.

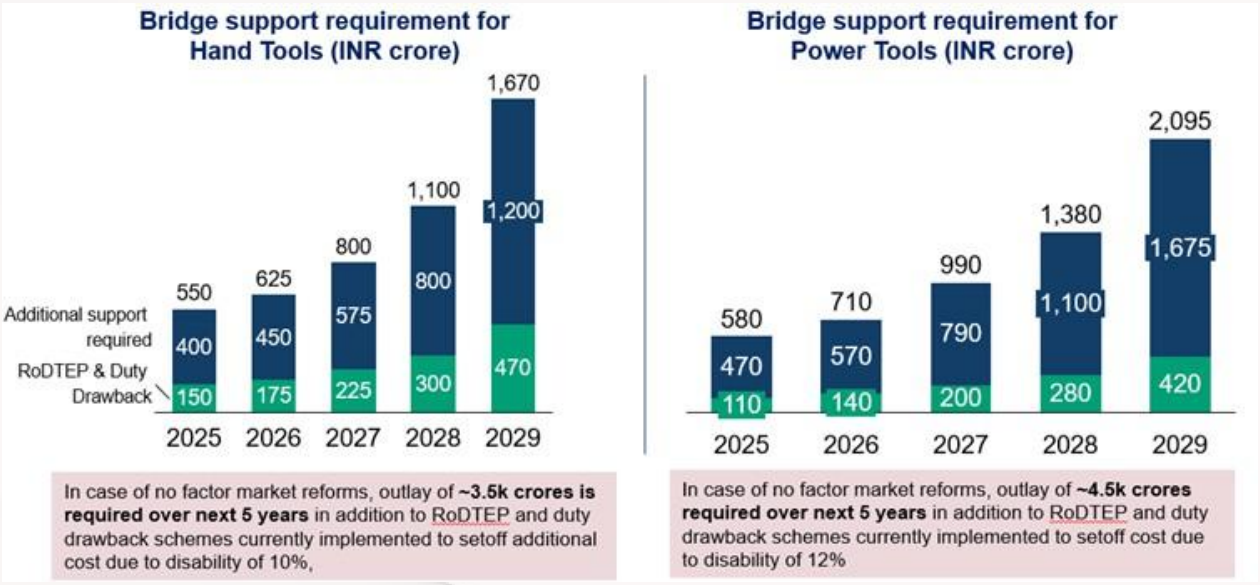


Figure 25: Bridge support requirement from the government for reducing cost disability in hand and power tools market without factor market interventions

Support for cost disability in the hand tools market can be provided through capital and operational subsidies

1. Logistics disability support (~INR 480 crores): 1% of FOB value of goods exported to be paid out as logistics cost reimbursement.
2. Interest subvention (~INR 700 crores): Interest subvention to be increased back to 5% under the Interest Equalization scheme by the central government.
3. Competitiveness incentive (~INR 650 crores): Provide competitiveness incentive support of 3% of additional sales from manufacturing units at industrial parks to be established.
4. Capital subsidy (~INR 1700 crores): 5% subsidy to be provided on all machinery (including testing equipment) that will be established in new industrial parks or procured by MSMEs.

Support for cost disability in the power tools market can be provided through capital and operational subsidies

1. Interest subvention (~INR 1000 crores): Reinstate interest subvention to 5% under the Interest Equalization scheme by the central government for all MSME and non-MSME exporters.
2. Competitiveness incentive (~INR 3000 crores): Provide competitiveness incentive support/ production linked or employment linked incentive amounting to 6% of revenue from manufacturing units at industrial parks to be established.
3. Capital subsidy (~INR 500 crores): 15% subsidy to be provided on all machinery (including testing equipment) that will be established in anchor investors.

If either the factor market reforms are implemented, or the government provides bridge support

requirement for both these industries then the cost curve in Figure 13 would readjust. The new cost curve is represented in Figure 26. Structural readjustments would move the India on a lower cost curve (indicated by the dashed line) and the lower structural cost curve will contribute to improving scale. This would reduce the cost of production in India further in line with China's cost.

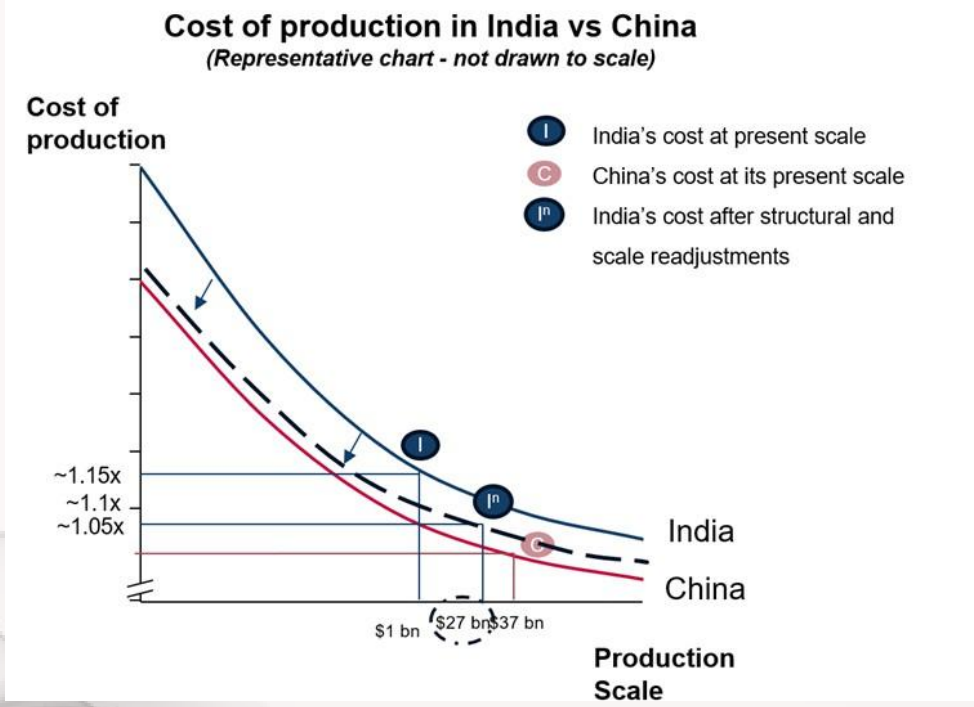


Figure 26: Readjusted cost curve after factor market interventions

Strategic Investment with Long-Term Gains

It is crucial to recognize that in case of no factor market reforms, the expenditure of the government provided as bridge support should still be viewed as a strategic investment by the government and not a subsidy.

For both Hand Tools and Power Tools:

1. The bridge support provided is projected to facilitate incremental exports worth INR 50,000 crore, having an income multiplier effect of 2-3 times.
2. With India's tax-to-GDP ratio at 11.7%, this growth is estimated to generate additional tax revenues of approximately INR 10-15,000 crores.
3. Hence, 2-3 times of bridge support provided will be collected from the industry as taxes over the next 5 years.

These interventions can transform the tools sector into a global leader, driving economic growth and job creation in the years to come.

Key Policy Recommendations and Conclusion

The report “Unlocking $25+ Billion Exports: India’s Hand & Power Tools Sector” sets forth a comprehensive strategy to significantly boost India’s export performance in the Hand tools and Power tools sector. The core recommendations, detailed throughout the document, focus on the following key pillars:

1 Create World-Scale and World-Class Clusters for Hand Tools

1.1 **Establish Clusters:** Develop 3-4 hand tool clusters spanning approximately 4,000 acres by 2035, with one cluster in Punjab, to enhance production efficiency and attract investment.

1.2 **Key Features:** Include plug-and-play infrastructure, worker housing, effluent treatment plants, convention centers, R&D and testing facilities, and reliable water and power supply.

1.3 **Investment:** Allocate INR 12,000 crores for cluster development, to be recouped through leasing fees and O&M charges, with an additional INR 45,000 crores from industry players over the next decade.

1.4 **PPP Model:** Implement a public-private partnership (PPP) model involving a Special Purpose Vehicle (SPV), private developers, and a Cluster Authority (state government) to manage development and governance.

1.5 **Governance:** Enact flexible regulations for labour, building, factory, and environmental requirements; empower Cluster Authority for time-bound approvals; and establish an independent governing council for R&D centers with industry and government representation.

2 Reduce Factor Market Disabilities Through Structural Reforms:

To bridge the identified 14-17% cost disadvantage compared to China, the document urges reforms across several areas:

2.1 **Raw Materials:** Rationalizing Quality Control Orders (QCOs) and reducing import duties on inputs like steel, PVC, and motors.

2.2 **Labour:** Increasing flexibility in working hours and overtime regulations, aligning wage norms closer to international standards.

2.3 **Capital Goods & Exports:** Simplify Export Promotion Capital Goods (EPCG) requirements, reduce import duties on machinery, and lower penal provisions like interest penalties.

2.4 **Logistics, Power & Finance:** Addressing transport costs, ensuring affordable and reliable power, and tackling higher financing costs. Ensure 24/7 electricity access in industrial clusters to reduce reliance on costly captive generators (INR 18/unit vs. INR 7-8/unit).

2.5 **Land & Building:** Liberalize Floor Area Ratio (FAR), ground coverage, and green cover norms to align with international standards, increasing usable land area and reducing investment costs to address land availability/cost.

2.6 **Technology:** Facilitating technology transfer through easier visa norms and import processes and promoting domestic R&D.

3 Provide Bridge Support to Overcome Cost Disabilities in the event of delayed Structural Reforms

3.1 **No Additional Support Needed:** If factor market reforms are implemented, existing incentives (RoDTEP, duty drawbacks) suffice; no further fiscal support required.

3.2 **Bridge Support Requirement:** If reforms are not implemented, provide INR 5,800 crores over 5 years (beyond existing schemes) to offset 10-12% structural cost disadvantages:

3.2.1 **Hand Tools (INR 3,450 crores):**

a. **Logistics support:** INR 450 crores (1% of FOB value as reimbursement).

b. **Interest subvention:** INR 700 crores (restore 5% under Interest Equalization Scheme).

c. **Competitiveness incentive:** INR 700 crores (3% of additional sales from industrial parks).

d. **Capital subsidy:** INR 1,600 crores (5% on machinery in new parks or for MSMEs).

3.2.2 **Power Tools (INR 2,230 crores):**

a. **Interest subvention:** INR 430 crores (restore 5% for all exporters).

b. **Competitiveness incentive:** INR 1,500 crores (6% of revenue from industrial parks).

c. **Capital subsidy:** INR 300 crores (15% on machinery for anchor investors).

3.3 **Strategic Investment:** Treat bridge support as an investment, not a subsidy, yielding 2-3x returns in tax revenue (INR 10-15,000 crores from hand tools, INR 5-7,500 crores from power tools) over 5 years due to export growth.

Strategic Outcome

These interventions aim to address India's 14-17% cost disadvantage compared to China, leveraging geopolitical opportunities (e.g., U.S. tariffs on China) and existing strengths (e.g., low-cost labor, hand tool ecosystem). The goal is to achieve a 25% global market share in hand tools ($15 billion) and 10% in power tools ($12 billion) by 2035, creating 3.5 million jobs.

Conclusion

India stands at a critical juncture, presented with a remarkable opportunity to transform its hand and power tools industry into a global export powerhouse, targeting a potential worth over $25 billion by 2035. As detailed in this report, while India possesses inherent strengths like cost-effective labour and a growing manufacturing base, it faces significant hurdles – primarily a structural cost disadvantage compared to competitors like China, inadequate scale, infrastructure deficits, and gaps in technical capabilities. Overcoming these requires a concerted and strategic effort.

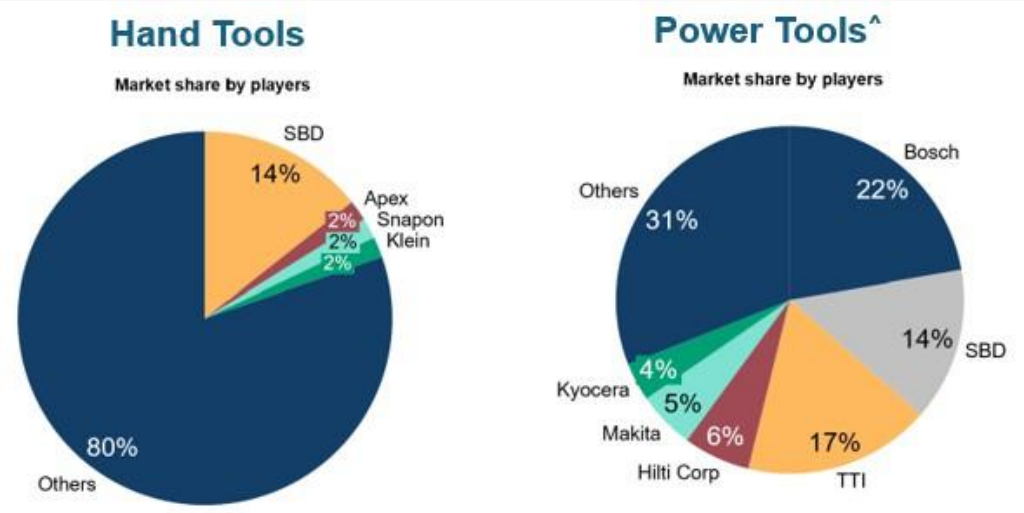
These proposed interventions are synergistic with the Government of India's ongoing push to bolster domestic manufacturing and enhance global competitiveness. The overarching 'Make in India' initiative sets the stage for developing indigenous capabilities. While specific Production Linked Incentive (PLI) schemes demonstrate a successful model for incentivizing scale and value addition, the principles driving them can be adapted to catalyze growth in the tools sector. Furthermore, dedicated efforts like the RAMP (Raising and Accelerating MSME Performance) scheme and the supportive, revised definition of MSMEs are vital steps aimed at strengthening the Micro, Small, and Medium Enterprises that dominate the hand tools segment, providing them with the necessary handholding to grow and compete globally. The recommendations within this report seek to build upon and amplify the impact of these existing foundational policies.

This report advocates a clear, actionable roadmap built on three pillars: developing world-class, scaled industrial clusters with integrated infrastructure; implementing crucial factor market reforms to enhance cost competitiveness across inputs, labour, logistics, and capital; and providing targeted, conditional support as a strategic investment to bridge temporary gaps. The path forward demands urgency and collaborative action from the central and state governments, industry players, and financial institutions. Implementing the proposed cluster development strategy, enacting structural reforms, and ensuring efficient delivery of support mechanisms can collectively dismantle the barriers holding the sector back.

Seizing this $25+ billion opportunity is not merely about export figures; it is about generating approximately 3.5 million jobs, fostering innovation, empowering countless MSMEs, strengthening India's industrial ecosystem, and solidifying the nation's position as a reliable, high-quality global manufacturing hub. The time to act is now; the potential rewards for India's economy and its people are immense.

Appendix

A.1 Market Share by Player Globally



A. 1: Global market share of top hand tools and power tools manufacturers
Source: Press search, Industry reports, Annual reports of industry players
^ Assumed 20% of component business solution segment in Kyocera and 60% of TTI business relates to power tools

A.2 Tariff levied by US on China

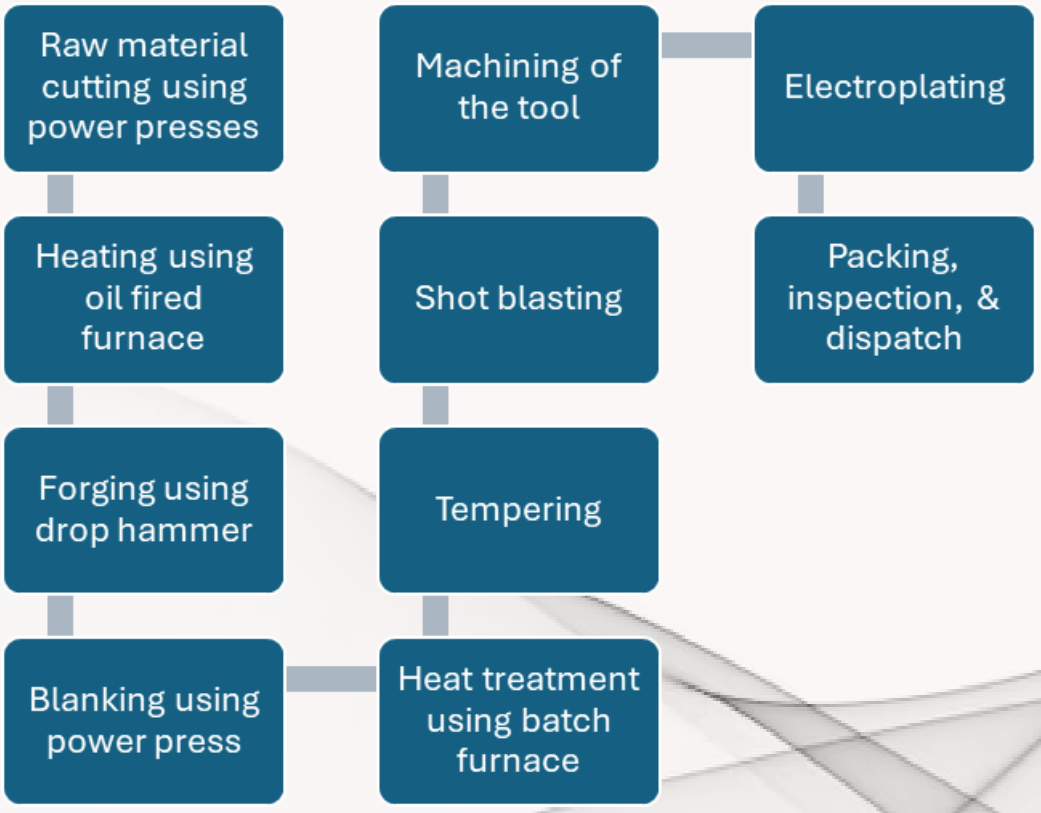
HSN Code	Product Category	US additional Tariff on China (ad valorem)
8201, 8202, 8203, 8404, 8205, 8206, 8210	Hand Tools (except 820120)	25%
8467	Power Tools	25%
8467	Power Tools (Remaining)	7.5%

Source: https://ustr.gov/issue-areas/enforcement/section-301-investigations/tariff-actions; Harmonized tariff schedule of the US (2024)

HSN Code	Product Category	US General Tariff
8467 (Others)	Power Tools	Free
846721		1.70%
846711.1, 846719.1		4.50%
820110, 820130, 820140.3, 820190.4, 820190.6, 820210, 820220, 820231, 820229, 820240.6, 820291, 820299, 820310, 820320, 820330, 820520.6, 820551.15, 820551.45, 820559.20, 820559.30, 820559.60, 820590.10	Hand Tools	
820140.6, 820510, 820520.3, 820540		Free
820240.3, 820559.1		6.20%
820320.2		7.20%
820320.4		4%
820320.8		12%
820340.3		4.50%
820340.6		6%
8204		3.30%
820530.3		9%
820530.6, 820570		5.70%
820551.3, 820551.75, 820559.8, 8210		5%
820559.45, 820559.55		3.70%
820560		5.30%
		2.90%

A. 2: Additional tariffs levied by the US on China along with general tariff rate for India

A.3 Hand Tools Manufacturing process



A. 3: Process flow chart of manufacturing of hand tools

A.4 RoDTEP rates in India and export rebates in China

RoDTEP rates in India

Type of tools	HSN Code	RoDTEP rate as % of FOB
Hand tools	8201, 8202, 8203 (excluding 82031000), 8204, 8205 (excluding 82057000), 8206	1.10%
	82031000	1.50%
	82057000	1.30%
Power Tools	8467	0.90%
	8508	0.70%

Export rebates in China

Type of tools	HSN Code	China's export rebate
Hand Tools	8201 (excluding 820120, 820160)	13%*
Power tools	8467	17%^

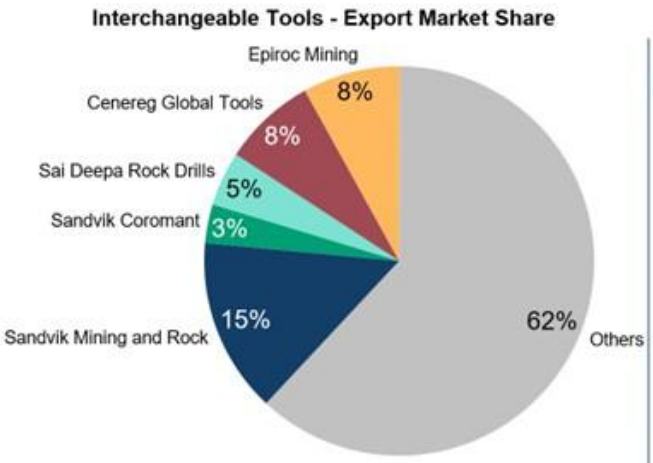
Export Rebates are methodology to refund VAT paid on inputs

- Major reforms began after China joined the WTO in 2001, including the expansion of rebate eligibility and adjustments to rebate rates.
- Subsequent reforms simplified rate structures, reducing the number of rate tiers and aligning rebate rates closely with VAT rates.

*Based on export tax rebate increase announced in 2020 (https://szs.mof.gov.cn/zhengcefabu/202003/t20200317_3484123.htm)
^Based on a 2003 circular as the circular for 2018 could not be attained (http://www.asianlii.org/cn/legis/cen/laws/cotmofatsaotoaterr1030/)

A. 4: RoDTEP rates in India and Export rebates offered in China

A.5 Top Exporters of Tool interchangeable for hand and machine tools



List of top exporters for tools interchangeable for hand & machine

Exporter	INR Cr.	% of overall export
Sandvik Mining and Rock Technology	450	15%
Epiroc Mining	250	8%
Cenereg Global Tools	240	8%
Sai Deepa Rock Drills	140	5%
Sandvik Coromant	100	3%
Kennametal	90	3%
Kadimi Tool	80	3%
LMT Tools	75	2%
Indo-MIM	70	2%
Sandvik Asia	65	2%
Others	1535	50%
Total	**3100**	**100%**

(HSN Code included is 8207)

A. 5: Top exporters of Tool accessories of India - HSN Code - 8207

A.6 Industry players and vendors interviewed

Name	Designation	Company
Gautam Kapoor	Managing Director	Gardex International
Naresh Sharma	Managing Director	HR International
Suresh Sharma	Managing Director	HR Industries
Ajay Kumar	Managing Director	Ajay Industries
S.C. Ralhan	President	Ludhiana Hand tools Associaton
Ashish Kumar	Director	Victor Forgings
Ashwini Kumar	President	Federation of Indian Export Organizations
Arun Khattar	Director - GSM Procurement Operations	Stanley Black & Decker
Gopal Balasubramanium	Vice President – Global Sourcing	Stanley Black & Decker
Vish Puri	President	CSTech
Hashim Abdul Khadar	Vice President	SFO Technologies
Jaspreet Singh	Assistant General Manager	Ask Automotive
Dhiren Bammi	Managing Director	Groz Engineering
Prashant Bammi	Executive Director - Operations	Groz Engineering
Rahul Khanna	General Manager - Sales	Groz Engineering
Vikas Chetwani	DGM-Product Management	Groz Engineering

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Shubham Pandey	Young Professional, NITI Aayog
Muskan Agarwal	Young Professional, NITI Aayog

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Acknowledgement

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