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Automobile Sector in India at the Current Juncture: Crisis and Prospects

Praveen Jha^{*}, Preksha Mishra[~], Kamya Singh[§]

Abstract

As the COVID-19 pandemic wreaked havoc along Global Value Systems (GVSs) and India's domestic economic crisis deepened, the already struggling Indian Automotive sector incurred huge losses owing to both demand and supply side factors. In fact, the sector has been under significant strain over the past decade, which only intensified by 2018-19. Since the pandemic, several policies have been initiated to 'revive' the industry and to achieve the sector's tremendous export potential; particular emphasis has been placed on technological advancement. The sector has been increasingly integrated into GVSs since the 1990s such that a large share of domestic production in the automobile and auto components industry is exported. However, India's share in global exports in the auto sector has remained modest and the sector has flourished predominantly in the mass production of low-value and low-tech commodities.

This paper seeks to assess the current state of the automotive industry in India against the background of the pandemic using both primary and secondary sources. For this purpose, two surveys were conducted in India in 2022 and early 2023; the first was undertaken in select automobile clusters and auto components manufacturers while the second, focused on multiple stakeholder categories across the industry – companies, policymakers and Trade Unions. The impact of the crisis, the subsequent 'recovery' and the future prospects of the sector have been examined through the lens of the industry performance and that of the world of work.

Keywords: Global value systems/chains, COVID-19, labour, Relative Surplus Population, Neoliberalism, exports, technological advancement, Manufacturing, Automobiles, auto components, Capitalism

JEL classification: P1, J210, J65, O140, I.6

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1. Introduction

The automotive industry is one of the largest manufacturing sectors in India, which, in FY 2019-2020, contributed 7.1% to the overall GDP, 49% to the manufacturing GDP, and 8% to total exports (Parliamentary Standing Committee Report 303 on the Automotive Industry published in December 2020¹). Directly and indirectly, it produces 37 million jobs and is a significant driver of growth through its strong forward and backward linkages (Ray, 2022). It is hardly surprising that it has been identified as a ‘sunrise sector’, experiencing remarkable global growth before the pandemic and having developed into one of the most significant segments since the initiation of the economic reforms in the early 1990s.

The industry consists of two major sub-sectors – The *automobile industry* (Original Equipment Manufacturers industry or OEMs) and the *auto components industry*. The Indian automobile industry was the 5th largest in the world in 2019-20 (SIAM, 2020) and consists of four primary segments: *passenger vehicles*, *commercial vehicles*, *two-wheelers* and *three-wheelers*. India is, in fact, the largest producer of 2-wheelers and 3-wheelers, 4th largest in 4-wheelers and 7th largest in light commercial vehicles (SIAM, 2020). Another segment in the automobile industry is quadricycles² but it is a very small segment of the automobile industry, constituting less than 0.1% of total automobile exports from India (Figure 1).

The automotive industry relies heavily on the auto components sector, which has played a noteworthy role in its overall growth. At the national level, the sector has contributed 2.3% to the total GDP and 25.6% to India's manufacturing GDP. The sector directly employed 1.5 million individuals as per the latest estimate published in February this year (IBEF, Feb 2023).

With the gradual ascendancy of neoliberalism since the 1970s across the globe and since the 1990s in India, there has been a substantial increase in global connectedness of economic activities and processes across sectors and between North and South in terms of scale, intensity and speed of interaction due to remarkable improvements in IT and transportation domain (Jha & Yeros, 2022). The Indian auto sector has been no exception and it has become increasingly integrated into the Global Value Chains (GVCs) or our preferred term Global Value Systems

¹https://prsindia.org/files/policy/policy_committee_reports/Report%20Summary%20-%20Downturn%20in%20Automobile%20Sector.pdf

²Small motorised four wheeled vehicles. European Union vehicle category for four-wheeled microcars, which allows these vehicles to be designed to less stringent requirements when compared to regular cars. Quadricycles are defined by limitations in terms of weight, engine power and speed.

or GVSs (Jha & Yeros, 2019; 2021) at different levels as ‘de-centring’ of production took deeper roots.

GVCs in automobiles flourished because firms sought to leverage engineering efforts across products sold in multiple end markets. In the automobile sector, the value chain is primarily driven by the automaker. This is because the conceptualization and design stages are crucial in car production and involve significant value addition. Typically, these tasks are carried out at the headquarters of the company, particularly for multinational corporations (MNCs), especially those operating in the premium segment, or in their subsidiaries in the proximity of the final market. Simultaneously, the auto component market developed as these MNCs use small and medium enterprises (SMEs) in developing countries as sources for automotive parts. To ensure greater efficiency and to cater to a large market, these firms rely substantially on a select few first-tier suppliers that can provide auto components on a global scale to original equipment manufacturer (OEM) standards (Ray, 2022).

Looking at the structure of the automotive value chain in India, it is evident that the two sub-sectors mentioned above continuously feed off each other. Thus, at a high level of generality, the automotive industry value chain could be seen as functioning across four levels. A bird’s eye view of the structure of the industry is as follows. First, there is the organised *automobile manufacturing* sector consisting of lead firms (or OEMs), who assemble the auto components supplied to them by the auto components industry. The *lead firms* are responsible for designing, specifying, and assembling auto parts and subsystems, ultimately contributing to the final product. In fact, in 2018, OEM supplies contributed to 55.97% of the total turnover of the auto components industry, followed by exports (26.20%) and domestic aftermarket (17.82%). It includes domestic and joint ventures like Maruti and Bajaj, multinational corporations, and emerging Transnational Corporations (TNCs) such as Kia Motors, PSA Peugeot, Lexus, Genesis, and Acura, as well as Chinese manufacturers like SAIC Motors, Foton Motor, and Changan Automobiles (Jha and Kumar, 2022). The OEMs contributed roughly 22% of the country’s manufacturing GDP in 2017 (Dash and Chanda, 2017)

The second node in the structure is the auto component industry, which encompasses various tiers of suppliers, starting with those who import raw materials like steel, aluminium, and plastics, while also sourcing materials locally. The structure of this sector is strictly asymmetric: the large OEMs of the Automobile industry assemble the components supplied to them by the Tier 1 firms; these firms comprise of a few large domestic suppliers and MNCs.

The second node, then, comprises manufacturers and assemblers who closely collaborate with major corporations and Original Equipment Manufacturers (OEMs), such as Bajaj, Denso, Bell Sonica, Bosch, and others.

Tier 1 Auto Components Manufacturing firms, in turn, assemble the parts and components supplied to them by Tier 2 and Tier 3 firms/workshops. The third and fourth nodes are these Tier2 and Tier3 firms, which consist of a diverse group of manufacturers, primarily micro, small and medium-sized enterprises (MSMEs) catering to both the domestic and export demand. They specialise in the production of small auto parts such as sheet metal components, plastic moulds, motor parts, headlights, shock absorbers, and more. These manufacturers typically operate with low-profit margins, relying on high volumes for profitability. Any substantial labour protections are virtually non-existent among these firms because the applicability of labour regulations in India is closely related to the size of the firm (in terms of the number of workers). For instance, the code Industrial Relations Code Bill (2020), which is concerned with the Trade Unions, conditions of employment in industrial establishment, investigation, and settlement of industrial disputes, can be applied to a firm with more than 300 workers only; the figure was increased from 100, as per the earlier law Industrial Employment (Standing Orders) Act, 1946, to 300 in 2020. This structure within the industry inevitably leads to a segmented workforce within the industry – with small, organised employment at the top and a very large share of informal and precarious employment. Towards the forward end of the value chain, we find dealers, service providers, including retailers, insurance and financing companies, and customer services.

It is important to highlight here that the composition of the sector has evolved considerably, at least partly due to increased integration of the sector into the global economy under the '*Liberalisation, Privatisation and Globalisation*' policies introduced in India in the 1990s (the 'reform' period). Thus, today, the automobile industry consists of (a) domestic firms (which started in India and are presently owned by Indian companies like Mahindra & Mahindra) as well as a large share of (b) foreign firms among the automobile manufacturers. The latter includes not only those that operate in India but are headquartered outside India, like Hyundai Motor India Ltd, but also those that started in India but today, have the majority of their shares owned by foreign firms like Maruti Suzuki India Ltd.

The extent of this sector's rising integration into the global economy has been well-documented in terms of the performance of a plethora of variables, such as share of trade in total production

and share in global exports, across a variety of data sources. One such indicator has been the sector's trade volume (exports and imports) as a proportion of the total domestic production. According to the trade-in-value-added (TIVA) database³, for the industrial classification *Motor vehicles, trailers and semi-trailers (D29)*, India's gross exports as a proportion of its domestic production nearly doubled between the 1990s and 2013; it increased from 8.1% in 1996 to 14.2% in 2013. However, due to an all-encompassing slowdown in the economy (and the sector), this share reduced sharply to 10.3% in 2018.

Additionally, according to the figures provided by the Observatory of Economic Complexity (OEC)⁴, India's share in global trade in '*vehicles*'⁵ (87 HS92) rose from about 0.15% in 1996 to about 1.2% in 2019, amounting to \$ 18.1 billion. A similar trend was also recorded in the auto components industry. India's share in the export of '*motor vehicles; parts and accessories*'⁶ (HS4 from 8701 to 8705) remained virtually constant at 0.2% between 1995-2000, increasing marginally to 0.8% in 2010, and further to 1.3% just before the pandemic in 2019. In terms of imports, India's share rose from 0.33% in the 2000s to about 1.06% in 2021. It is also worth highlighting that in terms of global components manufacturing, India's share was about 4.5% in calendar year (CY) 2019 but in global exports, the nation's share was only 1.4%. It must be underlined here that while an increase in exports has indeed been recorded, it is quite clear that the rise has only been marginal and seems completely unremarkable given India's huge potential in manufacturing capabilities (Ray & Miglani, 2018; Kumar & Jha, 2022; Ray, 2022).

Further, to get a broader perspective, India's position also needs to be put in a cross-country perspective, particularly against the performance of top exporters globally. In 2021, in terms of value, the top 5 exporters of '*motor vehicles; parts and accessories*' (HS4 from 8701 to 8705) were Germany with US\$64.5 billion (16% of global exports), China with \$43.5 billion (10.8%), the United States with \$34.1 billion (8.5%), Japan with \$33.4 billion (8.3%) and Mexico with \$30.7 billion (7.6%) worth of exports (OEC); as mentioned above, India's share

³ The Trade in Value Added (TiVA) database provides statistics on international trade, supply chains, component sourcing and global economic integration

⁴ <https://oec.world>

⁵ Cars, tractors, trucks & parts thereof.

⁶ Include Other Motor vehicle parts, Other parts and accessories of bodies for motor vehicles, Transmissions for motor vehicles, Brake system parts except for linings, Drive axles with differential for motor vehicles, Wheels including parts/accessories for motor vehicles, Steering wheels, columns & boxes for motor vehicles, Shock absorbers for motor vehicles, Clutches and parts for motor vehicles, and Mufflers and exhaust pipes for motor vehicles, among others

was a meagre 1.6%. Among *vehicles*, the top 5 exporters were Germany (16%, \$240 billion), Japan (9.5%, \$142 billion), the US (8.1%, \$ 121 billion) followed by China (7.9%, \$ 119 billion) and Mexico (7.4 per cent, \$ 111 billion) in 2021. The comparative figure for India was only 1.3%.

It is noteworthy that the state of the automotive industry in India, despite its huge potential, seems quite average when compared to China; both were on a similar footing in the 1950s when they embarked on their respective economic trajectories. Though India has also made significant strides, the gap between the two has been increasing. As per the most recent figures, China surpassed Japan in 2023 (and Germany in 2022) to become the biggest exporter of cars by exporting 1.07 million vehicles between January to March 2023, an increase of 58% compared to the first quarter of 2022. The corresponding figure for Japan was 954,185 (BBC, May 2023). This can be attributed to several external reasons besides China's own policies.

The war in Ukraine leading to trade sanctions being imposed on Russia by the Western nations, resulted in a surge in China's exports to Russia. Another crucial driver of growth in China's motor industry has been the changing automotive landscape in terms of the shift away from fossil fuel vehicles globally. The first quarter of exports of new energy vehicles (NEVs), which include electric cars, rose by more than 90% relative to 2022 (BBC, May 2023); these vehicles accounted for the majority of the vehicles exported in April 2023 (Global Times, May 2023). China had been able to meet this rise in global demand because it was already producing 75% of the world's lithium-ion batteries and holds 85% production capacity for anodes and 70% for cathodes, as per a 2022 report of the International Energy Agency (Harley, May 2023).

Returning to the case of India, the progress made in integrating into the global economy during the reform period as discussed above, however minuscule, begs the question of whether economic gains were accrued by India during this period. It has been argued elsewhere that although India's GVC participation rate in the automobile industry⁷, defined as a ratio of total participation (backwards and forward linkages) to its gross exports, fluctuated between 1995 and 2015, the value of forward linkages was higher than the value of backward linkages during the same period. This, in turn, implied that there have been rising economic gains from participation in GVCs for the automobile industry (Jha & Kumar, 2021; 2022).

⁷ Here it implies the category D29 - Motor vehicles, trailers and semi-trailers

Another way to assess India's economic gains is through an economic perspective focused on advancement. This is because a country's exports should ideally show a greater increase in the number or value of outputs compared to the number or value of inputs over time. Between 1995 and 2016, and particularly since 2000, the value of exported outputs, including capital goods (excluding transport equipment), durable goods, unspecified goods, industrial goods, non-industrial goods, and passenger motor cars, demonstrated a significant rise when compared to the value of inputs (parts and accessories) as shown by Jha & Kumar (2022). The value of exported outputs grew substantially, increasing from \$68 million in 1988 to \$10 billion in 2016, while the value of exported inputs rose from \$157 million to \$5 billion (Figure 5). Although there is a close correlation between the import and export values of inputs, the value of imports remained lower than the export value of outputs during this period, indicating a trade surplus for the industry.

Further, the number of exported products consistently rose from 36 in 1988 to 46 in 2005 and has remained largely stable since then (Jha & Kumar, 2021). The pattern of imported output has exhibited a parallel trajectory, and the magnitude of imported output has maintained minimal significance when compared to exports, thereby reinforcing the economic advantages evident in this particular industry. Moreover, India's domestic value added embodied in foreign final demand has risen consistently since 1995 and so has the foreign value embodied in the domestic demand; the latter did by and large remained only slightly above the former (Annexure 1).

However, there are two points of contention here. First, although gains have been recorded in terms of economic upgrading in particular segments, social upgrading gains have remained largely absent. This is because the integration has been accompanied by a rise in precarious employment and even a virtual stagnation of real wages for the majority of the workers (Jha & Kumar, 2022). The organised sector firms (OEMs and Tier 1 and 2 component manufacturers) today comprise of a highly segmented workforce with a large share of precarious employment. Moreover, the so-called 'unorganised' sector consists almost entirely of informal employment and constitutes a huge portion of the automotive industry in general, and the auto component industry in particular.

Second, though the Indian automotive industry has been ranked 11th globally in terms of value, it has flourished predominantly in the mass production of low-value and low-tech commodities, failing to make significant strides in the domain of advanced automotive technology (PIB,

2021). Now, the process of economic development necessitates the accumulation and utilization of productive knowledge across increasingly complex industries. This is because countries with more complex exports relative to what can be expected of their level of income, tend to grow faster. The Economic Complexity Index (ECI), developed by the Harvard Growth Lab, is a measure of the capabilities and know-how of a given country determined by the diversity, ubiquity, and complexity of the products it exports. A rise in a country's ECI entails expanding the range and intricacy of products that it effectively exports. India's largest export products were moderate and low-complexity products of chemicals and agriculture (ECI, 2020). India's ECI score in 2020 was quite low (0.4), such that the nation was ranked 46 out of 133 countries, even though its position had improved by 8 positions compared to the previous decade. Japan and Switzerland were ranked at the top with an ECI of 2.27 and 2.14 while the corresponding figure for China was 1.3, which was ranked at 17. Nonetheless, India's potential in terms of the complexity of products is substantial. According to the Complexity Outlook Index (COI) which measures how many complex products are near a country's current set of capabilities, India was ranked number 1 globally, with a score of 2.96. This indicates that there is an abundance of nearby, complex products that rely on similar capabilities as those present in current production and the country has huge potential in expanding these products in her export basket.

With this background, this paper seeks to assess the state of the automotive sector in India at the present juncture. The paper is structured as follows: Section 2 presents the conceptual framework for the paper; Section 3 provides a brief overview of the overall macroeconomic scenario in India before and immediately after the onset of Covid-19 to help contextualise the developments in the Automobile sector; Section 4 assesses the state of the automotive sector focussing on – the pre-pandemic crisis, the pandemic-induced crisis and the period of 'recovery', using secondary data sources; Section 5 presents some key results from the first and the second primary surveys on the three aforementioned aspects. The papers closed with some brief concluding remarks.

2. Conceptual Framework: Some Key Concerns

One of the primary manifestations of the *long duree* march of capitalism, in general, and the ascendancy of Neoliberalism since the 1970s in particular, has been a 'de-cen' of production which has resulted in a loosening of the previously rigidly imposed pattern the international division of labour" (Patnaik & Patnaik, 2019). With the rise in dominance of finance capital

and improvements in transportation and telecommunications technologies (Jha & Yeros, 2022), there has been a massive relocation of production, across sectors, from advanced capitalist nations to a few developing ones, and increased reliance on procurement of the former on the latter. The chasm between metropolitan and periphery economies in unit labour and other input costs and the untapped markets of the latter drove this trans-nationalisation of economic activities.

The rise of interlinked but geographically dispersed value-adding activities has been discussed at length in the literature as Global Value Chains, Supply/Commodity chains, and Global Production Networks (GVCs/GSCs/GCCs/GPNs). However, we contend that these terms seem to imply a simple linear or vertical connectivity between different actors in the production process instead of the complex interactions seen in practice. Much of the surplus-value appropriation occurs outside actual production activities; for instance, R&D and marketing have the largest shares in value addition as opposed to the manufacturing of the product at hand. Additionally, there are activities outside the production process whose value added to the product is not accounted for, such as household work and family labour. Thus, we deem the term Global Value Systems (GVSs) to be more appropriate as it encapsulates a more flexible conceptualisation of production, value addition and appropriation, covering all relevant actors and relationships. We refrain from a detailed discussion here, having already done so elsewhere in detail (Jha & Chakraborty, 2014; Jha & Yeros, 2019).

The extent of this trans-nationalisation of activities is evident from the fact that Global Value Systems today account for approximately 80% of global trade (UNCTAD, 2013). Now, the issue of whether GVCs are beneficial for the countries in the Periphery, located in the Global South, has been widely debated in the literature. The mainstream literature suggests that inserting themselves in GVSs is necessary for developing economies to succeed in terms of national economic development, capacity building, creating jobs, and reducing poverty (Fernandez-Stark and Gereffi, 2019) by utilising the gains accruing from the processes of both *social* and *economic* upgrading. Thus, ‘faults’ such as meagre wages, poor working conditions, tax avoidance and evasion, are not systemic issues and can be dealt with by alternate management practices and appropriate government policies.

However, this perspective does not account for the uneven and hierarchical relationship that has developed between the large multinational corporations (MNCs) who enter as ‘*lead firms*’ and a diverse multitude of domestic firms, primarily in the unorganised sector as well as the

labour compacts. This, in turn, has precipitated in the form of '*low road*' labour relations in the global South for the majority of workers. Even where economic upgrading is observed in terms of production and profits, it is often not accompanied by social upgrading in terms of increases in the real wages of workers and improvements in working conditions (Jha and Kumar, 2021). The trend has been one of growing informalisation and casualisation even within the formal sector across the economies. Furthermore, even if some social upgrading has been achieved through class struggles, it is often temporary. The moment the lead firm's real wage bill and input costs rise, the highly mobile and fickle international capital is quick to change its base to another country to benefit from the '*labour-nature-regulation arbitrage*' (Jha & Yeros, 2021). The reorganisation of production is intrinsically connected to the de-regulation of capital, which changed the 'dynamics of the capital-labour-state compacts' (Jha & Yeros, 2021). The gradual doing away with the 'regulatory shackles' on capital since the 1970s stemming from the perceived crisis of profitability has significantly reconfigured the power heavily loaded in favour of capital vis-à-vis labour, citizens, and nation-states. Additionally, there has also been a reconfiguration of class power within 'capital in general' in favour of 'finance capital' (Jha & Mishra, 2022; Jha & Sikdar, 2020). These processes in turn have resulted in adverse impacts on labour reserves, conditions of work and wages everywhere, but most evidently in the global South. Thus, this asymmetry of power is crucial in understanding the overall impact of these GVSs, which is often ignored in mainstream literature. One needs to view contemporary GVSs through the lens of Marx's notion of combined and uneven development and the law of concentration and centralisation.

It is pertinent to state that these GVSs are certainly not a new phenomenon. In fact, in a primitive form, they have had a long history, both within national geographical boundaries (as in the putting-out system) and across countries, particularly Britain's triangular trade between Asia, Africa and America. For instance, exporting cotton from India for textile manufacturers in England and the opium trade between India, China and England to obtain tea for European consumers. The raw materials and economic surplus appropriated from the colonies in the Global South or the 'periphery' helped sustain the Industrial Revolution in the 'core' economies across Europe. Thus, any analysis of GVSs has to be contextualised within the themes of colonialism, capitalism and imperialism (Jha & Yeros, 2022).

It must also be recognised that today's GVSs are the logical outcomes of the dialectics of capitalist development, though their shape and structure differ significantly from earlier.

Typically, primitive GVSs involved procuring materials from the colonies for production in the core economies and transporting the produce back to the markets of the colonies. The rise of current GVSs is linked to the evolution of large national enterprises of the developed world into oligopolistic transnational corporations and may be understood as new manifestations of relations of imperialism (Hymer, 1979). Today's GVSs emphasise production in select destinations in the South through the export of capital from the Global North, which was the fundamental determinant of imperialism for Lenin (1999). According to Patnaik and Patnaik (2016), forces of imperialism demand deflation in the peripheries to guarantee both cheapness of products and labour to stabilise the economy of the metropolitan centre. This has resulted in massive curtailment in workers' bargaining rights, wages, and social security expenditure in the neoliberal regime. In June 2021, India's expenditure on social protection (excluding health) was only 1.4% of her GDP, relative to the global average of 13% (Jha & Mishra, 2022b).

3. The Pre-Pandemic Macro-Economic Context and the Covid-19 induced Crisis

The economy during the neo-liberal regime, which was ushered in the 1990s, has been characterised as one of widening inequities, deceleration in consumption expenditure (Chandrasekhar, 2021), and high dependence on agriculture due to a lack of employment generation in the secondary sector, particularly in manufacturing and high-end tertiary sector. Consequently, even before the Covid-19 pandemic, the Indian economy was undergoing a slowdown for almost two years; the GDP growth rate was just around 3% in the last quarter of 2019-2020, compared to around 7% two years prior. We refrain from a more involved discussion on the crisis here, having discussed it elsewhere in detail (Jha & Kumar, 2020; Jha & Mishra, 2022). Nonetheless, a few key points must be underlined to emphasise the gravity of this crisis.

A multitude of key indicators of economic performance, such as real net exports, investment ratios, credit growth, industrial production index, consumption demand, and others, either remained stagnant or exhibited a decline between the years 2014-2015 and 2019-2020 (Jha and Kumar, 2020). Notably, one of the most important signals of economic distress was a considerable reduction in the per capita real consumption expenditure. As per the standard official data, the real per capita consumer expenditure declined by 3.7% between 2011-12 and 2017-18; the decline was reported to be even higher in rural areas, about 9% (Business Standard, 2019; Patnaik, 2019). Decreases were observed across all deciles of the population, albeit at varying rates. These figures, however, were never officially confirmed.

As one would expect, the repercussions on the world of work were also severe. The unemployment rate surged to exceed a high level of 6% in 2018 (Periodic Labour Force Survey, PLFS), becoming the highest in the last 45 years. In fact, before 2011-12, India's growth trajectory was one of *jobless growth*, with declining labour elasticity of output. This worsened even more in the few years preceding the pandemic: the labour elasticity of output turned negative between 2011-12 and 2017-18, which in turn implied a *job-loss growth* scenario (Kannan & Raveendran, 2019). This is to say, during this period, the *absolute number of persons employed had fallen for the first time in NSSO statistics since India's independence*, from 472.5 million in 2011-12 to 457 million in 2017-18—a drop of 15.5 million over six years. Furthermore, the youth unemployment rate increased by more than twofold, from 10% to 23%, between 2012 and 2018 (ILO, 2020).

The labour market was already besieged with grave and persistent vulnerabilities as evidenced by burgeoning informalisation, not only in the workforce at large but also within the formal sector, as disclosed by Jha and Kumar in 2020. Informal work is frequently associated with meagre wages, precarious work conditions, and the absence of various facets of decent work. As per ILO, the proportion of informal employment in India has largely remained stagnant at an elevated rate of 88% during the period from 2010 to 2019. Even among employees, who are deemed to be in non-precarious employment, the rate of informal employment shot up from 46.3% in 2010 to 62% in 2019. These trends resulted in exacerbating the crises of social reproduction for the peasantry and working classes.

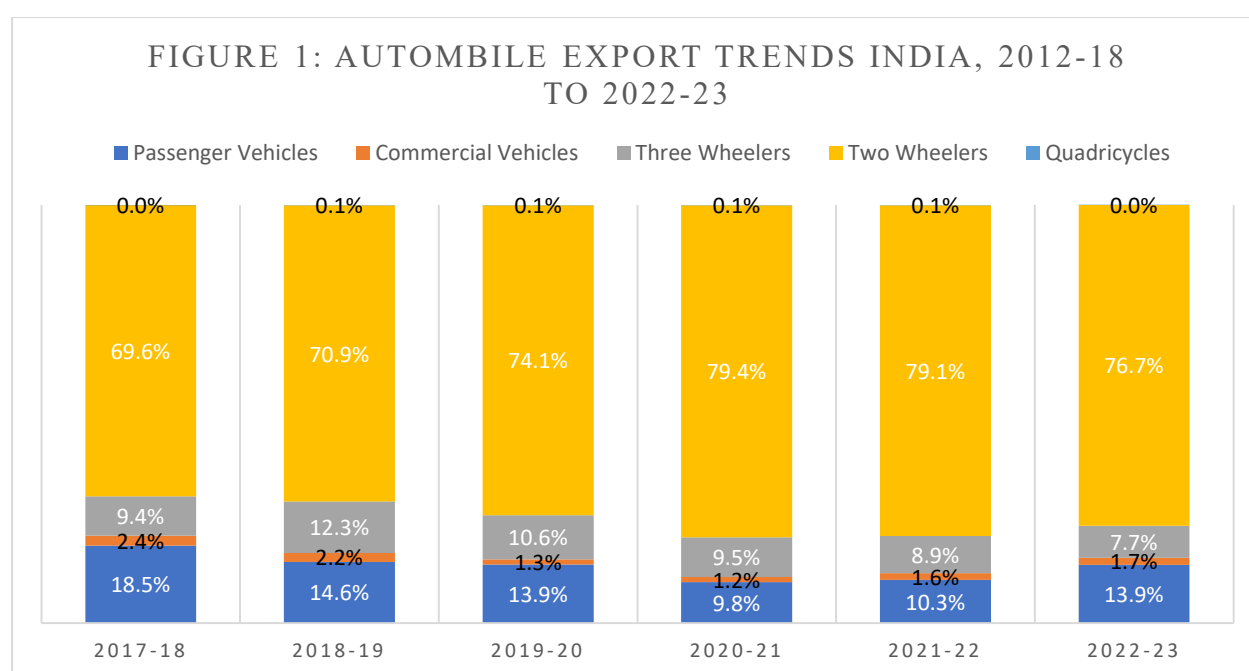
This ongoing long-term structural crisis during the neo-liberal regime, in general, which intensified more during the current political regime, in particular, was further exacerbated due to the Covid-19 pandemic, which came as a bolt out of the blue and led to a near-complete collapse of economic activities in March 2020. The State's response to the pandemic largely constituted of putting in place a series of lockdowns as 'containment measures'; the first lockdown in March 2020 was one of the most stringent in the world, which converted the initial Covid-19 health crisis into a major socio-economic crisis (Ghosh, 2022). The pandemic induced massive employment and earnings losses resulting in a severe private demand crisis, which adversely impacted the automotive sector, as will be elaborated on in the next section.

4. Automotive Sector in India at the present juncture

The importance of the automotive sector in terms of GDP contribution, employment as well

as participation in Global Value Systems cannot be underestimated. The Automotive Mission Plan (AMP) 2026 regards it as the mother of the manufacturing sector in an economy due to its several backward and forward linkages. The performance of the industry has a direct influence on the performance of various interconnected manufacturing sectors such as iron & steel, aluminium, lead, rubber, plastics, glass, machine tools, moulds & dyes, chemicals, and capital goods. Additionally, the services sector, including logistics, banking, insurance, sales & distribution, service & repair, and fuels, is also significantly impacted. Furthermore, given the structure of the industry, the rapid growth of the sector is crucial to providing an impetus to the MSMEs across multiple sectors, the development of which is one of the Government's principal objectives (AMP, 2026).

Before delving into the specificities of the current state of the automotive industry, it is pertinent to provide a very brief overview of the export profile of the Indian automotive industry. Within the automobile sector, the two-wheeler segment has accounted for the largest share (more than 70%) in automobile exports (Figure 1). In 2017-18, the two-wheelers share was 69.6%, which only grew during the COVID-19 period. As would be argued later, this segment was one of the primary drivers of recovery. Passenger vehicles occupy the second position in terms of the share in exports albeit by a huge distance (less than 20%). Their already low share in total automobile exports declined even before the pandemic from 18.5% to 14.6% between 2017-18 and 2018-19.



Source: ACMA reports.

India's key export destinations for two-wheelers are Nigeria, Nepal, Colombia, Bangladesh, Austria, Mexico, Kenya, the Philippines and Uganda. Major export destinations of Indian automobiles include- the US, South Africa, Mexico, Bangladesh, the UAE, Saudi Arabia, Turkey, Colombia, Brazil, Nigeria, Nepal, Indonesia and the Philippines. According to the statistics provided by the Ministry of Commerce and Industry, the US is a major export partner of India with close to US\$ 3 billion in exports as of financial year (FY) 2022, followed by Mexico (US\$ 1.53 billion) and South Africa (US\$ 1.21 billion). In 2013, for motor cars and other motor vehicles (HS 8711), India's three largest export destinations were Mexico, South Africa and the UK while for motorcycles (HS 8704), they were Bangladesh, Sri Lanka and Nepal (Jha & Kumar, 2021).

For the auto components industry, India has been on the path to becoming a global auto components hub. This is because India has a competitive advantage in several auto components categories such as shafts, bearings and fasteners, owing to a large number of players in the industry, which is expected to lead to higher exports in coming years (IBEF)⁸. Within this sector, 'drive transmission & steering' and 'engine components' have dominated the exports as well as imports for a few years. In the FY2018-19, they accounted for 54% of all exports and 49% of imports. This is followed by other products such as engine components, electricals & electronics, and body/chassis/BiW, to mention a few that each account for 10-12% of India's auto components exports. The product composition of exports and imports has remained virtually the same even in the current phase of recovery (2021-22) as shown in Table 1.

⁸ <https://www.ibef.org/industry/autocomponents-india>

Table 1: Auto components exports and imports by products, FY 2018-19 and 2021-22

Product	Percentage of total Auto exports		Percentage of total auto imports	
	2018-19	2021-22	2018-19	2021-22
<i>Drive Transmission & Steering</i>	34	33	31	31
<i>Engine Components</i>	20	21	17	18
<i>Electricals & Electronics</i>	8	10	14	14
<i>Body/Chassis/BiW</i>	16	12	9	9
<i>Interiors (non-electronic)</i>	4	6	7	8
<i>Suspension & Braking</i>	11	11	9	7
<i>Consumables & Misc.</i>	4	4	7	5
<i>Cooling System</i>	1	1	5	5
<i>Rubber Components</i>	2	2	2	2

Source: ACMA reports of respective years

The top destinations for component export (as per value) have been the US (25%), Germany (7%) and the UK (5%) while major auto parts and components suppliers for import are China (27%), Germany (14%), South Korea (10%), Japan (9%); the figures in the bracket show the respective nation's share in India's auto components exports before the pandemic in 2018-19. In the FY2021-22, a similar pattern was still visible, with China still accounting for the largest share in total auto imports (about 30%) followed distantly by Germany (11%). Thus, there has been an increase in the dependence on China's auto components imports in recent years. US, Germany and UK continue to be the top export destinations in 2021-22.

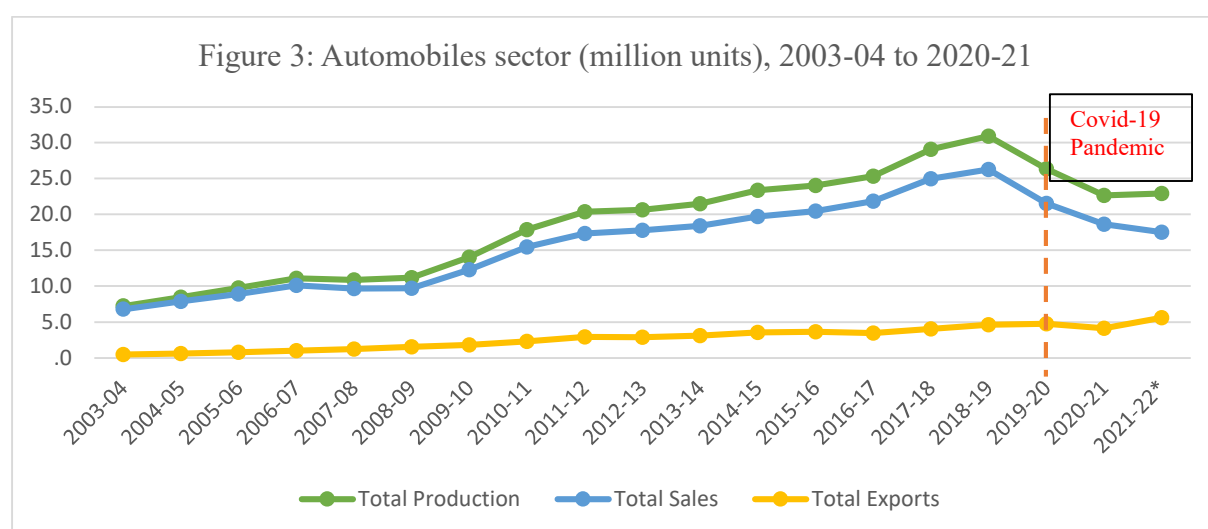
4.1 Pre-Pandemic Crisis in Auto Sector

The Indian Automotive sector had already been under some strain since 2014, which only increased by 2018-19. It was also affected adversely by the general economic slowdown in the country, which has been briefly discussed in the previous section.

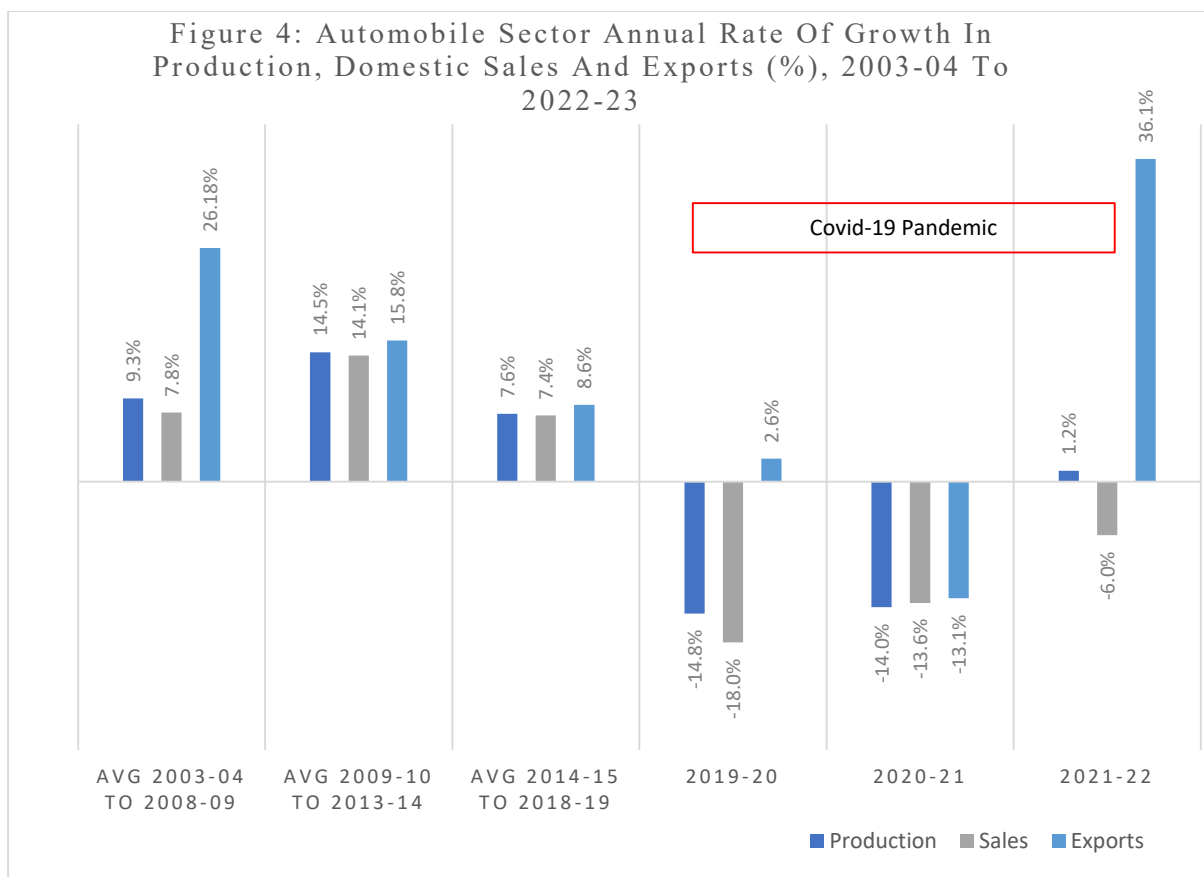
Between FY⁹ 2003-04 to FY 2018-19, the production, sales and exports in the *automobile sector* were rising in absolute terms (Figure 1). However, the 5-year average annual rate of

⁹ In India fiscal/financial year is from 1st April in the calendar year to 31st March in the subsequent calendar year.

growth for the industry along all three parameters declined from 2009-10 and 2013-14 to 2014-15 and 2018-19; the rates of growth became nearly half of their erstwhile figures (Figure 4). The highest rates of decline during this period were witnessed in the production and sales of passenger vehicles and two-wheelers as shown in Annexure 2. For exports, the total rate of growth was brought down, particularly by a sharp fall in the rate of growth of export of commercial vehicles from 15.5% to only 5.8% between 2009-10 to 2013-14 and 2014-15 and 2018-19. The rate of growth of exports of passenger vehicles also declined from 12.7 to 2.9%. The rate of growth of exports declined in all segments; the decline in the rate of growth was the smallest for two-wheelers (a 6-percentage point fall).



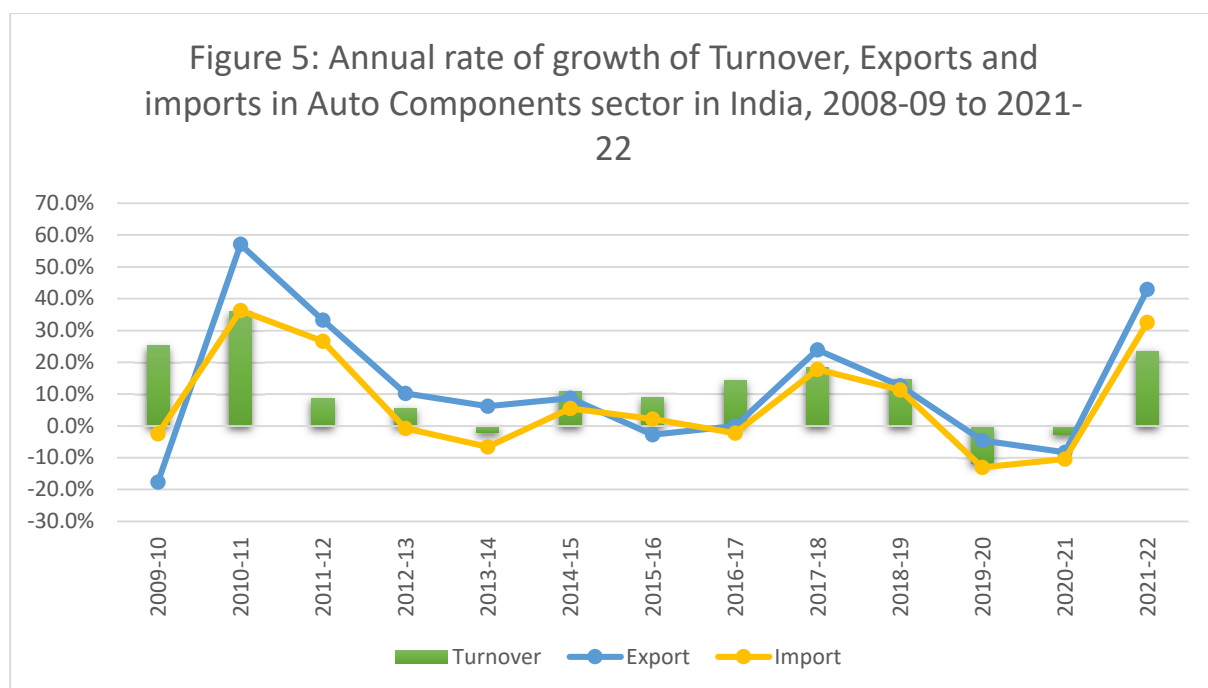
Source: SIAM Annual reports.



Source: Authors' calculations from SIAM annual reports. Quinquennial average rates of growth were calculated from the SIAM report 2020-21

Within the *auto components Sector* as well, the turnover (INR¹⁰ Billion) and exports, as well as imports (in USD billion), increased in absolute terms from 2009-10 to before the pandemic (Annexure 3, Figure 5). However, their rates of growth reduced post-2010-11, even turning negative in some years. The rate of growth of exports (in USD billions) declined from 57.1% in 2010-11 to -2.7% in 2016-17; though it rose to 12.6% before the pandemic (2018-19). A similar trend was also observed for imports (in USD billions) – the rate of growth fell from 36.3% in 2010-11 to -2.2% in 2016-17 but then rose to 11.3% in 2018-19. With regard to the turnover, however, the rate of growth declined between 2010-11 and 2013-14; turning negative (-2%) between 2012-13 and 2013-14. It thereafter increased to 14.6% in 2018-19.

¹⁰ The current Exchange rate is 1 USD = INR 82.50



Note: The year represents the annual rate of growth in the mentioned financial year between the previous and the current FY. For example, 2009-10 on the x-axis shows the growth rate recorded between FY 2008-09 and FY 2009-10.

As per ACMA (2018-19), such a deceleration in the industry was expected because a long-term correction had been pending in the industry for a long time, as it had enjoyed considerable growth in the previous decade or so. Industry experts and scholars have argued that the pre-pandemic slowdown in the sector could be attributed to a general downturn among major economic correlates, such as rising unemployment, which subdued the domestic demand for the automotive sector. This, coupled with several acts of commission and omission including the ‘shock-and-awe’ measures typical of the current regime such as the ‘demonetisation’ of 2016 and the launch of the Goods and Services Tax (GST) in 2017, led to a fall in overall demand.

This was further exacerbated by the Non-Banking Financial Companies (NBFCs) slump in late-2018 which was a consequence of the tightening of retail financing norms by banks due to high Non-Performing Assets (NPAs). This, in turn, severely curtailed the availability of finance to dealerships and end consumers. In 2018, only 60-70% of vehicle costs were financed through credit compared to the 85-90% coverage earlier for end consumers. The relevance of this is evident from the fact that NBFCs have been the biggest contributors to auto loans. They funded purchases of about 60% of commercial vehicles, 30% of passenger cars and 65% of 2-wheelers before the NBFC crisis began (Hindu Business Line, 2019). Moreover, Banks hiked the interest

rates on individual auto loans and reduced inventory finance to auto dealers, along with increasing collateral requirements, making many dealerships unviable. On the whole, the level of funding from both NBFCs and banks reduced significantly. By the last quarter of 2019-20, the addition to auto sector loans had come down to Rs. 1.7 billion as compared to Rs. 5.6 billion in Q4 2018-19; lending by NBFCs reduced from Rs. 900 billion to Rs. 600 billion cumulatively in the last quarter (GoI, 2020).

Another reason for the pre-pandemic slowdown in this sector was the rapid changes in safety and emission standards regulations resulting in a huge technological disruption. For instance, the then BS-IV norms were to be directly replaced by the BS-VI¹¹ emission norms within 3 years so as to quickly bring India to par with developed nations in Europe and the US (ACMA, 2018-19). These new regulations and other safety norms like airbags were likely to increase costs. The sudden announcement of transitions then forced the entire value system to adapt quickly, thereby resulting in supply chain disruptions and rising vehicle prices at a time of already dwindling demand.

Lastly, certain global factors such as weakening world demand, technological change requiring higher investments in new technologies, stricter fuel emissions standards causing price rises, and international trade uncertainty owing to the trade rift between the US and China also injuriously affected the Indian automotive sector. All regions of the world— from the EU to North and South America, Asia and Oceania—saw negative growth in sales and production figures in 2019 compared to 2018 (ACMA, 2020a). All these factors led to a situation wherein right at the cusp of the pandemic, that is, by the end of the fiscal year 2019-20, both the auto components and automobile industries had faced a 20-month steady contraction in market demand, as illustrated in Table 2.

¹¹Emission norms in India are termed BS or Bharat Stage emission norms. They are derived from EURO Emission norms. The transition from BS-II to BS-IV took 17 years, while the movement from BS-IV to BS-VI, skipping BS-V altogether, was ordered within three years. The urgency arose as India acceded to the Paris Agreement in October 2016 while EURO-VI emission norms were already implemented by late 2014.

Table 2: Segment-wise Automobile Domestic Sales Growth Rate (Month-wise Year-on- year)

Segment	2018									
	Jul	Aug	Sept	Oct	Nov	Dec				
PV	-2.7	-2.5	-5.6	1.6	-3.4	-0.4	-	-	-	-
CV	29.6	29.6	24.1	24.8	5.7	-7.8	-	-	-	-
3W	46.2	22.8	11.6	12.9	-11.2	-23.4	-	-	-	-
2W	8.2	2.9	4.1	17.2	7.1	-2.2	-	-	-	-
	2019									
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	
PV	-1.9	-1.1	-3	-17.1	-20.6	-17.5	-31	-31.6	-23.7	
CV	2.2	-0.4	0.3	-6	-10	-12.3	-25.7	-38.7	-39.1	
3W	-13.3	-4.2	-8.5	-7.4	-5.8	-8.8	-7.7	-7.7	-3.9	
2W	-5.2	-4.2	-17.3	-16.4	-6.7	-11.7	-16.8	-16.8	-22.1	

Source: Parliamentary Standing Committee on Industry Report No. 303, GoI (2020)

PV: private vehicle, CV: commercial vehicle, 2W: two-wheelers, 3W: three-wheelers

In the domestic sphere, the precipitous downturn in sales (due to a general economic slowdown) since 2019 compelled automobile manufacturers to implement a reduction of 15% in production for OEMs and 11.7% in the parts and components sector. This sharp decline had a profoundly adverse impact on MSMEs operating at the third and fourth-tiers within the value system, as they supply parts to higher-tier component manufacturers. According to the Federation of Automobile Dealers Associations (FADA), a staggering 286 automobile dealerships were forced to shutter their operations during this period. Consequently, the corresponding diminution in the workforce was estimated to be a collective total of 345 thousand individuals across various sectors, thereby halting any new hiring initiatives (GoI, 2020). The estimated job losses in the sector were significant (Table 3), and largely among the contractual and informal workers.

Table 3: Estimated Job Loss in the Auto Sector in 2019-20

Category	Estimated Job Loss
OEMs	15,000
Components Sector	100,000
Dealerships	230,000
Total	345,000

Source: Parliamentary Standing Committee on Industry Report No. 303, GoI (2020)

Thus, it is clear that even before the onset of the pandemic, this pre-existing deceleration, occurring during a period devoid of overt disruptions in the movement of goods and products within the value system, could be attributed to the enduring state of economic hardship expounded upon in the preceding discourse. Such circumstances, however, could not be elucidated by factors pertaining solely to the supply side. The government's failure to effectively address the contraction in demand further exacerbated the vulnerability of the automobile sector following the advent of the pandemic.

4.2 Impact of the COVID-19 Pandemic

The onslaught of the COVID-19 pandemic led to the complete collapse of economic activities in the country resulting in both supply and demand-side crises. The State's response to the pandemic largely constituted of putting in place a series of lockdowns as 'containment measures'; the first lockdown in March 2020 was one of the most stringent in the world.

Consequently, both backward and forward linkages of the automotive sector were disrupted suddenly and massively. The initial disruption stemmed from the unavailability and rising prices of all raw materials and auto parts, for instance, semiconductors, steel and shipping containers and shutting down supplier operations in the automotive value system etc. After the phased lifting of restrictions, there was an acute shortage of workers owing to the delayed return of migrant workers to the cities. This coupled with a *global semiconductor shortage*, the effects of which were felt mildly in December 2020 and acutely in June 2021, led to a huge decline in automobile production despite the fact that the demand (especially the external component of demand) had begun to revive. Maruti Suzuki India, one of the biggest OEMs, slashed production and sales by 50-55% in September 2021 compared to September 2020. Collectively, these factors led to a severe liquidity crunch across the value system for manufacturers and dealerships, particularly for firms lower down the hierarchy (Tier 2 and Tier 3). This resulted in increased inventories as production and input demand of OEMs reduced.

Automobile production contracted by 14.8% between 2018-19 and 2019-20 (Figure 2). This immediate decline was driven by a sharp fall in all vehicle segments, particularly commercial vehicles. It recorded a -14% year-on-year rate of growth in FY 2020-21 led by the collapse in three-wheelers (Annexure 2). In the auto components sector, the turnover (in INR Billions) contracted by 11.7% in 2019-20 and further by 2.5% in 2020-21 (Figure 5).

Exports also suffered from the domestic supply side crisis, as well as due to restrictions and uncertainties in international markets particularly in Europe and USA. Exports rose between 2018-19 and 2019-20 but nearly at one-fourth of the previous year's rate of growth primarily due to the deceleration in commercial vehicle exports (Annexure 2). Thereafter, the export volume declined by 13% in 2020-21, stemming from a fall in passenger vehicles and three-wheeler exports. Similarly, in the auto components sector, the rate of growth of imports and exports declined from 11.3% and 12.6% in 2018-19 to -10.4% and -8.3% in 2020-21 (Figure 5).

On the domestic demand side, the already brewing income and employment crisis, discussed in the foregoing, was further deepened by the pandemic containment measures. There was a complete collapse of economic activity resulting in massive job losses. After accounting for the discouraged worker effect and the fact that several individuals particularly the self-employed could not earn anything during the lockdown, the actual unemployment rate increased from 8.7% (July 2019-March 2020) before the lockdown to 22.5% during the first lockdown period April-June, 2020 (Mishra & Das, 2022). The earnings of the urban self-employed fell by over 20% for men and 10% for women during the same period (Chandrasekhar & Ghosh, 2021). Estimated job losses in 2019-20 within the automotive sector alone were huge, to the tune of 345,000; particularly in the components sector and dealerships about 100,000 and 230,000 jobs were lost in 2019-20 (GoI, 2020).

Despite these massive job losses, there was not a commensurate increase in government expenditure. Public expenditure was 90 billion rupees lower in the March-July 2020 quarter than in the same period in 2019 (Ghosh, 2020; Ghosh et al, 2022). In fact, the actual stimulus expenditure was estimated to be 1% of the GDP by various think tanks and scholars¹² — despite official announcements of 10% of the GDP under the *Atmanirbhar Abhiyan*¹³ (Jha & Kumar, 2020; Ghosh, 2022; Misra, 2020) as much of it came in the form of credit guarantees to the MSMEs and loan moratorium. Several schemes were launched to support businesses during the pandemic. For instance, the *Atal Bimit Vyakti Kalyan Yojana* scheme to support businesses in paying salaries to permanent employees during the lockdown, Emergency Credit Line Guarantee Scheme (ECLGS) to MSME sector to provide relief to the sector amidst the COVID-

¹² Such as Fitch Solutions, Nomura and Barclays, Centre for Budget and Governance Accountability (CBGA) among others

¹³ Aatmanirbhar Abhiyan was geared toward promoting 'self-reliance'.

19 pandemic, Liberalized Working Capital Assessment Scheme for MSME borrowers, to mention a few. We refrain from a detailed discussion of the specific schemes undertaken by the State in response to COVID-19 due to issues of space, but there is extensive literature available.

The *Pradhan Mantri Garib Kalyan Scheme* covered 800 million poor people and included cash transfers and food grains provisions to provide relief support. The scheme sought to provide food grains but it also provided some small linkage effect on general purchasing power in the economy during the lockdowns. This distribution of food grains came on top of the existing National Food Security Act (NFSA), but recently both schemes have been merged resulting in a reduction in the total food subsidy provided by the State. This reflects a serious attack on the entitlements of the poor (Kumar, 2022).

Specifically, for the automotive sector, cosmetic changes to increase demand were undertaken without rectifying the underlying distress factors. For instance, the increase in depreciation rate for used vehicles to reduce resale rates, incentive-based Vehicles Scrappage Policy (announced in 2021) to generate consumer demand for vehicles by replacing old ones with new vehicles and making available easier finance to consumers and dealerships for boosting demand. Further, the basic customs duty rates for select auto parts had been increased from 10% to 15% in the 2021 Government Budget to stimulate demand for local automobile component firms. The customs charged on steel imports were decreased to 7.5% to assist the struggling MSME sector in reducing costs, especially given the rapid rise in commodity prices in 2021. The government also delayed the introduction of the new foreign trade policy to provide stability and continuity to exporters. Both the time limit for importing through license and the time limit for fulfilling the export obligation were automatically extended by 6 months from the last date of scheduled expiry.

It is evident that the focus on increasing domestic employment and demand, however, remained very limited. The recommendations of the Parliamentary Standing Committee Report 303 on the Automotive Industry (2020) included the lowering of GST rates and overhauling of land and labour laws to attract investors in the Indian automobile sector as some manufacturers wanted to pull out from China. All suggestions for the report were taken from industry bodies (ACMA, SIAM, FADA, ASIA) without deliberations by diverse interest groups, particularly labour unions. The report primarily suggested liquidity measures while addressing the problem

of contraction of demand, though income and social security support was largely missing from most policy prescriptions. The government and industry associations attempted to localise production and reduce dependence on imports, thereby aiming to “de-risk” the automobile value system through the reduction of dependence on the Chinese component industry (Economic Times, July 2020). Essentially the objective was to attract auto majors that were offshoring their business from China. Hence, it is not surprising that policies were made to suit corporate investors and transnational corporations.

In fact, the general lack of demand and purchasing power in the economy meant that there was no increase in productive investments, and hence, in the demand for loans in large measure due to fiscal stringency. The risk of default on loan borrowings amid job losses also made increases in borrowings unlikely (Chandrasekhar, 2020). Thus, the pandemic induced income and employment crisis, the inadequate fiscal response of the government along with the unprecedented rise in petrol, diesel and gas prices led to a reduction in demand for automobiles and affected the demand for products. The automobile domestic sales *contracted* by 18% between 2018-19 and 2019-20, and further by 13% in 2020-21 over the previous year. Correspondingly, the auto components industry also witnessed a contraction by 11.7% in 2019-20 over 2018-19.

The two-wheeler segment and tractor sales have suffered since April 2021, as rural demand was yet to recover from the second COVID-19 wave. Customer bookings in the peak sales period came down by 11% for 2-wheelers and about 13% for tractors, according to the ACMA President.¹⁴In October 2021 it was reported that 2-wheeler manufacturers would likely cut down production by 20-35% in November and December amid inventory build-up due to weak domestic sales and the poor performance during the festive season, even as exports improved. Production at the country’s two biggest 2-wheeler manufacturers, Hero MotoCorp and Honda Motorcycles and Scooters India (HMSI) with over 60% market share, declined in October and November 2021 to a seven-year low (Table 4). To a lesser extent, other two-wheeler manufacturers such as Bajaj Auto and TVS also cut production (Business Standard, 25 Nov 2021).Hero also reported a 12% decline in sales in December 2021 (Business Standard, 1 Jan 2022). ICRA has forecasted marginal improvements in wholesale volumes as the inventories

¹⁴<https://auto.economictimes.indiatimes.com/videos/impact-on-rural-market-may-delay-recovery-in-auto-sector-deepak-jain/83540620>

pile up with dealerships and a market decline of 1-4% in 2022. The demand contraction for two-wheelers can be explained by the delayed monsoon and harvesting across regions, the price increases of over 25-40% in the last two years and the unprecedentedly high petrol and diesel prices in India in 2021.

Table 4: Oct-Nov production of Hero MotoCorp and HMSI, 2015-16 to 2021-22

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
<u>Hero MotoCorp</u>							
Oct	661,756	636,266	622,303	770,959	512,234	804,742	538,228
Nov*	506,361	516,271	633,468	559,294	591,102	590,000	352,000
Total	1,168,117	1,152,537	1,255,77	1,330,25	1,103,33	1,394,742	890,228
			1	3	6		
<u>Honda Motorcycles and Scooters India</u>							
Oct	405,309	468,547	469,415	511,699	393,427	501,680	393,555
Nov*	319,179	346,876	471,181	482,935	437,402	435,988	260,000
Total	724,488	815,423	940,596	994,634	830,829	937,668	653,555

*Estimates

Source: Business Standard report based on data from SIAM, Industry Sources

In addition, the burden of the unprecedentedly high petrol, diesel and gas prices in 2021 had a further dampening effect on demand for automobiles. Given this backdrop, it is not surprising that only 42% of India's automobile and 60% of component manufacturing capacity was being utilised in 2021¹⁵. Since each level in its value system depends on a high volume of production for profits because of low margins, a rise in input costs and a contracting demand would have an adverse impact on the profitability and viability of firms of all sizes, but could especially prove fatal for smaller workshops and factories.

4.3 The Road to Recovery

The Indian auto industry since FY 2021-22 seems to be on the path of recovery with improvements across the majority of axes in both the automobile and auto components sectors.

For the automobile industry, as the global economic conditions improved, the rate of growth of exports increased sharply from -13.1% in 2020-21 to 36.1% in 2021-22 (Figure 4). While

¹⁵<https://auto.economictimes.indiatimes.com/videos/impact-on-rural-market-may-delay-recovery-in-auto-sector-deepak-jain/83540620>

the domestic sales continued to decrease in 2021-22 by 6.1%, the total production in the sector recorded a positive rate of growth, although low at 1.2%, for the first time since FY 2018-19. However, in absolute terms, both domestic production and sales have remained below the 2018-19 levels, though exports rose by 10 million units in FY 2021-22 compared to 2018-19 (Annexures 2 & 3).

An even greater recovery can be observed in the auto components sector - all axes crossed the pre-pandemic marks in 2021-22 in absolute terms. The sector turnover increased sharply by 23.5% in 2021-22 compared to a -2.5% growth rate recorded in 2020-21. The industry is expected to record a growth of 23% by the end of FY 2022-23 (Economic Times, 6 Mar 2023). A significant rise was also recorded in exports and imports of auto components. As shown in Figure 5, exports and imports recorded a negative rate of growth in 2019-20 and 2020-21, but this figure rose to 43% and 36% respectively in 2021-22. The recovery is also likely to continue into the current year. As per ACMA (2023), in the first half of FY 2022-23, exports increased by 8.6% and imports by 17%. In the financial year 2021-22, the auto component industry in India achieved its largest trade surplus, amounting to \$700 million. This positive outcome can be attributed to prominent global automakers adopting a "China Plus One" approach to mitigate supply chain risks stemming from the COVID-19 pandemic (Economic Times, 23 Aug 2022).

The shock of the COVID-19 crisis jolted the State into focusing on immediate recovery and more importantly, long-term growth of the automotive sector. In 2021, the government of India set an ambitious goal of increasing the automobile sector's share of GDP to 12% and employment to 50 million (Business Standard, 2021). The present policies of the State aim not only to revive the sector in the short-term but also have to push the sector to meet its huge potential in the long-term. The government had already allowed 100% FDI in the sector under the automatic route so as to increase competition in the industry. In India, FDI is permitted via automatic route or the government/approval route. Under the automatic route, a foreign investment is less restrictive such that the non-resident or Indian company does not require any approval from the Government of India for investment.

The primary emphasis of the initiatives taken has been on the technological restructuring in the industry. The initiatives have been largely based on incentives and are directed towards moving away from fossil-fuel-based combustion engines and towards electric vehicles (EVs). This position is highlighted by some of the recent key initiatives of the government in relation to the automotive industry. In September 2021, the government issued a notification for a new

Production-Linked Incentive (PLI) Scheme for both the automobile and auto components industry to strengthen India's manufacturing capabilities in the realm of Advanced Automotive Products (AAT). For this purpose, a budgetary allocation of ₹25,938 crore has been dedicated.

Under its two components –the Champion OEM Incentive Scheme and the Component Champion Incentive Scheme, this PLI scheme aims to provide financial incentives to stimulate domestic production of AAT products and attract investments throughout the automotive manufacturing value chain. The key objectives of this scheme include addressing cost disadvantages, fostering economies of scale, and establishing a robust supply chain in the AAT product domains. It is expected to generate employment opportunities and enable the automobile industry to ascend the value chain by venturing into higher value-added product segments. As of 2022, the schemes have already been successful in attracting proposed investment of ₹ 74,850 crores against the target estimate of investment of ₹ 42,500 crores over a period of five years. The scheme is expected to bring in investments to the tune of USD 5.74 billion by 2026, with incremental production of Rs. 2.3 lakh crore (US\$ 28.8 billion) and other employment generation of over 7.5 lakhs. In 2022, 20 car manufacturers including Tata Motors, Suzuki Motor Gujarat, Mahindra & Mahindra, Ford India, Hyundai, and Kia were chosen under the scheme.

This scheme is supported by another PLI scheme set up under the National Programme on Advanced Chemistry Cell (ACC) Battery Storage. Advanced chemistry cell battery storage refers to the utilization of sophisticated and innovative chemical compositions and designs in battery technology to enhance energy storage capabilities. These advanced batteries are made up of new material such as lithium-ion, lithium sulphur, etc. which implies that they offer improved performance, higher energy density, longer cycle life, faster charging rates, and enhanced safety compared to traditional battery technologies. Under this PLI, four companies - Reliance New Energy Solar Limited; Ola Electric Mobility Private Limited; Hyundai Global Motors Company Limited and Rajesh Exports Limited – have been chosen to receive incentives to increase the local production of battery cells. With its budgetary outlay of ₹ 18,100 crore, the aim is to achieve a manufacturing capacity of Fifty (50) GigaWatt Hour (GWh) of ACC for enhancing India's manufacturing capabilities. The primary focus of the Government under this scheme is to build domestic battery manufacturing capability while simultaneously ensuring that the cost of battery manufacturing in India remains competitive on a global scale. According to NITI Aayog, the apex public policy think tank of the Government of India, the establishment

of a strong domestic battery manufacturing centre that fosters technological advancements has the potential to generate higher-performing batteries, thereby stimulating the adoption of electric vehicles throughout India.

The Program entails an investment strategy to stimulate domestic manufacturing and fostering demand for battery storage in the realms of electric vehicles and stationary storage. This initiative will not only promote the development of a comprehensive domestic supply chain and attract foreign direct investment to the country. The ACC PLI scheme is projected to lead to savings in the range of ₹2,00,000 crore to ₹2,50,000 crore in terms of the oil import bill during the Program's duration due to faster adoption of EVs, leading to substantial cost savings. Furthermore, it can contribute to the development of a dependable and resilient electricity grid capable of accommodating growing proportions of renewable energy sources. (PIB, Mar 2022).

In November 2021, under the PLI scheme for automobiles, the government added >100 advanced technologies. These technologies include compressed natural gas (CNG) systems, flex-fuel engines compliant with Bharat Stage VI standards, electronic control units (ECUs) for enhanced safety, advanced driver assist systems, and e-quadracycles.

The aforementioned PLIs, along with the already existing *Faster Adoption and Manufacturing of Hybrid and Electric Vehicles I (FAME I)*, which was launched much earlier, in 2015, the EV industry in India is likely to flourish. The Fame I was later replaced by *FAME – II* in 2020 and had allocated funds of USD 1.39 billion for FY 2020-22. Currently, it has been estimated that the EV market in India is likely to increase at a CAGR of 36% until 2026 while the EV battery market may expand at a CAGR of 30% (IESA, 2019). Consequently, the EV industry may create 10 million direct jobs and 50 million indirect jobs (Business Standard, July 2022). EV financing is also gathering significant momentum. According to NITI Aayog and Rocky Mountain Institute (RMI), India's EV finance industry is likely to reach USD 50 billion in 2030. According to IBEF, USD 117 million had already been spent on the FAME-II scheme as of June 2021, 87,659 EVs have received support through incentives, and more than 6000 electric buses have been sanctioned for state/city transportation. Some states have also received funds for EVs through private partnerships. For instance, In October 2021, the government of Maharashtra entered into an MoU with Causis E-Mobility Pvt. Ltd., based in the United Kingdom, to establish a manufacturing facility for EVs. The project involved a substantial investment of US\$ 317.96 million (IBEF, 2023).

Several other recent initiatives have aimed to facilitate the transition to EVs for producers as well as consumers. A new vehicle scrappage policy for private vehicles was launched in August 2021 and will be in force in 2024. Besides increasing domestic auto sales, the policy is formulated to remove polluting vehicles from the road and provide yet another push for cleaner vehicles. According to the government, this policy is likely to bring in investments to the tune of 10,000 crores (Mint, 2021). Further, roughly USD 3.5 billion in incentives for encouraging the production and export of clean technology have been planned over the five-year period ending in 2026.

Additionally, in the 2022-23 budget, a new battery-swapping policy was introduced which permits drained batteries to be swapped with charged ones at the charging stations. This is likely to make EVs more comfortable for new consumers. India also seems to be in a much better position now to undertake the transition to EVs due to the astonishing recent discovery of the first lithium reserves in Jammu & Kashmir and later in Rajasthan's Degana, Nagaur (Economic Times, 9 May 2023).

Further, to avert a crisis like the one in the industry due to a global semiconductor shortage, a new semi-conductor policy was announced in 2022. Under this, various schemes have been announced to promote investments in the sector, particularly for setting up semiconductor wafer fabrication facilities, manufacturing TFT LCD or AMOLED based display panels in the country to strengthen the electronics manufacturing ecosystem etc. In July 2022 the Gujarat government also announced the setting up of Dholera Semicon City under this new policy. Semiconductor fabrication, in particular, represents substantial advancement in technology in any country and would require significant government support; India had unfortunately not been quite successful in her earlier attempts in 2004 and 2012.

Notwithstanding, it is important to note that the changes in technological architecture were already underway even before the pandemic hit through some of the already operational policies (like FAME II). The National Automotive Testing and R&D Infrastructure Project (NATRiP) represents a noteworthy and substantial initiative in the automotive sector. It serves as a collaborative effort between the Government of India, various state governments, and the Indian automotive industry to establish advanced testing, validation, and R&D infrastructure within the country. Under this, five testing and research facilities have been set-up in India since 2015.

Another key initiative in promoting the growth of the automotive sector has been Automotive Mission Plan (AMP) 2026, which was launched much earlier than the pandemic in 2016. The AMP 2026 is a long-term plan that aims to make India a global automotive hub and seeks to increase the growth of the automotive sector (manufacture of automobiles, tractors and auto components) by four-fold by 2026. According to the mission's projection, the Indian Automotive sector is likely to contribute to over 12% of the country's GDP and comprise more than 40% of the manufacturing sector by 2026. The plan focuses on enhancing the competitiveness of the Indian automotive industry through investments in technology, infrastructure, and skill development and encouraging research and development, innovation, and the adoption of advanced manufacturing processes. This ambitious goal of the Plan is outlined in its vision statement: *"By 2026, the Indian automotive industry will be among the top three of the world in engineering, manufacture and export of vehicles and auto components, and will encompass safe, efficient and environment-friendly conditions for affordable mobility of people and transportation of goods comparable with global standards, growing in value to over 12% of India's GDP and generating an additional 65 million jobs"*.

5. Evidence from the field

Under the project, two primary surveys have been conducted – the first one conducted in early 2022 followed by the second survey in late 2022 and early 2023. The first survey was undertaken in the *Gurgaon-Manesar Automotive Cluster* and focussed on 3 primary companies, Maruti Suzuki India Limited, Gurgaon, Suzuki Motorcycle India Private Limited (Gurgaon), as well as various Tier 3 Auto Parts and Components Manufacturers in the Kadipur Industrial Area (Gurgaon).

Maruti Suzuki India Limited is one of the biggest automobile manufacturers in the country and has a 49% share in the passenger vehicle market. Gurgaon plant is the oldest MSIL plant, currently producing select passenger vehicles and light commercial vehicles. MSIL-Gurgaon has 7,000 permanent employees out of which 2,250 workers are engaged in production on the assembly line as Maruti Associates (MA). In terms of the composition of workers, several different categories of workers are employed at the plant who do more or less the same work

on the shopfloor as permanent workers - Company Casuals¹⁶, Temporary Workers (TW)¹⁷ and Apprentices¹⁸. Workers are hired under three categories within the Company Casuals category—unskilled, semi-skilled and skilled; two categories within Company Trainees (CT)¹⁹—CT1 (first years) and CT2 (second years); and when a batch of TWs is rehired, which is infrequent, there are two categories of TWs—TW1 and TW2. In addition, there were 1200 Student Trainees employed under the central government's NEEM Scheme. 54% of workers on the shop floor had non-permanent labour contracts and lacked bargaining power, as they are not part of the workers' union.

As clearly shown in Table 5, despite having similar job profiles, on average, skilled Company Casuals and TWs are paid only half to two-thirds of the salary paid to the lowest position permanent workers (MA-3), while unskilled Company Casuals, Apprentices and Student Trainees are paid approximately one-third the salaries of permanent workers. All categories of workers except for Apprentice and Student Trainees receive Employee State Insurance²⁰ and EPF as social security benefits. While a regular employee is paid ₹70,000-80,000/month, skilled casual workers are paid less than ₹25,000/month for the same work. This disparity exists across the industry. Over the years, there has been an increasing trend towards contractualisation and the destruction of labour rights across all sectors of the economy. This points towards a lack of social upgrading even if economic upgrading is achieved, a phenomenon widely discussed in the literature (Jha & Kumar, 2021; 2022).

¹⁶Company Casuals are employees working on a contractual basis with some guarantee for renewal of contracts (unlike TW). They are eligible to write exams, passing which they can be made permanent.

¹⁷Temporary Workers or TWs are kept on work on a contractual basis with a tenure of 7 months. The entire batch of TWs is usually let off after 7 months and a fresh batch is hired for another 7 months. TW is a relatively new category of worker in this system to by-pass the illegality of the contract system.

¹⁸Apprentices are workers on training after finishing their ITI diplomas (Industrial Training Institute's technical courses) under a government scheme.

¹⁹Company casuals who pass the exam for permanency are hired as Company Trainees for at least 2 years before they are finally offered permanent employment at the plant.

²⁰ESI is Employee State Insurance which is medical insurance towards which the employer contributes. EPF is Employees Provident Fund which is the contribution made by Employers towards employees' retirement savings.

Table 5: Average Monthly Remuneration (in INR) of MSIL-Gurgaon Workers (2021-updated figures)

Category		Sub-category	Cash in Hand	Cost to Company
Permanent (Maruti Associates)		MA-3	45,000	60,000
		MA-15 (highest level after promotions)	1,10,000	1,70,000
Company Trainee (Company Casuals who are eligible for permanent employment)		CT-1 (1st year)	28,450	34,460
		CT-2 (2nd year)	30,900	36,910
		Skilled	23,053	33,730
Company Casuals		Semi-skilled	21,228	31,423
		Unskilled	18,000	27,836
TW			24,190	30,250
Apprentice			16,359	Same as Cash in Hand
Student Trainee			15,923	Same as Cash in Hand

Source: Documented by the Maruti Suzuki Kamgar Union.

Note: There was segmentation within Permanent Workers—MA3 to MA15—based on the criteria of promotion satisfied by them.

A similar observation could also be made from Suzuki Motorcycle India Private Limited (SMI), which is a wholly-owned subsidiary of Suzuki Motor Corporation (SMC), Japan. It too had a similar composition of workers as MSIL-Gurgaon - 613 Permanent Workers, 2000 Casual (Contract) Workers, 10-15 Apprentices and 230 members of staff (including canteen staff, housekeeping and gardeners); their job profiles were virtually similar, yet there were considerable differences in their salaries and perks, as noted from Table 6.

Table 6: Average Monthly Remuneration (in INR) of SMI-Gurgaon Workers

Category	Monthly Remuneration
Permanent	45,000
Casual ITI	11,000
Casual non-ITI	10,000
Apprentice	8,400

Source: Documented by the Suzuki Motorcycle India Employees Union

The third place surveyed was the Kadipur Industrial Area (Gurgaon) which is a part of the automobile cluster in the Gurgaon-Manesar-Dharuhera-Bawal Industrial Belt, where many small workshops (MSMEs) are located. These workshops are engaged in the manufacture of

auto parts and components, textiles, and chemical dyes, which are supplied to companies higher up in their respective value chains. Interviews were conducted with workers from different categories of work and owners of enterprises engaged in auto parts production, categorised as Tier3 auto component manufacturers. Details of Tier 3 component manufacturers are briefly discussed in Box 1.

It was observed that the average workday in these enterprises ranged from 12 to 14 hours a day²¹. Salaries differed across workers in the same factory/workshop according to knowledge/skill level and ranged from ₹5,000-7,000 per month for helpers up to ₹24,000-28,000 per month for foremen including overtime. Although the laws mandate payment for overtime work at double the going wage, none of the workers received the higher rate for overtime. In terms of social security benefits, many workers said they are covered under ESI. Some of those who were not covered reported that the employer compensated them in case of work-related accidents. Nobody reported receiving EPF or other benefits. Most of the workers were migrant workers from Bihar and Uttar Pradesh.

The workers generally did not know which companies bought the products of their labour but had an idea of whether the parts were supplied to multiple domestic component firms or exported. Parts are delivered to upper-tier component manufacturers at different frequencies in different factories/workshops—from delivering parts two-three times a week to delivering two-three times a day. Keeping in line with the just-in-time production system, the lead firms maintain negligible inventories with themselves and depend on smaller consignments with frequent deliveries from their suppliers. Even though the work is gruelling, workers lamented the decrease in workload after the pandemic hit since their earnings from overtime fell drastically²².

²¹The workday in India is set at 8 hours/day. The work done beyond these 8 hours counts as Overtime work.

²²If a worker earlier spent 12-14 hours/day working in the factory earning ₹16,000-17,000/month, post-pandemic he worked for 8-10 hours/day earning ₹12,000/month.

Box 1: Tier-3 Auto Components Manufacturers: Underbelly of the Neoliberal Growth Paradigm

The initiation of neoliberal reforms in the Indian economy in the 1990s led to the rapid integration of the auto industry with the Global Value System (GVS) of automobile production. With the help of strong governmental support in terms of policy and benefits, the Indian auto sector has been one of the major benefactors of the liberalisation reforms along with industries such as garments and software. However, it is important to recognise the underbelly of this pattern of development which is most starkly observed in unorganised Tier3 auto component producers—the exploitative and precarious nature of work contracts.

The enterprises covered in the survey in the Kadipur Industrial Area (Gurgaon) manufacture a range of products such as parts of motors, gauge fixtures, pipes, spring sheets, small parts such as hinges, rings, bolts and screws, chemical dyes for paints, cutting of various grades and sizes of stainless sheets, precision auto and engineering parts for bike shockers and other metal or plastic auto parts and components. Some of the major component manufacturers supplied by the factories/workshops in the Kadipur Industrial Area are Munjal Showa, M&M Auto and other such companies in the IMT Manesar region, which further supply to companies such as MSIL (Gurgaon and Manesar), Hero, Honda, and TVS.

Kadipur is a village situated in the older part of the Gurgaon district. In the central area of Kadipur, every second or third building is a factory or workshop producing parts (for Tier 1 and Tier 2 component manufacturers) or repairing machines. Many workers and their families stay in houses surrounding this industrial area. Here, women are engaged in home-based production—finishing goods or producing smaller parts for the neighbouring industrial workshops—and may be categorised as Tier 4 auto producers. There is also a local-level industry body, the Kadipur Industries Welfare Association (KIWA, Gurgaon)—a reminder of how employers are organised at every level of production (large factories, smaller workshops or as the employers of home-based production).

The enterprises vary in terms of the number of workers employed—from enterprises having 5-6 workers to some employing 35-40 workers. Usually, the bigger factories/workshops are divided into two, three or more workshops; that is, the same owner runs three factories with different names on neighbouring plots, plausibly to avoid compliance with labour laws that require implementation in larger enterprises. Most of the workers work on a contractual, monthly salary basis.

The second survey under the project focussed on three primary stakeholders of the industry - Managers from Companies, Policy makers and industry experts, Trade Unions and Think Tanks. Personal interviews and focus group discussions (FGDs) were undertaken as per the agreed-upon questionnaires for each group. The specificities of this survey are illustrated

in Box 2. The remainder of this section presents a brief summary of the responses based on the findings from both surveys.

Box 2: Details of the Second round of Survey

The second survey was conducted in India in late 2022 and early 2023. As decided, more than 10 respondents within each of the three stakeholder categories i.e., managers from companies, policymakers and employers' associations and trade unions were contacted. Responses exceeded 10 under all groups; particularly overwhelming responses were received from the trade unions. Anonymity was maintained while recording the responses so that we can only provide a brief profile of each group of respondents, as presented below:

1. *Trade Union* responses were analysed separately for Northern and Southern India, given differences in union culture and history. Among trade unions of the South, personal interviews of 3 members of a national-level trade union, Centre of Indian Trade Unions (CITU), were conducted based on the approved questionnaire. To ensure diversity, the respondents chosen were from different cities. For the Northern region, there were 8 respondents, and a focussed group discussion method was followed.

2. The group of *company managers* included respondents from top-tier management from 3 of India's largest OEMs companies, Maruti Suzuki, Hyundai and Eicher Volvo, which constitute the top end of the auto supply chain. Responses were also elicited from 9 Tier 3 firms which are the suppliers in the auto supply chain/system. These firms lie at the lowest end of the auto supply chain and employ primarily an informal workforce. These included Badve Engineering Limited, Interact Auto Private, and Indo Forging Components Private Limited.

3. Among *policymakers*, 12 respondents from various ministries were interviewed using the relevant questionnaire. These included the Ministry of Labour & Employment, Ministry of Commerce & Industry, Ministry of Heavy Industries (under which the FAME scheme pertaining to EVs was launched) and the NITI Aayog. NITI Aayog is the apex public think tank of the Government of India and the nodal agency tasked with furthering national development while promoting cooperative federalism.

5.1 Impact on Industry

During April-August 2020, the automobile sector was adversely affected particularly that of the manufacturing of automobile bikes & scooters. This stemmed from various logistics-related issues such as (a) the availability of vehicles/ vessels to move their goods (b) skyrocketing prices in hiring of containers (c) delays at the ports. The effective labour costs also increased due to the installation of expensive protection and safeguard measures, payment of salaries to employees despite shutting down of production, and high migration of workers from cities as well as shortage. Further, the shortages and subsequent rise in prices of raw materials and semi-

finished products led to significant disruptions in the production cycle. While the companies with lower dependency on foreign suppliers or a higher degree of indigenisation of parts and component were affected less, the acute shortage of chips impacted the production of all vehicles. Coupled with a decline in consumer demand, the firms underwent a major loss of revenues and a severe liquidity crisis. However, by August 2021, some recovery was observed among our respondents. The total production in the Gurgaon plant increased from 30,000 units to 47,000 units as per Maruti Suzuki Kamgar Union.

The MSIL-Gurgaon plant was closed for 2.5 months after the first COVID-induced lockdown was announced in late March 2020 and some activity was started in mid-June. From July 2020 onwards, production levels were kept below the pre-pandemic level, owing to uncertainty in demand. Production was raised for some time as the festive season of September and October approached. By late 2020, global semiconductor shortages had materialised, which at the time did not affect Indian auto production drastically due to low demand. Overall, while MSIL (Gurgaon and Manesar) and SMG together produced about 1.8 million cars in 2018-19, production had come down to 1.5 million in 2019-20 due to the auto sector slump. In the pandemic year of 2020-21, annual production had reduced to 1.4 million units (Table 7).

Table 7: Total Sales and Turnover of Maruti Suzuki India Limited between 2017-18 and 2020-21

	2017-18	2018-19	2019-20	2020-21
Vehicles Sold* (‘000 units)	1,780	1,862	1,563	1,458
Net Sales* (₹ million)	781,048	830,265	716,904	665,621

*Combined figures for MSIL Gurgaon and Manesar Plants and SMG (Gujarat)

Source: Maruti Suzuki Integrated Reports

The total production in all three plants of MSIL and SMG between April-August 2021 was 651,000 units, more than twice that of 2020 at 286,000 units. On the other hand, owing to the semiconductor shortage drastically reducing the production capacity, the total production in August 2021 was much lower than in August 2020, right after the first economically devastating lockdown (Table 8). Having hiked up the prices twice by 4.94% cumulatively, MSIL announced the third price hike of FY 2021-22 citing rising input costs. According to the Senior Executive Director at MSIL, the third hike was substantial because material costs

account for up to 75% of automakers' overall costs²³. Furthermore, the company stated it may shift to the production of chips of relatively lower quality in India to keep production going amidst the chip shortage.

Table 8: Total Plant-wise Production of Maruti Suzuki India Limited in 2020 and 2021

Plant	Total Production (in '000 units)			
	<u>Aug 2020</u>	<u>Aug 2021</u>	<u>Apr-Aug 2020</u>	<u>Apr-Aug 2021</u>
Gurgaon	39	47	95	220
Manesar	56	30	130	217
Gujarat	28	36	62	213
Total	124	114	286	651

Source: Documented by the Maruti Suzuki Kamgar Union

Along similar lines, a near collapse of production was also witnessed by MSI Ltd Gurgaon. Although production returned to pre-COVID levels in July 2021, the subsequent shortage of semiconductors as discussed previously took a huge toll on the production (Table 9).

²³Shashank Srivastava (senior executive director, MSIL) to Business Standard

Table 9: Daily Production figures from Suzuki Motorcycle India Limited (Gurgaon)

Year	Month	Production per day (units)	Remarks
2019	July	2,860	<i>Strong production trends till early 2019 at around 3100 units per day; dropped to 2800 units per day as demand fell</i>
	August	2,870	
	September	2,910	
	October	2,980	
	November	2,870	
	January	2,410	<i>Production started declining as COVID hit China and lockdown was announced, disrupting the supply chain</i>
2020	February	2,430	<i>Lockdown announced in India</i>
	April	0	
	May	0	
	June	0	<i>Production resumed amidst uncertain demand but picked up as festive season (September, October) approached</i>
	August	2,620	
	December	2,310	
2021	May	1,860	<i>Second wave hit Delhi.</i>
	July	2,630	<i>Production rose again.</i>
	August	2,320	<i>Semiconductor shortage, acutely felt by Indian auto sector since June 2021, leads to a drastic fall in production level in August</i>

Source: Documented by the Suzuki Motorcycle India Employees Union

5.2 Impact on Workers

On the basis of the fieldwork carried out in the Gurgaon-Manesar Industrial Belt and Kadipur Industrial area, the workforce segmentation between the workers of the OEMs and that of the Tier3 auto components firms became even more apparent during the pandemic.

It was observed that among automobile OEMs (Maruti Suzuki India Limited, Gurgaon Plant), no layoffs or reductions in remuneration were reported across categories and the workers were compensated during the 2 months of lockdown. The production resumed slowly in July 2020 and then picked up as demand improved. This was followed by a significant drop in production between April and May 2021 due to two primary reasons: (a) the second wave of Covid-19, which yet again resulted in demand and supply side issues, and (b) the acute semiconductor shortage.

Net sales for Maruti Suzuki Limited declined from Rs 830,265 million in 2018-19 to 665,621 million in 2020- 21. Consequently, there was no new hire/contract renewal in any category. In fact, in 2019-20, the number of new permanent positions for MSL Gurgaon was down to 40 from about 60 in 2018-19 and 135 in 2017-18. Moreover, although there were no layoffs during the 2019-20 slump or the pandemic, new hiring had already been reduced in the TW category since 2019 and were completely halted since the onset of the pandemic. This continued into 2021, despite the pickup in demand and could be attributed to this semiconductor shortage that made the hiring of TWs completely unnecessary.

For auto parts and components manufacturers (Kadipur Industrial Area), workshops shut for 1.5-2 months during the first lockdown in March 2020. In contrast to the OEMs discussed above, *no compensation was provided* in the majority of workshops, though a few respondents reported receiving half a month's salary as compensation. This industry is generally characterised by a general lack of jobs and social security, except for the few workers who are covered under ESI (medical insurance). In fact, there were some reports of layoffs of contractual staff and a VRS (Voluntary Retirement Scheme) imposed on permanent staff in Tier 1 and 2 component manufacturers. In Tier 3 component manufacturing units, work-sharing arrangements were also found; there were no layoffs but lesser work hours contributed to reduced monthly total compensation for all employees.

Production resumed slowly in June 2020 amidst reduced demand from OEMs and Tier 1&2 component manufacturers and higher input costs (particularly due to the doubling of the cost of iron) leading to a reduced overall workload. Generally, workshops supplying to domestic component manufacturers fared worse than those producing for exports. No major layoffs were reported, but a drastic reduction in remunerations was observed yet again. There were also cuts in overtime work, such that workshops operated for only 8-10 hours/day, down from 12-14 hours/day. Correspondingly wages dropped by Rs. 2,000-5,000 across categories.

During the second survey, discussions with employers' associations, trade unions and NGOs revealed that the first lockdown critically affected the workers in the automotive industry; workers were left for many days without work or had their salaries cut (for permanent employees). The small units operating in and around Delhi-NCR were severely impacted due to worker migration, non-payment of wages and COVID-19 risk. The contractual/casual workers bore a disproportionate brunt of the crisis as they were not supported by any means, neither financially nor in the form of paid leaves. Furthermore, while rations were distributed, only the native workers were able to access them while the migrant workers were by and large left to their own devices. The workers who remained employed were also adversely affected, as the required inspections by state agencies to assess compliance with labour regulations were postponed.

The Government did not give much support during the pandemic. Unions and NGOs at their level supported the workers (largely restricted to permanent workers) through their own contributions, but the companies remained indifferent. COVID-19 was taken as an opportunity to dilute unions as the number of temporary staff increased. In most companies, the management often did not consult them on any new measures, nor on the introduction of new machinery.

As the restrictions were lifted and work resumed, there were limited improvements in employment. The permanent workers were retained to a large extent but their workload increased (8 hrs + 4 hrs overtime) and the new staff recruited was largely contractual. Permanent workers were increasingly being replaced with contractual workers. The wages were cut by 20-30% during the initial lockdown. During 2021-22, new hiring was undertaken but with lower wages, resulting in workers being unable to keep up with high inflation.

The union reported that permanent recruitments in MSL Gurgaon, though diminishing progressively, continued up to 2019, but there have been no fresh permanent recruitments since the pandemic struck. The salaries of all categories of workers were raised following the routine negotiations with the union in June 2021, but there was discontent amongst non-permanent workers as received a very nominal raise, not keeping up with the inflation and resulting in more wage disparity between casual and regular employees (The Hindu, Sept 2021).

A positive outcome was some reduction in gender differences due to high attrition rates. As per a middle-level manager from Eicher Volvo, more jobs for women were seen; 20% of workers at the plant level were women, but for heavy-duty work, males were still preferred.

5.3 Future Prospects of Industry and Workers

The policymakers interviewed expected the industry to develop in the context of rising pressure to frame a national-oriented economic policy forth promotion of self-reliance. Thus, outsourcing was likely to be reduced. Emphasis was on developing new infrastructure or upgrading the existing infrastructure locally around automobile clusters to ensure that there is minimal labour disruption despite the pandemic situation, such as hostels and hospitals. Further, bilateral agreements with other countries were expected to rise to ensure a continuous supply of raw materials. However, the respondents from the managerial class of the companies believed that their thrust would now be on improving the ease of doing business digitally by defining digital customer journeys and increasing the “hyperlocal” activities.

The prospects of workers in the industry were reported to be grim even though industry growth is expected to be good with a strengthening State-corporate nexus. There was a major restructuring of the industry during this period. Firstly, the companies’ emphasis was on greater automation. As per a senior manager from Eicher Volvo, there was greater investment in robotics, such as the paint shop shifting from manual to 100% automatic carbon coating mode. This new process only requires one operator to use the machine, which would result in direct job losses. Furthermore, this technological change could result in immediate job-losses as workers may not have the requisite skills and skill-enhancement may not be provided by the companies. This could also lead to difficulty in re-entry into the world of work for these workers. Secondly, the unions expect an increase in contractualisation, resulting in greater vulnerabilities for the workers. In addition, they also anticipate a reduction in investments in

human and capital resources and a greater transfer of workload on remaining permanent workers.

Box 3: Ford India's Exit and Re-entry

On September 9, 2021, Ford announced its exit from all manufacturing and sales operations in India with a phased shutdown of its two manufacturing plants in Sanand (Gujarat) and Chennai (Tamil Nadu) by 2022. Months before this announcement, Ford's discussions to transfer its operations to Ola and Mahindra & Mahindra were reportedly called off. This is part of the larger trend of Ford's exit from Europe and Brazil and General Motors' exit from Europe, India and Australia. According to industry experts, Ford's decision will affect about 4,000 direct employees at its two manufacturing plants and over 40,000 indirect workers involved in the value system including the many ancillary MSMEs supplying auto parts and components to Ford and 170 Ford dealers and their employees (Indian Express, 12 Sep 2021). The company also announced that it would retain and expand its 11,000-strong workforce in the Business Solutions team to support Ford globally and continue selling imported models in the country. The Chennai Ford Employees Union protested the decision to shut down manufacturing operations and demanded that management take steps to accommodate the employees to another production unit and ensure their livelihoods (Indian Express, 15 Sep 2021). In October it was reported that the Tata Group would take over Ford's Chennai Plant with the Tamil Nadu government encouraging the deal to ensure the employees' livelihoods (Economic Times, 8 Oct 2021).

Ford cited cumulative losses of over \$2 billion over the last two decades along with a \$0.8 billion asset write-down in 2019. In the past decade, Ford's low market share in new sales has declined from 3% to 1.4%. In fact, Ford's two plants had been operating at a capacity utilisation of 20%, half of which was being exported. Ford manufactured medium-range cars in India for which the consumer base was the fast-shrinking middle class. Despite India being one of the largest car markets in the world, it is deemed as a 'high cost, low margin' country where profits depend more on sales volumes. The Indian automobile market is currently dominated by Japanese, South Korean and Indian car makers²⁴ Maruti Suzuki, Hyundai, Mahindra & Mahindra, and Honda which have successfully launched various models in the low to mid-budget segments. Analysts have pointed out that American and European auto manufacturers have been struggling in South East Asian markets as they are unable to adapt to local demand conditions. Alongside Ford, this was also the primary reason for exits by Harley Davidson and General Motors from India as they suffered losses on their negligible sales in India. On the contrary, Ford and GM exited from Europe as they could not expand in the high-range section where Audi, BMW, etc. dominate.

Over the years, the Indian market has become saturated with cars and seems unable to keep up with the volumes produced by carmakers domestically. From witnessing double-digit growth

²⁴ Japan's Maruti Suzuki and South Korea's Hyundai Motor together have over 60 per cent of the Indian market share.

in domestic automobile sales between 2001 and 2012, the Indian automobile industry has experienced a slowing consumer demand post the 2012-13 economic slowdown. According to FICCI's analysis, 2-wheeler growth has moderated to 6-8% compared to double-digit growth rates earlier as penetration levels have exceeded 50% of Indian households (Economic Times, 10 April 2020). Problems of raw material shortages, high tax rates (at 28% in GST), rising fuel costs and the massive COVID-induced shock further dampened Ford's operations in India, forcing it to call quits in the country. Six major automakers have exited from India since 2017—Ford, General Motors, Fiat, Harley Davidson, MAN Trucks and UM Motorcycles. The data shared by the Federation of Automobile Dealer Association (FADA) with the Ministry of Heavy Industries reveals that these exits have affected over 464 dealerships and led to a cumulative loss of 64,000 jobs across the auto industry and ₹2,485 crores in dealer investment loss²⁵.

Ford is reportedly focusing on expanding in the Electric Vehicles (EV) segment, especially in North America and Europe and planning on partnering with European carmakers such as Volkswagen to ensure its growth in the European markets where Ford presently does not have much presence²⁶. In September 2021 Ford, together with its South Korean battery partner firm SK Innovation, announced an investment of \$11.4 billion, one of the biggest investment announcements in EV globally and in Ford's history, to build three major EV battery factories and an auto assembly plant in the USA which will create an estimated 10,800 jobs²⁷.

Seven months after exiting, Ford made a comeback in the Indian market and was included among the list of 20 carmakers chosen for the Central government's PLI scheme 'Champion OEM Incentive Scheme' (PIB, 2022). The Champion OEM Incentive scheme is a 'sales value linked' scheme, applicable to Battery Electric Vehicles and Hydrogen Fuel Cell Vehicles of all segments. The scheme applies to all OEMs except two- and three-wheelers. Along with other schemes mentioned earlier, this transition will facilitate India's advancement from a conventional fossil fuel-driven automobile transportation system to an environmentally cleaner, sustainable, advanced, and highly efficient system based on Electric Vehicles (EVs).

Ford is anticipated to introduce six automobile models in 2023-24. In the forthcoming years, Ford intends to substantially augment its Business Solutions team in India, which currently comprises 11,000 employees, in order to provide extensive support to Ford's global operations. The team's primary focus will revolve around centres of excellence encompassing engineering, technology, and business operations.

²⁵<https://www.moneycontrol.com/news/technology/auto/exit-of-five-major-auto-companies-from-india-result-in-64000-job-losses-rs-2485-crore-investment-loss-7499151.html>

²⁶ <https://media.ford.com/content/fordmedia/feu/en/news/2021/02/17/ford-europe-goes-all-in-on-evs-on-road-to-sustainable-profitabil.html>

²⁷<https://www.freepressjournal.in/business/ford-to-add-10800-jobs-in-north-america-to-focus-on-making-electric-vehicles-batteries>

6. Concluding remarks

It hardly needs reiteration that the pre-pandemic crisis in the automotive sector, which precipitated from a long-term structural economic crisis in the country under the neo-liberal regime, was deepened further by the pandemic-induced demand and supply side crisis. Production, domestic sales, and exports suffered substantially between 2019-20 and 2020-21. The auto sector workers suffered substantial losses; both in terms of the duration of work and the compensation received. This impact was to be expected given the high informality within the structure of the industry (Tier2 and Tier3 firms).

While several steps were taken by the government to revive the economy in the immediate aftermath of the first lockdown, scholars have argued that these were inadequate relative to the intensity of the crisis. Nevertheless, some recovery in the economy has been experienced, albeit a 'K' shaped recovery. Studies have shown that much of the recovery has occurred along the top arm of the letter 'K', as inequality has risen substantially during this period.

For the auto sector, the pandemic posed unique challenges for the three groups of respondents. For policymakers, the biggest challenge was adapting the support system, which was already inadequate, and ensuring coordination between relevant ministries and departments. The managers of the companies considered the strict and sudden lockdown as the primary challenge, as it caused major disruptions on the supply and demand side leading to severe liquidity crises in companies. Organising and providing relief to contractual workers was a major hurdle for unions in addition to a lack of financial support from the government.

In terms of expansion and growth, according to industry experts, the prospects for the industry look positive, as recovery has been recorded in both the automobile and auto components sectors since FY 2021-22 and strong demand is likely to strengthen recovery. By 2026, the auto components industry is estimated to be worth US\$ 200 billion and contributing 5-7% of India's GDP. According to ACMA, despite fears of a recession in major markets of the US and Europe, India's auto components industry is expected to grow around 10-15% in FY24, driven by domestic as well as export demand (Economic Times, 6 Mar 2023). In fact, in 2022 India, with 4.25 million unit sales, surpassed Japan in new auto sales and rose to the position of the third-largest market for the first time (Business Today, 8 Jan 2023). Further, as per IBEF report due to a shift in supply chains, India can possibly increase its share in the global auto component trade to 4-5% by 2026.

Government initiatives particularly pushing EVs are likely to play a crucial role. However, it is important to note here that the shift in policy towards technological restructuring in order to move away from fossil-fuel-based vehicles had already been underway, although slowly, since before the pandemic. China, which has sought (and now achieved) to become a world leader in the global export of vehicles through its production of EVs, had been striving towards this goal for years with policies that are backed by huge investments from the government in R & D expenditure, domestic infrastructure etc., in addition to large subsidies to automakers. As of 2022, China accounts for 65% of all public chargers. Furthermore, India's spending on R&D has remained astonishingly low since 1990s and falls way behind that of China (and advanced economies). While in 1996, both India and China were spending about the same on R&D (0.6% of GDP), by 2016, China's expenditure stood at 2.11% of her GDP, while India was only at 0.62% (Brookings India, 2019). As per a recent report by NITI Aayog & Institute for Competitiveness, India's investment in R&D even declined from 0.8% of her GDP to 0.7% between 2007-08 and 2017-18 (India Innovation Index, 2021). Thus, China's position would be difficult to surpass for India, particularly in terms of gaining a competitive advantage in EVs in the international market as technological innovation would be an important key. Perhaps some lessons could be learnt from China's trajectory along technological advancement in automotive sector²⁸.

For the domestic market, however, the stepped-up efforts of the government seem to be in the right direction – towards a sustainable future. Notwithstanding, the most crucial challenge facing the Indian automotive industry today is the global discourse surrounding building smaller value chains or re-shoring production to build more resilient auto supply systems, as this may reduce the demand for auto components – an area in which India already has a substantial competitive advantage in the global market.

Notwithstanding the recovery of the industry on the back of various government initiative and incentives, worker well-being in general and within the auto sector, is expected to remain under considerable strain, stemming (to a large extent) from the various 'pro-industry' policies initiated during the pandemic. In 2020 the Central government did issue an advisory to public

²⁸Case in point- India has been way behind China in semi-conductor fabrication, which is considered technologically quite advance. India's strategy has been to set up a new logic fab. while China acquired several loss-making fabs through massive government financial support over the last two decades and then set up its own logic fab, The advantage was that these already have 'stabilised technology, a supply chain ecosystem, an established product line, a market and were reasonably priced' (Kumar, June 2023).

and private employers to not terminate their employees, especially casual/contractual workers and not to reduce wages, but that is exactly what it was – an advisory. Simultaneously, to ‘revive’ the manufacturing sector at large, the economy and ensure that ‘workers get more jobs’, several states issued ordinances /notifications that blatantly undermined labour rights and welfare, even at a humanitarian level (Chakraborty & Yadav,2021;Miyamura, 2021).

These included, on one hand, reducing restrictions on factories to close their operations and lay off workers, employing contractual workers and, on the other hand, restricting the entitlement of workers to establish trade unions, participate in collective bargaining, or lawfully initiate industrial conflicts. More than 12 states, such as Assam, Goa, Gujarat, Haryana, Himachal Pradesh, Madhya Pradesh (MP), Odisha, Punjab, Rajasthan, and Uttar Pradesh increased their maximum daily work hours from 8 hours to 12 hours; Karnataka and Uttarakhand increased the work hours to 10-11 hours. However, Karnataka, UP and Rajasthan gradually repealed the notification due to litigations etc. (Sundar, 2020; Sundar & Sapkal, 2020, ILO, 2020).

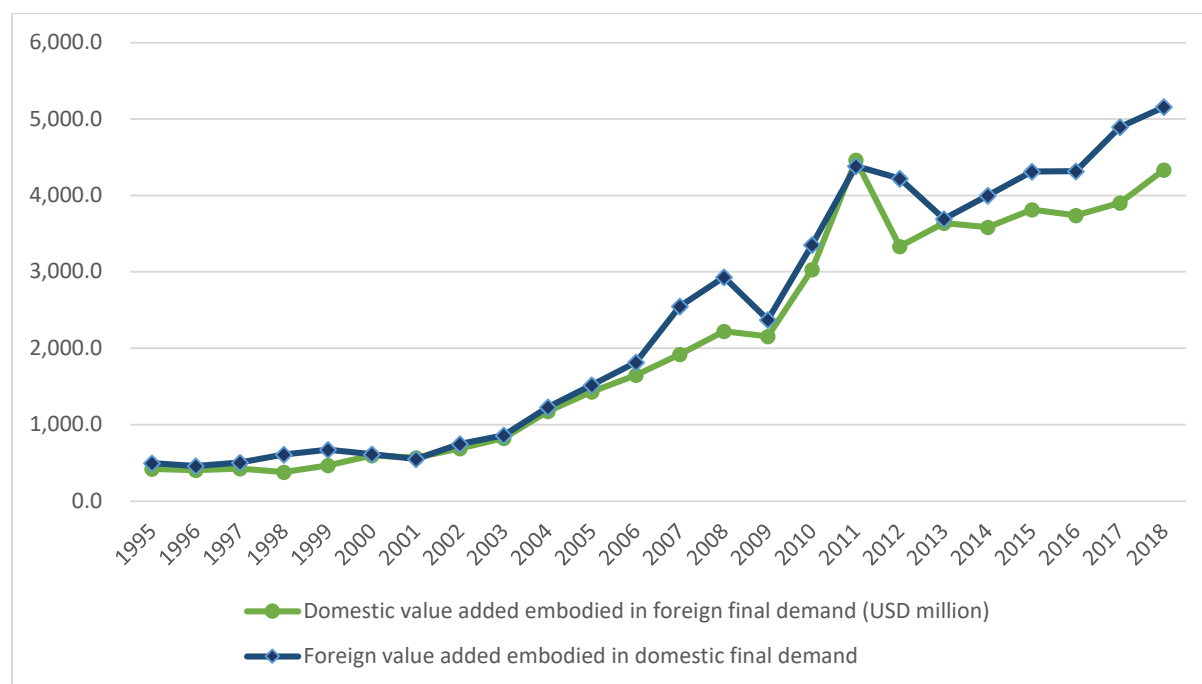
Nonetheless, UP was particularly perverse – the state issued an ordinance suspending 34 different acts that sought to prevent labour exploitation like the Trade Unions Act (1926), the Industrial Disputes Act(1947), the Minimum Wages Act (1948) etc., for *a period of 3 years, until 2023* (ILO,2020; Sundar,2020; Bhandari,2020). Similar suspensions were also undertaken in Madhya Pradesh and Gujarat; they also increased the threshold number of workers for the applicability of certain acts which led to severe exploitation. For example, in Gujarat, the government increased the threshold for applicability of from 20 to 50 labourers so as to ‘employ more workers’ (Chakraborty & Yadav, 2021). This essentially meant that for firms with 20-49 workers, the law would not apply. Furthermore, in order to improve the ‘ease of doing business’, labour inspections were also postponed or suspended in several states. Even when the economy industries began to return to their pre-pandemic capacities, many of these exemptions have continued and are likely to continue for at least a few years (Chakraborty & Yadav, 2021).

Another issue concerning workers is the restructuring expected to occur within the industry in response to the pandemic, including an emphasis on more automation and technology-driven work. These may pose a serious issue for the already stressed world of work in India. It is clear that the processes that were underway during peak of the Covid-19 crisis and continue to work today have undeniably led to a substantial intensification of labour exploitation, considerable

decline in bargaining power and widening inequality driven by the inherent tendencies that characterise the current regime of accumulation. In general, India seems to be sinking more and more into a low road labour model. Possibly, this is a price any country would have to pay for submission to neo-liberalism.

Annexures

Annexure 1: Foreign and Domestic value added in respective final demands in the automobile sector, India.



Source: TIVA, OECD Stats

Annexure 2: Annual Rate of Growth of Production, Exports and Sales in the Automobile Sector between 2003-04 and 2021-21

Year	Average 2003-04 to 2008- 09	Average 2009-10 to 2013-14	Average 2014-15 to 2018-19	2019-20	2020-21	2021-22
Production						
Passenger Vehicles	13.4%	11.7%	5.5%	-15.0%	-10.6%	-
Commercial Vehicles	12.9%	9.8%	10.1%	-32.0%	-17.4%	-
Three Wheelers	8.6%	11.6%	10.2%	-10.7%	-46.1%	-
Two Wheelers	8.6%	15.3%	7.8%	-14.2%	-12.8%	-
<i>Total Production</i>	9.3%	14.5%	7.6%	-14.8%	-14.0%	1.2%
Exports						
Passenger Vehicles	22.2%	12.7%	2.9%	-2.1%	-38.9%	-
Commercial Vehicles	24.55%	15.5%	5.8%	-39.6%	-16.6%	-
Three Wheelers	20.66%	21.4%	14.2%	-11.6%	-21.7%	-
Two Wheelers	30.81%	16.5%	10.0%	7.3%	-6.9%	-
<i>Total Exports</i>	26.18%	15.8%	8.6%	2.6%	-13.1%	36.1%
Sales						
Passenger Vehicles	11.8%	10.9%	6.2%	-17.9%	-2.2%	-
Commercial Vehicles	9.8%	12.6%	10.1%	-28.8%	-20.8%	-
Three Wheelers	6.0%	7.4%	8.3%	-9.1%	-66.1%	-
Two Wheelers	7.1%	15.1%	7.5%	-17.8%	-13.2%	-
<i>Total Sales</i>	7.8%	14.1%	7.4%	-18.0%	-13.6%	-6.0%

Source: SIAM Reports. Disaggregated report for FY 2021-22 is awaited.

Annexure 3: Turnover, Exports and Imports in Auto Components Sector in India – Figures and Rates of Growth between FY 2008-09 to 2021-22

	Turnover		Exports		Imports	
	<i>INR Billions</i>	<i>Rate of Growth</i>	<i>USD Billions</i>	<i>Rate of growth</i>	<i>USD Billions</i>	<i>Rate of growth</i>
2008-09	1106		5.1		8.2	
2009-10	1386	25.3%	4.2	-17.6%	8	-2.4%
2010-11	1883	35.9%	6.6	57.1%	10.9	36.3%
2011-12	2046	8.7%	8.8	33.3%	13.8	26.6%
2012-13	2160	5.6%	9.7	10.2%	13.7	-0.7%
2013-14	2117	-2.0%	10.3	6.2%	12.8	-6.6%
2014-15	2348	10.9%	11.2	8.7%	13.5	5.5%
2015-16	2556	8.9%	10.9	-2.7%	13.8	2.2%
2016-17	2921	14.3%	10.9	0.0%	13.5	-2.2%
2017-18	3456	18.3%	13.5	23.9%	15.9	17.8%
2018-19	3959	14.6%	15.2	12.6%	17.7	11.3%
2019-20	3496	-11.7%	14.5	-4.6%	15.4	-13.0%
2020-21	3407	-2.5%	13.3	-8.3%	13.8	-10.4%
2021-22	4206	23.5%	19	42.9%	18.3	32.6%

Source: ACMA reports

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