CHAPTER 3

INTERFACE BETWEEN GOVERNMENT POLICIES
AND GROWTH OF INDIAN AUTOMOBILE INDUSTRY

This chapter deals with identifying policies relevant to the development of India's automotive industry. A detailed historical account was made to provide the context and considerations under which the policies were formulated by the Indian government.

3.1 Government Policies

The evolution of India's automotive industry is identified to have occurred in four phases. In the first (1947-1965) and second phase (1966-1979), the important policies identified were related to protection, indigenisation and regulation of the industry. On the one hand, these policies helped India to build an indigenous automotive industry, while on the other it led to unsatisfactory industry performance. In the third phase (1980-1990), the single most important policy identified was the one with regard to relaxation in the means of technology acquisition. The foreign competition inducted into the industry transformed its dynamics. Lastly, in the fourth phase (1991 onwards) the liberalisation with regard to foreign investment had a significant influence on the Indian automotive industry as we see it today.

Government intentions for intervening in industry development are usually articulated in addressing selected concerns. Policy development is therefore a decision making process, which generally involves identifying the objective and determining pathway to the objective based on criteria such as effectiveness, costs, resources required for implementation and political context (Torjman 2005). The outcome of policy development is usually a policy statement that outlines the objectives of the policy and the measures to realise the same. Further, the measures for implementation of the policy may necessitate new legislation, amendment to existing legislation, modification of institutional context or design of specific programme initiatives (Torjman 2005). Additionally, depending upon the form of government in a nation (for instance, the federal form of government) the policy
formulation might also take place separately at the regional or local level, apart from that at the national level.

The objectives that government seek to achieve are usually complex and therefore involve several ministerial departments. As a result, the pathway to the objective is reflected in various policies from different departments. The policies are generally interlinked and the choices made in one policy area have effects on the other. For instance, an R&D policy decision to promote in-house R&D might be reflected in fiscal policy as tax-break to firms for their expenditure on R&D. There also exists a sort of hierarchical relationship between policies that collectively address a particular concern. With regard to industry development, an industrial policy forms the core of the policy framework. Other policies such as trade policy, foreign investment policy, monetary policy, fiscal policy, education policy and infrastructure policy basically support the decisions made in industrial policy within their respective policy areas. Nevertheless, the policies interact in a complex integrated manner and a policy could both influence and be influenced by other policies. For example, shortage of foreign exchange might require a nation to liberalise its foreign investment policy, which in turn has implications on the industrial policy.

Thus, so far the section discussed the role government ought to play in the development of an industry, both for developed as well as developing nations (with more emphasis laid on the latter). Based primarily upon the authoritative work of Porter (1990) on the subject matter, the section discussed a changing role for the government through successive stages of industry development - from a more direct one in the factor-driven to an indirect or partial one in the innovation-driven stage. Further, policies as the means for orchestrating, government interventions on industry development were explained. While the whole discussion made was to an extent idealistic and therefore prescriptive in nature, the role that government actually plays in the evolution of an industry might be a differing one. The difference is basically explained by the political and social pressures under which a government operates. For example, the political pressure on the government to save jobs in the short-run might result in a policy decision that extends the duration of protection given to an industry, thereby compromising on its long-term competitiveness. Moreover, a sound government policy might not be able to generate the desired outcomes, if the
institutional structure like the bureaucratic apparatus is not in sync with the policy objectives.

3.1.1 Evolution of India's automotive industry under State interventions

History of automobiles in India could be traced back to the import of first motor car into the country in 1898. Subsequently, completely-built cars and commercial vehicles were being imported into the country by British officials and other prominent Indians, either directly or through dealers/agents. By the end of World War I, the number of such vehicles imported per year was around 4,000 (Narayana 1989). Envisaging a promising demand for automobiles in India, General Motors and Ford established their assembly plants in the country in late 1920s and early 1930s respectively. General Motors began its operations in the Mumbai plant in 1928 by assembling CKD kits of cars and trucks imported from abroad. This was followed by the commencement of similar assembly operations by Ford in its Chennai plant in 1930, and later also in Mumbai and Kolkata in 1931. The number of automobiles imported/assembled in India grew significantly in the 1920s and crossed 30,000 units per year by 1930 (Narayana 1989).

In 1936, Sir M. Visvesvaraya, an eminent Indian engineer and statesman, presented a detailed report to the then central government regarding formation of an indigenous automotive industry in India. The proposal, which included establishment of a factory with a production capacity of 11,000 vehicles per year and a capital outlay of Indian Rupee (INR) 22.5 million, was however turned down by the government (Ghosh 1941). Nevertheless, as a by-product of Sir Visvesvaraya's efforts, the beginning of automotive industry in India was marked in early 1940s with the establishment of automobile companies by two Indian industrial houses – Hindustan Motors Ltd. (HML) founded by the Birlas and Premier Automobiles Ltd. (PAL) by the Walchand Hirachand Group in 1942 and 1944 respectively. Both the companies were established with foreign technical collaboration and a programme for progressive manufacture of complete vehicles. However, due to their slow progress initially, the production of automobiles by these companies started only after India's independence.
The drive for India's independence had already intensified in the country since 1930s. Various deliberations that shaped India's post-independence development strategy were being carried out during this period. National Planning Committee, set up in 1938 by the then dominant political party Indian National Congress, considered nearly all the aspects of economic planning for an independent India and generated a series of studies, ultimately proposing a set of socioeconomic policies and programmes for India after independence. The committee acknowledged the long-term importance of setting up an automotive industry in the country by recognising its place in the planned economy. In a separate effort, seven leading Indian industrialists prepared a set of proposals in 1944/45 for the development of post-independence economy of India. This set of proposals, also known as the 'Bombay Plan', suggested state intervention in the development of the nation's economy after independence. Eventually, recommendations of both the National Planning Committee and the Bombay Plan resulted in the original attempt of planned development after India's independence. The development of the nascent Indian automotive industry thus took a different path of planned approach in the years following India's independence in August 1947.

Today, the Indian automotive industry has come a long way on its path of development. From a mere production of 4,077 vehicles in 1950-51 (GOI 1951), the production of the industry reached 10,833,948 vehicles in 2007-08 (SIAM 2008e). The industry is now working in terms of the dynamics of an open market with a multitude of automobile and auto-component manufacturing firms. Various socioeconomic and political factors have shaped the development course of the industry along its way through inception to the present-day dynamic form. The evolution of India's automotive industry under the influence of these factors could be identified to have occurred in different phases.

The first phase (1947-1965) is characterised by protection from foreign competition, push for indigenisation and emergence of licensing regulations. The second phase (1966-1979) witnessed increased regulations and disparate growth among different segments of the industry. The third phase (1980-1990) saw relaxation in regulations and entry of several Japanese collaborators. Finally, the fourth phase (1991 onwards) began with the historic economic reforms in India and the ensuing liberalisation of the automotive industry. Subsequent influx of foreign players and the
resulting access to global markets have begun the global integration of the industry. The historical account of these four phases along with the State interventions that shaped them is presented in the following sub-sections.21

3.1.2 Protection, indigenisation and regulation: 1947 to 1965

The realisation of the dream of an independent India had brought along with itself the challenge of nation building for its leaders. The dismal performance of country's agricultural and industrial sector under the shackles of colonial rule had led to abject levels of poverty within the population. Among other things, the leaders of the nation had to decide upon the type of economic system that would set the pace of India's economic development promoting welfare of all its citizens. In light of the socioeconomic conditions then existing within the country, the newly formed government under the prime ministerial leadership of Jawaharlal Nehru preferred a mixed economy for the nation. This implied that the decision making of 'what to produce', 'how to produce' and 'flow to distribute' was to be shouldered by both the State and the market. In consideration of the vast social and economic inequalities then prevailing within the Indian society, the State decided to assume a bigger role for itself in the nation's economic development.

In line with the intentions of the State to intervene in economic development, Industrial Policy Resolution (IPR) was passed in the Indian Parliament in 1948. IPR of 1948 outlined the approach that the government proposed to pursue in the industrial growth and development. The resolution divided the nation's industries into different categories depending upon their strategic importance and specified the role of State in the development of each category of industries. Accordingly, the automotive industry was classified under the category of 'basic industries of importance'. As mentioned in IPR of 1948, these industries of basic importance, whose "location must be governed by economic factors of all-India importance, or which require a considerable investment of a high degree of technical skill" (GOI 2008b, p. 3), were subject to regulation and control by the central government. Further, the initiatives within the automotive industry were left to the private enterprise, with State playing only the role of a controller. However, the State
reserved its right to intervene and progressively participate in the industry when deemed necessary.

In addition to outlining the role of State in promoting industrial development, IPR of 1948 hinted at the State's disposition of raising tariff barriers for preventing unfair foreign competition and for ensuring judicious use of nation's precious foreign reserves. The resolution also proposed central regulation on new foreign investments and stipulated that effective control in future foreign equity collaborations ought to rest in Indian hands. In accordance with the objectives laid by IPR of 1948, the Ministry of Industry prepared its first policy for the automotive industry in 1949. As determined in the policy, the tariff on fully-built vehicles was heightened the same year, virtually banning their import into the country. The foreign assemblers assembling CKD vehicles were allowed to continue to operate nevertheless. Meanwhile, PAL and HML had already commenced their operations in 1947 and 1948 respectively. PAL started assembling Dodge-Fargo trucks, whereas HML assembled Studebaker trucks. The number of vehicles assembled/produced in the country reached a figure of 21,577 in 1951 (Tarayana 1989). The large number of on-road vehicles in the country by this time had led to the development of a sizeable repair and replacement sector.

In pursuance of IPR of 1948, the Industries (Development and Regulation) Act (IDRA) was promulgated in 1951. The Act provided the government with means to implement its industrial policy. While IPR of 1948 articulated the intentions of the government, IDRA orchestrated the complex implementation of rules and regulations for the planned development. According to the Act, "an industrial license was required for a unit with 50 or more workers (100 or more without power) in order to establish a new unit, expand output by more than 5% annually, change location, manufacture a new product, and to conduct business if a change was introduced in policies" (Kathuria 1996, p. 88). The bureaucratic process for obtaining the licenses was also stated in the Act. Thus, IPR of 1948 along with IDRA 1951 created an elaborate licensing system surrounding the Indian industries, including the automotive industry. IDRA 1951 with subsequent amendments owing to policy changes continued to apply to the Indian industry till early 1990s.
In the mean time, the Constitution of India came into force in January 1950. Subsequently, the Planning Commission was set up in March 1950 to oversee the formulation and implementation of India's Five-Year Plans (FYP). The commission had the responsibility of assessing all the resources of the country, augmenting deficient resources and making plans for the deployment of the resources in the most effective and balanced manner in consideration to the nation's priorities. With respect to the automotive industry, the commission planned the total number of vehicles (per vehicle type) that were to be produced in the given plan period depending upon country's needs and the resources at disposal. For instance, the First FYP covering the period 1951-1956 and introduced in April 1951, targeted to raise the production of vehicles in the country from 4,077 in 1951 to 30,000 in 1956 (GOI 1951). Accordingly, the Ministry of Industry administered the capacity licenses to the automobile firms.

In March 1952, the government decided to replace its hitherto 'gut-reaction' policy for the automotive industry with a more studied and comprehensive approach to the industry (Kathuria 1996). It referred to Tariff Commission the question of providing protection/assistance for the encouragement of automotive industry. The Tariff Commission submitted its report in 1953 recommending that only units with a plan for progressive manufacture of components and complete vehicles may be allowed to operate. It also recommended against any price controls and advised the government to maintain a watch on the prices. Subsequently, the recommendations of the commission were adopted by the government. Foreign assemblers like General Motors and Ford who considered the domestic demand too low to warrant a local manufacturing programme were obliged to close down their operations within three years. Thus, the exit of foreign assemblers by 1956 and the ban on import of fully-built vehicles since 1949 effectively protected the Indian automotive industry from foreign competition.

The push for indigenisation by imposing a progressive manufacturing programme on the indigenization manufacturing automobile firms was in alignment with the overarching goat of 'self-reliance' emphasised by the leaders of the nation. As per Tariff Commission's recommendation, a minimum 50% indigenous content requirement was introduced. The commission endorsed the already existing manufacturing plan of HML and PAL who had established units for manufacturing
some of the components. With the exit of foreign competition, both HML and PAL who had so far restricted themselves to CVs entered into the production of cars. HML had technical collaboration with Morris (UK) for cars, whereas PAL with Fiat (Italy) for the same. In addition to these two firms, the manufacturing programme of Automobile Products of India, Ashok Motors and Standard Motor Products for cars and CVs was also approved by the commission. Ashok Motors established in 1948, renamed itself as Ashok Leyland based on its equity collaboration with British Leyland (UK). Standard Motor Products was in collaboration with Standard Motors (UK) for the production of cars and CVs. Subsequently, manufacturing programme of one more firm Mahindra & Mahindra (M&M) was approved for the manufacturing of UVs Willys Jeeps.

After adoption of the Constitution and the integrated socioeconomic goals, the industrial policy was revised and adopted in May 1956. Known as the Industrial Policy Resolution of 1956, the revised industrial policy described 'socialist pattern of society' as the objective of Parliament's social and economic policy (GOI 2008b). Accordingly, the IPR of 1956 signalled higher level of State participation for accelerating industrial development. The resolution grouped the industries into Schedule-A, Schedule-B and the remaining. Schedule-A industries were either exclusive monopolies of the central government or were industries in the any new undertaking was solely reserved for the State Schedule included industries in which the State would establish new undertakings for accelerating the future development, and in which the private enterprises had equal opportunity for the same. The remaining industry list, which included the automotive industry, was left to the initiatives and enterprise of the private sector. However, the State reserved its right to participate in the future. Thus, the automotive industry under IPR of 1956 had been provided with necessary autonomy for functioning.

The IPR of 1956 was followed by the introduction of Second FYP (1956-1961). In contrast to its predecessor, which focused on the development of agrarian sector, the Second FYP had ambitious programmes for rapid development of the industrial sector. Massive investments were planned for the public sector and the amount of deficit financing was around INR 1,600 million per year (GOT 1993). The plan targeted a production capacity of 40,000 trucks, 12,000 cars and 5,000 jeeps for the automotive industry by end of the year 1960-61 (GOT 1956). As evident, more
emphasis was laid on the production of trucks with regard to the nation's priorities. Also, the plan aimed at stepping up the indigenous content of the automobiles to 80% by end of the year 1960-61. Meanwhile by 1956, Tata Engineering & Locomotive Company (TELCO) and Bajaj Tempo with programmes of CVs entered the industry. TELCO was in collaboration with Daimler-Benz of Germany and Bajaj Tempo initially produced 3-wheelers under the license of Vidal & Sohn Tempo Werke of Germany. Additionally, Enfield India with a programme of manufacturing motorcycles also entered the industry.

In order to encourage the domestic production and to keep the automobile prices low, the government in early 1950s had maintained lower import duties on the components still being imported. However, a steep rise in the prices made the government to approach the Tariff Commission for the second time in August 1955. The commission was asked to enquire into and recommend a price policy for the automobiles. In its report submitted in October 1956, the commission maintained its initial recommendation against the price controls, as they might undermine the development of the industry. It also suggested reviewing the whole question of protection granted to the automotive industry after a period of ten years.

The situation however changed very soon with the balance-of-payments crisis that sprang up in 1956-57. The ambitious Second FYP with massive outlays on industrial development had strained the nation's foreign reserves. Immediate measures required to counter the economic crisis included cuts on foreign exchange allocated to the automobile manufacturers. Moreover, these firms were permitted to produce only one model each. The ensuing reduction in import of vital components compelled the firms to reduce the production. As a result, severe backlogs were generated for the production orders. The decrease in supply of automobiles resulted in steep price increases owing to supply-demand economics. At this juncture, the government decided to impose 'informal price control' on automobiles, which was accepted by the manufacturers. The informal price control mechanism required the customer to place the order with the dealer and submit a partial payment to the Indian Postal Service. The manufacturer then had to deliver the automobiles in the sequence of the orders registered with the Indian Postal Service. The government also fixed the dealer commission to a maximum of 10% and asked the manufacturers to intimate any decision of raising ex-works prices in advance.
The government by its mechanism of informal price control countered the negative effects of providing protection to the automotive industry to some extent. However, the performance of the automotive industry (especially passenger cars) throughout the 1950s had been unsatisfactory. The growing criticism about the quality and price of the automobiles made the government to appoint L. K. Jha Committee to look into these issues. The committee was asked to review the progress of the industry and recommend measures in the matters of reduction of costs, etc. In its report submitted manufacture of components had resulted in an industrial structure devoid of supplier bargaining power, which further reduced the competition. As a result, in order to reduce costs and improve quality, the committee recommended the encouragement of an indigenous ancillaries sector. The subsequent adoption of these recommendations by the government marked the evolution of a separate auto-component industry in India.

The auto-components so far had mainly been produced by the in-house manufacturing units of the automobile manufacturers. The requirement of a progressive manufacturing programme coupled with the foreign exchange allocation incentives of in-house manufacture resulted in a primarily vertically-integrated industry structure. Some large/medium-size auto-component AD manufacturers like L. G. Balakrishnan & Bros. Ltd. and Motor Industries Company Ltd. appeared during this period with appropriate foreign collaborations. The participation of small-scale sector, however, was limited to the replacement market and to the small-scale jobs from automobile and bigger auto-component manufacturers. This was in part attributable to IF the lack of required skills in the small-scale sector and in part to the provisions in foreign collaboration agreements. The latter prevented the larger firms from locally procuring the components, either by explicit clauses or by giving too small concessions on content not procured from the foreign collaborators.

The government with its socialistic ideals gave importance to the development of small-scale sector from the very beginning. Apart from special credit and fiscal concessions, the government provided protection rates of tariff on a number of ancillary items used in the replacement market since 1956. Further, both small-scale units (fixed assets upto INR 2 million) and ancillary units (fixed assets up to INR 2.5 million) were exempt from licensing requirements under IDRA 1951 (GOT 2008b). Additional encouragement for the small-scale sector came in 1965, with some 60 to
80 components being exclusively reserved for manufacture by the small-scale units following the recommendations of the L. K. Jha committee. In general, the auto-component industry saw good development during this phase due to the emphasis laid on indigenisation within each of the three FYPs.

In order to achieve the increased automobile production targets of the plan period without putting strain on country's foreign exchange reserves, the Third FYP (1961-1966) had stressed on the efforts of indigenisation. The plan noted that "investment designed to increase the indigenous content has to take precedence over investment for establishing new units or expanding existing" (GOT 1961, p. 15). The indigenisation content to be achieved by 1965-66 was set at 85% as compared to 50% and 60% in First and Second FYP respectively. The target production for automobiles by end of 1965-66 was 60,000 CVs, 60,000 2-/3-wheelers, 30,000 passenger cars and 10,000 UVs (GOT 1961). As evident, priority was given to the production of CVs and 2-wheelers.

In summary, the Indian automotive industry in the years 1947 to 1965 was the one wherein the foreign competition was highly restricted by means of protective rates of tariff and foreign investment licensing requirements. Foreign collaborations were permitted only after diligent in considerations and were subject to effective control by Indian entities. The domestic competition was also regulated by means of industrial licensing, foreign exchange allocations and other governmental decrees. The nation's overarching goal of self-reliance was reflected in the indigenisation requirements imposed on the domestic automotive firms. Intentions of protecting and nurturing the nascent automotive industry were accompanied by side-effects of high prices and low quality levels. Even though the consumer interests were safeguarded to some extent by informal price controls, the overall performance of the industry in terms of quality, consumer choices and the ready availability of vehicles was unsatisfactory. Further, this phase witnessed increasing bias of the developmental efforts towards CV and 2-wheeler segment as opposed to that of passenger cars. With regard to the auto-component segment, the industry structure was largely characterised by in-house manufacturing units and large/medium-size firms. Efforts to encourage small-scale sector were being attempted by the government during this phase. Auto-related institutions like Development Council for Automobiles, ACMA,
SIAM and Vehicles Research & Development Establishment also got established during this period.

3.1.3 Increased regulation and disparate segmental growths: 1966 to 1979

India's war with China in 1962 and with Pakistan in 1965, along with poor agricultural production due to successive severe droughts had led to financial crisis in the country by mid-1960s. The financial situation improved to some extent with the help of a loan from International Monetary Fund (IMF) in 1966. However, the formulation and implementation of Fourth FYP was put down and instead three annual plans were drawn up for the period 1967 to 1969. On the political front, the void created by sudden death of India's fourth Prime Minister in 1966 was filled by Mrs. Indira Gandhi. In the general elections of 1967, Mrs. Gandhi was re-elected as India's fifth Prime Minister and this to an extent deflected the development path of India's automotive industry.

During her rule till 1977, the populist stance taken by the government perceptibly altered the automotive policy. The first change was initiated in May 1966 with government directing the Tariff Commission to look into the whole question of continuance of grant of protection to the automotive industry. The government also asked the Tariff Commission to enquire into the government cost structure and fair selling price of different type of automobiles. Although the review was already due as mentioned in Tariff Commission's earlier report in 1956, Pingle (1999, p. 96) however suggests that "the increasingly dominant populist ideology with its anti-big industry ideology emphasis within the political leadership" had actually led to the third-enquiry. Based on its report submitted in the same year, the Tariff Commission recommended the government: a) to help industry attain minimum efficient scale by limiting the number of models to an absolute minimum b) to impose price controls on passenger cars. Subsequently, the government imposed statutory price controls on passenger cars in September 1969.

Meanwhile, India's first competition law known as the 'Monopolies & Restrictive Trade Practices Act' (MRTP) was passed in 1969. The law was prepared to keep a check on the concentration of economic power in private hands by preventing monopolistic and restrictive trade practices in important economic
activities. The MRTP Act classified companies with more than INR 200 million in fixed assets and/or having a dominant market share of one-fourth or more as 'MRTP companies'. Such companies were required to obtain additional clearances (apart from those specified by the IDRA) in order to enter, expand, relocate, merge or acquire. The cumbersome process of obtaining MRTP clearances, which involved public notification of investment plans and semi-public hearings, acted as a deterrent for the companies. Subsequently, MRTP Commission was set up in 1970 for monitoring monopolistic practices in the industrial sector. Thus, many automotive firms owing to their high levels of investment came under the purview of MRTP Commission. TELCO was one of the first companies to come under the scrutiny of the commission when it applied for increasing its licensed capacity from 24,000 to 36,000 units in December 1970 (Kathuria 1996).

Government policies related to foreign collaboration and foreign investment also underwent changes during Mrs. Gandhi's regime. In the wake of growing criticisms regarding influx of foreign equity collaborations and the dependence on foreign technology, the government appointed Mudaliar Committee in 1968 to look into the whole question of foreign collaborations. The stricter approach to foreign equity collaboration recommended by the committee was adopted by the government. Subsequently, Foreign Investment Board was established in 1968 to critically review the acquisition of foreign technology by allowing foreign equity participation. In line with its stricter approach, the government enacted Foreign Exchange Regulation Act (FERA) in September 1973 consolidating and amending the then existing laws on foreign exchange transactions.

With its objective of conserving country's foreign exchange reserves and ensuring judicious use of the same as per nation's priorities, the FERA regulated the import of foreign supplies and the functioning of foreign collaborations. The provisions of the Act created additional constraints on the import of technology, raw materials and components for the industrial sector in general and the automotive industry in particular. The maximum foreign equity participation was brought down to 40% under FERA, with exceptions permitted only at State's discretion. Also, FERA classified the companies with more than 40% foreign equity as 'FERA companies'. These companies were subject to greater scrutiny in their operations. Thus, the
enactment of MRTP and FERA in the early-half of this phase strengthened the regulations surrounding the Indian automotive industry.

The fourth FYP (1969-1974) was introduced in 1969. The financial crunch combined with populist ideology of the ruling party manifested itself into reduced plan outlays for the industrial sector. With regard to its policy for automobiles, the government was very clear in its preference for means of affordable personal and public transport as against to luxurious passenger cars. From an actual production of 35,300 CVs and 84,600 2-/3-wheelers in 1968- 69, the fourth FYP targeted to reach an annual production of 85,000 CVs and 210,000 243- wheelers by the end of 1973-74 (GOI 1969). On the other hand, no additional capacity was planned for the passenger cars. Between 1970 and 1975, Kinetic Engineering and state-owned Scooters India made their entry into the 2-wheeler segment. Kinetic Engineering began producing mopeds, whereas Scooters India commenced production of scooters.

A further setback to the automotive industry came during this phase with the beginning of the Oil Crisis in October 1973. The substantial rise in the import bill of crude oil led to the balance-of-payments crisis. As a result, India approached IMF for a monetary loan to dampen the oil shock effects. The financial woes of the country made the bureaucrats of the Ministry of Finance and the Ministry of Industry to take a closer look at the development of the automobile industry, especially the low fuel-efficiency of the Indian automobiles. This study led to the division of automobile industry into luxury (passenger cars) and non-luxury (rest of the industry) segments. The ministries decided to provide encouragement for the growth and technological development of non-luxury segment, leaving out the luxury segment. Accordingly, CVs were added to the 'Appendix-I' list in 1973, which meant that the applications for capacity licenses, foreign collaborations, etc. from the CV manufacturers (including MRTP/ FERA companies) were to be treated more favourably. Furthermore, significant capacities were being licensed for the 2-wheeler segment.

The aftermath of Oil Crisis led to a steep rise in prices of the common goods, thereby affecting economic well-being of the country. As a result, the growth of most of the automobile segments slowed down over the next few years. The accompanying rise in fuel prices resulted in a noticeable decline in the demand for already troubled passenger car segment. Some relief came for the segment in 1975 with the court's
judgment against the statutory price controls on passenger cars. Subsequently, the informal price controls on 2-/3-wheelers were also removed. Meanwhile, the Fifth FYP (1974-1979) was introduced in 1974. The plan outlays were kept at modest levels and no new projects in the industrial sector were planned. With regard to the automotive industry, the plan targeted an annual production of 60,000 CVs, 320,000 2-wheelers and 32,000 passenger cars by end of 1978-79 as against the actual production of 42,900 CVs, 150,700 2-wheelers and 44,200 passenger cars in the year 1973-74 (GOT 1974).

As is evident from the Fifth FYP, the government concentrated on the policy of encouraging the growth of 2-wheeler segment from mid-1970s. This was done to provide mobility to the country's growing middle-class without incurring higher petroleum consumption on cars. As a result, the period between 1976 and 1980 saw new entries as well as diversification by the existing firms in the 2-wheeler segment. Maharashtra Scooters entered into the production of scooters. Sundaram Clayton and Majestic Auto commenced the production of mopeds. Bajaj Auto diversified into the production of motorcycles with its indigenously developed models. Scooters India also diversified into the production of 3-wheelers. As an exception, Sipani Automobiles entered into the passenger car segment with a small car model.

1975 onwards, minor relaxations were being made to the licensing regulations. For instance, since 1975 'automatic growth rule' was applicable to CVs, ancillaries and tractors. According, to this rule, an automatic capacity expansion of 5% per year (25% in total for 5 years) was permitted over and above the 5% automatic growth permitted under IDRA 1951. Another relaxation that was made for non-MRTP and non-FERA automotive firms producing CVs, tractors, ancillaries and scooters was the one that allowed expansion without limit. However, these relaxations were subject to certain conditions. The product in consideration could not be the one reserved for the small-scale sector. Moreover, the requirements of imported machinery and raw-materials/components arising out of the undertaken expansion required additional clearances. Further, in 1978 the government also dismantled some of its stricter controls on foreign equity collaborations.

Thus, this phase of the development of Indian automotive industry witnessed tightening of regulations with the introduction of MRTP and FERA. The
macroeconomic setbacks along with populist policies undermined the development of passenger car segment. The average annual growth rate of this segment over the period 1966 to 1979 was quite low at 2.8%. On the other hand; government policies to encourage the development of non-luxury segment helped it to sustain growth through otherwise difficult times. The CVs and the UVs segment saw moderate average annual growth rates of 3.3% and 3.8% respectively over this phase. The average annual growth rates over the same period for 2-wheeler and 3-wheeler segment were relatively high at 13.5% and 26.2% respectively. Nevertheless, all the segments within the industry experienced noticeable year-to-year fluctuations in demand within this phase. The Indian automotive industry produced 275,624 2-wheelers, 59,700 CVs, 29,235 cars, 16,947 3-wheelers and 12,340 UVs in the year 1979.

The government policy towards the auto-component industry remained more or less the same. With minor amendments, to the list, the auto-components reserved for the exclusive manufacture by small-scale sector continued to persist. The protective rates of tariff on components were preserved. By early 1970s substantial progress had been made in the indigenisation of components and the domestic content of almost all automobiles was above 90% (Narayana 1989). Lastly, the automotive industry in co-operation with the Ministry of Industry established the Automotive Research Association India in 1966 for supporting R&D efforts within the industry.

3.1.4 Limited liberalisation and foreign collaborations: 1980 to 1990

The beginning of this phase was marked with the re-election of Mrs. Indira Gandhi as the eighth Prime Minister of India in January 1980. The poor performance of Indian industries exacerbated by the demand problems arising out of unexpected oil shocks of the 1970s had created resentment about the regulatory policies of the government. As a result, the government thought it necessary to review its existing policies and undertake measures for making, the industries more competitive. It therefore decided to ease licensing controls and other restrictive/protective rules administering the industrial sector. It also decided to allow adequate import of technology required for modernisation. The Industrial Policy Statement Policy presented in July 1980 gave an expression to this shift in government policy.
Additionally, the statement emphasised the optimum utilisation of installed capacities, promotion of exports and regionally-balanced economic development. The Sixth FYP (1980-1985) introduced in early 1981 reflected these changes to the industrial policy. One striking feature of this plan as compared to its predecessors was the strong emphasis on exports.

The overall policy shift in the industrial sector brought about important changes within the automotive industry. Various relaxations were made to the regulations pertaining to capacity licensing and foreign collaborations. Imports of capital goods, technology and raw- materials/components required for the modernisation were also treated more, liberally. The encouragement for the development of CV segment continued in this phase as well. In 1981, the government gave Letter of Intent to four Indian firms for the manufacture of LCVs. All of the four firms were in technical-cum-financial collaboration with Japanese players and were -10 licensed a production capacity of 12,500 vehicles per year (Pin-16 1999). The four firms: Swaraj Mazda, DCM-Toyota, Allwyn-Nissan and Eicher Mitsubishi commenced their production in 1985.

The passenger car segment also witnessed a major change during this phase. The policy shift of 1980 intended to favour consumers by providing them with free choice regarding all types of consumer products including luxuries. Accordingly, despite of being classified in 1970s as a luxury segment, the passenger car segment was added to the Appendix-I list in 1982 along with UVs and 2-/3-wheelers.

Thus, the segment came to be classified as a core industry of national economic importance, whose development was to be favoured by the upcoming government policies. Reviewing the development that the passenger car segment had made so far under the existent firms, the government deemed it necessary to increase the competitiveness of the segment by actively Under the competition from MUL’s newly launched UV model, M&M which had enjoyed monopoly in the UV segment so far was also compelled to upgrade its model with a new Peugeot engine licensed from Peugeot (France). The 2-wheeler segment also saw the entry of new players: Kinetic Honda and Hero Honda in collaboration with Honda Motors (Japan) and LML in collaboration with Vespa (Italy). The existing players entered into collaborations with Japanese automotive firms: Bajaj Auto with Kawasaki, TVS Motors with Suzuki
and Escorts with Yamaha. In the face of competition from new Japanese motorcycles,' Enfield India introduced new models based on the designs bought from Zundapp (Germany). With regard to the CV segment, Ashok Leyland collaborated with Hino (Japan) for new engines. TELCO on the other hand made greater investments in its internal R&D capability. Thus, the entry of new players accompanied by import relaxations in early 1980s brought about fundamental changes to the structure of Indian automotive industry.

Indian consumers who had hitherto been restricted to a few models with outdated technology, were made available a variety of choices of better-technology and fuel-efficient vehicles in 1980s. In order to make sure that the new automobiles are affordable and therefore having sufficient demand, the government continued its 'automatic growth' and 'regularisation of excess capacity' schemes of the late 1970s. With the addition of all the automotive segments to Appendix-I list by 1982, the usage of automatic growth rule became easier for MRTP/FERA companies. Further, the government in 1980 allowed non-MRTP and nonFERA companies in CV and 2-/3-wheeler segment to automatically expand up to their installed capacities so as to achieve efficient scale. This was renewed in 1982 as re-endorsement of capacity up to 133% of the best production of the previous five years, given that the capacity utilisation had reached 94% (reduced to 84% in 1986) and was available to participating in it. Consequently, state-owned enterprise Maruti Udyog Ltd. (MUL) entered into collaboration with Suzuki (Japan) in 1982. The Japanese collaborator offered the best deal with three latest car models, 26% equity stake and indigenisation content level agreement of 95% by 1988-89. The first car rolled out of MUL’s factory in 1984 and with this changed the face of India's automotive industry.

Meanwhile, the government also relaxed the import regulations to encourage the existing films to upgrade their technology. Fiscal incentives were provided to the passenger car manufacturers in 1984 to enable them to import technology and improve the fuel efficiency of their vehicles. The domestic firms took advantage of these opportunities and upgraded their technology base, either by direct imports of technology or by foreign equity collaborations. PAL bought a license from Fiat (Italy) for the manufacture of its Fiat 124 model and reengineered it to receive a fuel-efficient Nissan engine produced under license from Nissan (Japan). Similarly, HML purchased the rights to manufacture phased-out Vauxhall Victor model of Vauxhall.
Motors (UK) and modified it to receive a fuel-efficient Isuzu engine licensed from Isuzu, (Japan). Sipani Automobiles obtained a license to manufacture the -British Reliant Kitten. On the other hand, Standard Motors which had shelved its passenger car production in late 1970s made a bid to re-enter the market with a new car model based on the Rover 3500 (UK) and its own engine.

Under the competition from MUL's newly launched UV model, M&M which had enjoyed monopoly in the UV segment so far was also compelled to upgrade its model with a new Peugeot engine licensed from Peugeot (France). The 2-wheeler segment also saw the entry of new players: Kinetic Honda and Hero Honda in collaboration with Honda Motors (Japan) and LML in collaboration with Vespa (Italy). The existing players entered into collaborations with Japanese automotive firms: Bajaj Auto with Kawasaki, TVS Motors with Suzuki and Escorts with Yamaha. In the face of competition from new Japanese motorcycles, Enfield India introduced new models based on the designs bought from Zundapp (Germany). With regard to the CV segment, Ashok Leyland collaborated with Hino (Japan) for new engines. TELCO on the other hand made greater investments in its internal R&D capability. Thus, the entry of new players accompanied by import relaxations in early 1980s brought about fundamental changes to the structure of Indian automotive industry.

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However, in 1984 all automotive segments were brought under 'Schedule IV', i.e. "industries requiring special regulation, on the grounds of raw material shortage, likelihood of high pollution, or infrastructure constraints" (Kathuria 1996, p. 89). This meant that the aforementioned relaxations were to an extent nullified with the
requirement of an additional clearance under Schedule IV for substantial expansion. New entry of firms and JVs with foreign collaborators that was witnessed in the period 1982-84 was virtually banned for the rest of the phase, except in the auto-components segment. Few more relaxations for the automotive industry made their way through the appointment of Mr. Rajiv Gandhi as the ninth Prime Minister of India in October 1984.

The fresh economic ideology and political perspective of the new Prime Minister was reflected in the Seventh FYP (1985-1990), with its focus on exports and liberalisation in the industrial production. Subsequently, in January, 1985 - the government announced a policy of 'broad-banding' encompassing the entire industrial sector that allows manufacturers to use the installed machinery flexibly. Under broad-banding scheme, the production licenses were issued for a broader product group as opposed to the single-product licenses issued previously. The manufacturers were not required to take any additional clearances for diversifying within their product groups as long as the diversification did not necessitate any new investment in machinery. The scheme was conceived to liberalise production by providing the manufacturers with freedom to select the right product mix to be produced, and thereby make optimal use of their capital investments.

In 1985, the broad-banding grouped passenger cars, CVs and UVs into one product group named 'on-road four-wheelers'. This entailed that any firm operational in the aforementioned segments, within its overall capacity, had the opportunity to diversify into any other segment within the group or vary the product mix over the segments based on the demand conditions. TELCO seized this opportunity by diversifying into the LCV segment with an indigenously developed model in 1986. It also entered into the UV segment with its pick-up truck in 1988. Similarly, broad-banding grouped all the 2-wheelers up to 350cc engine capacity into one group, which was later expanded in 1986 to include 3-wheelers. A similar broad-banding group was announced for automobile ancillaries as well. In addition to broad-banding policy, Mr. Rajiv Gandhi's regime also brought some other relaxations. From May 1985, all the automobile and component manufacturers were exempted from sections 21 and 22 of the MRTP act, which meant that the large industrial houses were no longer required to take MRTP approvals. 35 In 1986, 'ninurnurn economic scale' scheme was announced
under which the government promised to actively encourage firms to achieve economic scale of operations.

By the end of this phase, the limited de-regulation drive for industrial production came to a halt due to the growing opposition from within the ruling party. In fact, Mr. Rajiv Gandhi was compelled to undo some of the newly introduced modifications. Nevertheless, the limited liberalisation that took place during this phase had a considerable impact on the development of India's automotive industry. The modernisation programme of early 1980s intensified competition in the industry and upgraded its technological base. The relaxations in the form of new entries, foreign collaborations, automatic growth, re-endorsement of capacity, liberal MRTP/FERA implementations and broad-banding facilitated in driving the change. The drive for indigenization continued during this with all the vehicle and component JVs required under the phased manufacturing programme to achieve 95% indigenization within five years of start of production. Indian consumers were given a free choice to select among a higher variety of better technology and fuel-efficient vehicle, including luxuries. Passenger cars, a non-priority sector in 1970s, came to be identified as a core industry of national importance. The production of cars in the year 1989-90 at 179,278 exceeded that of CVs at 125,051 (refer Appendix A). The production of 2-wheelers, 3 wheelers and UVs in the same year was 1,731,686, 83,752 and 44,309 respectively.

The auto-components segment also underwent considerable changes during the second-half of this phase. The influx of foreign collaborations in the vehicles segment, and thereby ingress of diverse product designs necessitated technological upgrade from the side of auto-component manufacturers as well. As a result, many domestic manufacturers entered into collaborations with foreign players. Moreover, the foreign collaborators in the vehicles segment were followed by their players. Thus, this was the time wherein the Japanese best practices made their way into the Indian automotive industry. Consequently, the instance for higher quality components and timely delivers, coupled with the heterogeneous demand created unrest within the segment. Additionally, the Motor Vehicles Act passed in 1988 mandated the components used in the Indian used in the Indian vehicles to be certified under the standards laid by Bureau of Indian Standards.
The components segment was given due attention since its development was considered critical for the moderisation drive. The relaxations pertaining to relatively liberal entry, growth and imports of foreign supplies were also available to the auto-components segment. The broad-banding product categories for auto-components were quite large, enabling sufficient diversification by the existent players. In March 1985, the auto-component segment was delicensed under IDRA for non-MRTP and non-FERA companies with the condition that the firm was not located within urban or municipal limits. Further, for MRTP/FERA companies the delicensing was applicable for investment in backward areas. Encouragement to the small-scale sector was also continued during this phase with government raising the investment limits INR 1 million to INR 2 million for small scale units and INR 1.5 million to INR 2.5 million for ancillary units (GOI 2008b).

The export performance of the automotive industry between the years 1951 and 1980 had been mediocre. Being a net user of foreign exchange, the automotive industry was given much attention during the sixth plan period for improving its export performance. Accordingly, various export promotion measures were implemented by the government. As a consequence, the export of Indian automotive industry nearly doubled from INR 1561 million in 1984-85 to INR 3041 million in 1988-89 (ACMA 1991-92 cited after Chugan 1995).

3.1.5 Liberalisation and ensuing globalisation: 1991 onwards

The economic crisis of 1990-91 followed by a major shift in the country's overall economic policy framework marked the beginning of this phase. Increased governmental expenditure combined with poor performance of the public undertakings had led to growing budget deficits throughout the 1980s. The financial woes of the country were exacerbated by the commencement of the Gulf War in August 1990. The steep hike in import bill of crude oil coupled with decreasing remittances from Indian expatriates in the Gulf led to a sharp decline in country's foreign exchange reserves. By the end of 1990, the reserves dropped to levels that were not sufficient for even a fortnight and there was a serious possibility of default. In January 1991, the government accepted a loan from IMF's Compensatory and Contingency Financing Facility. Subsequently in July 1991, the new government
headed by Prime Minister P. V. Narasimha Rao approached IMF for another loan. The availed loan was accompanied by conditionality’s regarding control measures for budget deficit as well as the implementation of economic structural reforms.

In line with its agreement to the conditionality’s laid by the international financial institutions, the government adopted a new economic policy in July 1991. The new policy proposed wide ranging economic reforms in an attempt to liberalise and open up the economy. Structural reforms encompassing deregulation of industrial sector, trade and investment policy reforms, financial sector reforms, tax reforms and foreign exchange reforms were envisaged for this purpose. Accordingly, a new Industrial Policy Statement was introduced by the government in July 1991. The thrust of the new industrial policy was towards creating a more competitive environment in the sector and removing the barriers to entry and growth of firms. Some important policy decisions made by the government in this regard were as follows (GOT 2008b):

- Abolishment of the industrial licensing system for all except a few industries related to strategic and security concerns.

- Automatic approval of FDI up to 51% equity in high-priority industries.

- Automatic clearance for imported capital goods with the condition that the foreign exchange required is available through foreign equity.

- Automatic permission for foreign technology agreements in high-priority industries subject to the prescribed royalty rates or a lump-sum payment not exceeding INR 10 million.

- Amendment of MRTP Act to remove the threshold limit of assets for MRTP companies and large dominant undertakings, which effectively eliminated the need for such companies to obtain MRTP clearances any further.

- Review of the existing portfolio of public investments with greater realism and progressive disinvestment in public enterprises where private sector had developed sufficient expertise and resources.
The sweeping changes in overall industrial policy had a significant impact on the development course of India's automotive industry. Though a few liberalisation measures had already been introduced in 1980s, the policy reforms initiated in 1991 were much more comprehensive. All the vehicles segment (except passenger cars) and the auto-component segment were delicensed in July 1991. The passenger car segment was delicensed in May 1993. Along with abolition of the need for MRTP clearances, this meant that the automotive firms were free to enter, expand, diversify, merge or acquire based on their commercial judgements. The liberalisation concerning foreign investment encouraged several global players to enter into the Indian market establishing JVs with domestic players. While FDI upto 51% was allowed on an automatic basis, the same for more than 51% required governmental clearances which were approved on a case-to-case basis depending upon the projected exports, sophistication of technology brought in, etc. The phased manufacturing programme requiring time-bound indigenisation was dropped in 1991 for the new units and in 1994 for the existing units.

While the aforementioned structural reforms benefited the automotive industry over a longer term, the short-term stabilisation measures adopted by the government to counter the crisis adversely affected the industry's growth. As an immediate measure to improve the country's balance-of-payments situation, the government discouraged the consumption of oil by imposing a surcharge of 25% on petroleum products. It also imposed a heavy excise duty on selling price of all the automobiles. For instance, the excise duty on passenger cars was increased from 42% to 53% in August 1990, and further raised to 66% in July 1991 (Sumantran et al. 1993). Additionally, in order to reduce the trade deficit the rupee was devalued and the auxiliary customs duty was increased. The escalation of the yen-rupee exchange rate combined with the increased costs of production of the newer import-dependent components undermined the performance of firms with recent Japanese collaborations. On the demand side, the overall hike in fuel prices and the credit squeeze to curb the inflation stifled the demand for automobiles in the country. The change in allowed rate of depreciation from 33% to 20% was an additional discouragement for the market (Sumantran et al. 1993).

The automotive industry, which saw a negative annual growth rate of 10.1 % in the vehicles segment in the year 1991-92, recovered in the subsequent years of the
post-reforms period.; The excise duty on passenger cars was reduced from 66% to 55% and that on LCVs from 15% to 10% in June 1992 (Sumantran et al. 1993). The excise duties on other vehicle segments were also rationalised. The tariff structure for auto-related imports also underwent changes with the peak tariff rate reduced from 150% in 1991 to 110% in 1992, 85% in 1993, 65% in 1994 and 50% in 1995 (Kathuria 1996). The tariff rate for capital goods also underwent similar reductions. Additionally, the rupee was moved to full convertibility in March 1993, and the imports and exports were to be made at market-determined exchange rate. Thus, the lowering of trade barriers, the possibility of making direct investments and the promising growth potential of the domestic market, brought India onto the radar of international automotive players.

The passenger car segment with the highest untapped growth potential saw the most hectic activities from the foreign automotive firms. By mid-1990s, several foreign players had entered into the Indian passenger car market by mainly setting up JVs with the local firms – Mercedes-Benz with TELCO (1994), General Motors with HML (1994), Peugeot with PAL (1994), Daewoo with acquisition of DCM-Toyota (1995), Honda Motors with Siel Ltd. (1995), Ford with M&M (1996), Hyundai with a 100%-owned subsidiary (1996), Fiat with Tata Motors (1997) and Toyota with Kirloskar Group (1997). In the CV segment, Tatra in collaboration with Vectra Motors (1997) and Volvo with its 100%-owned subsidiary (1997) made their foray into the Indian market. Most of these new ventures proposed to initially only assemble SKD/CKD kits. As a result, for balance-of-payments reasons the government in 1995 asked these companies to individually commit an equivalent amount of exports.

In 1997, the Ministry of Industry in its policy for automotive industry placed import of capital goods and auto-components under Open General License (OGL), but regulated the import of automotive vehicles in CBU form or in SKD/CKD condition. The vehicle manufacturing units were allowed to import vehicles only in SKD/CKD condition and were required to obtain a license for the same. The availability of license was subject to execution of Memorandum of Understanding (MoU) signed with the DGFT. As described in GOI 2002 (pp 2,3), such a MoU required the companies to:

- Have a plan for actual production and not just merely assemble SKD/CKD kits.
• Bring in at least USD 50 million for having operations as a subsidiary.

• Reach an indigenisation content level of 50% in the third and 70% in the fifth year from the date of clearance of the first lot of imports.

• Neutralise foreign exchange outgo on imports by equivalent exports. Such an obligation commences from the third year of the start of operations.

Eleven companies had signed such MoUs with the DGFT (GOI 2002) by April 2001. Meanwhile, the passenger car segment saw the entry of Skoda in 1999. In the 2-/3-wheeler segment, the trend was for the earlier foreign collaborators of 1980s to either acquire majority stake in the JVs or establish independent subsidiaries into the country. Accordingly, Yamaha (1995), Piaggio (1998) and Honda (1999) made their independent foray into the Indian market. With the need for being more investor-friendly, subsequent improvements have been introduced into the automotive policy from time to time. For instance, in Jan. 2000 the requirement of foreign exchange neutrality was done away with for the new investors. Since April 2001, the SKD/CKD and even CBU imports were put on the OGL list, thereby eliminating the need for obtaining license under MoU with DGFT for the new investors. The quantitative restrictions on imports were therefore effectively removed. The export commitments for the already-existing foreign investors were abolished in August 2002.

With a vision of establishing a globally competitive automotive industry in India and doubling its contribution to the economy by 2010, the Ministry of Industry presented for the first time a separate auto policy document in March 2002. Known as 'Auto Policy 2002', the document supersedes the auto policy adopted in 1997 by addressing emerging problems, being more investor friendly and ensuring compatibility with World Trade Organisation (WTO) commitments. Auto Policy 2002 sets itself for making the Indian automotive industry globally competitive. It aims at promoting, modernisation and indigenous design and development within the country as well as establishing domestic safety and environmental standards at par with the international ones. Furthermore, it targets at making India as an international hub for manufacturing of small cars as well as a key centre in the world for 2-wheelers and tractors. Accordingly, the policy proposed various initiatives relating to investment, tariffs, duties and imports in order to achieve these objectives.
Auto Policy 2002 allowed automatic approval of foreign equity investment upto 100% for the manufacture of automobiles and auto-components. With regard to the tariff structure, the policy proposed to fix the import tariffs in a way that the actual production within the country was facilitated over mere assembly, without providing undue protection at the same time. This was mainly applicable to the WTO-unbound segments (passenger cars, UVs and 2-/3-wheelers). For WTO-bound segments (CVs and auto-components), the policy proposed to encourage the domestic players by providing adequate accommodation for attaining global standards. The thrust for automotive R&D continued in this policy, but with renewed vigour. Suitable fiscal and financial incentives were planned for promoting industry R&D efforts. For instance, a weighted tax deduction of more than 125% was decided for R&D activities of vehicle and component manufacturers (GOI 2002). The policy also planned to increase the allocations to the automotive fund created for R&D of automotive industry and to expand the scope of activities covered under it. Auto Policy 2002 also stressed upon strengthening the environmental and safety standards.

The policies laid by Auto Policy 2002 have continued to apply till date with minor modifications. Within a decade of introducing structural reforms into the country, the production of India's automotive industry had increased from 1,603,736 2-wheelers, 165,309 cars, 144,248 CVs, 76,750 3-wheelers and 31,530 UVs in 1991-92 to 4,271,327 2-wheelers, 564,052 cars, 162,508 CVs, 212,748 3-wheelers and 105,667 UVs in 2001-02 (refer Appendix A). Along with reductions in the overall tariff level to open up India for international trade, the government has also progressively rationalised its domestic taxation structure to provide a fair competition ground for its domestic manufacturers against the international competition. For instance, the excise duty on passenger cars has been brought down from its peak rate of 66% in 1991-92 to 24% in 2008-09. With regard to the import tariffs in the year 2008-09, the custom duty on WTO-bound segments (CVs and auto-components) has been reduced to 10%, whereas that for the WTO-unbound segments (passenger cars, MUVs and 243-wheelers) has been 10% for CKD units and 60% for SKD/CBU form (SIAM 2008g).

Thus, during this phase, the increasingly investor friendly as well as liberal trade measures adopted by the government led to a momentous increase in the number of foreign players active in the country. The dismantling of licensing controls also
encouraged the domestic players to undertake entrepreneurial endeavours. This furthered competition within all the segments of the automotive industry. The market for automotive vehicles in India, which had earlier been virtually a seller's market, was transformed into a buyer's market. The Indian consumer benefited the most from the intensified competition, which brought his requirements of a cost-effective, technologically-competent, fuel-efficient and reliable means of transport into perspective. Strong macroeconomic base of demand growth drivers along with convenient credit facilities have ensured rising demand for vehicles in the country. Hence, the bold attempt of the government in making a major shift in its economic policy framework in early 1990s, along with its continued support to the automotive industry has put the industry on a fast track of development.

Also, environmental and safety standards as an integral and important part of modern automotive industry received due attention during this phase. First state emission norms came into force for petrol vehicles in 1991 and for diesel ones in 1992. Euro I, Euro II and Euro III norms have subsequently been introduced in India in 1996, 2000 and 2005 respectively. Efforts are being made to align Indian safety standards with the global ones. With its accession to United Nations Working Party-29 in 2005, India has been making efforts towards the harmonisation of auto standards world-wide and therefore integrating its auto industry into the global automotive industry. On the technology front, the liberalisation concerning foreign technology agreements and foreign collaborations infused world-class technology into the industry. The government has encouraged efforts for latest foreign technology assimilation and indigenised design and development. Fiscal incentives as well as institutional support have been provided for encouraging industry R&D efforts. The domestic R&D efforts came to fruition with the launch of India's first indigenously developed car 'Indira' by Tata Motors in 1999. Over years, many domestic as well as foreign firms have set up R&D facilities in the country.

With regard to the auto-component segment, the phase witnessed the entry of several foreign auto-component firms mainly following their global OEM customers into the Indian market. By the end of year 2000, all major global Tier-1 suppliers had their presence in India. The spurred competition on the home turf as well as the expanding domestic and international market for their products, made the domestic auto-component producers to upgrade their technology and management practices.
Further, the cost-effective and quality auto-components produced in India are increasingly gaining acceptance in international markets. There is an increasing trend in the number of Indian auto-component firms getting integrated into the global supply chains of automobile and auto-component majors worldwide. On the other side, the automobiles produced in India are increasingly making their way to the foreign markets through either direct or indirect exports. Also, the domestic automobile manufacturers are teaming up with foreign auto-component firms for bringing out new vehicle models. Hence, such increased interaction and interdependence between the Indian automotive firms and their foreign counterparts is leading to globalisation of India's automotive industry.

In consideration to the complexities expressed so far, this section shall discuss the influence of government policies while maintaining the scope of discussion within modest levels. For this put-pose, the section focuses only on the key policies discussed within Section 5, with the importance of these policies over others judged based upon the literature reviewed on the subject matter. It has to be made clear here that the term 'policy' in its academic usage does not necessarily implies a 'policy document', and that it basically refers to a 'decision' that is made by the government to provide guidance for addressing selected concerns. Such an understanding of the term 'policy' helps to explain its varied usage as referring to individual government decisions (e.g. informal price control policy), decisions within a policy document (e.g. licensing policy), the policy document itself (e.g. industrial policy) and decisions spanning several policy documents (e.g. liberalisation policy). Based on the literature reviewed for compiling the list of policies that shaped the development of India's automotive industry, it was observed that the policies described were usually individual government decisions or decisions within policy documents as opposed to complete policy documents themselves. Following the same, this section also restricts its focus on key individual government decisions and the decisions within policy. Documents (referred together as 'policy decisions') instead of considering each policy document separately. Furthermore, only policy decisions made at national level are taken into consideration, while leaving out those at the state level.

The influences of key policy decisions on the development of India's automotive industry are explained using the findings of veteran researchers on the subject matter, supplemented by the authors' own analysis. Quantitative means are
used to the extent of exhibiting the impact of policy decisions and cannot be compared to the complex econometric analysis with policy-impact lag adjustment usually employed by policy researchers; see for instance Panda (2002). Also, the impact of a particular policy decision is studied only on selective aspects of industry development. Further, since the impact of a policy decision varies for different vehicle segments of the industry as well as for different firms within the same vehicle segment, the section attempts at providing a limited discussion of the important segment-wise and firm level influences.

Accordingly, subsequent sub-sections in this section discuss the impact of major policy decisions made within different phases of the development of India's automotive industry. Finally, for each sub-section, the role played by the Indian government is reviewed on lines of the discussion made in Sections.

### 3.2 Influence of key policy decisions in the regulatory phases

The key policy decisions made by the Indian government towards the development of the automotive industry during the regulatory phases (1947-1965 and 1966-1979) are presented in Figure 3.1 below. The figure also shows the important events in the history of India's automotive industry that in a way shaped the context of the aforementioned policy decisions. The influence of these policy decisions on the development of India's automotive industry shall be discussed in the present sub-section.
Virtual ban of CBU imports:

In order to conserve foreign exchange and incentivise assembly over mere imports, the government in 1948 raised the tariff barriers on vehicles imported in the CBU form. This virtually eliminated the CBU imports, and thereby protected the final product i.e. the complete vehicle from external competition. Such a policy decision, if
it did not directly help the domestic firms HML and PAL with their recently commenced assembly operations, it clearly did not hurt. Even today in India, the tariffs on CBU imports are maintained high enough to discourage any significant market for them.

3.3 IDRA promulgated (Licensing system)

In its IPR of 1948, the government recognised the strategic importance of automotive industry and brought it under the purview of State regulation. Subsequently, IDRA of 1951 defined the manner in which the industrial sector was to be regulated, including the automotive industry. Under the Act, the automotive firms were obliged to obtain licenses from the purpose of entry, diversification, capacity expansion, foreign collaborations, imports of machinery and components. The licenses were issued in accordance to the developmental objectives laid in the FYPs, which in turn were based on political agendas and projected demands. By means of the licensing system, the government restricted the industry competition (by regulating entry and diversification) to fewer firms in order to avoid fragmentation of the industry, and thereby the uneconomic scales of production. 44 The absence of strong internal competition provided the then existing firms with a protected market, and thereby little incentives for undertaking R&D efforts. This manifested itself in the obsolete designs and inadequate quality of the vehicles produced at that time.

Further, the industry's output was controlled by capacity and product licensing. The IDRA of 1951 with minor modifications continued to apply to the automotive industry till early 1990s. While the brunt of the licensing system was not felt in the initial years of industry's development, the resentment among the automobile manufacturers was becoming more evident in the second-half of 1960s and the 1970s (Pingl6 1999). Narayana (1989) argues that even though the capacity licensing policy was rigid in its form, it was not such an inflexible policy as made out to be. Based on his analysis, he found that the installed capacities of the automobile firms have been significantly lower than their licensed capacities. Whenever the production of a firm neared its licensed capacity, it was licensed additional capacities. If the capacity licensing affected any firms, then it was the market leaders Bajaj Auto and Escorts that could have grown much more, had the regulatory policy been more relaxed.
Nevertheless, it has to be noted that the growth of licensed capacities of Bajaj Auto and Escorts were among the highest in the industry in 1960s and 1970s (Narayana 1989).

**Progressive manufacturing obligation (Indigenisation)**

Following the recommendation of the Tariff Commission, the government in 1953 imposed the requirement of progressive manufacturing on the automobile assemblers. The measure used to implement the decision was restricted allocation of foreign exchange. The policy decision with its intention of indigenising the production of vehicles in the country had a significant impact on the development of India's automotive industry. The immediate result was the exit of foreign assemblers from the country. The domestic assemblers entered into collaborations with foreign players for manufacturing vehicles in the country. Since the auto-component segment was not well-developed at that time, the automobile firms undertook in-house manufacture of components. This resulted in a vertically-integrated structure of the industry. The government progressively increased the indigenisation content from 50% in 1950s to 80% in 1960s. Since the extent of indigenisation is subject to increasing costs (Singh 2004), this increased the price of automobiles. Low GDP per capita combined with high price of automobiles had a negative influence on the demand development. The learning by doing involved in local manufacturing of vehicle sub-assemblies certainly helped to improve the Manufacturing capabilities of the industry (Narayana 1989).

**Emphasis on ancillaries development**

The indigenisation policy had resulted into a vertically-integrated industry structure. Protected market combined with the lack of supplier power had led to the concentration of bargaining power with the automobile manufacturers. Furthermore, considerable amount of foreign exchange was being spent on importing critical components. In order to address these concerns, the government in 1960 adopted policies for encouraging the development of ancillaries. This marked the beginning for the development of a separate auto-component sector in India.
60 to 80 components reserved for small-scale

In 1965, the government reserved between 60 and 80 components exclusively for the small-scale units. This decision was in alignment with the government's continuing policy of supporting the small-scale units. Earlier, in 1956, the government implemented protection rates of tariff on aftermarket ancillaries produced by the small-scale units. Pingl& (1999) argues that such a strategy of the government based on socialistic principles, led to a fragmented structure of the auto-component industry with inefficient units – a problem that persists even today.

Stricter controls on foreign equity collaborations

Until the early 1960s, a number of foreign equity collaborations had made their way into the Indian industry. The growing criticism towards the reliance on foreign technology made the government to adopt stricter controls on foreign equity collaborations in 1968. Foreign Investment Board was established to discourage the acquisition of technology through foreign equity participation. The number of foreign collaboration approvals decreased strikingly, to be restored only in early 1980s with the relaxation of controls. Narayana (1989) argues that such a hiatus in the approval of foreign collaborations actually helped the automotive industry to build limited design capabilities. In the absence of the possibility of introduction of any new foreign designs, the domestic firms like Bajaj Auto and TELCO were incentivised to introduce indigenously designed vehicles and capture market share of the competitors relying on foreign designs. Accordingly, Bajaj Auto introduced an indigenously designed 50 cc motorcycle.

Significant capacities for 2-wheelers

Fifth FYP onwards (1974), the government decided to give significant thrust to the production of 2-wheelers in the country. The performance of the public transport system had been dismal. In order to serve the rising transport needs of the growing population and to save on the consumption of expensive petroleum at the same time, the government targeted the growth of the 2-wheeler segment.
Accordingly, the period 1976-80 saw entry of new players into different segments of the 2-wheeler industry—Maharashtra Scooters and Scooters India in scooter segment, Sundaram-Clayton and Majestic Auto in moped segment and Bajaj Auto in motorcycle segment (based on Narayana 1989). Today, India is the world's second-largest market for 2-wheelers and this policy decision has certainly been an important milestone in this journey.

Thus, several important policy decisions were made over the years 1947 to 1965. The thrust was on protection, indigenisation and regulation of the automotive industry. The policy decisions played a significant role in determining the initial structure, growth and performance of the industry (Narayana 1989). The results however were mixed. On one hand, the policy decisions led to a largely indigenous industry with strong manufacturing and limited design capabilities, but on the other, they resulted in a mediocre industry performance. Most of the automotive firms enjoyed monopolistic/oligopolistic benefits under the regulatory regime and were little incentivised to make indigenous efforts for upgrading their technological capabilities, an indispensable factor for building international competitiveness. The exclusion of passenger car segment, the one considered most important in the world automotive industry, from the developmental agenda of policies negatively impacted its growth and demand conditions.

With regard to the role played by the Indian government over this period, it was more direct and regulative in nature. In light of the dismal performance of industrial sector under the colonial rule, the statist ideology adopted by the government post-independence was seemingly reasonable. The importance of automotive industry in the nation's economic development was rightfully identified by the government from the very beginning. Even though the public sector was expanded under IPR of 1948/1956, the automotive industry had been given sufficient autonomy for its operations. Although the protection policy for automotive industry seems justified in today's context, it lacked a time constraint and failed to generate sufficient domestic rivalry in most of the automotive segments. Moreover, the poor development of important upstream industries like steel under the state ownership constrains the local availability of critical raw materials to the automotive industry even today.
3.4 Influence of key policy decisions in the limited-liberalisation phase

Figure 3.2 below shows the timeline of key policy decisions and events in the limited-liberalisation phase (also known as the deregulation phase). The influence of important policy decisions made during this phase on the development of India's automotive industry is taken up for further discussion.

**Figure 3.2**: Timeline of key policy decisions and events in the deregulation phase.

**Modernisation programme for automotive industry**

In early 1980s, the Indian government made policy decisions for infusing fuel-efficient technologies and competition into the automotive industry. These policy decisions, collectively referred to as the 'modernisation programme', included relaxations in new entries, foreign equity collaborations and imports of technology and machinery (Narayana 1989). The timing of relaxations coincided with the desire of Japanese firms to find new markets (D'Costa 1995). As a result, several JVs were established between the Japanese and Indian entities for technology transfer and equity participation. Other domestic firms formed technology collaborations with western and Japanese manufacturers for introducing new fuel-efficient vehicle models. The modernisation programme had a significant impact on the development of India's automotive industry. The programme transformed the industry with mixed
outcomes. The number of vehicle models available to the Indian consumer increased. Both product technology and quality saw improvements. In order to reduce weight of the vehicle for increased fuel efficiency, the product designs changed considerably to include components made of aluminium, fibres and plastics (Narayanan 1998). This brought changes to the manufacturing technologies of auto-components.

Further, the Japanese collaborators brought world-class manufacturing practices into the country. The Japanese practice of subcontracting that involves establishment of vendor parks in the geographical vicinity of automobile plants led to the creation of two new industrial sites in the country – Gurgaon in Haryana and Pithairipur in Madhya Pradesh (D'Costa 1995). Many Japanese auto-component firms followed their customers into India and collaborated with the Indian businesses. This resulted in an increase in the capabilities of the auto-component segment. Tile programme changed the structure of the industry considerably, especially the passenger car segment. The entries of new firms into the automotive segments led to a significant change in the competitive position of the old players (Narayanan 1998). The two big car manufacturers, HML and PAL, lost their market- leadership to MUL, which was able to capture more than 60% of the market in only a few years. On the negative side, the industry experienced problems of higher concentration and greater fragmentation (D'Costa 1995). A near-monopoly situation was created in the car segment, whereas the LCV segment experienced low-economic volumes owing to the fragmentation of demand among fragmentation manufacturers.

3.4.1 Promotion of automotive exports

The automotive industry had been a net user of foreign exchange. Moreover, the industry was experiencing uneconomic production due to low domestic demand. Therefore, in 1980. the government made a decision to promote exports of automotive products in order to attain a favourable balance of trade and to support a higher utilisation of production capacities. The promotion measures included simplified procedures for exports, easier availability of licenses for 100% export-oriented units and easier expansion of existing units for the purpose of exports, amongst others (GOI 2008b). The modernisation programme also helped indirectly to increase the exports of the industry. For instance, the technical collaboration made with Ivecos under the
programme, helped Ashok Leyland to make exports of its new line of CVs to Mexico. Moreover, MUL started making indirect exports of the Japanese collaborator's 800cc car model to the European countries. The export of the automotive industry thus doubled over the period 1984-85 to 1988-89. Even though the share of India's automotive exports in the global export market was much small (around 0.1%) in 1980s (D'Costa 1995), the government's policy decision to promote exports during this phase was an important initiative in the development of India's automotive industry.

**Broad-banding policy for automotive segments**

The 'broad-banding' policy introduced in 1985 was a continuation of the government's previous efforts to facilitate the fullest utilisation of installed capacities and the expansion of Indian industries. The overarching objective behind this could be understood as the initiation of a self-reinforcing interaction between low-cost production and demand stimulation. Under the broad-banding policy, the government decided to issue licenses to the automotive firms for broader product groups instead of licenses for just specific products. Within the broader product group, the automotive firms were free to decide the product mix to be produced and therefore, make optimum utilisation of their while the impact of broad-banding policy on the automobile segment was not much, it created a potential for severe competition within the auto-component segment. The product groups for auto-component segment defined under the policy were too broad to force the market leaders of different sub-segments to compete with each other sooner or later. In case of the automobile segment, the only firms that benefited from the policy were TELCO for diversifying into LCVs and Lohia Machines for switching from 100 cc scooters to 150 cc scooters (Narayana 1989).

The significance of policy decisions made during this phase is reflected in the growth of during automobile production witnessed in the country during the second-half of 1980s (see Appendix A). Under the constraints of saving on imports of oil, improving the performance of the industry and satisfying the growing demand of vehicles in the country, the government decided to upgrade the technology base and competitiveness of the industry. This is in effect the sum and substance of important
policy decisions made during this phase. Narayana (1989) argues that among all other policy decisions made during the limited-liberalisation phase, the most important policy decision was the relaxations with regard to foreign collaborations. The spate of technology agreements and foreign investment that followed, transformed the industry considerably. The attainment of the government's objective to induce competition in the industry could be verified in the results of Narayanan (1998)'s econometric exercise, which reveals a significant change in the relative position of the old and pioneering firms since deregulation.

With regard to the role played by the Indian government during this phase, one could observe the transition from statist ideology to pro-market orthodoxy. While there could possibly be several reasons based on socioeconomic and political factors that help explain such a shift, the one provided by D'Costa (1995) is interesting. He argues that the statist policies of the government contributed to the rise of middle class in India. The past policies of curtailing production of consumer durables like the automobiles, demanded by the rising middle class, was no longer sustainable and that the shift became inevitable (D'Costa 1995). Therefore, despite of the growing oil prices, the government had to facilitate the growth of vehicle production in the country. Further, the transition effected by the government from a heavily regulated industrial environment to the one in this phase was not abrupt. A full-blown industrial restructuring was avoided under the political considerations of the established producers and their employees (D'Costa 1995). Finally, the only contradiction to the State's facilitative role was its permission for only one new entry in the high growth car segment as compared to four new entries in the LCV segment.

3.5 Influence of key policy decisions in the liberalisation phase

In 1991, substantial changes were made to the economic policy of India. The government did away with most of the controls and regulations. It assigned central role to the market forces for organising economic activities and also adopted a more liberal stance towards foreign trade and investment. These policy changes, collectively known as 'liberalisation of the Indian economy', had far reaching implications. Accordingly, the functioning of the automotive industry also got liberalised, which significantly altered its development trajectory. The important
policy decisions made during this phase and their influence on the development of the automotive industry becomes a subject matter of discussion in this subsection.

Liberalisation policy

The important policy decisions of the liberalisation package were delicensing, 51% FDI via automatic route, relaxations for critical imports and suspension of local content requirements. The impact of these policy decisions over the developmental aspects of the industry was visible by the mid-1990s. The policy decisions led to a second wave of restructuring of the industry and resulted in a fiercely competitive domestic market, both in terms of price and quality (Singh 2004). The policy decisions also altered the behaviour of the established firms with respect to technology acquisition and performance (Narayanan 2001). Under the delicensing policy, the firms were free to enter, expand, diversify and relocate based on their commercial judgements. The delicensing of entry and diversification, combined with automatic approval up to 51% FDI led to a spate of entries by the foreign players, establishing JVs with the domestic players. GOI (2002) notes that after delicensing of cars in 1993, 17 new ventures had come up out of which 16 were for manufacture of cars. This transformed the previously oligopolistic car segment into one of the most competitive sector in the industry.

The delicensing of expansion was of no immediate help for the automotive industry in general. As pointed out by Narayana (1989), the freer capacity licensing policies of 1980s itself were of no help to the industry since the actual production of automotive firms was usually below their installed capacities. The fragmentation of the market with the entry of new players and the general recessionary conditions in the country simply exacerbated the situation in early 1990s. The industry suffered from the problem of overcapacity and the sales-capacity ratio of automobile manufacturers improved only after 1998 (Singh 2004). Another important policy decision was the relaxations on imports of capital goods and technology. The relaxations were in the form of simplification of bureaucratic procedures and rationalisation of tariff duties, a trend which has continued till today. Compared to the 1980s, the technology acquisition in the liberalisation phase was apparently better due
to the mechanism of technology transfer from the foreign entity to its Indian subsidiary as opposed to a less than 40%-owned JV in the 1980s.

The Phased Manufacturing Programme introduced in 1980s, which required the automotive firms to attain an indigenisation level of 95%, was dropped under the liberalisation regime. While this was of not much help for the established automotive firms in India who had already attained high levels of indigenisation, it certainly was an attractive proposition for the foreign firms who could commence their operations in India by assembling SKD/CKD kits. However, 1995 onwards, the foreign firms were obliged to maintain foreign exchange neutrality. Further, from 1997, the new foreign firms were required to sign MoU with the DGFT for importing SKD/CKD kits. The MoU necessitated export commitments and a plan for production activities in the country. The FDI in India has primarily been market seeking and not cost reducing (Singh 2004), and it is argued that such obligations made the foreign firms to explore the potential of the country as an export base for automobiles and/or components; see for instance UNCTAD (2003).

In general, liberalisation and the accompanying entry of foreign firms have raised the technological competence level of India's automotive The international players international brought along with them world-class design and manufacturing practices that have percolated into the domestic industry and is reflected in its quality offerings and increasing export performance.

3.6 Auto to Policy 2002

Auto Policy 2002 comprises several policy decisions that aim at making the Indian automotive industry globally competitive and for raising its contribution to the economy. Discontinuation of foreign exchange neutrality requirement and approval of 100% FDI via automatic route are the policy decisions aimed at creating a more conducive environment for the foreign investors. The influence of the policy decisions is strikingly visible in the exponential growth in FDI received by the automotive sector over the period 2004-05 to 2007-08 (refer Figure 5). Premium car manufacturers like BMW and Volkswagen, who previously could not have complied with the localisation commitments owing), to their high quality standards, have
established their assembly facilities in India after the year 2002. Further, incentives for R&D efforts planned by the government have incentivised car manufacturers like Suzuki and Hyundai to undertake R&D in India. Finally, based on the policy changes, Singh (2004) estimates some increase in the import intensity (total imports to sales ratio) of foreign-owned vehicle manufacturers in the near future, and also an increase in the export-output ratio of the auto-component industry.

With regard to the role played by the Indian government during this phase, it is the one of a facilitator encouraging the firms to achieve higher capabilities and performance. By undertaking liberalisation, the government did away with most of its direct influences (controls and regulations) on the automotive industry. Higher foreign competition was introduced in the industry. However, the induction was not sudden and allowed the indigenous firms to adjust. The benefits from the foreign investment were reaped with the imposition of export obligations and localisation commitments. Efforts are being made to move beyond the factor-driven advantages by encouraging R&D efforts within the industry. International competitiveness is eyed upon by encouraging small car production and design in the country. The demand standards of the industry are being raised by adopting higher.

Currently, 100 per cent Foreign Direct Investment (FDI) is permissible under automatic route in this sector including passenger car segment. The import of technology/technological upgradation on the royalty payment of 5 per cent without any duration limit and lump sum payment of US$ 2 million is also allowed under automatic route in this sector.

The automobile industry is delicensed, and import of components is freely allowed. With an objective of accelerating and sustaining growth in the automotive sector and to steer co-ordinate and synergise the efforts of all stakeholders, the Automotive Mission Plan (AMP) 2006-2016 was prepared. The plan aims at making India global automotive hub. The AMP 2006-2016 aims at doubling the contribution of automotive sector in GDP by taking the turnover to US$ 145 billion and providing additional employment to 25 million people by 2016.

In the long term, the government has expressed plans to follow a two pronged strategy for spurring automotive Research & Development (R&D). The first is aimed at addressing the existing infrastructure gap in the field domain of automotive testing
and homologation through the Department’s flagship National Automotive Testing and R&D Infrastructure Project (NATRiP), which is being implemented at a cost of Rs 2,288 crores (US$ 521.5 million), and is expected to be completed by the end of 2012. The second part of the strategy is aimed at leveraging the investments being made in NATRiP facilities for collaborative R&D with the industry, especially for the small and medium enterprises (SMEs) in the auto component space.

Further, with the recent announcement of the launch of the National Mission for Electric Mobility and the setting up of the National Council and Board for Electric Mobility, Mr Patel emphasized on the commitment of the government for early adoption of electric vehicles, including hybrid vehicles, and the manufacturing of these vehicles and their components.

The government is considering setting up two automotive manufacturing hubs spread over 10,000 acres each in central and eastern India. The new hubs, aimed at consolidating India's position as an important destination for low-cost automotive production, will be in addition to the three existing zones — Haryana, Maharashtra and Tamil Nadu.

3.7 Conclusion

This work attempted at identifying policies relevant to the development of India's automotive industry and studying their impact on the industry's development. The definition of policy adopted for the work referred it as a decision made by the government to provide guidance for addressing selected concerns. Such a usage was also observed in the literature discussing government policies on the Indian automotive industry. In order to identify the relevant policies, the evolution of India's automotive industry under the influence of the government interventions, was traced from its inception to the present day form. A detailed historical account was made to provide the context and considerations under which the policies were formulated by the Indian government.

The evolution of India's automotive industry is identified to have occurred in four phases. In the first (1947-1965) and second phase (1966-1979), the important policies identified were related to protection, indigenisation and regulation of the
industry. On the one hand, these policies helped India to build an indigenous automotive industry, while on the other it led to unsatisfactory industry performance. In the third phase (1980-1990), the single most important policy identified was the one with regard to relaxation in the means of technology acquisition. The foreign competition inducted into the industry transformed its dynamics. Lastly, in the fourth phase (1991 onwards) the liberalisation with regard to foreign investment had a significant influence on the Indian automotive industry as we see it today.

With every major shift in policies made by the Indian government, the automotive industry has come out stronger and better. While the shift in policies seems to have mostly been brought by chance events, the Indian government has at least to be credited for making the right decisions and implementing them correctly. It is paradoxical that the Indian middle class, the most attractive feature for foreign investment in the liberalisation phase, was an outcome of the statist ideologies in the regulatory phase. The product innovations of domestic firms like Tata Motors and Bajaj Auto today are the fruits of indigenisation and protection policies of the regulatory phases.
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