Cluster Development Programme, India

DIAGNOSTIC STUDY

SME

THE AUTOCOMPONENT CLUSTER

CHENNAI, TAMIL NADU

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1. INDUSTRY INTRODUCTION

1.1 NATIONAL SCENARIO

India's automotive component industry manufactures the entire range of parts required by the domestic automobile industry for various light vehicles like cars, jeeps as well as for light and heavy commercial vehicles (LCV's and HCV's) like tractors, three wheelers etc. The automotive component industry's output for the financial year 1999-2000 was US$ (M) 3894 with a growth rate of 26% against the financial year 1998-99. For the year 2000-01, the auto component production touched US$ M 4000 (Rs. 20000 crores approx.). The industry registered a compound annual growth rate (CAGR) of 19.5% between 1994 and 1999.

Most components required by the Indian automobile industry are manufactured locally. Their dependence on imports is very low, approximately at 13% of the domestic demand, and is usually restricted to items requiring special steels and materials or precision engineering (gearboxes for instance).

The mainstay of auto component industry is the auto industry. The annual production of auto industry is US$ Million 10000 (Rs.50000crores approx). It is larger in size than any other priority industries and has great employment potential. The auto industry has strong backward (component, basic material) as well as forward linkages (Insurance, Financing, Oil Industry & Roads). The industry contributes 17% of the total indirect taxes collected by the exchequer and is a driver of product and process technologies. Annexure details out the production of passenger vehicles and commercial vehicles during the past decade.

There are 402 medium and large key players in the organised sector along with 6000 ancillary units. However, in the unorganized sector there are approximately 5000 SSIs. The direct employment generated by the medium and large firms in the organized sector is 2,50,000. There are no figures available for unorganized sector.

Chennai and Pune are the traditional locations of the industry. Delhi and its surrounding areas are the new locations that came into existence mainly because of Maruti Ltd. The geographical spread of medium and large companies as per records of ACMA is as under

North region	161
Western region	123
Southern region	91
Eastern region	27

1.2. EVOLUTION

1.2.1 Initial phase:

The Indian auto component industry started out small in the 1940s, supplying components to Hindustan Motors and Premier Automobiles. In the1950s, with the arrival of Telco, Bajaj, Mahindra and Mahindra, there was a steady increase in production. In India, the vehicle industry till the 1980s was characterized by an oligopoly structure, small-scale operations, high cost of production, technological obsolescence and numerous government regulations. In this period, there was a tendency for vehicle manufacturers to produce parts and components in-house itself. And the outsourcing of components was mainly done to cater to the replacement demand.

It was however in the 1980s, with the coming of Maruti Ltd that growth suddenly accelerated and the industry came of age. Before Maruti, a majority of the components were produced in house by vehicle manufacturers leaving uneconomic volumes and very low profits margins. The Maruti Udyog Ltd (MUL) led to a paradigm shift in the auto ancillary sector. A boon time for the auto components industry started with the arrival of India's people's car. This gave birth to a variety of new age auto components manufacturers, who manufactured components that combined the best of technology and quality. With the success of Maruti, the paths of Indian auto component industry took an upswing with climbing export figures as a result of low cost of labour and material. The giant players in automobile industry also encouraged and facilitated growth of auto component industry around their units.

1.2.2 Post liberalisation:

The next turn in the auto and the auto component industry came with the onset of liberalisation policies. With the growing urbanisation and increasing purchasing power coupled with liberalization process that was set in motion in 1991, the industry circle predicted that India is going to be the largest market in the automotive field in the Asian region.

After liberalization and with the consequent opening up of the auto sector in 1992-93, the license raj ceased to exist. A number of collaborations such as PALs with Peugeots, DCMs with DAEWOO, entry of General Motors etc. have significantly changed the scenario in the automobile sector, particularly in the passenger vehicles sector. Similar developments have been taking place in the field of manufacturing of commercial vehicles including the LCV sector, with most of the international names having some tie-ups in India.

The entry of major internationals has caused new manufacturing capacities to come up in the automobile components sector as a result of collaboration with world leaders. Indian automotive component manufacturing industry is keeping itself fully in tune with the technological advances being made all over the world. This has helped them to develop their export base. Some of the automotive component manufacturers in India have already emerged as major global players by tying up with several well-

known OEMs overseas as component suppliers. The Indian auto component industry has entered into nearly 450 overseas technical collaborations and more than 50 component companies have already secured ISO9000 accreditation.

However, the auto components industry went overboard with huge capacity expansion and modernization programs. Similarly, the global auto giants soon realized that the Indian market was not as big as it appeared to be. Their targets went haywire, inventories piled up and bookings were cancelled. This also coincided with a general slowdown in the Indian economy in the last one or two years. The auto component industry in India, which was mainly driven by domestic demand faced sluggish growth.

Following the growth of around 20% between 1993–1997, the industry was now experiencing a slow down across almost all segments (except the two wheeler one). This was partly due to the overall slowing down of the world economy but domestic fiscal policies had also added to the situation. However, the industry still expected to grow at around 10% pa. and account for around 5% of domestic industrial output.

Some Indian companies used the interim period to trim down their costs and improve productivity. Several companies entered into technological collaboration and equity partnership with the world leaders in auto components. They did not only adopt their systems but also their work ethics and management practices. Strict quality controls, sound technology and high volumes enabled the Indian auto component industry to chart greater progress in the coming future.

By global standards, there is a fairly well developed component and ancillary industry with some suppliers already meeting global technical and quality standards, particularly at Tier 1 level, but many other lack such competence. Pressure is on suppliers to raise the quality of their products to remain competitive. Total investment in the component industry is around $2bn (up from $1.7bn in 1996/97) with an output estimated at around $3.8bn. A majority of companies (approx 78%) are SMEs with a turnover of less than $10m. In terms of location over 70% are situated in either the northern or the western regions.

Exports are expected to increase as a result of over capacity in the domestic car industry and the Government's policy to bring in a more liberal regime on the foreign exchange front. The flood of new entrants into the car industry as a result of liberalization has led to a complete transformation of the sector. These far reaching changes will also leave a permanent mark on the industry’s road to growth.

1.3 STRUCTURE OF THE INDUSTRY

The auto ancillary industry is classified into the following product segments.

- **Engine and Engine Parts** - Pistons, Piston rings, Gaskets, Carburettors, Fuel Injection Pumps etc.
- **Drive Transmission and Steering Parts** - Transmission gears, Steering gears Crown wheels and pinions, axles, wheels etc.
- **Suspension and Braking Parts** - Leaf springs, Shock absorber, Brake Parts, assemblies etc.
- **Electricals** - Spark plugs, Starter motors, Generators, Distrbuters, Voltage regulators, Flywheel magnetos, Ignition coils.
- **Equipment** - Dashboard instruments, headlights, horns, Wipers etc.
- **Others** - Fan belts, Sheetmetal parts, Plastic mouldings etc.

The segmentwise concentration of Auto Component units is as follows.

Segment	**No of Units**	**Prodn Value (Rs. bn)**
Engine Parts	99	32.52
Transmission / Steering	62	20.05
Suspension / Braking	28	16.69
Electricals	24	6.70
Equipments	38	5.83
Others	23	17.54
Total(organized ind)	**274**	**99.33**
Total SSI's	**Around 6000**	**27.50**

1.4. MARKETS

As regards to the market for automotive components, a major proportion i.e. nearly 55 percent, is the vehicle industry for original equipment. Replacement demand constitutes 35 percent of domestic production. Exports account for the remaining 10 percent.

The original equipment manufacturers (OEMs) market has been growing since the 1980s owing to a rapid growth in the passenger car and two wheeler segments.

Replacement-market demand has also been growing with an ever– increasing vehicle population, deteriorating driving conditions due to heavy traffic and poor road conditions. Some of the components that have a high replacement demand are fuel injection equipment, filters (air/oil/fuel), piston components, gaskets, gears, alternators, brake lining, rear view mirror, clutches and headlights. Engine and transmission parts constitute a good proportion of exports, that cater mostly to the replacement market abroad.

Low volume and fragmented market: The Indian auto component industry is low-volume and fragmented. In terms of turnover, it is only about one tenth of the size of the world's largest automotive company, Delphi Automotive Systems Corporation of US.

1.5. INDUSTRY CHARACTERISTICS

The unorganised small-scale sector is estimated to contribute nearly 23 percent to the industry's total production. A majority of these small-scale units are located in Delhi and Haryana. They produce low-technology products that require simple production set-ups like gaskets, engine valves and sheet metal components. Most of these units employ older technologies including second-hand machine. Usually the small-scale sector plays a role in the production of components for which excise duty is high, as small-scale units are given excise duty concessions that lower the price of their products. The unorganised small-scale sector mostly caters to the replacement demand, with a few exceptions like sheet metal components. It is because almost all of the production of sheet metal parts caters to the demand of the vehicle manufacturers so it does not have to meet any replacement demand.

The fragmented nature of the auto ancillary industry implies that capacity of individual players is small as per the international standards and the auto ancillary industry has to contend with multiple sourcing. Whereas the OEMs prefer to spread orders for the same ancillary products across several ancillary companies.

Dominant firm with a competitive fringe: The industry structure of the Indian auto components industry can be taken as a minor variant of a dominant firm with a competitive fringe. This phrase theoretically refers to an industry that has a single firm with a dominant share of the market and many fringe or small firms each with a trivial

share of the market. A firm is dominant either because of a superior product or lower costs or both. The costs of a firm could be lower due to economies of scale, experience gathered especially due to an early entry or simply due to better technology and management. It is not a single firm but a few firms together that control the dominant share of the market leaving a tiny share to numerous small firms.

Three to five firms have more than 75 percent of the market for almost all the products For example, the three players namely, Escorts Mahle, India Pistons and Shriram Piston and Rings, dominate the piston segment with more than 70 percent of the turnover of the industry. Similarly, Jay Bharat Maruthi and Mark Auto are industry leaders in the sheet metal parts with around 70 percent of the industry's turnover. These firms play a dominant role mainly due to some degree of independence in product design and continued technological up gradation.

Growth pattern over past few years: The auto components market is growing at the rate of 10% per year. The demand from OEM market is dependent on the demand for new vehicles. The total industry output has grown steadily over the years-from a total production of Rs 8.37bn in FY85 to Rs 126.8bn in FY99. The industrial output in the organized and small scale sector grew at a compounded annual growth rate (CAGR) of 19.5% in the last 6 years.

SEGMENT	**FY94**	**FY95**	**FY96**	**FY97**	**FY98**	**FY99**	**CAGR**
Engine Parts	15.22	19.15	23.90	31.39	31.61	32.52	16.4%
Transmission/Steering	8.54	11.07	15.24	18.84	18.81	20.05	18.6%
Suspension / Braking	6.32	9.83	13.55	16.60	15.99	16.69	21.4%
Electrical	3.15	4.21	5.42	5.86	6.55	6.70	16.3%
Equipment	2.28	2.82	4.40	5.87	5.81	5.83	20.7%
Others	3.92	4.67	7.17	9.70	13.79	17.54	34.9%
Total (organized)	**39.43**	**51.75**	**69.68**	**88.27**	**92.55**	**99.33**	**20.3%**
Total (SSI)	*12.62*	*15.52*	*20.90*	*26.48*	*27.77*	*27.50*	*16.9%*

The export market with a 10% market share and a growth rate of 20% per annum is another factor that determines the growth of the auto ancillary industry and is crucial as it protects it from domestic recession.

2. GROWTH OF THE CLUSTER

The establishment of Ashok Leyland in the late 50's and that of the TVS group of companies in the early 60's had provided the impetus for starting a large number of ancillary/components manufacturing units in the Chennai region for catering to their component requirements.

In fact, the auto component cluster at Chennai is an induced one as it is linked to the establishment of the larger industries like Ashok Leyland, TVS Group, Rane Group and Amalgamation group of companies. Initially, it started with the establishment of

some units but then gradually expanded in line with the level of sophistication and product range of the larger units. Today, Chennai is popularly known as Hub of automobile industry and is referred to as the Detroit of India.

Some of the reasons that attract the auto component industry to this region are:

- Chennai has the tradition of producing a large pool of intellectual workforce and trained hard working industrial labour.
- State's power deficit is negligible and the power tariffs are 15-20% lower than other major states of India.
- It has business friendly government policies and socio-cultural environment
- Has been traditionally very strong in engineering & auto sectors.
- Chennai's economy is well balanced with the InfoTech, Industrial, Entertainment and other service sectors playing an equal role in the city's growth.
- Chennai is already a home to world-class automobile companies like Ford, Hyundai, Hindustan Motors, Ashok Leyland, Royal Enfield, Tafe and TVS.
- The Chennai sea-port and the international airport act as a gateway to a substantial portion of southern India comprising Karnataka, Tamilnadu, Andhra Pradesh and Kerala, all of which have emerged as the fastest growing states of India in the post liberalisation era.
- The auto component firms in the cluster have already placed themselves on the world map and a few of them are already getting prestigious awards like the Deming award.

3. GLOBAL TRENDS

The global auto industry is dominated by only a few firms. Over 80% of the world car production is accounted by six major global groups that are mainly from USA and Japan. Consolidation in the commercial vehicle sector has gone even further, with five major groups dominating the global markets of trucks and buses. A similar picture is that of the component sector, which is increasingly dominated by large multi-national firms that seek to establish a leading position in key technologies. Yet in all parts of the world, there are some smaller independent companies that continue to survive and indeed thrive, in particular sectors of the market.

The retail sector contrasts with this picture as it is still largely organised along national lines. Retailers are also consolidating, fuelled by increased competitive pressures resulting from new channels to market such as the internet and free imports.

Increasing sophistication

The industry is technologically advanced, both in terms of the manufacturing processes as well as products. It is characterised by economies of scale and low unit costs, despite the increasing complexity of the fundamental product. Manufacturers are seeking to differentiate their products through technology and branding in order to restore margins particularly by applying electronics to vehicles. The proportion of

electronics in the average vehicle may well double from the current level of around 20% over the next ten years, particularly in the areas of management systems and telemetric. The engine management system alone can be at least 10% of the value of the car. Suppliers are taking on an increased responsibility for product development, design and sub-assembly as the manufacturers focus on core capabilities.

Another key force driving technological change is environmental regulation. The industry has made major strides in the areas of emissions control and safety, but will face pressures for further improvement.

Intense competition

The industry suffers from global over-capacity and with best practices in manufacturing being rapidly diffused around the world, the fight to build or retain market share is relentless and the competition is fierce. Lean production is not enough; companies are striving to improve profitability by building desirable brands, through excellence in design, engineering and marketing.

In Europe last year, Ford and General Motors made losses of $1bn and $463m respectively. They are both in the throes of substantial programmes to cut their overcapacity, through plant closures and other rationalisation. Honda, Nissan and Toyota have also been making losses in Europe, despite their impressive record on productivity. The current economic slowdown, which many commentators expect to worsen, may well lead to further reductions in both United States and Europe. The pressure on suppliers that was already intense, is likely to increase yet further.

Major driving force for various industries

The passenger car segment has emerged as a major driving force for upstream industries like steel, iron, aluminum, rubber, plastics, glass, and electronics as well as down stream industries like advertising, marketing, transport and insurance. The car industry generates large amount of employment opportunities in the economy. For example in the US, every sixth worker is involved in the making of an automobile.

Slow growth rate

The global automotive car market is growing at a rate of only 2 percent per annum and is not expected to pick up in the near term. Growth has dropped due to the increasing levels of saturation in the larger car markets of the world. Worldwide the trend is towards ensuring that one's products are superior in terms of quality. This will enhance the useful life of cars and hence, slow down growth in sales.

The world car production has increased from 44.66mn in 1996 to an estimated 48.3mn cars in 1999. Japan, Canada and USA brought about the major increases, which contribute to 53% of the world's car production. The largest car market i.e. the US expects car sales to decline 8 to 9 per cent to 16 million cars in 2001, as compared to 17.4 million cars sold in 2000.

The USA and Japan are the leaders with around 42% of the total world market. However, since the last two to three years, the international passenger car industry has

been witnessing an over capacity of more than 30%. The trend suggests that industry volumes may grow by just 2% or around 10mn vehicles per year. If this situation continues for the next few years the world car market may witness shakeout in the near future. Already signs towards this are being observed as the phenomenon of mergers catches on.

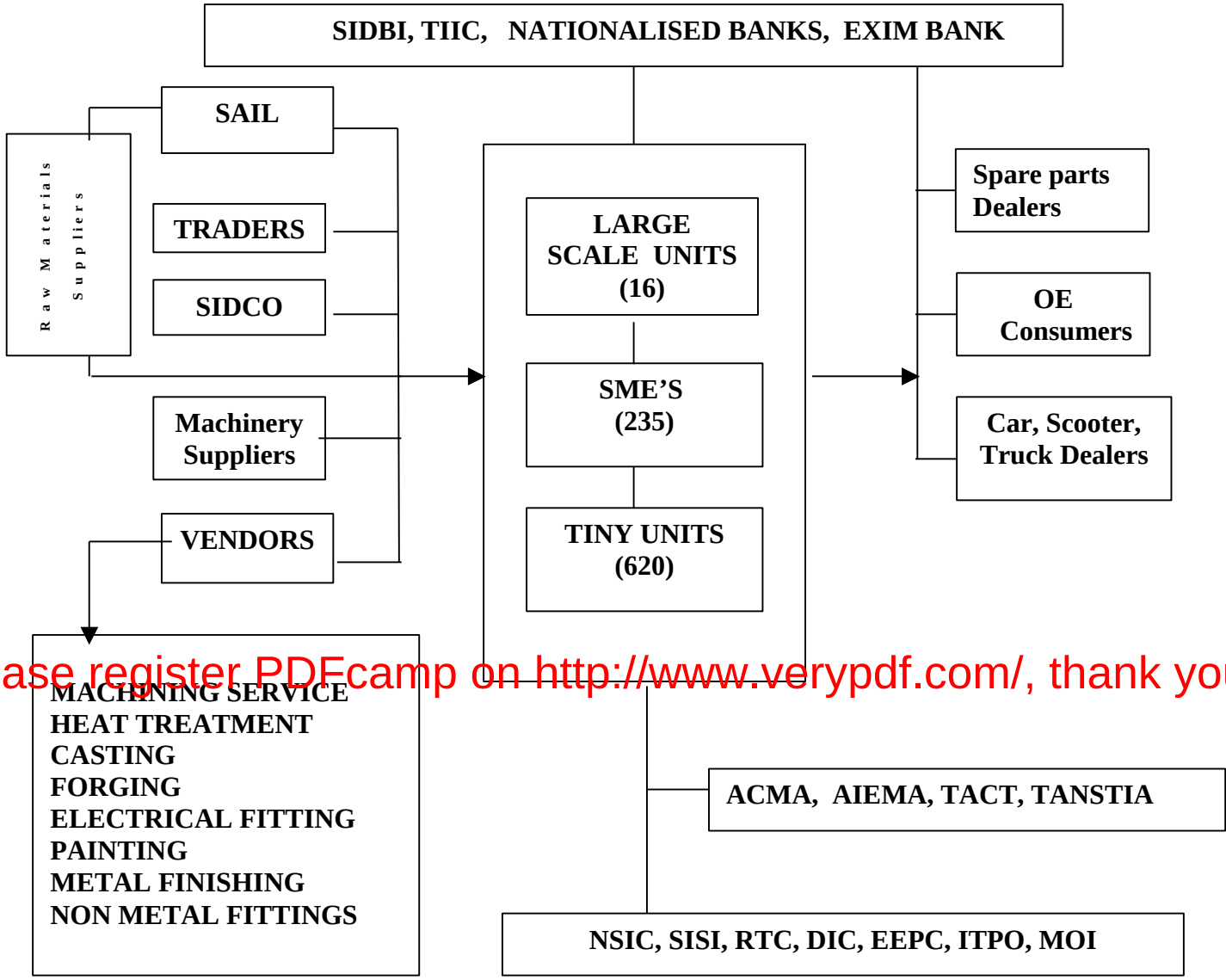
The recent mergers in the international car market are Ford-Volvo, Renault-Nissan, Daimler-Chrysler. A few more players are expected to join the fray in the next few years so as to strengthen their hold in the world market. Among the top car manufacturing companies, the General Motors and the Ford Motors group of USA lead with a contribution of 15.8% and 11.6% of world car production respectively. Volkswagen and Toyota stand third and fourth with more than 9% contribution each to the world car production.

Shifting trend in sales

The global domination of the larger automotive manufacturers is slowly on the wane and the trend in sales is shifting towards more "region-centric" products. Automakers that have been enjoying a generally prosperous spell would have to rethink on the way vehicles are designed, manufactured, distributed or sold. Already, players like General Motors, Volkswagen and Toyota have begun to re-examine their dealer relationships and pricing strategies.

Carmakers would now have to think in terms of a new customer focus and provide better financing and servicing. Strategic tie-ups, mergers and acquisitions have become the talk of the day. A few instances are Daimler Benz's tie-up with Chrysler of the US, Ford's acquiring of Daewoo and tie up with Volvo Car Corporation and Renault acquiring a stake in Nissan. Such deals will certainly lead to economy in terms of costs but it remains to be seen whether they will also create significant new opportunities for growth.

4. AUTO COMPONENT CLUSTER MAP



4.1 CORE CLUSTER ACTORS

The core cluster actors in Chennai auto component cluster could be listed as follows

- Large and Medium enterprises
- Vendors to the large firms
- Small firms catering to replacement markets
- Job shops in metal cutting, grinding, metal forming
- Foundries
- Heat treatment units
- Forging units
- OEM manufacturers of vehicles- as customers
- Material supplier

Large and Medium Enterprises:
As per figures given by ACMA there are about 40 medium and large enterprises in the cluster. Most of the industries in this category are sub-assembly manufacturers supplying to OEMs in India. Some of these units have also entered the export markets recently. Two business houses control a majority of the large units. A list of large enterprises is attached to the report.

Most of these large units have got good exposure to world class manufacturing practices. Some of these units have completed tierisation of their vendors while others are in the process. These units are now insisting upon their vendors to go for quality certification in addition to offering warranty for their products. The concepts like Just In Time, zero percent rejection are insisted from the vendors. Some industries like TVS group of industries have got partnership approach with their vendors i.e. guiding vendors in choosing the right machinery, process technology, training, implementation of quality up-gradation etc. Few industries have got world recognition in the form of Deming award.

Vendors to Large and Medium Firms:
Each of the larger units have 100-200 vendors who serve them. Most of these are in the throngs of tierisation. Most of the vendors are skeptical about their being on tier 2 or tier 3. They fear delayed payments from their newer customers, lack of technical support, which they till now were receiving from large companies. The psychological issue of separation from principal is also a big issue.

A large number of these units are facing constant pressures from principal companies to reduce cost and improve quality. Some of the units have become quality conscious but on the whole, quality is lacking in most of these vendors. Principals are forcing these vendors to go in for quality certifications like ISO-9000.

Most of the vendors are keen to get into consortia and make a complete sub assembly as a group. In such a scenario, they are sure to break into export markets directly.

Small firms catering to replacement markets:
There is a large number of firms in the cluster that are catering to the replacement market. Some estimates put it at more than 200 in number. Mostly they are catering to replacement market because of low product cost. The low product cost is mainly because of excise duty concessions given to these small firms. These industries have got margins up to 25%. However, of late these units are facing more competition and as a result, it is not uncommon to see the units going in for reckless undercutting in prices without any real cost management, which is detrimental to the entrepreneur's interest in the long run. They are also facing high rejection rate. Besides, now it has become mandatory to offer 1 year warranty for their products.

Job shops:
There are about 1000 job shops in the cluster. However most of them cater to not only automobile industry but also to other engineering industries. Most of the firms have conventional machine tools and employ old and experienced people who have at least an ITI qualification. The units with advanced technology machine tools like CNC lathes, Machining Centres etc., employ diploma holders and engineering graduates, who are then trained in parts programming and then put on the job. However such units are very few in number. Some of the units feel that there aren't enough CNC trained operators available in the cluster.

The wages and facilities provided to the employees are not good. Many firms are not quality certified and they have low margins because of cutthroat competition in the industry. Some of the units are run by entrepreneurs, who do not have any formal technical education but possess shop floor experience in other small/medium units. These type of entrepreneurs are although technically sound as they work on their gut feeling and experience yet they lack sound knowledge of enterprise management and cost effectiveness.

Foundries:
There are approximately 31 foundries in the cluster and about 21 of them are SMEs. There are no details available with the association IIF as to how many of them exclusively work for the auto component industry. 50% of them are ISO-9000 certified. Since all are energy intensified units, power saving is the main area for this sector. Only a few of them have gone for energy audits and some have to go for mechanization of shops under technology up-gradation. They are facing problem from buyers because of the tight quality system parameters.

Heat Treatment Units:
There are a few units that have good facilities and manufacturing practices. They are getting constant pressure from the OEMs for delivery schedules. None of the firms have done energy audits and only a few are ISO 9000 certified. They don't have exposure to new technologies available in the market. There is a lot of secrecy maintained with regard to procurement of materials. An exclusive association was formed for these units but is no longer in operation.

Forging Units :
These units are facing severe competition. They are getting constant pressure from the OEMs to reduce the prices. Most of them have never been exposed to good manufacturing practices. The level of safety is also quite low in this sector. Only a few firms have gone through energy audit. Pollution is another major threat for these units and they have taken certain pollution control measures recently.

Material Suppliers:
Dealers and alloy casters are the major conduits. Most of the units buy the materials through the dealers of big manufacturers. Raw materials like steel and ferrous alloys are principally sourced from SAIL and its suppliers. For non-ferrous alloys like aluminium, there are local remelting units & foundries that manufacture the alloys & other ranges with different composition based on the requirements of the manufacturers. SIDCO is in the forefront in supplying raw material to the needy industries. It has got price preference from SAIL. SIDCO has got few depots in the industrial estates to cater the needs of the industries.

The units get the credit for purchases for time period ranging from one to two months. Generally, minimum order quantities are not too high for the components. Most of the times, units do not get any value added services from the dealers regarding technical inputs or advice relating to the material that they are using.

Good Model
In respect of vendors to Ashok Leyland, the OEM have a tie up with SAIL and practice an informal consortium approach wherein the steel requirements of all its vendors are clubbed together and a price is negotiated with SAIL based on the bulk of purchase. This has gone a long way in helping Ashok Leyland's vendors to reduce the raw material costs and can be role model for the cluster.

Original Equipment Manufacturers:
They are in the process of tierisation. Recently established Industries like Hyundai, Ford etc have done 100% tierisation whereas old industries like Ashok Leyland, Hindustan Motors etc are still in the process. They give inputs to their vendors like benefits of joint raw material procurement, implementation of quality systems, technology up-gradation and world class manufacturing methodologies. There is no mechanism of sharing their vendors and no common vendor rating.

4.2 CURRENT INSTITUTIONAL MATRIX

Ø TANSTIA
It is an apex body established in 1956 and recognised by both the State and the Central Governments. It has more than a 100 members, consisting of all district level associations, trade associations of Tamilnadu and many small and tiny industries. This association plays a promotional role and participates in the committees set up by the State and the Central Government to promote the interest of the small and tiny

industries. The institution is trying to bring the cluster development phenomenon to major industrial estates, however at present there is no organic link between auto component cluster and TANSTIA.

Ø **AIEMA**

This is the association of the units in the Ambattur industrial estate that has about 2000 units located inside it. It has got 700 registered member units, out of which 100 are small-scale auto component manufacturers. This is a very active association and promptly takes up the problems of its members with the Government departments and the agencies concerned. It has started initiatives to bring a consortium approach among its members. The association is very active in organising ACMEE, an exhibition largely catering to automotive component industry that is organised once in 2 years. They also organise Buyer-Seller meets for auto component industries.

Ø **ACMA**

Auto Components Manufacturers Association is an all India association and has an extensive database on the auto components manufacturers and their production. This association has a regional office at Chennai headed by an Assistant Director. It organises buyer-seller meets, trade fairs and seminars etc. This body has produced a comprehensive statistical report on the automobile and auto components sectors and has published a number of different publications.

This association is also a member of many Government Committees and represents the issues & problems faced by its members on those forums. Most of its members are from medium and large scale sectors. However, the association has a low visibility in the cluster and there is no data available on their Chennai member industries performance, their share, export details. Besides, there is also no linkage with other support institutions in the cluster.

Ø **SISI**

This is a Central Government organization that comes under the control of the Development Commissioner -Small Scale Industries and in turn under the Ministry of SSI, Government of India. This is the body that disseminates information about the Central Government’s policies and schemes and also conducts training programmes in various disciplines. Under the aegis of UNIDO, this organization also has a subcontracting exchange for vendors.

This organization has been mandated to play a role as a cluster development agency in the auto component cluster at Chennai .It can cater the needs of the industries in skill up-gradation programme. It also offers consultancy services on ISO9000 certification at competitive rate. It also recommends to DC(SSI) for reimbursement scheme for ISO certified industries.

Ø **NSIC**

This is another Government of India agency that had been set up to promote, aid and foster the growth of small-scale industries in the country. The organization is involved in hire-purchase and leasing schemes and also has a raw material assistance scheme for supplementing the availability of raw materials to large number of units**.** Its hire-purchase scheme can be utilised in the cluster for technology up-gradation. During the last financial year, around Rs30crores was disbursed to 100 entrepreneurs. It also operates a consortia marketing assistance program. The institution is keen on playing an active role in the cluster development programme.

Ø **SIDBI**

This is a national-level financial institution that had been set up with the objective of assisting the development of the small-scale sector in India. This institution has a number of schemes for the SSI Sector of which a few prominent ones are the TDMF, TUF and Credit Linked Capital Subsidy scheme. This institution also assists in many developmental activities especially on the HRD front and will have a major role to play in for the implementation of the cluster approach in the auto component sector at Chennai.

Ø **CIPET**

The Central Institute of Plastic Engineering & Technology is at the forefront in offering training, consultancy services and testing facilities. It has got good linkages with industries. Many auto-component industries and automobile manufacturers avail its services. It conducts placement programmes for the trainees with the help of industries.

Ø **EEPC**

Engineering Exports Promotional Council is a central government organisation that comes under the Ministry of Commerce and keeps tracks of the exports of engineering goods including auto components that are exported from the country. This body also helps the industry by organising buyer-seller meets, exhibitions, foreign exposure trips etc. It operates the Marketing Development Assistance Scheme through which airfare is reimbursed and financial assistance is given for preparation of publicity material and market surveys on specific product. It maintains no data on how many auto component industries have got benefited through it. It is taking business delegation to US in the first quarter of 2003 which will be useful to auto component industries. On the whole, the institution is keen to play an active role in the cluster development programme.

Ø **TIIC**

This is the premier financial institution in the State and does Project financing for medium and small-scale units. Apart from the conventional term loan lending, this institution also has a scheme for modernisation, which the units in the auto component cluster avail for upgrading their technology. It is an industrial friendly institution and many industries avail its funds for working capital.

Ø **Department of Industries & Commerce**

This department deals with the small-scale industries in the State, and apart from the regular developmental work done by the departments like registering the SSI units, it also implements a number of Government Incentive Schemes. The special capital subsidy scheme for auto component sector (for buying machinery) has been withdrawn recently in which these industries used to get 20% subsidy.

5. SWOT ANALYSIS

The SWOT analysis of the cluster is based upon the interactions during the interviews and the insights developed thereon are highlighted below.

STRENGTHS:

- v Easy availability of trained and skilled manpower.
- v Management with technical background.
- v Easy availability of raw materials and other inputs.
- v Presence of many auto component majors in the region
- v Presence of giant automobile companies like Ashok Leyland, Ford, Hyundai, Car Plant and Royal Enfield.
- v Availability of industrial parks with state-of-art technology.
- v High annual growth rate of production and exports of auto components.
- v Connected with sea, air, train & road routes with vast national/international networks
- v Increasing awareness about achieving zero defect.

WEAKNESSES:

- v Low levels of trust
- v Low levels of labour productivity
- v Quality is poor and rejection rates are high
- v Absence of sufficient testing facilities
- v Cut-throat competition
- v Sense of insecurity due to ‘tierisation’
- v Non-broadening of market horizon
- v Resigned attitude of management due to recession
- v Weak linkages between the SMEs and the institution
- v No commonality of goals
- v Technology up-gradation low
- v Low research & development efforts
- v Inadequate flow of market information
- v Low size of firms & economies of scale
- v Scattered production of auto components in the SSI Sector
- v Technically sound but needs inputs and guidance in financial management and cost effectiveness

- High electricity tariff
- High rate of interest for loans
- No tailor made trainings by institutions
- Poor working conditions
- Too many interventions by statutory & regulatory authorities
- No effective agency to help for exploring export markets
- High tax & duties structure
- Slow indigenisation process
- Lack of brand image

OPPORTUNITIES:

- Growing domestic and international market
- Product diversification
- Abundant scope to cater to foreign majors setting up shops in India.
- Ability to cater to small batch sizes

THREATS:

- Auto giants in and outside the cluster looking for global outsourcing
- Fierce competition from other countries in raw materials cost and productivity disadvantages
- Slow incorporation of quality standards
- Import of second hand automobiles, Complete knock CKD kits
- ISO 9000/QS 9000 are a necessity
- Government policies

6. VISION FOR THE CLUSTER

The Chennai auto component firms would strive to grow by 20% annually with 30% growth in exports over the next 5 years to become a global source for auto component supplies.

7. STRATEGY FOR INTERVENTION IN THE CLUSTER

In the post liberalisation period and the emerging WTO regime, the hitherto protection available to automobile and auto component industry has dwindled over a period of time. The gap between the Indian auto component industry and the global standards is still huge and the industry would need to upgrade itself for survival and growth. The transformation from a totally protected market to an emerging free market is going to be painful. The progressive and forward-looking large units in the cluster have shifted their focus to quality improvement, waste minimisation and rationalization of their supply chains.

There is a continuous pressure upon vendors to upgrade their technology, quality systems and reduce wastage. In such a scenario, the challenges for the SMEs would be to rise to the occasion and become competitive not only in the Indian context but also at the global level. With the opening up of economy and liberalisation, an opportunity has emerged for small manufacturers, who can get into export market. However, this challenge can be met only through consortia approach where few SMEs come together to make a full sub assembly.

The priority therefore will be to:

1. Upgrade SMEs that are either vendors to the large industries or catering to the replacement market, on the quality and price front using BDS intervention.
2. Directly link to some of the progressive SMEs to the market both domestic and exports using a consortia approach.
3. Facilitate technology up-gradation to SMEs
4. Most of these challenges will have to be achieved by building the capacities of associations like ACMA and also by creating new ones in order to foster mutual learning and help them to embark initiatives that individual firms can't undertake on their own.

The action plan for 2003 is designed to meet the above objectives and a broad outline of the plan is as under.

1. Facilitating adopting of world class manufacturing practices at all levels of the value chain
2. Capacity building of existing and new networks
3. Facilitation technology up-gradation
4. Direct linkages of SMEs to the market

8. ACTION PLAN

S_No.	Activities	Time period	No of Beneficiaries
1.	**Preliminary Activities**		
1.1	Awareness Programme on Cluster Development	Q4/2002	25 firms
1.2	Survey on Auto component Industries	Q4/2002	1000 firms
2.	**Facilitating World Class Manufacturing Practices**		
2.1	3 Seminars on "World Class manufacturing Practices"	Q4/2002 Q1-Q2/2003	25 firms * 3 = 75 Firms
2.2	Implementation of " World Class manufacturing Practices"	Q1-Q2/2003	10 Firms
2.3	2 Exposure visits to world class units	Q1-Q2/2003	10 Firms* 2 = 20 Firms
2.4	2 Seminars on statistical quality control techniques	Q1-Q3/2003	25 Firms* 2= 50 firms
2.5	Adoption of statistical quality control techniques	Q2-Q3/2003	10 Firms
2.6	ISO-9000 certification	Q1-Q3/2003	30 Firms
2.7	Energy audits in Heat treatment and foundry units	Q1-Q3/2003	15 firms
2.8	Study on needs of mechanization in foundries	Q2/2003	All foundries
3.	**Facilitation of Technology up-gradation**		
3.1	Survey for needs of technology upgradation	Q1/2003	Entire cluster
3.2	Networking with support institutions for finance	Q1-Q3/2003	20 Firms
4.	**Strengthening and Creation of Networks**		
4.1	Formation of 2 consortia for making full subassemblies	Q2-Q3/2003	12 Firms
5.	**Direct Linkages of SMEs to the Market**		
5.1	Printing of common brochures for two consortia	Q3/2003	2 Consortia
5.2	Hiring of common marketing consultants	Q2-Q3/2003	2 Consortia
5.3	Common marketing office	Q2-Q3/2003	2 Consortia

ANNEXURE 1

List of Large Scale Auto Component Industries in the Cluster

S No.	Name of the company	Turnover
1	Autolec Industries Ltd.	**Rs. 105 crores**
2	Axles India Ltd	**Rs. 100 crores**
3	Brakes India Ltd.	**Rs. 600 crores**
4	Engine Valves Ltd	**Rs. 120 crores**
5	India Pistons Ltd.	**Rs. 250 crores**
6	Lucas-TVS	**Rs. 880 crores**
7	Rane Madras Ltd	**Rs. 177 crores**
8	Rane Brake Linings Ltd.	**Rs. 125 crores**
9	Rane Engine Valves Ltd.	**Rs. 100 crores**
10	Rane TRW Steering Systems Ltd	**Rs. 150 crores**
11	Sundaram Brake Linings Ltd.	**Rs. 100 crores**
12	Sundaram-Clayton Ltd.CD	**Rs. 140 crores**
13	Sundram Fasteners Ltd.	**Rs. 480 crores**
14	Tube Investments of India Ltd.	**Rs. 1000 crores**
15	Ucal Fuel Systems Ltd.	**Rs. 100 crores**
16	Wheels India Ltd	**Rs. 336 crores**

ANNEXURE 2

Statistical figures for Production and Sales of Automotives Worldwide

Production of Cars By Region (in Numbers)

Year	Western Europe	NAFTA	Japan	Asia (excd Japan)	Eastern Europe	Other Markets	Total
1990	14,423	7,725	9,948	2,028	1,848	847	**36,819**
1991	13,873	7,219	9,753	2,205	1,669	918	**35,637**
1992	14,215	7,470	9,378	2,424	1,719	1,125	**36,331**
1993	12,034	8,172	8,497	2,889	2,060	1,474	**35,126**
1994	13,545	8,657	7,801	3,215	1,630	1,676	**36,524**
1995	13,973	8,361	7,612	3,667	1,778	1,622	**37,014**
1996	14,283	8,147	7,864	4,071	1,863	1,835	**38,063**
1997	14,865	8,103	8,492	4,197	2,123	2,155	**39,935**
1998	14,214	8,001	8,056	3,445	2,200	1,785	**37,701**
1999	14,872	8,255	8,100	4,644	2,200	1,481	**39,552**
2000	14,595	8,377	8,363	4,387	2,432	2,184	**40,338**

Production of Commercial Vehicles By Region(in Numbers)

Year	Western Europe	NAFTA	Japan	Asia (excd Japan)	Eastern Europe	Other Markets	Total
1990	1,858	4,876	3,539	1,549	830	577	**13,229**
1991	1,744	4,541	3,492	1,697	707	580	**12,762**
1992	1,725	5,360	3,124	1,948	661	626	**13,444**
1993	1,295	6,010	2,731	2,167	561	685	**13,449**
1994	1,569	7,098	2,753	2,250	260	1,044	**14,974**
1995	1,808	6,903	2,585	2,650	221	1,128	**15,295**
1996	1,886	7,245	2,482	3,050	221	1,186	**16,070**
1997	2,110	7,683	2,484	2,279	258	1,326	**16,140**
1998	2,118	7,800	2,030	1,994	253	1,322	**15,517**
1999	2,145	9,283	1,795	2,226	212	1,191	**16,852**
2000	2,245	9,432	1,782	2,372	330	1,941	**18,103**

Production of All Vehicles By Region (in Nos)

Year	Western Europe	NAFTA	Japan	Asia (excd Japan)	Eastern Europe	Other Markets	Total
1990	16,281	12,601	13,487	3,577	2,678	1,424	**50,048**
1991	15,617	11,760	13,245	3,902	2,377	1,498	**48,399**
1992	15,940	12,830	12,502	4,372	2,380	1,751	**49,775**
1993	13,329	14,182	11,228	5,056	2,621	2,159	**48,575**
1994	15,114	15,755	10,554	5,465	1,890	2,720	**51,498**
1995	15,781	15,264	10,197	6,317	2,000	2,750	**52,309**
1996	16,169	15,392	10,346	7,121	2,084	3,021	**54,133**
1997	16,975	15,786	10,976	6,476	2,381	3,481	**56,075**
1998	18,111	15,801	10,086	5,439	2,453	3,107	**54,997**
1999	17,017	17,538	9,895	6,870	2,412	2,672	**56,404**
2000	16,840	17,810	10,145	6,759	2,762	4,125	**58,441**

Sales of Cars By Region(in Nos)

Year	Western Europe	NAFTA	Japan	Asia (excd Japan)	Eastern Europe	Other Markets	Total
1990	13,233	10,532	5,103	1,994	1,995	1,730	**34,587**
1991	13,500	9,466	4,868	2,086	1,697	1,775	**33,392**
1992	13,497	9,449	4,454	2,355	1,731	1,989	**33,475**
1993	11,450	9,653	4,200	2,853	1,654	2,344	**32,154**
1994	11,934	10,154	4,210	2,972	1,560	2,617	**33,447**
1995	12,021	9,424	4,444	3,267	1,533	2,970	**33,659**
1996	13,083	9,390	4,669	3,533	1,729	3,088	**35,492**
1997	13,138	9,333	4,492	3,599	1,906	3,423	**35,891**
1998	14,038	9,357	4,093	2,468	1,820	3,012	**34,788**
1999	15,049	10,023	4,154	3,333	1,900	2,706	**37,165**
2000	14,742	Not available	4,260	1,063	Not available	Not available	**Not available**

Sales of Commercial Vehicles By Region (in Nos)

Year	Western Europe	NAFTA	Japan	Asia (excd Japan)	Eastern Europe	Other Markets	Total
1990	1,854	5,467	2,675	1,749	1,106	561	**13,412**
1991	1,677	5,040	2,657	1,755	800	699	**12,628**
1992	1,667	5,621	2,505	2,159	735	764	**13,451**
1993	1,350	6,290	2,268	2,448	740	907	**14,003**
1994	1,433	7,118	2,299	2,550	350	1,013	**14,763**
1995	1,537	7,056	2,404	2,850	310	1,103	**15,260**
1996	1,626	7,623	2,392	2,830	360	1,183	**16,014**
1997	1,740	8,086	2,233	2,450	395	1,222	**16,126**
1998	1,954	8,671	1,781	2,050	405	1,007	**15,868**
1999	2,118	9,636	1,707	2,830	420	836	**17,547**
2000	2,270	Not available	1,695	381	Not available	Not available	**Not available**

Sales of All Vehicles By Region (in Nos)

Year	Western Europe	NAFTA	Japan	Asia (excl Japan)	Eastern Europe	Other Markets	Total
1990	15,087	15,999	7,778	3,743	3,101	2,291	**47,999**
1991	15,177	14,506	7,525	3,841	2,497	2,474	**46,020**
1992	15,164	15,070	6,959	4,514	2,466	2,753	**46,926**
1993	12,800	15,943	6,468	5,301	2,394	3,251	**46,157**
1994	13,367	17,272	6,509	5,522	1,910	3,630	**48,210**
1995	13,558	16,480	6,848	6,117	1,843	4,073	**48,919**
1996	14,709	17,013	7,061	6,363	2,089	4,271	**51,506**
1997	14,878	17,419	6,725	6,049	2,301	4,645	**52,017**
1998	15,992	18,028	5,874	4,518	2,225	4,019	**50,656**
1999	17,167	19,659	5,861	6,163	2,320	3,542	**54,712**
2000	17,012	Not available	5,955	1,444	Not available	Not available	**Not available**