

## **An analysis on impact of motor Pump Industries and its Problems, Prospects and Growth – In Coimbatore District**

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### **Abstract**

Coimbatore, located in the state of Tamil Nadu, is an important industrial cluster in India. The industrial activities in the cluster developed in the 1930s, with the setting-up of many textile and spinning units since the local weather was suitable for yarn processing. Initially, the metal casting industry flourished in Coimbatore to cater to the needs of the local textile machinery manufacturers. Subsequently, with the start of pump manufacturing in Coimbatore in 1930 and electric motors in 1937, it became an important cluster for manufacture of mono-blocks, domestic pumps, and subsequently submersible pumps.

### **Introduction**

In 1970s, the wet-grinder was developed in Coimbatore for grinding of rice and lentils used in local recipes. The motor and drive-system of wet-grinders use casting components. Subsequently, major automobile manufacturing units came up in surrounding areas, such as Hyundai, Honda, Leyland, Allwyn Nissan, Pricol, L&T, LMW, and Mahindras. There are an estimated 25,000 Micro, Small, and Medium Enterprises (MSME) units in Coimbatore cluster, of which majority are engineering and textile units.

Some of the major engineering segments include foundry, pump sets, machine tools, auto components, sheet metal, cables and wires, printing and packaging, and food machinery. The pump set manufacturing units are scattered both within and outside the city. Some of larger geographical concentration of pump set manufacturing units in the cluster includes Arasur, Annur, Avinashi Road, Ganapathy, Kanuvai, Manikkampalayam, Mettupalayam, Peelamedu, and SIDCO Industrial Estate. Smaller manufacturers produce pump sets from 0.5 to 20 hp capacity, while the bigger manufacturers produce up to 50 hp capacity. Leading pump manufacturers in the cluster include CRI pumps, Texmo industries, PVG industries, Flowserve, Aquasub engineering, Sharp industries, Deccan pumps, Ekki pumps, Mahendra pumps, and Suguna pumps.

### **Statement of the problem**

Pump manufacturers in Coimbatore depend their business mainly on agriculture and construction services sectors. Coimbatore district is the hub of Educational and Micro, Medium and Small scale. Due to this growth the demand for the motors industries is vulnerably increasing. The need for the motor pumps becomes very essential one. This study helps to analyse the problems and issues faced by the motor industry in the Coimbatore.

**Need for the study:**

Coimbatore pump set manufacturers traditionally cater to the requirements of agriculture and domestic sectors. Pumps are widely used in the agricultural, municipal, domestic, and industrial sectors. Coimbatore is one of the largest producers of submersible pumps for agricultural and domestic sectors as well as centrifugal pumps for domestic and industrial usage. There are about 600 pump manufacturing units and 400 ancillary units in Coimbatore; it accounts for nearly 40% of the pump sets manufactured in India.

The estimated production of pump sets in Coimbatore district is 35,000 per day (about 10.5 million pump sets per annum). The pump set manufacturers employ close to 7,000 direct employees. The estimated annual turnover of the pump set units is nearly 5,000 crore, of which only 1–2% corresponds to exports. Two support industries for pump manufacturing include machine tool industry and component manufacturing industry. There are about 400 ancillary support units in the cluster. Pump industry needs components such as impeller, diffuser, and shaft, which are manufactured with machine tools, such as lathes and shaping machines. Hence due to the arising demand Coimbatore district is taken for the study.

**Objectives of the study**

- To study the impact of pump industry in Coimbatore district
- To study the problems faced by the pump industry in Coimbatore city.
- To analyse the growth of pump industry in Coimbatore district.

**Scope of the study**

This study aims to find out the problems and challenges faced by the pump industry and its growth in the Coimbatore city. Pump industry is expected to have a higher demand of pumps from various sectors in the coming years.

**Review of Literature****Devakumar**

Today it is found that consumers have many choices at the point of sale (POP). Therefore, marketers and consumers need to understand buyer influence and buyer influence by understanding consumer needs and desires. Whenever a customer is dissatisfied for some reason (e.g. emotional, psychological, or personal), the customer's behavior changes. In order to meet the needs of our customers and keep them satisfied, we have chosen various methods such as customer phone lines with trained staff, emergency services and fast after-sales service and support. This study aims to determine the level of customer service quality, distribution and customer satisfaction among micro pump dealers in the city of Coimbatore. The analysis was conducted using data collected from 250 respondents from different POPs. The study results show that customer commitment, timely after-sales service, extended warranty period and customer attitude have a significant impact on customer satisfaction.

**Michel Cartiller**

He attempted to study the impact of small businesses on the economic growth of the irrigation pump industry in Coimbatore. The study was conducted according to protocol. First, they analyzed the size, demand and economics of the small water pump industry in Coimbatore, including number of units, power connections, employment, revenue and output. Second, he focused on selling water pumps. Finally, he attempts to measure the role and impact on agricultural development. As a result, pump sets help farmers reduce the cost and quantity of irrigation.

## **Ramathilagam**

The economic performance of small mechanical units in Coimbatore city and attempted to assess their contribution in promoting other industries and economic development in the region. According to CODISSIA records, there are 1200 sub-categories, of which 120 categories are generated by product groups, such as electric vehicles, textiles were studied. This study focuses on the financial performance of micro enterprises in Coimbatore. McIntyre, Craig<sup>4</sup> talk about the importance of knowing what information is needed to protect your pump and help it work properly in the United States. It is known as a device that measures and displays pump performance to protect the pump and allow monitoring of unspecified performance. The pump is installed. However, investing in sensors can improve pump and pump reliability and performance.

## **Product, market, and production capacities**

The raw materials for pump set manufacturers are mainly castings and engineering components, including impeller, diff user, and shaft. Castings are procured locally from foundry units and other raw materials are procured from allied component manufacturers. Coimbatore pump set manufacturers traditionally cater to the requirements of agriculture and domestic sectors. Few manufacturers also export to other countries covering industries such as oil refineries, steel mills, mines, etc. Major products under pump set component manufactured includes mono-block pumps, jet pumps, centrifugal pumps, reciprocating pumps, gear pumps, process pumps, and submersible pumps. Based on their average production levels, categorization of pump industries is given in Table 1. Table 1: Categorization of units and estimated production Category Production capacity (Pump sets/day) Number of units A— Small and Micro 5–10 500 B—Medium 100–200 85 C—Large 1,500–2,000 15 The estimated production of pump sets from the cluster is 35,000 per day (about 10.5 million pump sets per annum). The pump set manufacturers employ close to 7,000 direct employees. The estimated annual turnover of the pump set units of the cluster is nearly ` 5,000 crore, of which only 1–2% corresponds to exports. Two support industries for pump manufacturing include machine tool industry and component manufacturing industry. There are about 400 ancillary support units in the cluster. Pump industry needs components such as impeller, diffuser, and shaft, which are manufactured with machine tools, such as lathes and shaping machines.

## **Research Methodology**

The Data used for this study is primary in nature. Data has been collected from the pump manufacturers of Coimbatore district by adopting structured questionnaire method. In this study population is finite hence 150 respondents were chosen randomly from the total population by adopting simple random sample method.

## **Sampling Frame**

Totally 150 firms in the pump industries were selected as respondents for this study, all respondents provided good response and therefore it is fully taken for analysis.

## **Sampling Method**

The study is based on convenience sampling method which means that the authors have targeted a group of people easy to contact or to reach and it is also known as convenience sampling which is a type of non-probability sampling methodology.

S.no	Internal Factors	No of Respondents	Percentage
1	Seasonal Orders	57	38
2	Higher Cost	48	32
3	Stiff Competition	21	14
4	Insufficeient Fund	12	8
5	Delayed Payments	12	8
	<b>Total</b>	<b>150</b>	<b>100</b>

S.no	Externall Factors	No of Respondents	Percentage
1	Economic Slowdown	51	34
2	Thin margin	51	34
3	Stiff Competition	30	20
4	Impact of GST	12	8
5	Lack of Government Intervention	6	4
	<b>Total</b>	<b>150</b>	<b>100</b>

### Findings

- The table depicts that majority of the respondents added that the seasonal orders were the major concern and it is followed by higher cost of raw material.
- The table depicts that majority of the respondent's considered both economic slowdown and thin margin is a challenge to them and it probably is a threat to their industry.

### Conclusion

Industrial uprising evolved with pumps and till now it is one of the main source of pumps supply to the rest of India. Majority of the country's pump requirement is met from Coimbatore city. Pump manufacturing and supply is more product price driven and is continuously involving value engineering and process cost reduction . So the thrust is always towards backward integration, technological enhancement, manpower reduction. Due to uncertainties in supply from China a huge oppurtunity is evolving for supplies from India in overall global pump market . To mention a classic example, in the recent past, Italian manufacturers who are pioneers in the planet for supply of quality and technologically updated low cost pumps to the global market, have established multiple facilities in Turkey are exploring for opportunities in India. The pumps manufacturers in Coimbatore are always competitive, innovative and ready to invest in research and development activities [4]. Despite the economic slowdown and thin margins, the prospects of allied industrial growth and continued lowering interest rates and reasonable reduction of taxes by government shows a good outlook to the pump industry. Further, the innovation of energy efficient pumps and the solar pumps will aid the growth of pump industry.

## Reference

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