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IMPACT OF GOVERNMENT POLICIES ON INDIAN AUTOMOBILE INDUSTRY

BY SHIVAM SINGH[1], DR. SYED NASEER AHMAD SHAH[2]

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Introduction: -

The industrial and economic environment of India is significantly influenced by the automobile sector. One of the biggest in the world, it employs millions of people directly and indirectly and accounts for about 7% of India's GDP. Two wheelers, passenger cars, commercial vehicles, and the expanding electric vehicle (EV) market are just a few of the many categories that make up this industry.
In the past, government policies have significantly influenced how this business has developed. Every stage, from the highly regulated pre-liberalization period to the economic changes that followed in 1991 and, more recently, to the emphasis on sustainability, electric mobility, and global competitiveness, has been distinguished by significant governmental interventions.
Important programs like the Production Linked Incentive (PLI) scheme, the Automotive Mission Plan (AMP), the Bharat Stage (BS) emission standards, and the FAME (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) schemes have sought to modernize the industry, lessen its environmental impact, and establish India as a major hub for manufacturing worldwide. Notwithstanding the guidance and assistance these rules have offered, they have also brought forth problems including supply chain reorganization, compliance expenses, and technology changes.
Assessing the effects of different government policies on the composition, operations, and prospects of the Indian car industry is the goal of this study. It aims to comprehend how industry dynamics and regulations interact, look at policy driven trends like the emergence of electric cars, and pinpoint the obstacles still standing in the way of attaining equitable and sustainable growth.

Background of the Study -

One of the biggest in the world, the Indian car sector makes a substantial contribution to the GDP, employment, and industrial production of the nation. The industry has experienced significant change throughout time, going from a controlled setting to a free and open market. This evolution has been significantly shaped by government policy.

Every legislative change has had a major impact on car production, sales, investments, and innovation, starting with early industrial licensing and restrictions on international cooperation and continuing with liberalization after 1991 and the current focus on electric mobility and sustainability. The government's goal to establish India as a major hub for auto production and exports is exemplified by programs like the Automotive Mission Plan, FAME, Bharat Stage emission regulations, and the Production Linked Incentive (PLI) plan. For stakeholders to adapt and plan for future developments, it is essential that they understand the effects of these policies.

Objectives of the Study -

To evaluate the main government policies—such as trade laws, emission standards, and tax laws—that have an impact on the Indian car sector.

To assess how different sectors of the automotive industry are affected by programs like the GST changes, the PLI (Production Linked Incentive) Scheme, and the FAME (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) initiative.
To evaluate how automakers have responded to changes in regulations, such as the switch from BS-IV to BS-VI emission standards.

To determine the possibilities and problems these regulations present for many stakeholders, including suppliers, manufacturers, investors, and consumers.

To make policy suggestions for the growth-oriented and sustainable expansion of India's automotive sector.

Scope -

The study covers government policies implemented over the past 10–15 years, focusing on their implications for production, sales, investment, and innovation in the automobile industry.
It includes major segments such as two-wheelers, passenger vehicles, commercial vehicles, and electric vehicles (EVs).

The study primarily focuses on the Indian context but may briefly refer to international policy trends for comparison.

Limitations -

The analysis may be limited by the availability and reliability of secondary data sources.
Government policy impacts are often long-term; thus, the short-term data may not fully reflect long-term consequences.

Regional disparities in implementation and enforcement of policies are not deeply analyzed.
The study does not include in-depth case studies of specific companies unless illustrative.

Methodology of Research -

Research Framework:
The research employs a descriptive and analytical approach to examine and assess the effects of government policies on the automobile sector in India.

Main Data:
Restricted primary data can be gathered via expert interviews, surveys, or questionnaires aimed at industry professionals (if relevant).

Secondary Information:
Official documents (e.g., Ministry of Heavy Industries, NITI Aayog) trade organizations (e.g., SIAM, ACMA) released articles, journals, and scholarly research papers Yearly report car manufacturer document related to policies and financial reports.

Data Examination:
quantitative assessment employing statistical methods (if relevant), graphs, and trend analysis to monitor the effect over time. Comparative evaluation throughout various policy stages (before and after policy execution) .

Overview of the Indian Automobile Industry: -

The Indian auto sector is one of the most vital parts of the economy, playing a key role in industrial growth, job creation, and technological progress. By 2025, India ranks as one of the leading three automobile markets globally concerning production & sales. The sector is varied, including numerous vehicle categories such as motorcycles, personal cars, commercial vehicles, three-wheelers, and a growing presence of electric vehicles (EVs).

This chapter offers an in-depth look at the industry by examining its historical development, present organization, key participants, and economic effects.

Historical Growth and Evolution: -

The Indian car sector has seen considerable change since it began in the 1940s.
Originally defined by minimal local production and reliance on imports, the industry started to develop with the arrival of firms such as Hindustan Motors and Premier Automobiles in the post-independence period.

1940s–1980s: Era Before Liberalization Stringently regulated with permits and restricted international cooperation. Controlled by a handful of competitors using obsolete technology. Production concentrated primarily on fundamental passenger and commercial automobiles.

1991–2000: Deregulation and Worldwide Expansion The economic liberalization of 1991 signified a pivotal moment. Involvement of international brands like
Suzuki, Hyundai, and Honda. Joint ventures grew prevalent, resulting in technology exchange and product variety.

2000–2015: Growth and Modernization Increase in demand for passenger cars and motorcycles. Concentrate on overseas shipments, research and development, and quality benchmarks. Implementation of emission standards and safety guidelines.

2015–Present: Move Towards Sustainability and Innovation Government focus on electric transportation (FAME Program). Shift to BS-VI emission regulations. Heightened emphasis on self-driving capabilities, linked automobiles, and ecofriendly innovations.

Present Market Framework:-

The Indian automotive industry ranks among the largest globally and includes the following key segments:

Two-Wheelers Largest category by volume; consists of motorcycles, scooters, and mopeds.
Passenger Cars Comprises hatchbacks, sedans, SUVs, and MPVs. Commercial Vehicles Comprises light, medium, and heavy trucks, along with buses.
Three-Wheelers –Mainly utilized for transporting passengers and carrying goods. Electric Vehicles (EVs) –A developing sector gaining traction via policy backing.

Ownership & Production Base -

Mix of Indian (e.g., Tata Motors, Mahindra) and multinational firms (e.g., Hyundai, Honda, Toyota).
Strong manufacturing base with production hubs in states like Maharashtra, Tamil Nadu, and Gujarat.

Key Players and Segments:- Two-Wheelers:

- **Key Players:** Hero MotoCorp, Bajaj Auto, TVS Motor, Honda Motorcycle & Scooter India.
- **Trends:** Rising demand in rural areas; growing focus on electric scooters.

Passenger Vehicles:

- **Key Players:** Maruti Suzuki, Hyundai Motors, Tata Motors, Mahindra & Mahindra, Kia India.
- **Trends:** Shift toward SUVs; increasing demand for automatic transmission and connected cars.

Commercial Vehicles:

- **Key Players:** Tata Motors, Ashok Leyland, Mahindra, Eicher Motors.
- **Trends:** Impacted by infrastructure spending and logistics reforms (e.g., GST).
- **Electric Vehicles: Key Players:** Tata Motors (Nexon EV), Ather Energy, Ola Electric, MG Motor, BYD India.
- **Trends:** Rapid growth in urban areas; high government incentives.

Economic Significance -

The automotive sector is a vital engine of India's economic development.

- **GDP Contribution:** Approximately 7.1% of India's GDP and 49% of the manufacturing GDP (based on recent estimates).
- **Job Creation:** Provides direct and indirect employment for more than 35 million individuals.
- **Exports:** A significant factor in India's merchandise exports, particularly in twowheelers and automotive parts.
- **Investment Magnet:** Draws substantial FDI; remarkable investments in EV and research and development infrastructure.
- **Industrial Connections:** Robust backward and forward connections with industries such as steel, electronics, rubber, and services (e.g., finance, insurance).

Government Policies Relevant to the Automobile Sector:-

The development and evolution of the Indian automobile sector have been intricately connected to numerous government initiatives and policy structures. Through liberalization and deregulation, along with targeted mission plans and tax reforms, the government has significantly influenced the industry's direction.
This chapter examines the key policies that have shaped the industry over the years.

Industrial Policies and Reforms -

India's industrial policies have established the groundwork for the growth of the automobile sector. The 1991 Industrial Policy transformed the landscape—it permitted foreign investment, lessened licensing demands, and promoted private involvement in manufacturing. This change resulted in the entry of international automotive leaders and signaled the onset of a more competitive and innovation focused landscape.

Later reforms aimed at enhancing the ease of doing business, streamlining regulations, and upgrading infrastructure, all of which have played a significant role in the swift growth of automobile manufacturing in India.

Automotive Mission Plans (AMP 2006–2016, AMP 2016 –2026) -

To provide the sector with a defined path and long-term outlook, the government launched the Automotive Mission Plan (AMP) in two stages:

AMP 2006–2016:

The initial strategy sought to establish India as an international centre for automobile manufacturing and exports. It aimed for a revenue of $145 billion and the generation of 25 million jobs. The strategy promoted funding in research and development while advocating for enhanced manufacturing competitiveness.

AMP 2016–2026:
The second phase adopts a broader and more future-oriented perspective. It seeks to position India within the top three automotive producers worldwide and focuses on sustainability, electric transportation, safety, and emissions. It aligns with worldwide movements such as connected and self-driving cars and also fosters innovation through projects like smart transportation and renewable energy.

FDI Policies in the Automobile Sector -

India's liberal Foreign Direct Investment (FDI) policies have significantly aided the automobile industry. At present,100% foreign direct investment is permitted through the automatic route in this sector, indicating that foreign investors are not required to obtain prior approval from the government.

This open strategy has drawn significant global producers and component manufacturers, who have established joint ventures, fully owned subsidiaries, and production facilities throughout the nation. Firms such as Suzuki, Hyundai, Toyota, Ford, and Kia have made substantial long-term investments, generating employment, sharing technology, and enhancing exports. FDI has contributed not just capital but also enhanced the standards of quality, safety, and design.

Taxation Policies (GST, Excise Duties) -

Taxation greatly affects vehicle costs, accessibility, and sales patterns. The Goods and Services Tax (GST), launched in 2017, created consistency by eliminating
various indirect taxes such as excise duty, VAT, and service tax.

Beneath GST:
Most passenger cars are subject to a tax of 28%, plus an additional cess that varies between 1% and 22% based on the type of vehicle and engine size.

*Prior to GST, excise taxes differed among vehicle categories and regions, frequently resulting in pricing and logistical inefficiencies. The tax system has become more transparent and favourable for businesses under the postGST framework yet worries about elevated rates on traditional vehicles persist.

Make in India Initiative -

Initiated in 2014, the Make in India campaign stands as one of the most ambitious efforts to convert India into a global manufacturing centre. The automotive industry is a fundamental component of this initiative.

Main features of how Make in India aids the automotive sector:

Promotes domestic production of cars and automotive parts
Encourages research and development as well as innovation in transportation technologies, particularly electric vehicles and alternative energy sources.

Aids the development of infrastructure for logistics, testing centres, and industrial hubs.
Aims to boost manufacturing's share to 25% of GDP by establishing top-tier manufacturing facilities.

Due to this initiative, numerous businesses have broadened their production facilities in India, aiming not only for local demand but also for exports to growing markets in Asia, Africa, and Latin America.

Environmental and Emission Policies: -

With the expansion of the automobile sector, its environmental impact also increases—especially regarding air pollution and greenhouse gas emissions. Acknowledging this, the Indian government has launched various environmental and emission-focused policies designed to decrease vehicle pollution, support cleaner technologies, and promote the use of electric vehicles (EVs). This chapter examines the most important of these policies and their effects on the automotive sector.

Bharat Stage (BS) Emission Standards -

India's Bharat Stage (BS) emission standards are regulatory guidelines designed to limit air pollutants released by internal combustion engine vehicles. These standards are based on European regulations and are implemented by the Central **Pollution Control Board (CPCB).**

BS-I to BS-IV(2000–2017):

Throughout the years, India progressively embraced more stringent regulations. BS-IV was enforced nationwide in April 2017, representing a major advancement in emissions regulation. * BS-VI (2020 y a partier de entices):
In a daring decision, India bypassed BS-V and adopted BS-VI standards starting April 1, 2020. This represented a significant advancement, necessitating sophisticated engine technology and more sustainable fuels.
Main characteristics consist of:
Notable decline in NOx, PM, and HC emissions. Compulsory implementation of diesel particulate filters (DPFs) and selective catalytic reduction (SCR) technologies. Compatibility with cleaner BS-VI fuel (sulphur content of 10 ppm).

Electric Vehicle (EV) Policies -

Electric vehicles are a vital component of India's long-term plan to decrease emissions, decrease reliance on fossil fuels, and mitigate urban air pollution.

The central and state authorities have implemented various policies to encourage the adoption of electric vehicles:
Incentives and subsidies for purchasing EVs for individuals and fleet operators. Tax incentives, such as lowered GST (from 28% to 5%) and income tax relief on EV loan interest.

Exemptions for road tax and registration fees in numerous states. Assistance for the development of charging infrastructure, comprising public charging stations and battery-swapping systems. State-specific electric vehicle policies (e.g., Delhi, Maharashtra, Tamil Nadu, and Karnataka) concentrating on investments, production, and demand stimulation.

Impact of Policies on Industry Performance: -

Government policies are vital in influencing the performance of industries. These policies can either encourage growth or create limitations. Assessing their influence assists stakeholders—such as companies, investors, and policymakers— in grasping how to adjust and succeed.

Production and Sales Trends -

Government regulations have greatly impacted manufacturing and sales throughout various vehicle categories. The implementation of GST and BS-VI regulations initially hindered sales because of price changes but ultimately resulted in enhanced efficiency and uniformity. FAME and make in India, conversely, enhanced local EV production and overseas sales.

Investments and Technological Advancements -

Liberal FDI policies, tax breaks, and specific initiatives such as PLI have resulted in higher investments in research and development and advanced manufacturing technologies. Vehicle manufacturers have adopted automation, AI, and connected car technologies to remain competitive and align with regulatory changes.

Shift Towards Electric and Hybrid Vehicles -

FAME I & II, state EV policies, and NEMMP have sped up the transition to EVs. Registrations of electric vehicles, particularly in the two- and three-wheeler categories, have experienced remarkable growth. Established OEMs and emerging startups are shifting focus towards electric frameworks and battery advancements.

Employment and Skill Development -

As clean mobility and smart manufacturing advance, new employment positions have arisen in electric vehicle maintenance, battery technology, and software development. Government training initiatives and collaborations with industry are currently targeting skills for the future.

Challenges Faced by the Industry :-

Regulatory Uncertainty

Frequent shifts in emission standards, safety rules, and tax frameworks introduce uncertainty for producers, affecting their long-term strategies.

Compliance and Cost Burdens

Complying with BS-VI standards, EV legislation, and safety protocols requires significant investment in research and development, as well as retooling—creating obstacles particularly for smaller companies.

Infrastructure Limitations

The infrastructure for EV charging is still in its early stages. The availability of public charging stations and battery-swapping services is restricted, hindering EV acceptance in semi-urban and rural regions.

Global Competition

India encounters fierce rivalry from established automotive centres such as China, Japan, and South Korea regarding technology, cost-effectiveness, and export sales.

Case Studies: -

Impact of BS-VI Implementation

India introduced **BS-VI emission norms** on **April 1, 2020**, to combat growing air pollution. These norms are equivalent to **Euro VI standards**, and the government made a bold decision to skip BS-V altogether, moving directly from BS-IV to BS-VI within just 3 years.

Challenge

- Maruti Suzuki, India's largest carmaker, faced the challenge of upgrading engines across its vehicle portfolio to meet BS-VI norms.
- BS-VI fuels (with lower sulfur content) became available only shortly before the deadline, making testing and tuning difficult.

Response

- The company discontinued its diesel variants (costlier to upgrade) and focused on petrol, CNG, and hybrid technologies.
- BS-VI compliant petrol vehicles were introduced as early as 2019, ahead of the deadline.
- Investments were made in R&D for engine tuning and emission control systems (e.g., three-way catalytic converters, onboard diagnostics).

Outcome

- By April 2020, Maruti Suzuki had a full BS-VI compliant petrol portfolio.
- It saw a **temporary rise in costs (₹8,000–₹10,000 per vehicle)** but gained market trust for compliance and environmental commitment.
- Reduced particulate and NOx emissions led to better air quality in urban areas.

7.3 Role of PLI (Production Linked Incentive) Scheme

- **Launched:** 2020 by the **Government of India** as part of the Aatmanirbhar Bharat initiative.
- **Objective:** Boost domestic manufacturing, reduce imports, increase exports, and make India globally competitive.
- **Key Feature:** Provides **financial incentives on incremental sales** (usually 4%– 6%) for a fixed number of years in targeted sectors.

Key Sectors Covered Mobile & Electronics Pharmaceuticals

- Automobile & EV Components
- Battery Manufacturing (Advanced Chemistry Cells)
- Telecom, Textiles, Solar PV Modules, Medical Devices, etc.

Stakeholder Perspectives:-

Views from Automobile Manufacturers

OEMs value policy guidance but desire greater consistency and long-term transparency. Numerous proponents of Make inIndia and PLI urge for a quicker implementation of EV infrastructure.

Consumer Response to Policy Changes

The uptake of EVs by consumers has increased, particularly in urban areas, due to reduced GST, incentives, and higherfuel costs. Nonetheless, issues persist regarding charging accessibility and resale worth.

Role of Industry Associations (SIAM, ACMA)

Industry associations have played a crucial role in influencing policy discussions. They provide feedback to thegovernment, encourage standardization, and advocate for training initiatives throughout the value chain.

Analysis with Other Countries :-

China's EV Policy Framework

China's achievement in EV adoption is fuelled by significant subsidies, robust localization, and leadership from state-owned enterprises. India can draw lessons from its approach to scale and battery.

South Korea and Japan's Auto Policy Models

These nations emphasize global innovation leadership by making significant R&D investments and fostering robust collaboration between government and industry practices India could adopt for high-end and technology-driven sectors.

Lessons for India

Guarantee policy consistency Align incentives with sustainable market preparedness. Allocate substantial resources to research and development, localization, and infrastructure. Sure! Please provide the text you'd like me to paraphrase. Prospective Vision and Policy Suggestions

Outlook and Policy Recommendations: -

Emerging Trends and Technologies

Autonomous vehicles powered by AI Mobility sharing platforms Hydrogen fuel cells and alternative energy sources Vehicles defined by software (VDSs)

Strategic Policy Suggestions

Implement gradual, long-term electric vehicle policy plans. Enhance coordination between state and centre Enhance assistance for electric vehicle infrastructure and battery recycling

Building Sustainable and Competitive Industry

To create a future ready automotive sector, India needs to focus on sustainability, innovation, and worldwide integration via durable supply chains and forwardthinking policy changes.

Conclusion:-

The Indian automobile sector is at a pivotal point, significantly influenced by changing government policies that have fostered both expansion and change. Since the liberalization of the 1990s, the sector has been steered towards enhanced environmental responsibility, technological progress, and global integration through policy frameworks including the introduction of BS-VI emission standards and initiatives such as FAME and the National Electric Mobility Mission Plan (NEMMP) promoting electric vehicles.

Initiatives like Make in India and the Production Linked Incentive (PLI) scheme have promoted local manufacturing and R&D investments, while flexible FDI policies have drawn international companies. These initiatives have enhanced production efficiency and product quality while establishing India as a centre for exports, especially in small cars and twowheelers.

Yet, the journey has faced its share of challenges. Regulatory ambiguities, compliance expenses, insufficient EV infrastructure.

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