

A STUDY ON GROWTH AND SWOC ANALYSIS OF MOTOR AND PUMP EXPORTERS IN COIMBATORE

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ABSTRACT

This study aims to examine the development path and strategic placement of motor and pump exporters in Coimbatore, India, by conducting a thorough analysis of their strengths, weaknesses, opportunities, and challenges (SWOC) as well as sector's growth. The motor and pump sector in Coimbatore has attracted significant recognition for its impact on the local economy and its importance in the international marketplace. The Indian pumps market is fairly mature, with domestic sales expected to increase at a rate of 16 to 18 percentage per year, and exports projected to grow at around 10 to 12 per cent over the next few years. Today 60% of India's requirements of domestic and agricultural pump sets are made in Coimbatore. The pump manufacturing industry in Coimbatore holds a major portion of the total Indian market share. Many brands in the international market are Coimbatore based companies and the quality and technical superiority of the products has helped the sector to both domestic and global demands.

Key words: Pump manufactures, Contribution to the nation, Coimbatore city, Motor and pump export, agricultural pump, growth of motor and pump industry.

INTRODUCTION:

The motor and pump industry bloomed in India between 1920 and 1940, with the launch of the first submersible pump of India in the year 1928 and electric motor in the year 1937 in the Coimbatore region. Ever since, the motor and pump Industry has flourished in India because 58 per cent of country's population still relies on agriculture sector for their livelihood. The major motor and pumps Industries in India are situated in Ahmedabad, Batala, Belgaum, Coimbatore, Jalandhar, Kolhapur, Rajkot, and Hyderabad. The Coimbatore motor and pump industries meet more than 50 percentage of the country's requirement. This region is also named as "Pump City of Asia" due to its production capacity, continuous innovation, and market significance in global market. There are around 600 Manufacturing units and 400 Ancillary units in Coimbatore producing motor and pumps and its spare parts for various sectors such as household, agriculture, manufacture, infrastructure, oil & gas, chemicals, mining & quarrying, water treatment, food & drink, defence and even for nuclear power generation. Some of the largest motor and pump set manufacturing units are established in Annur, Arasur, Avinashi Road, Ganapathy, Kanuvai, Mannikampalyam, Mettupalyam, Peelamedu and SIDCO industrial estate.

OBJECTIVES:

1. To analyze the financial growth of Indian motor and pump exporters.
2. To find the strength, weakness, opportunity, and challenges of motor and pump exporters in Coimbatore.

REVIEW OF LITERATURE:

Chakravarthy, C.S.G. (2020)¹ used the waterfall approach to analyze the globalization techniques of Coimbatore based motor and pump manufactures. In this study the data was collected through personal meetings and mail reviews from 143 export units. The study highlights that the moving from domestic market to global market have the perks specifically for those SMEs who practice the innovation in their product line. Also, it is observed that there is a significant relationship between quality of the firms and development variables used in this study.

Selvi, T.V., & Sheeba, J. (2018)² in their articles tried to examine the export awareness among the pump manufacturers and challenges they are facing during export operations. The study is based on the data collected from 60 respondents in Coimbatore region. It is found that Coimbatore based pump manufacturers are engaged in mass production but there is scope for improvement in their export operations. The irregular power supply is a major problem faced by the pump manufacturing units. Apart from power supply other issues such as shortage of raw materials, efficiency of labors, technological backdrop, commercial risk, and political risks are highlighted in this research work.

Orchard, B. (2017)³ in company focus section of world pumps discusses the major factors behind the growth of DP – Pumps. The one of the major factors behind the company's success is the presence of lines of product in the market. The company expanded and upgraded their manufacturing facilities along with the effective control over manufacturing processes. Also, they found that quick deliveries strategy at short notice can help companies to strive and survive in the market.

RESEARCH METHODOLOGY

SOURCE OF DATA:

- **PRIMARY DATA:**

A structured questionnaire is formed and validated to collect quantitative and qualitative data on motor and pump exporter's growth and strength, weakness, opportunities, threats. The data was collected from the motor and pump exporters in Coimbatore city.

- **SECONDARY DATA:**

Information that already exists was gathered from many sources, such as research article journals, websites and magazines.

POPULATION:

- There are 600 motor and pump manufacturing and exports in Coimbatore.

SAMPLE DESIGN

A sample of motor and pump exporters in Coimbatore will be selected using purposive sampling, ensuring representation from large, medium, and small-scale exporters. data will be collected through surveys, and review of secondary sources. swot analysis will be conducted to identify internal strengths and weaknesses, as well as external opportunities and threats faced by the exporters.

SAMPLE SIZE

For the study, a sample of 80 respondents was gathered (pilot study).

TYPE OF RESEARCH:

RESEARCH TYPE	DESCRIPTIVE STUDY
SAMPLING AREA	COIMBATORE DISTRICT
STUDY AREA	COIMBATORE CITY

ISSUES FACED BY MOTOR AND PUMP EXPORTERS IN COIMBATORE

- **Competition:** The market for motors and pumps is highly competitive, both domestically and internationally. Exporters in Coimbatore must compete with manufacturers from other regions, as well as with imported products.
- **Technological Obsolescence:** Keeping up with technological advancements and ensuring that products remain competitive in terms of efficiency, durability, and features can be a challenge for exporters.
- **Regulatory Compliance:** Meeting various regulatory requirements, including export regulations, quality standards, and environmental regulations, can be complex and time-consuming.
- **Currency Fluctuations:** Fluctuations in exchange rates can impact the competitiveness of exports from Coimbatore, affecting pricing and profitability.
- **Logistics and Infrastructure:** Ensuring efficient transportation, handling, and delivery of products to international markets can be challenging, especially if there are infrastructure limitations or logistical bottlenecks.

MOST EXPORTING REGIONS FROM COIMBATORE:

1. **Middle East:** Countries in the Middle East, such as the UAE, Saudi Arabia, and Qatar, are significant markets for motors and pumps due to their construction, industrial, and infrastructure development projects.
2. **South East Asia:** Countries like Indonesia, Malaysia, and Thailand have growing economies and infrastructure development, leading to increased demand for motors and pumps.
3. **Africa:** Countries in Africa, especially those experiencing rapid industrialization and infrastructure development, present opportunities for Coimbatore's exporters of motors and pumps.
4. **Europe:** While competitive, European markets, including the UK, Germany, and Italy, can be lucrative for Coimbatore's exporters due to their demand for high-quality engineering products.
5. **North America:** The United States and Canada have established markets for motors and pumps, but competition is stiff, requiring exporters to meet stringent quality and regulatory standards.

ANALYSIS AND INTREPRETATION**CAGR:**

Name of the company	Year	Actual value	AGR	CAGR
KSB PUMPS	March 2019	11130		
	March 2020	13160	18%	
	March 2021	12370	-6%	
	March 2022	15310	24%	

	March 2023	18640	22%	
	CAGR			14%
ELGI EQUIPMENT	March 2019	18720		
	March 2020	18420	-2%	
	March 2021	19470	6%	
	March 2022	25800	33%	
	March 2023	31080	20%	
	CAGR			13.5%
CRI PUMPS	March 2019	18220		
	March 2020	18050	-1%	
	March 2021	20650	14%	
	March 2022	23780	15%	
	March 2023	28910	22%	
	CAGR			12%
ROTO PUMPS	March 2019	13700		
	March 2020	13500	-1%	
	March 2021	13200	-2%	
	March 2022	18000	36%	
	March 2023	23000	28%	
	CAGR			15%
SHAKTI PUMPS	March 2019	507		
	March 2020	344	-32%	
	March 2021	869	153%	
	March 2022	1098	26%	
	March 2023	901	-18%	
	CAGR			15%

INTERPRETATION

The table presents the financial performance of top five companies in the motor and pump industry from March 2019 to March 2023, detailing their actual values and annual growth rates (AGR), along with their Compound Annual Growth Rates (CAGR) over the period. KSB Pumps demonstrated consistent growth with a CAGR of 14%, despite a slight decline in 2021. ELGI Equipment's revenue fluctuated but showed an overall positive trend, with a CAGR of 13.5%. CRI Pumps exhibited steady growth with a CAGR of 12%, while ROTO Pumps experienced fluctuating growth rates, leading to a CAGR of 15%. SHAKTI Pumps showed significant

revenue fluctuations, with a notable increase in 2021 but decreases in 2020 and 2023, resulting in a CAGR of 15%. Overall, the table highlights the varying growth trajectories and challenges faced by these companies in the motor and pump industry over the four-year period.

SIMPLE PERCENTAGE ANALYSIS:

NATURE OF THE ORGANIZATION

FACTOR	FREQUENCY	PERCENT
Sole proprietorship	14	17.5
Partnership	66	82.5
Total	100	100

INTERPRETATION:

According to the data, partnerships account for (82.5%) of all businesses, while single proprietorships make for a lower percentage (17.5%). This suggests that among the entities surveyed, partnerships are strongly preferred over sole proprietorships.

YEARS OF OPERATION

FACTOR	FREQUENCY	PERCENT
Below 5 years	24	30.0
5 – 10 years	13	16.3
10 – 15 years	31	38.8
More than above	12	15
Total	80	100

INTERPRETATION:

The above table shows that 30.0% of the total respondents are below 5 years, 16.3% of the total respondents are below 5-10 years, 38.8% of the total respondents are 10-15 years and 15% of the respondents are more than above. This concludes that the 38.8% of the total respondents are 10-15 years.

TYPE OF PRODUCT PRODUCED

FACTOR	FREQUENCY	PERCENT
Exclusively pumps	18	22.5
Exclusively motors	22	27.5

Both	40	50.0
Total	80	100.0

INTERPRETATION:

The data indicates a balanced distribution among pump industry respondents, with half exclusively dealing with pumps, a quarter focusing solely on motors, and the remaining half offering both pumps and motors. This suggests a notable segment of the pump industry prioritizes versatility, likely aiming to meet diverse customer demands and provide comprehensive solutions within the sector.

SWOC ANALYSIS:

STRENGTH

SNO	PARTICULARS	STRONGLY AGREE		AGREE		MODERATE AGREE		DISAGREE		STRONGLY DISAGREE	
		NO	%	NO	%	NO	%	NO	%	NO	%
		1	Collaboration with MNC in developing new technology number of indigenous	35	43.8	11	13.8	4	5.0	14	17.5
2	Local manufacturers of raw material components and parts	22	27.5	36	45.0	13	16.3	4	5.0	5	6.3
3	Government incentives like skill India and make India increases the skilled labors.	21	26.3	34	43.5	4	5.0	16	20	5	6.3
4	High number of engineering colleges results in reducing high skilled labour and technological innovations	18	22.5	32	40.0	14	17.5	11	13.8	5	6.3
5	Good will and brand image of Coimbatore region in manufacturing engineering goods	30	37.5	25	31.5	7	8.8	14	17.5	4	5.0
6	Support from association regulating pump exports	26	32.5	28	35	8	10	13	16.3	5	6.3
7	High quality of pumps manufactured in Coimbatore	27	33.8	14	17.5	29	36.3	5	6.3	5	6.3
8	Adoption of customer centric attitude of the manufactures affordable cost of pump and motors for the customers	16	20.0	28	35	22	27.5	9	11.3	5	6.3

9	uninterrupted logistics and supply chain system	18	22.5	16	20.0	31	38.8	7	8.8	8	10.0
10	Easy availability of financial supports from banks and other financial institution	18	22.5	41	51.2	9	11.3	8	10.0	4	5.0

INTERPRETATION:

In the above table, 29.89% of the respondents were strongly agreed and 31.2% of respondents were agreed, 18.88% of the respondents were moderately agreed, 12.65% of the respondents were disagree, 7.38% of the respondents were strongly disagree. It has concluded that, majority (31.2%) of the respondents were agreed that strength of the pump and motor exporters.

WEAKNESS

SNO	PARTICULARS	STRONGLY AGREE		AGREE		MODERATE AGREE		DISAGREE		STRONGLY DISAGREE	
		NO	%	NO	%	NO	%	NO	%	NO	%
		1	Insufficient skill labour (Experts & Mechanical engineering).	31	38.8	19	23.8	9	11.3	8	10.0
2	Increasing cost of raw material results in increasing price of pumps.	19	23.8	38	47.5	4	5.0	8	10.0	11	13.8
3	Lagging technological innovation inadequate infrastructure facilities affects the logistics and distribution option of the company	17	21.3	33	41.3	8	10.0	6	7.5	16	20.0
4	Huge number of domestic competitors	22	27.5	31	38.8	14	17.5	8	10.0	5	6.3
5	Transport connectivity issue to the ports or terminals	18	22.5	28	35.0	12	15.0	3	3.8	19	23.8
6	Fluctuation in demand for motors and pumps due to changes in season	17	21.3	37	46.3	17	21.3	4	5.0	5	6.3
7	Problem of delivery of shipment high freight cost for shipping in foreign market	8	10.0	26	32.5	24	30.0	7	8.8	15	18.8
8	Lack of research and development in product innovation	6	7.5	31	38.8	20	25.0	10	12.5	13	16.3

9	Language barriers or ineffective communication with international clients	27	33.8	22	27.5	13	16.3	13	16.3	5	6.3
10	Slow to adapt to changes in market demands and trends	10	12.5	27	33.8	20	25.0	12	15.0	11	13.8

INTERPRETATION:

In the above table, 21.80% of the respondents were strongly agree, 34.53% of the respondents was agreed, 17.64% of the respondents were moderate agreed, 10% of the respondents were disagree and 13.07% of the respondents were strongly disagreed that they have weakness in the pump export. It has concluded that, majority of (34.53%) of the respondents were agreed that they have weakness in the pump export.

OPPORTUNITY

SNO	PARTICULARS	STRONGLY AGREE		AGREE		MODERATE AGREE		DISAGREE		STRONGLY DISAGREE	
		NO	%	NO	%	NO	%	NO	%	NO	%
		1	High focus and research and development in updating of new technologies in manufacturing and supply chain process	39	48.8	18	22.5	5	6.3	5	6.3
2	Increasing focus on sustainable development	26	32.5	30	37.5	15	18.8	5	6.3	4	5.0
3	Increasing concentration on development of green energy-based products	8	10.0	44	55.0	18	22.5	5	6.3	5	6.3
4	More number of engineering colleges and high concentration on developing skill-based education may result in increase in skilled manpower	27	33.8	26	32.5	13	16.3	9	11.3	5	6.3
5	Adoption of digitization in production may overcome the shortage of skilled labour and speedup the production	25	31.3	24	30.0	12	15.0	12	15.0	7	8.8
6	Proactive and supportive government policies	19	23.8	30	37.5	16	20.0	3	3.8	12	15.0

7	Increasing financial support from business development from bank or other financial institutions	27	33.8	14	17.5	13	16.3	22	27.5	4	5.0
8	Growing industrial development programs in the area	27	33.8	27	33.8	8	10.0	9	11.3	9	11.3
9	Incentives and subsidies from the government in order to support export	18	22.5	27	33.8	22	27.5	8	10.0	5	6.3
10	Strengthened trade valuation ship of India with other countries	12	15.0	37	46.3	13	16.3	13	16.3	5	6.3

INTERPRETATION:

In the above table, 29.33% of the respondents were strongly agreed, 32.64% of responded that agreed, 16.90% of the respondent were moderate agree, 11.41% of the responded were disagreed and 8.66% of the respondents were strongly disagree, finally concluded that (32.64%) of the respondent ware agreed in opportunity in the pump export.

CHALLENGES

SNO	PARTICULARS	STRONGLY AGREE		AGREE		MODERATE AGREE		DISAGREE		STRONGLY DISAGREE	
		NO	%	N	%	NO	%	NO	%	NO	%
				O							
1	Rapid changes in technology	28	35.0	23	28.7	11	13.8	10	12.5	8	10.0
2	Inflation economic slowdown in importing countries	14	17.5	30	37.5	14	17.5	14	17.5	8	10.0
3	Changes in foreign trade policy both in India and in importing countries	35	43.8	13	16.3	12	15.0	7	8.8	13	16.3
4	Increasing number of global competitors with advanced technologies	29	36.3	37	46.3	5	6.3	4	5.0	5	6.3
5	Difficulties in finding new customers	17	21.3	23	28.7	23	28.7	4	5.0	13	16.3
6	Exchange rate Fluctuation	17	21.3	21	26.3	15	18.8	8	10.0	19	23.8

7	Strict quality policies	19	23.8	21	26.3	16	20.0	8	10.0	16	20.0
8	increasing transportation cost	7	8.8	38	47.5	17	21.3	14	17.5	4	5.0
9	difficulties transportation cost	17	21.3	31	38.8	18	22.5	9	11.3	5	6.3
10	Increasing tax rates	27	33.8	17	21.3	19	23.8	12	15.0	5	6.3

INTERPRETATION:

In the above table, 24.11% of the respondents were choose strongly agreed, 31.14% of the respondents were agreed, 18.79% of the respondents were moderate agree, 11.26% of the respondents were disagreed and 11.03% of the respondents were strongly disagreed. It has concluded that (31.14%) of the respondents were agreed that pump exporters were facing challenges in the industry.

ANOVA**ANOVA TABLE FOR STRENGTH**

		Sum of squares	df	Mean square	F	Significance
Nature of organization	Between Groups	.711	1	.711	.978	.326
	Within Groups	56.689	78	.727		
Year of operation	Between Groups	15.624	3	5.208	9.475	.000
	Within Groups	41.775	76	.550		
Type of products produced	Between Groups	11.507	3	3.836	6.352	.001
	Within Groups	45.892	76	.604		
Number of employees	Between Groups	11.507	3	3.836	6.352	.001
	Within Groups	45.892	76	.604		

INTERPRETATION:

To ascertain whether the strength of the motor and pump industry varies across business variables, it was found that there is no significant difference based on the nature of organization. However, a significant

difference exists in the strength of the industry based on the year of operation, type of products produced, and number of employees.

H₀: There is no significant difference in the weakness of motor and pump industry based on the selected business variables.

H₁: There is significant difference in the weakness of motor and pump industry based on the selected business variables.

ANOVA TABLE FOR WEAKNESS

		Sum of squares	df	Mean square	F	Significance
Nature of organization	Between Groups	.195	1	.195	.503	.481
	Within Groups	30.338	78	.389		
Year of operation	Between Groups	4.676	3	1.559	4.581	.005
	Within Groups	25.858	76	.340		
Type of products produced	Between Groups	4.014	3	1.338	3.835	.013
	Within Groups	26.520	76	.349		
Number of employees	Between Groups	2.059	3	.686	1.832	.148
	Within Groups	28.474	76	.375		

INTERPRETATION:

To ascertain whether the weakness of the motor and pump industry varies across business variables, it was found that there is no significant difference based on the nature of organization and number of employees. However, a significant difference exists in the weakness of the industry based on the year of operation and type of products produced.

H₀: There is no significant difference in the opportunities of motor and pump industry based on the selected business variables.

H₁: There is significant difference in the opportunities of motor and pump industry based on the selected business variables.

ANOVA TABLE FOR OPPORTUNITY

		Sum of squares	df	Mean square	F	Significance
Nature of organization	Between Groups	2.034	1	2.034	3.834	.054
	Within Groups	41.394	78	.531		
Year of operation	Between Groups	4.877	3	1.626	3.205	.028
	Within Groups	38.552	76	.507		
Type of products produced	Between Groups	11.057	3	3.686	8.653	.000
	Within Groups	32.372	76	.426		
Number of employees	Between Groups	6.503	3	2.168	4.461	.006
	Within Groups	36.926	76	.486		

INTERPRETATION:

To ascertain whether the opportunity of the motor and pump industry varies across business variables, it was found that there is no significant difference based on the nature of organization. However, a significant difference exists in the opportunity of the industry based on the year of operation, type of products produced, and number of employees.

H₀: There is no significant difference in the challenges of motor and pump industry based on the selected business variables.

H₁: There is significant difference in the challenges of motor and pump industry based on the selected business variables.

ANOVA TABLE FOR CHALLENGES

		Sum of squares	df	Mean square	F	Significance
Nature of organization	Between Groups	4.994	1	4.994	13.573	.000
	Within Groups	28.701	78	.368		
Year of operation	Between Groups	3.631	3	1.210	3.060	.033

	Within Groups	30.064	76	.396		
Type of products produced	Between Groups	9.141	3	3.047	9.430	.000
	Within Groups	24.555	76	.323		
Number of employees	Between Groups	2.634	3	.878	2.149	.101
	Within Groups	31.061	76	.409		

INTERPRETATION:

To ascertain whether the challenges of the motor and pump industry varies across business variables, it was found that there is no significant difference based on the nature of organization, year of operation and type of products produced. However, a significant difference exists in the challenges of the industry based on the number of employees.

FINDINGS:

- 82% respondent are partnerships account for of all businesses.
- 39% of the total respondents are 10-15 years in operation.
- 47% of Annual turnovers falling within the range of 20-40 lakhs.
- 50% of the products produced both motor and pump.
- 39% of the number of employees working in industry of 100-250.
- 34% of the products are exported to Middle Eastern countries.
- 38% respondent source of finance from the financial institution.
- 33% of raw material procurement is from both domestic and international.
- 69% of respondent are there is no specific regulations for exporting.
- 39% of respondent are lead time for manufacturing and delivering is 2-4 weeks.
- 31.2% of respondents were agreed that strength of the pump and motor exporters.
- 34.53% of the respondents were agreed that they have weakness in the pump export.
- 32.64% of the respondent ware agreed in opportunity in the pump export.

CONCLUSION:

A comprehensive study on the growth and SWOC (Strengths, Weaknesses, Opportunities, and Challenges) analysis of motor and pump exporters in Coimbatore, it is evident that the region holds significant potential in this industry. The exporters benefit from a robust infrastructure, skilled workforce, and access to raw materials, contributing to their growth trajectory. However, challenges such as fluctuating market demand,

Changes in foreign trade policy both in India and in importing countries and global competition underscore the importance of strategic adaptation and innovation. Moreover, leveraging emerging opportunities such as High focus and research and development in updating of new technologies in manufacturing and supply chain process and expanding markets can further propel the exporters' success. By addressing weaknesses like Insufficient skill labour (Experts & Mechanical engineering), logistical constraints and enhancing strengths like Collaboration with MNC in developing new technology number of indigenous, product quality and customer service, Coimbatore's motor and pump exporters can strengthen their position in the global market and continue to thrive in the dynamic business landscape.

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