

CLUSTER PROFILE AUTO PARTS CLUSTER LAHORE



Turn Potential into Profit

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1 Description of Cluster

1.1 Cluster Brief

Lahore is the one of most industrialized city of Punjab and is well known for its engineering industry. The automotive assembling in Pakistan started in 1950 when National Motors Limited was established in Karachi. Being simultaneously a sea port and the largest market for vehicles, Karachi became the hub of automobile assembling plants which laid the foundation of Auto Parts Manufacturing Industry in Pakistan. Since its inception the major focus of auto parts industry was in Karachi, but slowly and gradually it also shifted towards Lahore. Currently Lahore auto parts cluster is the second largest hub for auto parts manufacturing after Karachi and catering almost 50% of auto parts demands of assemblers and after markets.

1.2 History and Background

The first auto part manufacturing unit was established in Lahore was way back in 1942 for after sales market. The initial focus of auto parts manufacturing units established in 1950s, 1960s and 1970s was limited to tractors, buses & truck parts as well as to cater the need of after sales market of different automobiles. However, the major advancement in the industry took place during the 80's when for the first time Suzuki commenced production in Pakistan. After that other assemblers of cars and motorcycles were also established. The establishment of assembling plants gives the encouragement to local industry to enter in auto parts manufacturing. Overall 80s and 90s are the decade when Lahore auto parts cluster start to develop rapidly.

1.3 Defining the Products

The production of auto parts in Lahore can be broadly categorized into following segments:

- Parts for Cars and Light Commercial Vehicles (LCVs)
- Parts for Two Wheelers and Three Wheelers
- Tractor Parts
- Parts for Trucks and Buses
- Parts for After Sales Market

An automobile consists of more than 20,000 components, with each performing a different function. The product ranges of above segments can be broadly classified into following four broad categories.

- Engine Parts
- Body Parts
- Trims
- Suspension Parts
- Electrical Parts

Bodies parts are the largest sub-segment around 34% of units are involved in manufacturing of body parts for all segments. After that, suspension parts is the second largest as around 22% of units are involved in manufacturing suspension parts.

1.4 Geographical Location

The Lahore auto parts cluster is highly decentralized and varied in terms of size and location. The small and unorganized units are located in congested areas of Badami Bagh, Mecleod Road and Bilal Gang, while large and medium organized units are located in Kot Lkhpat Industrial Estate, Thokar Niaz Baig and Multan Road.

1.5 Core Cluster Actors

The manufacturers of all type of parts of auto vehicles are the core cluster actors. The major highlights of Lahore auto parts cluster is as follows:

Table: Lahore Auto Parts Cluster

Number of Units	Approximately 750 units - 100 Large and Medium Organized Sector (Registered vendors to assemblers/OEMs) - 200 Medium and Small Mix of Organized and Unorganized Sector (Producing parts for some new assemblers as well as after sales market) - 450 Small Unorganized Sector (Only focusing on after sales market)
Employment Generated	About 220,000 (Organized sector provides employment to 60,000 people whereas Unorganized sector employs almost 160,000)
Revenues to GOP	Approx. Rs. 4 billion (By organized sector only)
Total Investment	Approx. Rs. 30 billion
Capacity Utilization	80% to 90%

The 100 units in the organized sector are the members of Pakistan Association of Automotive Parts & Accessories Manufacturers. They are the registered vendor of Original Equipment Manufacturers and only work for them. These units are the main Principle Firm in the Lahore auto parts cluster.

2 Analysis of Business Operations

2.1 Production Processes

The automotive components industry is more aptly described as an "agglomeration of industries" rather than as a single industry. An automobile consists of more than 20,000 components, with each performing a different function. These parts broadly categories as boy parts, engine/engine assembly parts, electrical parts, power train & chasse parts and interior trim parts. The production processes of different parts are mixed of different

processes. The main processes involved in the manufacturing of auto parts are given below. It is not necessary that production of all parts used in an automobile will comprise of all the following processes.

- Product Designing
- Casting Process
- Machining Process
- Forging Process

2.2 Raw Material

The automotive components industry is more aptly described as an "agglomeration of industries" rather than as a single industry. This industry lends lot of support from the other sectors. The main raw materials and inputs used for the manufacturing of auto parts are steel, aluminum, copper and their special alloys and many others. The bakelite powder and plastics are main raw material for plastic parts of auto mobiles.

The main raw material which is steel is normally purchased from Pakistan Steel Mills and People Steel Mills. Both these raw material suppliers are located in Karachi. Large and medium firms buy directly from these manufacturers, where as small and cottage firms buy from local dealers and stockiest. The aluminum, copper and their special alloys and other materials are purchased from Lahore as well as from Karachi. Except steel other raw material are easily available in local market of Lahore.

2.3 Technology

Technology is rapidly changing in all spheres of life these days and also in auto parts sector. Old conventional systems are changing with computer aided systems. Majority of auto parts industry in Lahore has adopted the conventional systems and has trained their manpower according to these systems. Now the market size has increased tremendously and we need to increase our volume of production. The lack of modern technology and modern system is the biggest hurdle in the growth of Lahore auto parts cluster. Now the industry is moving in the right direction of technology up-gradation. Currently in the organized sector the technology level is high approximately 40% units having latest modern technology. In the unorganized sector the technology level is very low and they are still relying on conventional manufacturing.

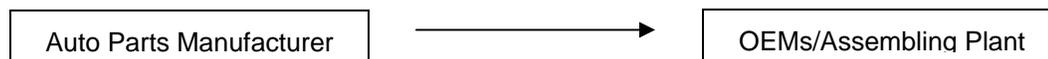
2.3 Market Analysis

Keeping in view sales patterns and industry dynamics, the market for Lahore auto parts cluster can be categorized in two following segment segments:

2.3.1 Assembling Plants/OEMs Market

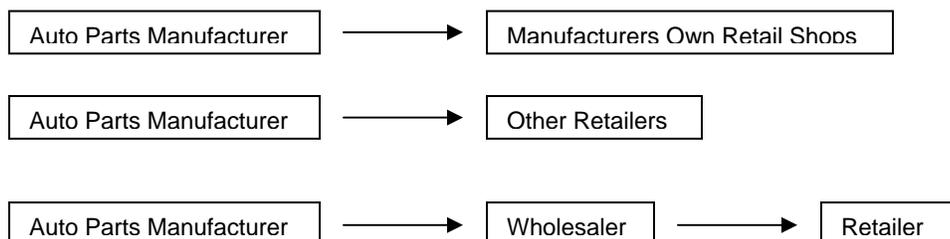
The composition of auto's demand in Pakistan is dominated by motorcycles 68%, with cars at 21%. Keeping in view the sales trends and existing installed capacities, it is estimated that Motorcycle and Car Parts are the major dominant segment of market for auto parts manufacturers. This market segment is dominated by Organized Sector which constitutes 100 Large and Medium auto parts manufacturing units which are the registered suppliers of top ranked OEMs. There

are another 200 Medium and Small units which are also trying to enter in this segment of market. Their focus is on new entrants in motorcycles and car segment as well as the specialized after sales market for branded parts. The channel of distribution in market segment is very simple. The auto parts manufacturers directly get the others from their registered OEMs and then they directly dispatch the good to OEMs.



2.3.2 Auto Parts After Sales Market

The after market of auto parts in Pakistan is estimated at US \$ 750 million (imports and local production together). As around 40% market is catered by Lahore auto parts manufacturers, so it is assumed that market potential for Lahore cluster is approximately US \$ 300 million. This market segment is dominated by Unorganized Sector of around 650 units (200 Units small & medium a mix of organized and unorganized sector other 450 units are small and is unorganized sector). As this market segment is mix of Organized and Unorganized sector and is involved in production of a very high diversified range of products, so the channel of distribution in this segment varies according to the dynamics of manufacturing units. The following types of three different distribution channels are prevailing in the market.



3 Institutional Setup

3.1 Entrepreneurs Associations

- Pakistan Association of Automotive Parts & Accessories Manufacturers (PAAPAM)
- Lahore Chamber of Commerce and Industry (LCCI)

3.2 Government/Semi Government Support Institutions

- Pakistan Industrial Technical Assistance Centre (PITAC)
- Pakistan Council for Scientific and Industrial Research (PCSIR)
- Technical Services Centre (TSC)
- Export Promotion Bureau (EPB)
- Small and Medium Enterprise Development Authority (SMEDA)
- Engineering Development Board
- Punjab Small Industries Cooperation (PSIC)

3.3 **Technical Training & Educational Institutions**

3.3.1 **Engineering Colleges and Universities**

- University of Engineering & Technology (UET), Lahore
- University College of Engineering & Emerging Technologies (UCE&ET) - Punjab University (PU)
- Institute of Quality & Technology Management (IQTM) - PU
- Usman Institute of Engineering and Technology (UIET)
- University of Management Technology (UMT)

3.3.2 **Technical and Vocational Training Institutes**

- Technical Education and Vocational Training Authority (TEVTA)
- Punjab Vocational Training Council (PVTC)

4.1 **Private Business Development Service (BDS) Providers**

There is very poor significance of Private BDS providers in the cluster. Very few consultancy firms are working in the cluster. They provide service with respect to ISO 9000: 2004 and other certifications. The BDS providers in the areas of technology, material mixing, product standardization and latest production techniques are the main requirement of the cluster.

3.5 **Banks and Financial Institutions**

Lahore is adequately covered by nationalized and private sector banks and financial institutions. The credit needs of the auto parts industry are sufficiently met by these institutions. The banks and financial institutions are willing to finance the auto parts vendor as this sector has posted a phenomenal growth during last 3-4 years. Only issue is that the financing rate in Pakistan is very high, due to this reason manufacturers avoid to take financing. So there are no issues with respect to financing in auto parts cluster of Lahore. The main banks and financial institutions involved in financing are as follows.

4 **SWOT Analysis**

4.1 **Strengths**

- Capability to produce low volumes competitively and capture niche markets
- Presence of world class automotive manufacturers in each segment
- Availability of low cost human resource
- OEMs quality standards are largely achievable
- High growth and demand in the market
- Good mechanical skills

4.1 **Weaknesses**

- No long term vision or policy

- Lack of Information Dissemination (Technical know how, Information on standards, Processing techniques, Design criteria's)
- Product design & engineering capabilities constrained due to absence of economies of scale
- Lack of Tooling and die manufacturing facilities
- Lack of skilled manpower for modern machinery
- Lack of well equipped facilities for product testing and research & development
- High cost of utilities
- High cost of financing and leasing
- Availability of raw material especially steel
- Absence of membership in any Trade Bloc
- Too many regulatory & taxation agencies

4.1 Opportunities

- Potential for high market growth due to wide gap in population to vehicle ratio
- Export potential in niche markets
- Domestic replacement parts market (if smuggling curtailed)
- Global spare parts market of discontinued vehicles
- Emerging Afghanistan, Nepal, Bangladesh, Iraq, Sri Lanka markets
- Great potential all over the world for tractors and trailer parts market

4.1 Threats

- Poor image of the country
- Regional conflicts
- Smuggling, under-invoicing and dumping of auto parts
- Phasing out of administrative control under WTO regime
- Continuous depreciation of rupee against top world currencies

5 Investment Opportunities

Keeping in view the current potential and high market growth due to wide gap in population to vehicle ratio there is an ample opportunity for invest in Auto Parts Cluster, Lahore. Some potential project for invest are as follows:

- Engine Parts Manufacturing Units
- Reverse Engineering of Products and Parts
- Computer Aided Product/Pattern Designing Center
- CNC Machining Centers
- Dies and Molds Manufacturing Units
- Trading (Machinery Imports)