The organisation of economic activities whether within a firm (vertical integration) or outside (vertical disintegration) is one of the important areas of concern in the theory of Industrial Economics. This demarcation, prima facie, might give an impression that the various activities can be organised wholly within a firm or may occur as market or inter-firm transactions. As Richardson(1) points out, such a dichotomy between firm and market is misleading since it fails to highlight the existence of inter-firm co-operation. Thus vertical integration or disintegration has to be viewed not merely from a structural viewpoint but also in an important behavioural sense. A similar

1) "Firms are not islands but are linked together in patterns of cooperation and affiliation. Planned coordination does not stop at the frontiers of the individual firm but can be effected through cooperation between firms. The dichotomy between firms and market, between directed and spontaneous coordination, is misleading; it ignores the institutional fact of inter-firm co-operation and assumes away the distinct method of coordination that this can provide". Richardson G B (1972), "The Organisation of Industry", Economic Journal, September pp. 883 - 896.
observation is also made by Mead (2) who opines that the choice of organisational disintegration involves the selection of a point along a complex continuum. This is most evident in the case of the Japanese automobile industry where a conscientious choice was made along an array of options by selecting subcontracting as an effective supporting system. The choice of subcontracting in the automobile industry, in Japan, transcended the traditional reasonings for vertical disintegration (e.g. cost reduction) and instead was a dynamic factor accounting for the symbiotic growth of both the primary producer and the subcontractor firm. Thus this thesis addresses itself not to subcontracting per se as a mechanism in the

2) "If firms choose to produce something themselves, they can make it under the direct control of their overall management, or in a separate division, with varying degrees of autonomy for the division. If they choose to buy, they can buy from a wholly or partly owned subsidiary or from a separate firm with which they have any of a variety of different formal and informal relationships. Alternatively, they can simply buy an input in the market place, in ways which involve little or no contact with its producers. Organisational dis-integration is not an all or nothing choice, but rather involves selection of a point along a complex continuum".

conventional sense of static analysis but has a wider connotation and is specific to the automobile industry.

While the organisational forms, in the real world, are arrayed in a continuum, nevertheless, theoretical reasonings, which warrant certain degree of abstraction, revolve around the two extreme modes viz. vertical integration and disintegration. An understanding of both these forms of organisation is necessary to know why and how a particular point in the continuum is selected by a firm. There is extensive literature on the theoretical reasonings/explanations of vertical integration and disintegration. (3) One of the earliest explanation was given by Coase, who stated that a "firm will expand until the cost of organising an extra transaction within the firm becomes equal to the cost of carrying out an exchange in the open market". (4) Later, a full-fledged transactions costs

3) Some of the important theoretical underpinnings are discussed in Chapter-2 on Review of Literature.

theory was developed by Williamson. (5)

Another theoretical reasoning has been put forward by Stigler, (6) who has used Adam Smith's theorem that the division of labour is limited by the extent of the market, as the core of his analysis. Stigler relates vertical integration/disintegration of a firm to the life-cycle of the industry. When the market is small, the young industries are forced to undertake all the activities themselves right from design and manufacture of equipment. However, when the industry attains a certain size, many of these tasks become sufficiently important to be handed over to specialist firms. And finally when the industry begins to decline, these subsidiary activities have to be reappropriated by the surviving firm. Stigler therefore concludes that the "division of labour is not a quaint practice of


eighteenth century pin factories; it is fundamental principle of economic organisation". (7)

In analysing the firm's decision to integrate or disintegrate, Stigler, has adopted a functional classification of firms. Thus firms are regarded as consisting of several sequential functions or processes such as purchasing and storing materials, transforming materials into semi-finished products and semi-finished products into finished products etc. These several functions may be related by factors like technology and costs. In some industries like steel, technological factors may dictate that the sequential functions take place in vicinity for reasons of conserving heat. If the functions are independent, there will be a trade-off among these activities especially in a managerial sense. Hence with the onset of diseconomies of scale, some of the rival functions may be farmed out. These examples, illustrate the 'pure' case of vertical integration or disintegration.

7) Stigler G J (1951) ibid.
In the real world, one finds vertical disintegration in various degrees. Of all forms of vertical disintegration, it is subcontracting (8) which proves to be the ideal form of disintegration as it combines the advantages of both vertical integration and disintegration. Subcontracting is seen to be most successful and hence largely prevalent in the machinery industry. The whole process of machinery production divides into processes that are self-contained and independent of each other. This feature is eminently manifested in the automobile industry, where manufacturing processes comprise production of complete parts and components (e.g. shock-absorbers, spark-plugs etc.) or of specialised process engaged in the execution of well defined industrial services (e.g. plating, painting etc.). It is technically feasible therefore to break down the entire process into a

8) "A subcontracting relationship exists when a company (called a contractor) places an order with another company (called the subcontractor) for the production of parts, components, subassemblies or assemblies to be incorporated into a product to be sold by the contractor. Such orders may include the processing, transformation or finishing of materials or parts by the subcontractors at the request of the contractor". UNIDO (1974) "Subcontracting for Modernising Economies", United Nations, New York, pp. 6
multiple of specialised operations. (9) Hence in the automobile industry, there are several options open regarding integration and disintegration. It does not face the compulsion of integration, nor does it have to wait for diseconomies in scale to set in for deciding upon dis-integration. This industry fully bears out the observation of Richardson and Mead that a choice can be made along a continuum.

Subcontracting can be either "specialisation oriented" or "capacity oriented". (10) It is under the


10) "Subcontracting can be either "specialisation oriented" or "capacity oriented". In the first type, parent firms and their subcontractors are engaged in different but complementary activities. They may be working towards the same final product by different production processes (e.g. manufacturing of parts and components and their assembly) or they may be making different final products in order to diversify the parent firm's range. In the second type, the two parties are engaged in similar work and they are mutually competitive by nature, in the sense that once the demand slackens they must compete with each other for orders". Watanabe S (1971), "Subcontracting, Industrialisation contd.
specialisation oriented type of subcontracting the two parties tend to develop stable and continuous relationship resulting in "quasi-integration". (11)

This feature can be prominently seen in the automobile industry in Japan. "Specialisation orientation" under subcontracting in the automobile industry has a wider connotation where a further distinction between product-specialisation and process-specialisation can be made. Subcontracting by product specialisation in the automobile industry confers certain unique advantages. This can form the basis for dynamic relationship whereby the parent firm without being encumbered by routine managerial/technical activities succeeds in obtaining its requirements of intermediate components on a continuous basis. Also, it has considerable growth potential, since economies of scale are important under product-specialisation. The

10) contd.

11) "In the specialisation-oriented type of subcontracting the two parties are naturally in a complementary relation, which tends to be continuous and can develop into the stable sort of association that has been described as 'quasi-integration'." Watanabe S (1971), ibid.
subcontractor firm which grows to reap this advantage in turn would resort to subcontracting thereby giving rise to a closely-knit hierarchical structure. Such a hierarchical structure under subcontracting is widely prevalent in Japan. This enables the division of labour and specialisation to be carried to the fullest extent. Besides, such dynamic conditions which permit the growth of subcontractor, also influence the market structure and conduct. The market structure of the subcontractors which originally consists of several small firms is replaced by large firms, which are fewer in number in order to take advantage of specialisation and economies of scale. The behaviour of the parent firm is also significantly altered as it has to deal not with a multitude of small subcontractors, but fewer specialist subcontractors who have grown in size. (12) Unlike conventionally recognised forms of subcontracting for securing mere cost advantage, subcontracting for product

12) This phenomenon was clearly exhibited by the Japanese automobile industry. Such a growth of subcontractors meant that the "primary firms could no longer afford to change their parts suppliers, as many auto parts producers had acquired oligopolistic power over the market. The primary firms' heavy dependence on subcontracting was established more firmly than ever". Odaka K, et al (1988) ibid pp. 270.
Specialisation represents a unique choice made in an array of options which resulted in a form of vertical integration as in the case of the Japanese automobile industry. It is for this reasons that subcontracting in the automobile industry proves to be an intriguing area of study. In the examination of the Indian automobile industry and their subcontracting practices, therefore, the role of product specilisation will be central to the analysis. Extensive subcontracting has taken place in the Japanese industry especially in the automobile industry which provides a classic example of how subcontracting can be an ideal form of dis-integration without being an all or nothing choice.

In India subcontracting had caught the attention of policy makers.(13) Both Japan and India had similar economic environment when they embarked on an industrialisation programme. The similarities extend

13) ".... in India an important objective of government policy on subcontracting was to promote modern small industries, in particular those able to undertake specialised work. In India, subcontracting small industries, referred to as "ancillary industries" received considerable technical and financial support from the government, over and above that given to non-subcontracting small industries". UNIDO (1974) ibid pp. 7.
to the period when the decision on the development of the automobile industry was taken by both countries. In both the countries the automobile industry was initially dominated by foreign firms engaged in pure assembly of imported kits. Due to the production characteristics of the automobile industry, its development is a difficult task for newly industrialising countries. (14) For instance, in industrially developed countries, the automobile industry was preceded by other industries. (15) This had been one of the important factors which facilitated the growth of the automobile industry in the USA which had the advantage of a developed machine tool

14) The production characteristic of the automobile industry which is, "large-scale, capital intensive, a complex product, requiring a wide array of high-quality inputs from numerous suppliers, top-grade engineering and managerial skills—would seem to make it a highly unlikely industry for a newly-industrialising country to seek to establish." Maxcy C (1981), "The Multinational Motor Industry", Croom Helm, London pp. 203.

15) Rosenberg has noted that due to the presence of technological convergence in the machine tool industry, "experience in the production of firearms made it relatively simple to produce sewing machines, just as the skills acquired in producing sewing machines and bicycles facilitated the production of the automobile". Rosenberg N (1976), "Perspectives on Technology", Cambridge University Press, Cambridge.
industry. (16) Another major constraint was the small domestic market due to the low per capita income. The presence of economies of scale in the automobile industry requires a large market. (17) As such there was considerable scepticism about the viability of the industry. In the post-war Japan, when the Government was contemplating the development of the industry, certain sections expressed serious reservations about pursuing such a policy. (18) Likewise, in India when

16) "--- the American automobile industry did not encounter any fundamental production difficulties in its early stages because it could draw technical leadership, plant facilities, and skilled labour from an existing machine tool industry". Odaka K, et al (1988) ibid pp. 4

17) An "outstanding feature of the manufacturing process is the very great significance of economies of scale. Few industries have been so profoundly influenced by such economies as has been the motor industry. They go a long way towards explaining why the production of motor vehicles is highly concentrated in the major industrial countries, and even why less than a dozen giant companies in those countries account for the bulk of the world's output of automotive products. The use of capital intensive mass-production techniques, which reduce unit costs at high volumes, is made possible by the existence of large markets ---." Maxcy G (1981) ibid pp. 199.

18) "The dark post-war prospect for the industry culminated in a statement made in 1950 by Governor Ichimada Hisato of the Bank of Japan expressing serious doubts about pursuing automobile production. According to his view, it would be more consistent with Japan's comparative advantage to give up such capital intensive operations as automobile manufacture. This opinion conti.
after independence the Government had asked the Tariff Commission to make recommendations for the development of this industry, a foreign expert attached to the Tariff Commission, gave a dissenting view. (19) Earlier, the development of the industry in India was severely handicapped by a colonial rule whereunder, the development of the industry was discouraged even in the face of war-time requirements. (20) The industry had to be built almost from the scratch after independence. Although, both India and Japan decided to commence domestic manufacture of automobiles, the industry made

18) contd. probably represented the feelings of a fairly substantial portion of the population at that time, including economists".

19) "The present demand of approximately 15000-20000 motor vehicles per year is far too low to give a reasonable basis for an automobile industry".
Vorwig W R (1953), "Automobile Manufacture in India".

20) "The British outlook on planning for war production proved to be as conservative as their attitude to tariff protection in peace time. In response to a question in Parliament about the refusal of aid to automobile manufacture in India by a Labour M.P., the Secretary of States replied uncompromisingly that the resources which the establishment of an automobile industry would draw upon were fully required for the development of war production".
Ray R K (1982) "Industrialisation in India - Growth and Conflict in the Private Corporate Sector 1917-47",
Oxford University Press, India pp. 183.
spectacular progress in Japan but in India it has stagnated at a low volume of production. (21)

In Japan, the automobile industry was made central to the economy's high speed growth. (22) Through its unique subcontracting system, Japan could become one of the leading auto producers in the world. On the contrary India's share in world auto production could

21) This would be evident from the following figures:

<table>
<thead>
<tr>
<th>Year</th>
<th>Japan</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>31,597</td>
<td>14,688</td>
</tr>
<tr>
<td>1980</td>
<td>11,042,884</td>
<td>113,907</td>
</tr>
</tbody>
</table>


hardly come up to even one percent. (23) In Japan, the unique subcontracting system had facilitated the rapid and planned expansion and growth of primary producers. Such a healthy link between the subcontractors and the primary producers is absent in India with practically no move on the part of the Government also to develop the subcontracting system on the lines in Japan. The objective of this thesis is to establish that such pronounced differences in growth could be traced to the differences in the approach to subcontracting in the two countries. Odaka (24) has

\[ \text{India's share in world automobile production.} \]

<table>
<thead>
<tr>
<th></th>
<th>India</th>
<th>World</th>
<th>Percentage share of India in World Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cars (a)</td>
<td>13.6</td>
<td>64(a)</td>
<td>11,010</td>
</tr>
<tr>
<td>Commercial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehs. (b)</td>
<td>9.5</td>
<td>69(a)</td>
<td>2,690</td>
</tr>
</tbody>
</table>

Note: (a) 1982 (b) 1982-83

Source: Centre for monitoring of Indian Economy, "Indian Economy since 1950-51", Feb. 1986

listed certain theoretical conditions which favour subcontracting in the automobile industry. These include market-factors, technological adaptability, managerial capability and appropriate Government policies. But these alone could not have contributed to the remarkable achievements of the industry. At an early stage, before the onset of diseconomies of scale, which normally warrant subcontracting, the primary producers of Japan had the vision to realise the advantage of subcontracting. (25) In Japan, the primary firms and the subcontractors had grown in a symbiotic relationship. The subcontractors in Japan were initially making simple products. Some of them were in process specialisation only. The primary producers, through careful sifting selected subcontractors who were given extensive assistance and continuous patronage. The Japanese automobile producers realised from the early stages, that

25) "The rapid growth of the domestic market initiated by the special procurement demands of the Korean war and later encouraged by the government's promotional and protectionist policies, gave strong impetus to the profit motive of the primary firms, which felt the need to expand and modernise their production capacity as fast as possible. Again, the extensive utilisation of subcontracting was the most suitable method to perform the task and the need drove the primary firms to assist the ancillary firms to develop". Odaka K, et al, (1988) ibid pp. 283.
subcontracting was to be something more than a source for cheaper inputs. Although, it was a vertically disintegrated activity organisationally, yet with its strong linkages with the primary producers, subcontracting became an effective supportive system for the vertically integrated main industry. It is this hypothesis that will be examined in the context of the Indian experience.

Subcontracting is a unique form of vertical disintegration whereby the firm retains its separate identity and yet at the same time has strong linkages with the parent company. It has been mentioned earlier that there are theoretical reasons favouring subcontracting. Besides, there are empirical studies on subcontracting in the automobile industry in respect of a few developing countries. These studies include, a comparative study of Japan and a few developing countries of East, South East Asia, (26) a study of

26) Odaka K (1985) "Is the Division of Labour Limited by the extent of the Market - A study of Automobile Parts production in East and South East Asia" in Okhawa K and Ranis G (eds) (1985) "Japan and the developing countries".
linkages between primary firms and suppliers in India (27) and most importantly, Odaka’s study of the development of ancillary firms in Japan. These empirical studies will also be discussed in Chapter 2, on review of literature, along with the theoretical reasonings, so as to provide a framework for testing the hypothesis of this study.

At this juncture, it is necessary to clarify the usage of the term 'ancillary' in the context of the Indian and Japanese experience. In the Japanese automobile industry, the very term, first-tier ancillary is used in a dynamic sense, as one which had evolved from the status of subcontractors of simple components. Of special importance is the inter-firm relationship between the primary firm and the first-tier ancillary which has resulted in vertical integration, Japanese style. In India the term, ancillary has different connotations in different contexts. Thus, the manufacture of intermediate products itself is termed

as an ancillary function. (28) Similar references are also obtained in the literature. (29)

Likewise, small firms supplying parts and components, which are normally referred to as subcontractors, have been given the nomenclature of ancillary by policy-makers in India. (30) Thus unlike in Japan

28) The Tariff Commission enquiries on automobile parts and components instituted by the Government of India, refers to these as automobile ancillaries such as the "Report on the fair selling price of Auto Ancillaries".


30) "'Subcontracting' is a business practice whereby the party offering the subcontract (parent firm, enterprise or company) requests another enterprise (subcontractor, or "ancillary industry" in India) to manufacture or process parts or whole of the product it sells as its own." Watanabe S, (1978), "Technology and Employment Programme: Technological linkages between formal and informal sectors of manufacturing industries", Working Paper, World Employment Programme, International Labour Office, Geneva.

Ancillary firms in the small sector, according to Government definition are "undertakings having investments in fixed assets in plant and machinery not exceeding Rs. 45 lakhs and engaged in the manufacture of parts, components, sub-assemblies, toolings; or intermediates; or rendering of services and supplying or proposing to supply or render 50 percent (modified contd.
where the first-tier ancillaries have a distinct status not merely as suppliers of intermediate components to the primary producers but also because of the close linkages forged with the parent company, the ancillary classification in India is somewhat loose. Such differences can be traced to the differences in the evolution of ancillaries. In Japan, it was seen that it was the primary producers who had fostered subcontractors to grow to the size of ancillaries. Here the ancillaries had evolved from small sized firms to large corporations and clearly the primary producers were directly responsible for their growth. In India, on the other hand, ancillary firms were established financially and technologically independent of the primary producers. They were large in size from inception and generally had foreign collaboration as well. Most importantly, these ancillary firms' linkages with the primary producers was weak because they were oriented to the spares market. The primary producers in India, due to various reasons, notably, the small domestic demand were small in size, which  

30) contd.
recently to 30 percent of their production or total services as the case may be, to other units for production of other articles; provided that no such undertaking shall be a subsidiary of owned or controlled by any other undertaking."
hampered subcontracting. (31) And in consumer durables like automobiles where the economy is characterized by low incomes, the spares market assumes considerable importance. In fact, subcontracting in India got considerable stimulus from the large independent ancillaries which were catering to the spares market.

Subcontracting is concerned with the supply of intermediate products. As such its very existence just like any other firm producing an intermediate product depends on the nature of the demand for the final product as well as the structure and conduct of the

31) "... . . . . Indian 'large' units are for too small to be efficient and maintain a large group of subcontractors. In the automobile industry, for example, India's total car production in 1971 was 91,233 units and this total was shared by eight assemblers located in different parts of the country. Toyota, in contrast assembled 2,080,000 units in 1972, nearly all of them in Toyota City". Watanabe S (1974), "Reflections on Current Policies for promoting small enterprises and subcontracting", International Labour Review, November, pp 405-422
primary firms. (32) Fluctuations in demand besides the behavioural pattern of the primary producers can create uncertainty and instability in subcontractor firms (the demand for whose products is a derived demand) affecting their very survival. The automobile industry, the world over is oligopolistic in structure owing to the importance of scale economies and requirements of large capital and Japan and India are no exception. (33) In Japan, structure-wise the primary producers do resemble oligopsonies in the

32) "For any firm to grow, there must be a market for the product........ the size of the market for ancillary firms depend not only on the growth of the market for the final products, but also on the policy of the primary firm with regard to the acquisition of necessary parts and components". Odaka K, et al (1988) ibid, pp 281.

33) In theory, oligopoly is a market form where there are only a few producers. The automobile industry the world over is marked by concentration in production. In U.S.A., the three producers, General Motors, Ford and Chrysler account for 90% of the production. In Japan, Nissan, Toyota and Toyo Kogyo share 80% of the market.

In India, Hindustan Motors and Premier Automobiles were the two leading producers accounting for almost the entire production of passenger cars until the establishment of the public sector project, Maruti Udyog Ltd. Likewise, Telco and Ashok Leyland account for almost all the entire production of medium and heavy commercial vehicles.
factor market as is also the case in India. But the subcontractors in Japan did not encounter oligopsonistic behaviour. (34) On the other hand the primary producers in Japan, rationalised their subcontracting practice by giving extensive support through equity participation, loaning or selling second-hand machinery, imparting training etc. This had enabled them to obtain the unique advantage of getting the benefit of a vertically integrated structure without getting involved in the day to day operational aspects of the process, had they retained the same without leaving them to subcontractors.

As the primary producers conduct has far reaching implications for subcontracting, this will be analysed in the Indian context. Their structure as well as their approach to subcontracting will be analysed in Chapter III. The transition from pure assembly to domestic manufacturing, provides an opportunity for deciding upon the organisational structure from a wide spectrum ranging from integration to disintegration, with several intermediary forms of inter-firm co-operation.

34) The memorable judgement of Justice Hand of the U.S.A that size per se is not an offence has led economists to focus on market conduct.
The development of subcontractors would have been possible if the primary producers had high technological capability and were motivated to reduce costs. There is a need for a strong incentive for the initial stimulus of subcontracting such as cost-reduction. One of the exogeneous factors can be Government policy. For instance, protection to the industry from foreign competition, under an import substitution policy can result in a high cost industrial structure. A similar effect may be obtained under an industrial licensing policy which bars the threat of entry. Whether the development of subcontracting in India was hampered by such factors has therefore to be examined.

It is well recognised that government policies can considerably influence the structure and conduct of an industry/firm. In developing countries, the governments have the additional responsibility of developing the industry itself. In an industry like automobile, the major constraints that would be encountered relate to capital and technology, besides the small size of the market. While providing financial assistance is not novel, the provision of a
market for the industry and facilitating an appropriate choice of technology by the government is no mean achievement and represents a commendable form of government intervention. This had occurred in Japan, where the industry was asked to supply trucks to meet the military requirements of the government. (35) This choice of product required less rigorous technological specifications and had lower economies of scale which facilitated the development of the industry and also gave a fillip to subcontracting. (36) This resulted in a harmonious and mutually beneficial relationship between the industry and the government.

35) "In the case of Japan, the dominance of trucks for three decades reflected the late development of the market, due primarily to low income levels and high retail prices. In retrospect, however, beginning with truck posed certain advantages. When Nissan, Toyota and Isuzu first entered the industry during the 1930s, personal income levels in Japan were too low to support large sales of domestically made cars. The army on the other hand, demanded Japanese trucks and bought 60% of domestic production between 1933 and 1944 despite a variety of technical problems in these vehicles". Cusumano M A, (1985), "The Japanese Automobile Industry", Harvard University Press, Cambridge, pp 14.

36) "As the engineering specifications for trucks were not so stringent as those for passenger cars, one would have imagined (and rightly so) that this factor was a big plus in mobilising and upgrading the technological potential of the ancillary firms". Odaka K et el (1988) ibid pp 83.
and within the industry between the primary firm and subcontractor. (37) The approach of the government to the various issues having an implication on subcontracting is therefore of much significance. Hence, in this thesis the influence of government policy would be kept in view in analysing the various issues relating to subcontracting.

While exogenous factors like Government policy, providing Tariff protection, special tax laws allowing accelerated depreciation etc. influenced the development of the automobile industry in Japan, certainly, these alone could not have been the factors for its phenomenal success. It is the 'vertical integration' Japanese style, as it is called which in

37) In India the governments policy towards subcontracting emanates from fear of monopoly. "The Government urges that large industrial enterprises should increase subcontracting to small firms as 'the country's resources are best utilised by a balanced distribution of capital investment in large and small scale industries. Decentralised production pattern has inherent advantages: it generates more job opportunities per rupee of investment.' This view is contrary to the philosophy and experience in Japan, where subcontracting has spread as an aid to, and a consequence of, the concentration of scarce capital in the large sector". Watanabe S, (1974) ibid.
effect means extensive utilisation of subcontracting as the dominant method by the primary firms to bring about rapid growth and expansion over a short period of time, that accounts for the success of the Japanese automobile industry. In this the subcontractors who had evolved into the status of first-tier ancillaries had a prominent role to play.\(^{38}\) The very nature of the automobile industry comprising 20,000 pieces, needed for the manufacture of the final product, lends itself to vertical disintegration. Yet the Japanese Automobile Industry could avoid this other extreme of the spectrum of structure by recognising and giving due attention to the role of subcontracting as a means to realise “high speed growth” as it is termed. The large ancillary firms in India on the other hand, although similar in terms of the type of products manufactured (viz. brakes, radiators, spark-plugs etc.) appear to be functionally different from the ancillaries of Japan. In case they are independent

\(^{38}\) “In visualising the inter-firm relations in the Japanese automobile industry especially during the era of ‘high speed growth’ it is important to realise that quite a few parts producers especially in the first tier level, have maintained steady and long lasting relations with a particular assembler”. Odaka K et al (1988) ibid, pp 68.
of the primary producers in terms of capital and technology, and also their market viz. as suppliers to spares/replacement market rather than for original equipment (O.E.) required by the primary producers, it would be reflected in the differences in the approach to subcontracting. In Japan, the first-tier ancillaries specialising by product were the critical link in subcontracting. The growth of these first-tier ancillaries gave the primary producers the benefit of economies of scale indirectly through their pursuing "a policy of vertical integration even as they increasingly resorted to subcontracting to second tier ancillary firms." (39) In turn the growth of first-tier ancillaries gave rise to further sub-contracting down the line. The Japanese experience makes it evident that a conscious choice was made in selecting a form of organisation viz. subcontracting with emphasis on product specialisation which resulted in a blending of the advantages of both integration and disintegration. The Indian experience in subcontracting would be analysed in this background.

The case study which is dealt with in Chapter IV is concerned with the kind of stimulus expected to be provided by the primary/ancillary firms which brought about subcontracting. Here, the important distinction between supplying for original equipment to the primary producers and supply to the replacement market is made. Besides, the periodisation of subcontracting is also equally relevant. A late start in subcontracting has certain repercussions especially in terms of product specialisation, which is the key to the success of subcontracting system as found in Japan. A failure to subcontract by product would result in the conventional form of process subcontracting, which does not provide the same kind of linkages between the primary and the subcontractor firm. A purposive sampling was done for the case study which despite its small size, reveals consistency in the subcontracting characteristics. The methodology adopted for the case study is given in detail in Chapter IV. The hypothesis that only subcontracting under product specialisation can serve as an effective supportive structure will be tested in this chapter. As this represents a conscientious choice made by the primary/ancillary firms, their behavioural attributes besides the
theoretical reasonings for subcontracting will be examined.

It is said that the building of the automobile industry is complex because the final product itself is complex, as the automobile has some 5,000 components which can be further disassembled into over 20,000 individual pieces. Any attempt on the part of the primary firm to produce all the 5,000 components and at the same time hope to meet the demand within the targeted time is almost impossible. The simultaneous supply of all the thousands of components automatically involves the smooth functioning of all the primary producers and their ancillaries/subcontractors thereby leading to a stable relationship. The importance of interdependence of the primary, ancillary/subcontractor firms is the very basis for the success of the automobile industry. As such the development process and policy of the primary, ancillary and subcontractor firm has to be studied and this forms the subject matter of chapter 5.

In Japan the primary producers had encouraged the subcontractors to graduate to ancillary status. While
quantitative assistance in the form of assured market, finance, machinery etc. was given, the qualitative aspects of their relationships deserve special mention. One such feature was the formation of association of ancillary firms which cemented the relationship between the parent firm and subcontractors. (40) In short such inter-company ties substituted in part for formal, vertical integrations. That such a harmonious relationship is absent in India, resulting in a low level of co-operation between the firms in the industry had received the critical attention of the Tariff Commission which indicate that often they blamed each other for the poor performance of the industry in terms of cost and quality. (41) Such a behaviour would more likely result in the primary producers behaving as oligopsonists exploiting the competitive structure of

40) "Ancillary firms' associations have played an indispensable role in the development of both ancillary and primary firms. They served not only as the primary firms' channel of assistance to ancillary firms, but also as an effective instrument for the cultivation of loyalty. Further, they fostered intra-group competition in productivity improvement." Odaka K, et al (1988) ibid pp. 255.

41) In fact the Tariff Commission's enquiry on automobile ancillaries was instituted due to the pressure from the primary producers.
the subcontractors. This would not be conducive for the kind of vertical integration contemplated in the Japanese automobile industry. Both the primary producers and the subcontractors may then tend to behave opportunistically.

The subcontracting system in India could have been channelised in the proper direction by a more pragmatic Government policy. The Government's policy was more regulatory than development oriented. Yet it could not arrest the inefficiency within the industry resulting from lack of competition. In so far as subcontracting is concerned, it was considered in general terms as a check against growth of monopoly. Of late certain measures for liberalising the economy in terms of relaxing the control on monopolies and permitting foreign collaboration etc. have been introduced. The establishment of a public sector project for the

42) "In India the Government's enthusiasm for subcontracting derives to some extent from its distrust of the industrial 'giants' and its desire to restrict their growth. In other words, an effective subcontracting system is regarded in India as a measure of curbing industrial 'monopolies', while in Japan, it is regarded as a pre-requisite to the growth and technical progress of larger firms". Watanabe S, (1974) ibid.
manufacture of passenger cars in the early 1980's, itself signifies a breakaway from the earlier policies wherein passenger car was treated as a luxury commodity. The public sector passenger car project, Maruti Udyog Ltd., has emerged as a leader in the automobile industry.

In conclusion, the secondary evidence in respect of the development of the automobile industry in general and subcontracting in particular, besides the results thrown up by the case study, support the hypothesis that only subcontracting by product specialisation can be an effective supportive system to the integrated firm. The weak inter-firm linkages even under a system of subcontracting in India is a result of the behavioural and market factors. However, it is necessary to reverse this process by according primacy to subcontracting whose role is often visualised in isolation without a proper appreciation of the complementary nature of the activity. A possibility for taking corrective steps presents itself with the liberalisation measures being adopted in the economy as a whole and the revamping of the automobile sector with a central role to the public sector project Maruti
established in collaboration with Suzuki of Japan. These aspects will be dealt with in the concluding chapter. A realisation of the pivotal function of subcontracting as an effective supportive system to the primary firm in conjunction with its larger macro-economic function for providing growth with equity has to be translated into concrete policy measures and projects. Such a strategy would succeed in securing the much needed inter-firm and inter-sectoral linkages within the economy.