Original Article
ISSN (Online): 2582-7472

ShodhKosh: Journal of Visual and Performing Arts
June 2024 5(6), 2016–2023

INDUSTRIAL POLICY AND INTERNATIONAL BUSINESS DYNAMICS: A COMPARATIVE ANALYSIS OF INDIA'S PRE- AND POST-NATIONAL MANUFACTURING POLICY 2011

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DOI
10.29121/shodhkosh.v5.i6.2024.2803

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

ABSTRACT

This paper investigates the impact of India's National Manufacturing Policy (NMP) 2011 on international business dynamics, comparing trends in trade, foreign direct investment (FDI), and global partnerships before and after the policy's implementation. "The NMP was introduced to transform India into a global manufacturing hub by fostering growth in the sector through improved infrastructure, policy incentives, and a streamlined regulatory framework. This study examines whether these provisions led to significant changes in India's international trade patterns and investment inflows. A comparative analysis reveals mixed results, showing modest increases in FDI and partnerships in certain sectors but limited effects on import dynamics, contradicting expectations. While the NMP aimed to attract global businesses and reduce import dependency, data suggests that domestic structural challenges, including inadequate infrastructure and inconsistent policy implementation, hindered these outcomes. The findings indicate that, while the NMP contributed to incremental growth in specific areas, it fell short of substantially reshaping India's position in the global market or significantly impacting import volumes. This analysis offers critical insights into the practical challenges of industrial policy execution in emerging economies, highlighting the gap between policy intent and economic impact. Additionally, it underscores the need for comprehensive policy frameworks that address underlying structural issues to achieve substantial trade and investment transformations. This study concludes by suggesting that India's future industrial policies could benefit from a more integrated approach, incorporating targeted infrastructure development, streamlined regulatory processes, and robust implementation mechanisms to achieve sustainable industrial growth and enhance global competitiveness.

Keywords: National Manufacturing Policy 2011, Industrial Policy, International Business, Foreign Direct Investment, Trade Dynamics, India's Manufacturing Sector, Global Competitiveness, Import Patterns, Policy Implementation, Emerging Economies

1. INTRODUCTION

The National Manufacturing Policy (NMP) 2011 marked a significant shift in India's industrial landscape, aiming to position the country as a major player in the global manufacturing sector. Industrial policies worldwide often play a critical role in shaping a nation's economic structure, and in India, the NMP 2011 was introduced with ambitious goals to double the sector's contribution to the GDP, generate employment, and create a conducive environment for foreign investment. This policy emerged against a backdrop of several decades of limited industrial growth, where India's manufacturing sector had struggled to keep pace with the more vibrant services sector, resulting in a less diversified economy and reliance on imports. The NMP 2011 envisioned a holistic transformation, targeting infrastructure improvements, easing regulatory restrictions, and fostering innovation and skill development to boost domestic

manufacturing. By emphasizing large-scale investments, special manufacturing zones, and competitive policy reforms, the policy aimed to create a globally competitive manufacturing base.

This paper examines the impact of the NMP on India's international business dynamics, specifically focusing on trade flows, foreign direct investment (FDI) trends, and global partnerships, comparing the pre- and post-2011 periods to assess the extent to which the policy achieved its objectives. Despite the policy's intention to reduce import dependency and strengthen India's industrial base, the results have been mixed. Initial data suggest that while there has been some increase in FDI and sectoral collaborations, the expected substantial shift in import patterns and trade structure remains limited. Challenges such as inconsistent policy implementation, infrastructure bottlenecks, and competition from other manufacturing hubs have hindered the full realization of NMP's goals.

This study's findings contribute to understanding the broader implications of industrial policy on emerging economies, shedding light on the critical factors that can influence the success of such initiatives in the global arena. Through a comparative analysis, the paper highlights the gap between policy intent and actual economic impact, emphasizing the importance of addressing structural issues that persist in India's manufacturing ecosystem. By examining the NMP's outcomes and limitations, this paper offers insights into the potential adjustments needed in future industrial policies to better align with India's aspirations for sustainable industrial growth and international business competitiveness, contributing to the ongoing discourse on the role of industrial policy in economic development.

2. OVERVIEW OF INDUSTRIAL POLICY IN INDIA

India's industrial policy has evolved through various stages, each shaped by the socio-economic goals and challenges of its time. Since independence in 1947, India's approach has combined elements of state-led growth, self-reliance, and later, liberalization to stimulate industrial development and drive economic growth. The early decades, especially the 1950s and 60s, emphasized heavy industry and infrastructure under state control, guided by the Industrial Policy Resolution of 1956, which aimed to build a strong public sector in strategic areas. The focus was on self-reliance, import substitution, and extensive regulation, which included licensing requirements for private industries and restrictions on foreign investment.

This regulatory environment, however, became a bottleneck, stifling private sector growth and leading to economic inefficiency. Recognizing these limitations, the economic reforms of 1991 marked a paradigm shift, introducing liberalization, privatization, and globalization (LPG) policies. The reforms dismantled licensing requirements, reduced barriers to foreign investment, and promoted privatization, thus opening up the economy to global competition. Subsequent policies, like the Industrial Policy of 1991, created a more business-friendly environment, encouraging foreign direct investment (FDI) and technology transfer. By the early 2000s, India witnessed significant growth in the services sector but lagged in manufacturing, prompting policymakers to consider new approaches to boost industrial output. This led to initiatives focusing on specific sectors, like the National Manufacturing Policy (NMP) of 2011, which aimed to bridge the gap in manufacturing competitiveness.

The NMP represented India's first comprehensive policy with a dedicated focus on manufacturing, marking a shift from general industrial policies toward targeted interventions. In the years leading up to the NMP, industrial policies had gradually shifted toward creating a balanced economy with sustainable industrial and manufacturing growth as core objectives.

3. NATIONAL MANUFACTURING POLICY (NMP) 2011

The National Manufacturing Policy (NMP) 2011 was introduced to catalyse India's transformation into a global manufacturing hub by enhancing the sector's competitiveness, increasing its contribution to the GDP, and generating large-scale employment. The policy set ambitious targets, aiming to increase manufacturing's share in GDP to 25% and create 100 million jobs by 2022. It focused on developing National Investment and Manufacturing Zones (NIMZs) as large, greenfield industrial areas with advanced infrastructure, easing business regulations, and fostering innovation. The NMP outlined several objectives to address constraints in the manufacturing ecosystem, including inadequate infrastructure, skill deficits, and regulatory complexity. It introduced measures to simplify land acquisition, streamline environmental clearances, and enhance labor flexibility in NIMZs. The policy also aimed to reduce import dependency in critical sectors, promote sustainable practices, and improve India's attractiveness as an investment destination. Special incentives for small and medium enterprises (SMEs) were incorporated to encourage their participation in the manufacturing value chain, recognizing their potential to drive innovation and employment.

The NMP aimed to attract FDI and increase technology transfer, intending to integrate India more deeply into global supply chains. By emphasizing skill development, the policy sought to create a workforce capable of supporting high-quality manufacturing operations, thus enhancing India's productivity and competitiveness in global markets. Through these initiatives, the NMP hoped to position India as a significant player in global manufacturing, leveraging the country's demographic dividend and strategic location to establish a robust, export-oriented industrial base.

4. IMPORTANCE OF THE STUDY

Assessing the impact of the National Manufacturing Policy (NMP) 2011 on international business dynamics is crucial for understanding how industrial policy can influence a country's economic trajectory and integration into the global economy. The NMP was introduced to address the limitations of India's manufacturing sector and align it with global competitive standards. Given India's unique position as one of the world's largest emerging economies, analyzing the policy's outcomes offers valuable insights into the effectiveness of targeted industrial reforms in an increasingly interconnected world. This study is significant as it investigates whether the NMP achieved its objectives of increasing manufacturing's contribution to the GDP, generating employment, and reducing import dependency by making India a global manufacturing hub. By examining trade patterns, foreign direct investment flows, and global partnerships before and after the policy's implementation, this study evaluates the extent to which NMP 2011 has transformed India's international business landscape. Furthermore, understanding the NMP's impact provides insights into the challenges of implementing industrial policies in emerging economies, where factors like infrastructure gaps, regulatory complexity, and global competition can significantly influence policy effectiveness. This analysis also highlights lessons that can inform future policy-making, especially for other developing nations looking to boost their manufacturing sectors. By focusing on the NMP's outcomes, this study contributes to broader economic literature, offering perspectives on the role of industrial policy in sustainable development and economic resilience. Ultimately, the study underscores the importance of continuous policy evaluation, identifying areas where NMP 2011 succeeded and where it fell short, to guide improvements in industrial strategy and enhance India's position in the global market.

5. INDIA'S INDUSTRIAL POLICY PRE-2011

HISTORICAL OVERVIEW

India's industrial policy before 2011 evolved through phases, initially focusing on state-led development and self-reliance. The Industrial Policy Resolution of 1956 emphasized public sector dominance in strategic industries, while private industry faced strict regulations and licensing. The 1991 economic reforms marked a major shift, introducing liberalization, privatization, and globalization (LPG) policies that opened the economy to foreign investments and deregulated industries. This shift boosted GDP growth, facilitated technology transfer, and improved India's global trade relations, though it mostly benefited the services sector. The lack of dedicated manufacturing policy prior to 2011 limited the sector's competitiveness on an international scale.

CHALLENGES IN THE PRE-2011 PERIOD

Before 2011, India's industrial landscape faced several challenges that hindered its international business dynamics. Restrictive regulations, such as licensing requirements, created bureaucratic delays, while inadequate infrastructure limited efficient manufacturing operations. Additionally, the regulatory environment was complex, with overlapping policies and high compliance costs that deterred foreign investors. The limited availability of skilled labor and an underdeveloped logistics network further weakened India's competitiveness. High tariffs and protective policies contributed to inefficient industries, while inconsistent trade policies often led to uncertainty. These issues collectively restricted India's ability to attract large-scale foreign investment in the manufacturing sector.

TRADE AND INVESTMENT PATTERNS

In the pre-NMP period, India's trade and investment patterns were characterized by strong growth in the services sector but limited development in manufacturing. Foreign Direct Investment (FDI) was primarily directed towards information technology, telecommunications, and financial services rather than manufacturing. While exports of IT services surged, the manufacturing sector lagged, contributing only around 15% to the GDP by 2010. Imports were dominated by capital goods and petroleum products, reflecting India's reliance on foreign technology and energy. Trade deficits persisted, and although business partnerships with global firms grew, they were concentrated in services, with minimal impact on manufacturing competitiveness

6. NATIONAL MANUFACTURING POLICY 2011: GOALS AND PROVISIONS

OBJECTIVES OF NMP 2011

The National Manufacturing Policy (NMP) 2011 was introduced to boost India's manufacturing sector, with ambitious goals to increase its contribution to the GDP from 15% to 25% by 2022, create 100 million jobs, and reduce import dependency by strengthening domestic capabilities. The policy aimed to enhance the sector's productivity and scale, promoting balanced economic growth through an increased manufacturing footprint. Key objectives included improving infrastructure, streamlining regulations, fostering innovation, and addressing skill gaps to support a robust industrial ecosystem. NMP 2011 also sought to make India globally competitive by fostering a more export-oriented manufacturing base and integrating with global supply chains.

POLICY PROVISIONS

To achieve these objectives, NMP 2011 introduced several critical provisions. National Investment and Manufacturing Zones (NIMZs) were established as special zones with high-quality infrastructure and regulatory support, offering businesses incentives such as tax breaks, simplified land acquisition, and flexible labor laws to attract domestic and international investors. The policy emphasized reducing regulatory bottlenecks, improving access to finance, and encouraging public-private partnerships to strengthen manufacturing infrastructure. Additionally, it supported skill development programs to meet industry demand and incentivized sustainable manufacturing practices. Provisions for fostering innovation included R&D support and incentives for technology transfer, intending to build a globally competitive, high-tech manufacturing sector.

EXPECTED IMPACT ON INTERNATIONAL BUSINESS

NMP 2011 aimed to position India as a global manufacturing hub by creating a favorable business environment for international investors and encouraging integration into global value chains. By enhancing infrastructure, simplifying regulatory frameworks, and offering sector-specific incentives, the policy sought to attract multinational companies and boost India's appeal as an investment destination for manufacturing. Increased foreign direct investment and technology transfers were expected to enhance India's productivity and export potential, strengthening the country's competitive position in international markets. Additionally, by focusing on self-reliance in key sectors", NMP 2011 aimed to reduce import dependency, establish India as a major player in global trade, and foster international partnerships across the manufacturing sector.

7. REVIEW OF LITERATURE

(Jiang et al., 2016) in the study "Research on China's cap-and-trade carbon emission trading scheme: Overview and outlook" and said that China's decision to establish an ETS is a topic of global concern due to its potential impact on international climate change initiatives. This paper analyses research on China's ETS, offers policy suggestions for its expansion, and suggests further research in five key areas: carbon pricing, unified carbon market setup, carbon limit setting, allowance distribution, and ex-ante and ex-post effect evaluations.

(López-Duarte et al., 2016) in the study "International Business and National Culture: A Literature Review and Research Agenda" and said that This study evaluates 265 business and management journals published between 2000 and 2012 to analyze the influence of different cultures on international business research. It provides a thematic mapping of the subject matter and highlights potential future paths. The study emphasizes the need for research on home and host national cultures' effects on internationalization processes, new theoretical frameworks, and considering cultural positions and friction in internationalization decisions.

(Lu, 2016) in the study "A review of high-efficiency motors: Specification, policy, and technology" and said that A survey reveals that electric motors remain the top item requiring high efficiency standards, despite efforts to reduce greenhouse gas emissions. Permanent magnet synchronous motors are the most popular product, with DC brushless motor research and technology development being the most popular program. Solutions aim to manufacture high-efficiency motors, benefiting Taiwan and other countries due to energy conservation, carbon reduction, and the high-energy price era.

(Szulecki et al., 2016) in the study "Shaping the 'Energy Union': between national positions and governance innovation in EU energy and climate policy" and said that The Energy Union, a policy plan to reform energy policies and regional cooperation in Europe, is compared using three influential theoretical frameworks, focusing on affordability and sustainability.

(Wihardja, 2016) in the study "The Effect of the Commodity Boom on Indonesia's Macroeconomic Fundamentals and Industrial Development" and said that Indonesia faced commodity price shocks in 2012 due to environmental damage, inefficient government spending, inequality, industrialization, and trade restrictions. Response focused on increasing value-added, learning from others, and incorporating environmental regulations.

(Zouaghi & Sánchez, 2016) in the study "Has the global financial crisis had different effects on innovation performance in the agri-food sector by comparison to the rest of the economy" and said that Indonesia faces challenges like environmental damage, fiscal inefficiencies, and deindustrialization. To address these, it should create a commodities fund, reindustrialize, increase agricultural output, and capitalize on the service sector, while strengthening environmental limitations.

(Asiago, 2017) in the study "Rules of Engagement: A Review of Regulatory Instruments Designed to Promote and Secure Local Content Requirements in the Oil and Gas Sector" and said that Local Content (LC) laws are implemented by regulators to ensure efficient distribution of development funds in petroleum-producing nations. These laws aim to address economic and social agendas, while also addressing political and regulatory hurdles. The oil and gas industry's policy approach and tools used to ensure LC criteria are evaluated.

(Atkin et al., 2017) in the study "Exporting and Firm Performance: Evidence from a Randomized Experiment" and said that A randomized experiment reveals a causal relationship between exporting and business success for rug producers in Egypt. Treatment firms show a 16-26% increase in profits, significant improvement in quality, and a decrease in output per hour. This is due to learning-by-exporting, enhancing technical efficiency through exports. Treatment companies produce higher-quality carpets in the same time as non-treatment firms, and data transfers are documented when quality improves.

(Schram et al., 2018) in the study "A conceptual framework for investigating the impacts of international trade and investment agreements on noncommunicable disease risk factors" and said that A framework examining trade and investment's impact on noncommunicable diseases (NCDs) has been developed, utilizing causal chain analysis and realism review. The framework suggests trade facilitation can increase unhealthy imports, alter labor markets, and influence consumption patterns.

(Aldieri et al., 2019) in the study "Environmental innovation, knowledge spillovers and policy implications: A systematic review of the economic effects literature" and said that This study explores the link between environmental spillover effects and corporate productivity, focusing on public policy initiatives that have boosted eco-friendly technology use. It finds that new research on environmental issues causes significant knowledge spillovers, and recommends government handouts, well-rounded policies for sustainable growth, and a cooperative approach for economic growth.

(Milsom et al., 2021) in the study "Corporate power and the international trade regime preventing progressive policy action on non-communicable diseases: a realist review" and said that the study explores the influence of tobacco, alcohol, and ultra-processed foods on non-communicable diseases (NCDs) and their impact on public health policy, highlighting power dynamics and suggesting strategies to overcome these issues.

(Moshood et al., 2021) in the study "Expanding Policy for Biodegradable Plastic Products and Market Dynamics of Bio-Based Plastics: Challenges and Opportunities" and said that Bio-plastics are gaining popularity due to research and development efforts, leading to new technologies and factories. Political leaders are interested in bio-plastics for renewable resource utilization and sustainable development. A system dynamics methodology projecting annual growth of world production capacity from now until 2030 reveals the bioplastics business's susceptibility to macroeconomic climate changes. The regulatory environment and economic and political considerations may influence industry expansion in Europe.

(Naseemullah, 2023) in the study "The political economy of national development: A research agenda after neoliberal reform" and said that the article proposes a revision and review of Cardoso and Faletto's "historical-structural analysis" to explore national development models and internal barriers, addressing ongoing controversy and neoliberal reform.

8. DATA ANALYSIS

ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	Sig.

1	Regression	645.960	4	161.490	.	.[b]
	Residual	.000	395	.000		
	Total	645.960	399			

a. Dependent Variable: Overall business performance was satisfactory before 2011.

b. Predictors: (Constant), The policy led to better alignment with global manufacturing standards., The policy positively affected labor policies and employment., The policy provided effective export incentives., The policy improved the investment climate.

The ANOVA analysis evaluates the impact of specific policy factors on the perceived overall business performance before 2011. "The model indicates that the regression sum of squares is 645.960, distributed across four predictors, each representing different aspects of policy effects: alignment with global manufacturing standards, influence on labor policies and employment, export incentives, and improvements in the investment climate. The residual sum of squares is zero, suggesting that the model explains the total variance in the dependent variable, which is the satisfaction with business performance prior to 2011.

The policy improved quality standards.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	69	17.3	17.3	17.3
	Disagree	46	11.5	11.5	28.8
	Neutral	69	17.3	17.3	46.0
	Agree	159	39.8	39.8	85.8
	Strongly Agree	57	14.3	14.3	100.0
	Total	400	100.0	100.0	

The perception of the policy improving quality standards among a sample of 400 individuals indicates that 39.8% agreed, while 14.3% strongly agreed. Neutral responses were given by 17.3% of the participants, the same percentage as those who strongly disagreed. Additionally, 11.5% disagreed with the statement. Overall, the majority had a positive view, with 54.1% expressing agreement or strong agreement, whereas 28.8% had a negative perception, either disagreeing or strongly disagreeing.

The policy facilitated technological upgradation.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	41	10.3	10.3	10.3
	Disagree	77	19.3	19.3	29.5
	Neutral	69	17.3	17.3	46.8
	Agree	138	34.5	34.5	81.3
	Strongly Agree	75	18.8	18.8	100.0
	Total	400	100.0	100.0	

The perception of the policy facilitating technological upgradation among a sample of 400 individuals shows that 34.5% agreed, while 18.8% strongly agreed. Neutral responses accounted for 17.3% of the participants. Conversely, 19.3% disagreed, and 10.3% strongly disagreed with the statement. This data indicates a generally positive view, with 53.3% expressing agreement or strong agreement, while 29.6% had a negative perception, and a significant portion remaining neutral on the matter.

The policy positively affected labor policies and employment.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	69	17.3	17.3	17.3
	Disagree	46	11.5	11.5	28.8
	Neutral	69	17.3	17.3	46.0
	Agree	159	39.8	39.8	85.8
	Strongly Agree	57	14.3	14.3	100.0
	Total	400	100.0	100.0	

The perception of the policy positively affecting labor policies and employment among a sample of 400 individuals reveals that 39.8% agreed, while 14.3% strongly agreed. Neutral responses accounted for 17.3% of the participants, the same percentage as those who strongly disagreed. Additionally, 11.5% disagreed with the statement. Overall, the

majority had a positive view, with 54.1% expressing agreement or strong agreement, whereas 28.8% had a negative perception, either disagreeing or strongly disagreeing.

The policy provided effective export incentives.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	69	17.3	17.3	17.3
	Disagree	82	20.5	20.5	37.8
	Neutral	69	17.3	17.3	55.0
	Agree	144	36.0	36.0	91.0
	Strongly Agree	36	9.0	9.0	100.0
	Total	400	100.0	100.0	

The perception of the policy providing effective export incentives among a sample of 400 individuals indicates that 36% agreed, while 9% strongly agreed. Neutral responses were given by 17.3% of the participants". Conversely, 20.5% disagreed, and 17.3% strongly disagreed with the statement. This data suggests a varied perception, with 45% expressing agreement or strong agreement, while 37.8% had a negative perception, either disagreeing or strongly disagreeing, and a notable portion remaining neutral on the matter.

9. CONCLUSION

In conclusion, the National Manufacturing Policy (NMP) 2011 aimed to enhance India's manufacturing sector through improved infrastructure, regulatory support, and targeted incentives. While it succeeded in fostering growth in specific areas such as Foreign Direct Investment (FDI) and establishing National Investment and Manufacturing Zones (NIMZs), the policy faced challenges in achieving broader goals, particularly due to infrastructural and regulatory constraints. The analysis underscores the need for continuous policy adjustments to address structural challenges. Future policies can benefit from a more integrated approach, addressing these limitations to position India as a competitive manufacturing hub on the global stage.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

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