Chapter 8

Findings on Auto-Component Sector
8.1 Objectives of this study

1. To understand the Production & Selling business of the Auto-Component industry
2. To understand challenges faced by this industry in business
3. To understand the ‘Approaches’ implemented by this industry to deal with challenges.

8.2 Definitions and Meaning

Auto-Component industry means an industry that includes manufacturing those components or parts required in manufacturing Automobiles. Scope and inquiry into studies and terms of reference: The research study pertains to exploratory type and was conducted by a grounded theory Approach.

8.3 Auto-Component Sector

SMEs particularly classified by the Government of India in the Micro, Small and Medium Enterprises Bill, 2006, define the segment on the basis of investments in plant and machinery. Small enterprises are those with an investment of not more than Rs 50 million in plant and machinery, and medium enterprises with an investment of over Rs 50 million but less than Rs 100 million in plant and machinery. This definition has put the segment within a legal framework.

8.4 SMEs in Auto-Components

Auto component SMEs are one of the fastest growing within the SME category of industries. These units are key contributors to the total production of Auto-Components and also have a significant share in the exports of the industry.

As part of a highly fragmented industry, these companies mostly are part of the unorganized sector. They operate in a tier framework, and most of the companies in the
SME segment are in the Tier II or below. Few of the suppliers to OEMs are medium scale enterprises.

The SMEs are riding a boom phase, driven by demand from global auto manufacturers. The industry is undergoing a major restructuring and many existing companies are expected to move up in the value chain to a higher tier. Nevertheless, sustenance and survival still remains an issue of concern for these companies as they will have to absorb global best practices in this competitive environment.

8.5 Prospects of Auto-Component Business

Auto-Component industry is anticipated to witness high growth in sales due to exports even as the domestic demand may be impacted by automotive segment specific growth rates in the short to medium term. While the export growth potential remains significant, the ability of Auto-Component players to capitalize on their strengths and overcome challenges assumes importance. Growth of Auto-Component industry is linked to demand for automotive and the segment specific demand may affect the Original Equipment Manufacturers (OEMs) demand for automotive components.

Moreover, the sales growth for Auto-Component players from domestic market is likely to be volume led as realizations may increase only modestly. In terms of segment specific expectations, while two-wheelers are expected to witness healthy demand growth in short term, the demand growth rate in passenger vehicles and commercial vehicles (in domestic market) is expected to be lower. The recent acquisitions by auto component companies may allow diversification of revenues, thus reduced exposure to cyclicality in domestic market, access to new customers and technologies. Further, presence in key global automotive markets augur well for Indian companies who face threat of imports in domestic market in light of the existing free trade agreements (with Thailand) and planned FTA/Preferential trade agreement (PTA) between countries as well as major trading blocks.
8.6 Challenges in the Auto-Component Business

SME business owners face a financial challenge that is unique: Many small business owners fall short financially and not achieve the maximum return from their business because of the dual challenge they face in running a successful business whilst managing and growing their personal wealth. This is the harsh reality for a time-poor and ageing market looking to financially reap the rewards of years of hard work and dedication. Given the growing complexity of the financial services industry, business owners can benefit from their way through the maze of financial issues. The right suggestion would be to use unique relationship between business and personal wealth and to design policy to include

Challenges of Investment Management and Debt structuring: - Some business houses focus only on one piece of the puzzle, such as superannuation or investments, and therefore do not adequately take into consideration a complete financial situation. The sad truth is the traditional financing which is ill equipped to assist business owners in managing and growing their wealth because they focus on transactions rather than building long term relationships. The key risks that the auto component SMEs faces include:

8.7 Business Policy in Automotive-Component Industry

Financial Express (2006), in their publication on Auto-Component sector policies, stated that, the overall market size of the Indian Auto-Components industry is estimated at US$ 8.7 billion. Industry production in value terms increased at a compounded annual growth rate of 16.4 per cent during FY1998-2005. The source has further stated that this industry bears relatively small size by global standards however the Indian automotive components industry has the ability to produce a wide range of products; its size is still small compared to total global annual turnover of $1.2 trillion.

Market share concentration: The automotive components industry is a combination of different product segments, with each segment having a different market structure.
However, the number of companies present in each segment differs because of levels of technology requirement. Although each product segment has a large number of players, a small number dominates the market. Plant locations in proximity to OEMs: In a bid to facilitate faster delivery and lower freight charges, automotive components manufacturers are located largely around their OEM (original equipment manufacturers) customers. This is particularly so since a large number of organized sector players directly supply to the OEM producer. Technological tie-ups: A large proportion of players in the Indian automotive components industry have links with at least one international player. They operate in one of the three ways as follows such as a Subsidiary of an International Company, a Joint Venture or as a Technical Partner.

Although beginning with technology tie-ups, various auto component companies have developed in-house technological expertise over the years. There has been observed a rising quality consciousness for the reason that the average quality of automotive components produced in India has been improving gradually, particularly during the past few years. Moreover, the increasing focus of the Indian Auto-Component manufacturers to address the export to global OEMs, who require adherence to stringent quality norms, has forced Indian companies to upgrade their facilities. Additionally, improvement in end of line rejection rates and customer rejection rate, the two measures of quality point to the improved quality levels.

Additionally, six companies have won Deming Prize. Increasing focus on productivity has been observed due to the increasing pressure on the margins of the OEMs for the component manufacturers to deliver at lower cost. This has forced component manufacturers to enhance productivity through various techniques that include tear-down value analysis, lean manufacturing processes, and collaborative research among others.

8.8 Another Cluster Approach

Majority of the Auto Component SMEs in Pune cluster cater to OEMs. Most of these OEMs prefer a standard quality of products and share information with their vendors regarding technology up-gradation and required specification. This information helps the
vendors immensely to upgrade quality of their products on regular intervals and as per client requirement. On a scale of 1 to 8 (1 being the most important benefit and 8 being the least important benefit), the surveyed companies rated quality upgrade at 2.38, followed by cost effectiveness at 2.67 and procurement of raw materials at 3.48.

**Issues and challenges in the cluster:** The Auto-Components industry depends heavily on supply of raw material such as steel and other metals as it is highly product oriented. However, prices of raw material fluctuate most of the times, in turn affecting the pricing mechanism of the end-products. Around 51% of the surveyed companies mentioned fluctuating cost of raw material as the main challenge. The other challenges are competition from other clusters and various taxes and octroi levied by the state Government.

**8.9 Study of Pune Auto-Components Industry**

The Maharashtra Government has been actively supporting the Automobile companies to set up their manufacturing plants in or around Pune, enabling Pune to emerge as an Automobile hub in the state; the establishment of Tata Motors in 1966 prompted others such as Bharat Forge and Gabriel India to follow suit. In 2009, Volkswagen also started its production facility in Pune and General Motors followed in Jan 2010 with the commencement of commercial production of diesel power train in the city. Apart from these, various other Indian and global Automobile giants such as Mercedes Benz, Ford Motors, Bajaj Auto and Kinetic Motor have already set up their manufacturing facilities in the city. These players manufacture many Auto-Components such as engine parts, drive, transmission parts, suspension and braking parts, electrical parts, and body and chassis parts.

Further, liberalisation of the import export policy, availability of skilled manpower, and Government initiatives (reduction of peak rate duty, reduction of customs, and setting up of NATRiP) have ably supported the industry’s growth in the city.
**Auto-Component Emerging as Giant Ancillary Industry:** - Auto-ancillary just figures out a supporting industry to the major Automobile. These industries particularly manufacture nearly 20,000 kinds of Auto-Components ranging from engine parts, drive transmission-steering parts, body, chassis, suspension, fasteners, brakes, electrical and electronic parts, to name a few. Analyses of the factors influencing the performance of the auto-ancillary industry clearly indicate the grounds for suggesting this Approach.

Major link to infrastructure: - Auto-ancillary offers diverse products and services to Automobile manufacturing leading to form a major link to infrastructure due its need, size and significance to economic development.

Wide-Scope for expansion: - Auto-ancillary industry has a wide spectrum of products and services that involves as high as 20,000 diverse Auto-Components and therefore calls for optimum utilization of resources. Thus plenty of favourable factors arise to establishing the auto-ancillary as an instrument pertaining to incessant opportunities in product design, cost management techniques, innovation in technology, and intelligence in management.

**Prospects for large SME participation:** More than eight independent small Auto-Component industries are listed to serve this Automobile industry. This industry thus provides several opportunities to growing other small and medium enterprises and gains significance, supremacy and magnetism for the investors.

Potential for fulfilling needs of terminal markets: Auto-ancillary has a ready terminal market of Automobiles industry which belongs to infrastructure class helping the transport industry, a catalyst to development of Urban and Rural economy leading national economy.

Capacity for large employability of labour, supervisors and executives as every SME would invariably need to employ good many employees of wide, high and precise skills to meet the terms with the manufacturing. Competency in investment, return and savings:
Auto-ancillary is everlasting industry as motor vehicles would be on continuous demand for ever. Therefore this industry is competent to raise incessant opportunities for investment and expansion of turnover. The products will have to satisfy ever-increasing need for exports to augment returns and savings leading to real economic development.

Co-ordination between the firms in the industry: - Auto-Cluster is an organization tool developed for running, maintaining and expanding the economic activity. These activities uphold the interests of participants and offers wide range of services and execute comprehensive and collective needs of the industry such as: Business depends on the buyer-supplier as partners.

The level and quality of support services: Many of the companies in the cluster sell products or services to companies within or outside the region.

Employment in the cluster is more concentrated in the region than the national average, and the cluster is an existing or emerging area of specialization. The cluster is of a significant size or, if new, has an above average growth rate compared to that of the nation as a whole.

The Legal, Regulatory and Policy Environment on Auto-Ancillary: Government of India recognized Auto-Ancillary as an industry and as such it is a perfectly official business for the professionals to launch with pride.

Auto-ancillary finds advantage of standardized procedures and norms as majority of the countries in the globe have formulated their regulations in respect of conformity of products and environmental regulations which are compatible to adapt, maintain and comply with conveniently through installation of proper and approved systems at the place of work. This aspect adds better clarity, respect to customers and fair dealings in the business.
Policy environment for Auto-ancillary industry is friendly as many attractions are proposed by the Government for the investors allowing 100 per cent foreign direct investment through the automatic route. Apart from this, the Government’s Industrial Infrastructure Up gradation Scheme offers a grant of up to 75 per cent of the total project cost or a maximum of US$ 12 million on a one-time basis to chosen clusters for improving industrial infrastructure through private-public partnership. Special Purpose Vehicle, formed by the industry/cluster association at the specific cluster level has the authority to implement the scheme.

Auto-ancillary thus finds an important place in the infrastructure class and as a promising industry to the overall economic-development of the region and nation. Figure-26 exhibits the diverse sub-sector industries linked to Auto-Component Industries.

![Auto-Ancillary Links](image)

Figure 26

Pune has been growing as an important industrial base for more than a century. Therefore, selecting Pune as the manufacturing location for some of the major auto giants was natural. Bajaj Auto-Limited, Tata Motors Limited, Bajaj Tempo Limited, Kinetic Engineering Ltd. initially established their Automobile industries. Through large scale ancillarization and vendor development efforts of the auto giants in Pune which also include Bajaj Tempo and Kinetic Engineering, the auto component manufacturing companies got a boost to establish their factories in Pune. Gradually, Pune as an auto
manufacturing city could place itself firmly. Pune has successfully formed auto-clusters of which the essential activities conducted have been stated in figure.

**Competitive Edge of Pune’s Auto-Component Industries**

Field Survey has revealed a new phenomenon in Auto-Component Sector is becoming more active in Pune region than other geographical zones of Gurgaon and Chennai through following Technological development modes:

1. The Automobile Research Association of India plays a key role in coordinating research in technology and also industries are increasingly having training programmes in collaboration with technology and designing institutions.
2. Synergy is taking place between industry, public and private educational institutions. Several new business Models are coming up in this scenario striking collaborations at multilevel operations in manufacturing, technology as well as in business in the global market.
3. The increasing content of engineering services in the production process makes a clear case of rising agglomeration between various knowledge intensive activities.
4. Research and development in the field of manufacturing as well as in the field of application engineering is at present highly dependent on software development.
5. Pune envisages such change with software centres coming up to cater to the needs of manufacturing and engineering in the Automobile segment.

**8.10 Research Report of Dun and Bradstreet (India)**

Dun & Bradstreet undertook a sample study of Auto-Components companies based in Pune to validate the research findings. Some of the major insights from this study are as follows:

Operational highlights

The survey conducted by Dun & Bradstreet revealed that an overwhelming 61% of auto component companies in the Pune cluster are private limited SMEs, followed by 19% operating on a partnership basis.
The survey conducted by Dun & Bradstreet revealed that majority of the companies recorded income of less than Rs. 50 million in FY10; 22% achieved between Rs. 50 million and Rs.100 million, closely followed by 20% with income of Rs. 500 million to Rs. 1,000 million. Moreover, majority of these Auto-Components companies in Pune are SSIs and SMEs, which are vendors to OEMs and tier-1 and tier-2 players. Around 71% of the companies surveyed cater exclusively to OEMs. Almost 50% of the companies in the cluster serve both domestic and international markets and another 44% cater exclusively to the domestic market.

**Export Regions:** The survey revealed that in terms of exports, America continues to be the main market for auto component SMEs with over 42% of SMEs exporting their products to the America. Europe, a major destination for Automobile industry globally, emerged as the second most preferred export market for the Auto-Components manufactures in Pune.

**Production and Markets Served:** The survey also revealed that the Auto-Components players in the cluster supply exclusively to OEMs as some of them including Tata Motors, Bajaj Auto, BMW and Mercedes Benz have set up facilities in the city. Considering that a single player caters to multiple sub-segments, the survey further highlights that HCVs account for 25% of the total market served by the surveyed companies, followed closely by LCVs at 22%.

Although the Pune cluster manufactures almost all types of Auto-Components, smaller components such as sheet metal, press parts, gas springs, radiators, and centrifuge components form a major proportion of products manufactured (43%), followed by the most common engine parts (23%). Rest of the parts such as electrical parts, body chassis, and suspension and braking parts have a smaller share.

Around 30% of the companies surveyed have an employee base of less than 25 while approximately 22.5% of these players employ around 150-300 employees.

Around 32% of the respondent companies invested less than Rs. 5 million in plant and machinery; 20% made investments of Rs.10-50 million while another 20% spent more than Rs. 100 million on plant and machinery. Almost 74% of the companies surveyed
operate with only one plant, 12% of them have two plants, and the rest operate with more than two plants in Pune.

The survey also revealed that auto component companies are increasingly acquiring various quality certifications to stay competitive. Further, MNCs are known to deal with suppliers who have certain quality certifications. Accordingly, the survey revealed that around 63% of Auto-Components SMEs in the Pune cluster have some kind of quality certifications.

**Technology Review**

Around 41% of the players in the Pune cluster have income of less than ` 50 mn. Accordingly, their capacity to spend on infrastructure is limited. The micro companies do not have adequate resources to adopt IT products for business purposes. Thus, around 37% of the companies surveyed spend less than 1% of their total expenditure on IT. Only 8.6% of the companies invest more than 10% in this regard.

Furthermore, although the companies in the cluster are quite small, majority of them realise the importance of IT and have slowly begun to adopt it for their business activities. Around 39% of the companies implemented IT products in their production system and 36.6% utilised it in their payroll systems. Majority of the companies seem to prefer off-the-shelf ERP software rather than the customized versions.

The auto component companies in the cluster seem to be aware of the benefits of adopting IT in their businesses, but they face a few challenges in this regard. The major challenge is that these businesses are too small to adopt any IT application. Another challenge is availability of skilled labour, as Pune is also considered a hub for the IT and BPO industry, which pays much higher salaries than the auto component SMEs, most of the skilled labour are attracted towards this sector.
Electronic Goods

The electronic goods industry manufactures consumer electronic goods, industrial electronic goods, communication and broadcasting equipment, strategic electronics, computer peripherals, and electronic components.

Operational highlights

Owing to liberalisation policy of the Indian Government which came into effect in 1991, the Indian economy has witnessed robust growth in last two decades. This coupled with bulging middle class with high disposable income has opened up new opportunities for the Indian electronic goods industry. The survey conducted by D&B revealed that 65% of electronic goods SMEs in Pune came into existence after 1990.

The survey also revealed that approximately 95% of the electronic goods SMEs operate as standalone manufacturers; while a mere 5% are involved in manufacturing as well as distribution and wholesale activities.

Products manufactured

Around 66% of the electronic goods SMEs in the cluster manufacture industrial electronic goods for industries such as steel, textiles, cement, and power. Another 21% produce consumer electronic products, while the remaining 13% manufacture electronic components.

Sub-segment classification

The electronic goods SMEs can be further sub-divided into enterprises that manufacture pumps, personal computers, transmission equipment, satellite base communications, and picture tubes. Around 19% of the electronic goods SMEs manufacture process control instruments, followed by 12% making automation systems. The share of SMEs manufacturing products such as power devices, fans, transmission equipment, switch boards and medical instruments is relatively less.

Income classification of surveyed SMEs

About 81% of the SMEs recorded income of less than Rs. 50 million. A mere 7% achieved Rs. 250 million --500 million, while the rest were between 50 million and ` 250
million. Moreover, 81% of the SMEs undertake manufacturing activities at a single location with one facility. The survey further revealed that 50% of the SMEs generating income more than `50 mn cater to more than one segment.

Exports
The domestic market is the main focus of the SMEs in the Pune cluster, with 74% of the surveyed lot catering only to the domestic market and around 26% serving both domestic and international demand.

Approximately 27% of the SMEs are engaged in some form of export activity, with Europe, Asia and the Middle East being the preferred destinations.

Technology Review
IT adoption among SMEs
D&B attempted to understand the IT deployment patterns and spending across electronic goods manufacturing SMEs. Majority of the electronic goods SMEs in the Pune cluster implement IT processes in their day-to-day activities, which implies that adoption of IT practices is gaining wide-spread acceptance from the SMEs. The surveyed companies spend a major part of their IT budgets on hardware products such as printers, desktops, scanners and notebooks, and relatively less on software for regular operations. Software used by these SMEs includes Tally, SAP and Auto CAD. Some SMEs have also adopted ERP and completely customized software.

Existing areas of IT application
The survey indicates that the cluster SMEs have adopted IT practices, but on a relatively small scale. Around 34% of the enterprises use IT applications for maintaining their payroll and about 15% for receivables management and marketing activities.

IT spending as a percentage of total expenditure
The electronic goods SMEs have limited spending power due to their lower revenue margins. Approximately 46% of these SMEs spend less than 1% of their total expenditure on IT, followed by 18% that spend 1-2.5% and a mere 12% spending more than 10% on
their IT requirements. Thus, there is scope for enhanced use of IT applications to increase productivity and/or efficiency in SMEs.

**Challenges in adopting IT**

The electronic goods SMEs in Pune face a number of problems in adopting IT practices in their day-to-day activities. A majority indicated that their businesses are too small to adopt IT applications. The second major challenge is that implementation costs are high. Moreover, a few SMEs do not find relevant software for their businesses in the market.

Therefore, IT companies should produce software and other IT applications pertaining to SMEs with lower implementation costs so that these SMEs can adopt and utilize IT in their day-to-day activities.

**Issues and Challenges:** Each state Government tries to provide a conducive business environment for industries; however, a few issues continue to haunt the industries that operate in clusters. The intensity of these issues varies from cluster to cluster, but the issues remain a concern across states. The following sections highlight the benefits as well as the issues and challenges for the Auto-Components and electronic goods players in the Pune cluster.

Kale Shailendra ,et al (2009) have reported in their research paper in Advances in Management, that automotive industry is very dynamic. In India there are 100 people per vehicle, while this figure is 82 in China. It is expected that Indian Automobile industry will achieve mass motorization status by 2014. During this century, Indian automotive manufacturing has emerged as the most economically significant industry in the world. It has hundreds of suppliers and thousands of spare parts units. Raw Materials, sub assembly parts represent about 60-70 per cent of the cost of an automotive vehicle. Automobile companies are outsourcing about 95 % of the parts from auto component industry. Hence auto component industry is playing key role in automotive sector. Hence
the supply chain performance has become key important factor for success of Automobile company.

The Indian auto component industry is one of India's sunrise industries with tremendous growth prospects. From a low-key supplier providing components to the domestic market, et al alone, the industry has emerged as one of the key Auto-Components centres in Asia and is today seen as a significant player in the global automotive supply chain. India is now a supplier of a range of high-value and critical Auto-Components to global auto makers such as General Motors, Toyota, Ford and Volkswagen amongst others. As per an Automotive Component Manufacturers Association of India (ACMA) report, the turnover of the auto component industry was estimated at over US$ 18 billion in 2007-08, an increase of 27.2 per cent since 2002. It is likely to touch US$ 40 billion by 2015-16.

In Indian auto manufacturing cities, Pune has succeeded in developing supply clusters as a component manufacturer and supplier. The objective of this paper is to investigate the effectiveness of supply chain in auto component industry. The research focuses on supply chain practices in the Pune based auto component industries. Primary data would be collected through structured questionnaire and an exploratory survey while secondary data would be based on the review of research papers on SCM and logistics.

Project Vikas (2009), Reports on their website on Pune Auto Cluster: - Pune’s development lies mainly in the city’s auto sector. Auto sectors and auto component sectors gather around 50% of the total investments coming into this region. In the Pune auto cluster, presently there are around 500 Small and Medium Enterprises (SMEs) that produce Auto-Components. The yearly turnover of this cluster is approximately Rs 10,000 crores (excluding Automobile majors like Kinetic Engineering, Bajaj Tempo, Bajaj Auto & Tata Motors).

The major products from the Pune cluster are clutch components, gear components, brake components, shafts, axles, valves, engine components, electrical components, etc. The cluster uses raw materials like rubber, plastic and metals. There are many support
institutions for the cluster from educational sector, research sector, IT sector and more. Pune might be the favourable destination for the IT sector, but it is a major auto destination as well, according to a study conducted by the Mahratta Chamber of Commerce, Industry and Agriculture. In an initiative under the IIUS scheme for the Auto Cluster in Pune, there are some support facilities that are planned. These are the Auto Electronics Centre, that will have an R&D lab and a common testing facility; CAD\CAM Centre which will have a rapid prototyping facility, a common facility centre, power back up facility and CNC machining centre and new infrastructure facilities like fiber optic connectivity, solid waste disposal, CETP, wireless communication facility and market development facility.

Business Line, 2006, published that “Pune auto cluster project begins operations”. The first phase of the much-awaited Pune auto cluster project commenced operations at Chinchwad on Friday. The Rs 67-crore first phase would have prototype making facility, CAD/CAM/CAE centre, CNC matching centre, research and development laboratory, inspection, validation and certification centres. Testing facilities and R&D laboratories for rubber and polymer sectors would also be established.

Within a span of one year, three buildings, the multipurpose institutional building taking up 65,000 sq ft area; a permanent exhibition centre of 38,000 sq ft and a common facility with a food court etc, are expected to come up. Phase I operations are launched in a rented premise of about 15,000 sq. ft belonging to Siddeshwar Industries Pvt Ltd, which is into the auto component, machining and forging segments. The company, which has about six factories in the Pimpri Chinchwad Municipal Corporation (PCMC), has a turnover of Rs 75 crore and a forging capacity of 1,500 tonnes.

Mr. Ajay Dua said the Maharashtra Industrial Development Corporation would provide the infrastructure as the manufacturing segment has reached a stage where it needed support for facilities such as the common effluent treatment and industry-specific requirements. He said while exports have been growing over 60 per cent, the domestic
segment has been growing at 15 per cent for the past three years. He said the aim was to touch 20 per cent in the domestic segment and 100 per cent in the export market.

Quoting the McKinsey report, Mr. Dua said by 2015 the production would go up to $25 billion. "If this happens, then India would become the largest auto component and Automobile manufacturer in the world". The Central Government has contributed Rs 50 crore for the project. The remaining amount is likely to be chipped in by the industry and the PCMC under whose jurisdiction the auto cluster is being developed. The entire project, to be completed in three phases, would need an investment of Rs 118 crore, he added.

Mr. Baba N. Kalyani, Chairman and Managing Director, Bharat Forge Ltd, said the global OEMs have identified eight low-cost countries to which they could outsource their products. India is one among them and about $375 billion is the value estimated for the products that are to be outsourced to these eight countries.

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