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A Value Chain Analysis of the Solid Liquid Separator Industry in Gujarat

Author : Swapnil Borude , Raj Bhatt , Mohit Parekh

Designation: Student , Student ,Assistant Professor

Name of Department of MBA PIMR,
Parul University, Vadodara, India .

ABSTRACT:

The value chain in Gujarat's solid-liquid separator sector is examined in this research report. The study analyzes Rotofilt Engineers Ltd.'s major and supporting activities using a descriptive research design. Surveys and questionnaires were used to collect primary data, and corporate records and industry reports were used to obtain secondary data. The results highlight important obstacles and potential opportunities for value chain optimization, especially with regard to resource allocation, cost structure comprehension, and customer value delivery. The analysis advances our knowledge of this industry's competitive advantage and strategic decision-making.

Keywords: Supply Chain, Manufacturing, Competitive Advantage, Process Efficiency, Solid-Liquid Separation, Gujarat, Industrial Equipment, Value Chain Analysis

INTRODUCTION

1.1 Background :

In many industries, including as pharmaceuticals, food and beverage manufacturing, and wastewater treatment, solid-liquid separation is an essential procedure. Purification, concentration, and resource recovery all depend on the separation of solid particles from liquid phases. Both operational effectiveness and environmental sustainability depend on efficient and successful separation procedures. An important part of the economy of Gujarat, a highly industrialized state in India, is the solid-liquid separation sector.

1.2 Problem Statement:

Numerous obstacles in the solid-liquid separation sector call for constant innovation and research. These include the requirement for increased materials recovery, process intensification, less environmental impact, and higher energy efficiency. There are also difficulties in automating operations, scaling up procedures, and satisfying strict regulatory standards. To overcome these obstacles and stay competitive, businesses must examine and improve their value chains.

1.3 Objectives:

The following goals are the focus of this study paper: to determine the main and auxiliary tasks in a solid-liquid separator manufacturing company's value chain to evaluate these primary and supporting activities' efficacy and efficiency. to investigate the main problems and obstacles pertaining to this industry's value chain.

Identifying the primary and supporting activities in a solid-liquid separator manufacturing company's value chain and evaluating the efficacy and efficiency of these primary and supporting activities are the goals of this research work.

To investigate the main problems and obstacles pertaining to this industry's value chain.

1.4 Hypothesis :

H1: Procurement's allocation to inbound logistics, operations, outbound logistics, marketing & sales, and services does not differ significantly.

H2: Procurement's allocation to inbound logistics, operations, outbound logistics, marketing & sales, and services differs significantly.

2. LITERATURE REVIEW

Value chain analysis has garnered a lot of attention from both academics and industry professionals. The value chain was first proposed by Porter (1985) in his work on competitive advantage as a means of comprehending how businesses generate value. Porter states that the value chain is made up of support activities (procurement, technology development, human resource management, and firm infrastructure) as well as primary activities (inbound logistics, operations, outbound logistics, marketing and sales, and service).

By examining the connections and interactions between value-added operations, value chain analysis can assist businesses in identifying competitive advantages, according to Ensign (year). The significance of incorporating sustainability issues into the value chain was emphasized by Fearne & Garcia (year).

Frederick (year) talked about the convergence of global input-output (I-O) methods and global value chain (GVC) analysis. A more thorough knowledge of the structure of global production networks and the cross-border distribution of value is made possible by this integration. Together, these studies add to the theoretical underpinnings of value chain analysis by offering theories and perspectives pertinent to the solid-liquid separation sector.

3. RESEARCH METHODOLOGY

3.1 Study Design:

The research design used in this study is descriptive. The goal of descriptive study is to correctly and impartially depict a phenomenon's features. It is appropriate in this situation for examining the value chain operations and associated attitudes in the solid-liquid separation sector.

3.2 Data Collection:

Both primary and secondary data sources are used in this investigation. Surveys and questionnaires were given to customers, staff members, and industry experts in order to gather primary data. These tools collected data on client preferences, supplier relationships, production processes, and expenses. Trade association statistics, corporate annual reports, market research journals, and industry studies were the sources of secondary data.

3.3 Sampling Techniques :

Population: Manufacturers, suppliers, consumers, and industry specialists are among the participants in Gujarat's solid-liquid separation sector used in this study.

Sample Size: For the primary data collection, 38 respondents made up the sample size.

The sampling unit: is made up of individual businesses, workers, and clients in the solid-liquid separation industry.

The sampling Method: employed combined convenience sampling to include individuals who were easily accessible with selective sampling to choose important industry experts.

3.4 Data Analysis:

Data Analysis of variance (ANOVA) and descriptive statistics were used to examine the gathered data. The sample's characteristics and the replies' distribution were summed together using descriptive statistics. The assumptions regarding the distribution of support activities among primary activities were tested using ANOVA.

4. RESULTS AND DISCUSSION

4.1 Evaluation of Primary and Support Activities :

Numerous insights into the core and auxiliary operations of the solid-liquid separator business were uncovered by the investigation. Seventy-one percent of the organizations showed a high level of comprehension of their current cost structure. The distribution of resources to support operations varied, nevertheless, with 37% of businesses evaluating it as good and 50% as exceptional. The allocation of each support activity to primary activities did not differ significantly, according to the analysis of support activity allocation to primary activities. For example, Procurement, Technology Development, and Firm Infrastructure received outstanding ratings for the contributions of Inbound Logistics, Operations, Outbound Logistics, Marketing & Sales, and Services. Nonetheless, these core activities were frequently assessed as having a good contribution to human resource management.

4.2 Primary Activities Contribution:

A number of product and service qualities were also evaluated in the study. The percentage of businesses that customized their products ranged from 61% to 80%, with 40% of them doing so. The majority of businesses assessed timely product delivery as excellent (58%).

Findings and Conversation :

Overview Understanding how various business operations contribute to competitive advantage requires a thorough understanding of value chain analysis. With an emphasis on effectiveness, efficiency, and the influence on organizational success, this study assesses primary and support activities. The results shed light on a range of company operations, including their advantages and shortcomings.

Data and Results : Main Tasks Product development and delivery are directly impacted by primary activities. Through the management of logistics, production, sales, and services, these operations guarantee the business runs well.

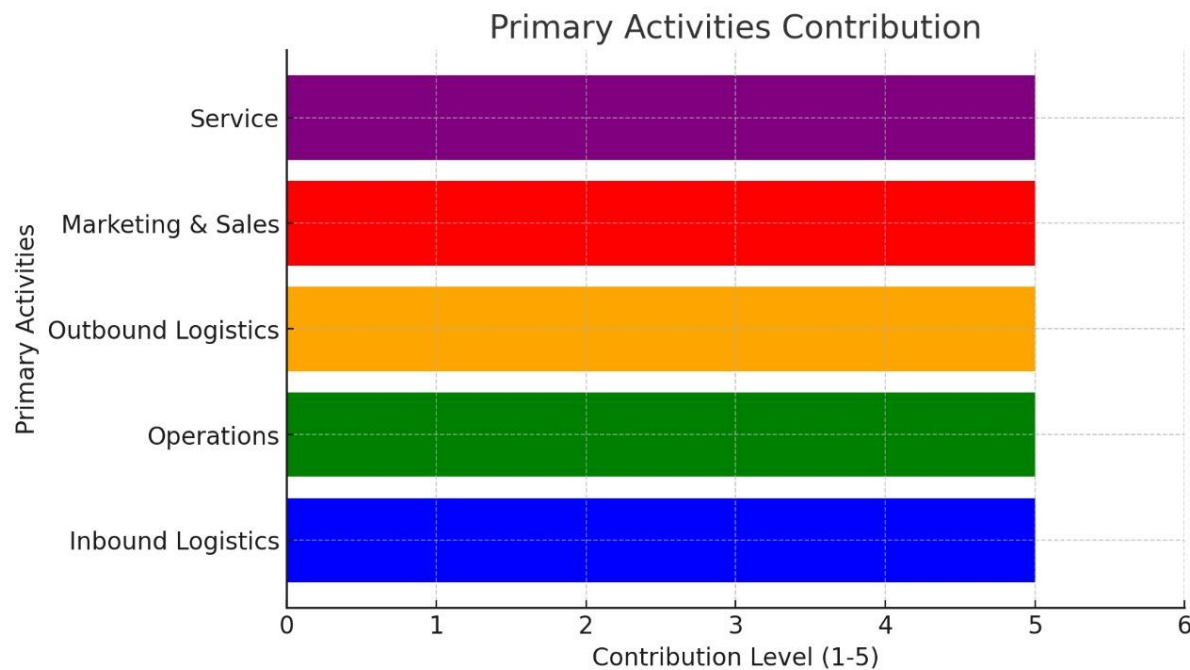
Main Task Level of Contribution: Inbound Logistics Outstanding Outbound Logistics and Operations Outstanding Sales & Marketing Outstanding Service Outstanding

Inbound Logistics: Extremely effective in material distribution, storage, and acquisition. Nonetheless, several businesses suggest that supplier integration and warehouse management might use some work.

Operations: Received good ratings for cost control, efficiency, and quality assurance. Minor inefficiencies in process improvement are reported by certain companies.

Outbound logistics: efficient delivery and distribution, however sporadic delays have an impact on client satisfaction.

Marketing & Sales: Good promotional tactics and brand recognition, although pricing that is in line with consumer expectations might be improved.



4.3 Support Activities Contribution:

Assistance Tasks Through the optimization of infrastructure, HR, technology, and procurement, support activities increase the efficacy of primary activities. Assistance Activities Level of Contribution Purchasing Fantastic Development of Technology Fantastic Management of Human Resources Excellent Enterprise Infrastructure .

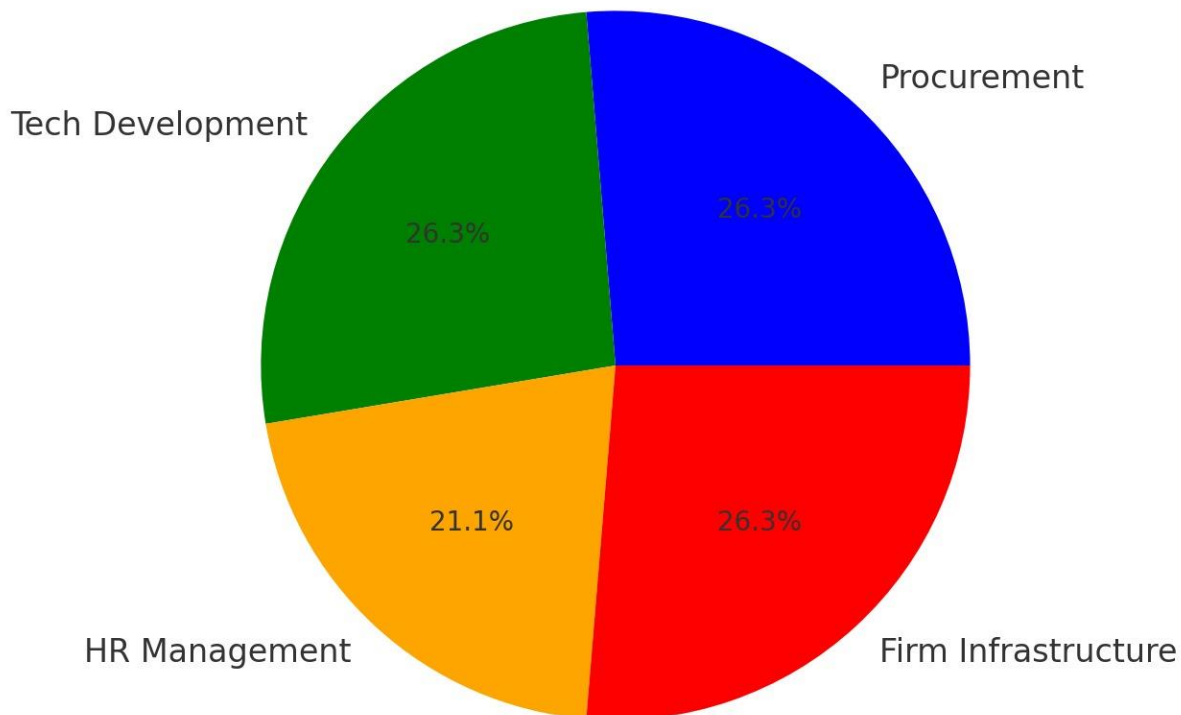
Procurement : Fantastic One of the most important aspects of keeping costs and quality competitive is procurement. Global disruptions expose certain businesses to supply chain risks.

Technology Development: Digital tools and process automation are heavily emphasized. Nonetheless, 34% of businesses say they need to spend more money on innovation.

Human resource management: is generally good, but techniques for employee skill development and retention need work.

Firm Infrastructure: Effective operations are facilitated by strategic management and robust administrative support.

Support Activities Contribution



4.4 Customer Satisfaction Rating:

In order to satisfy consumer requests, 77% of businesses provide 61%–100% customization.

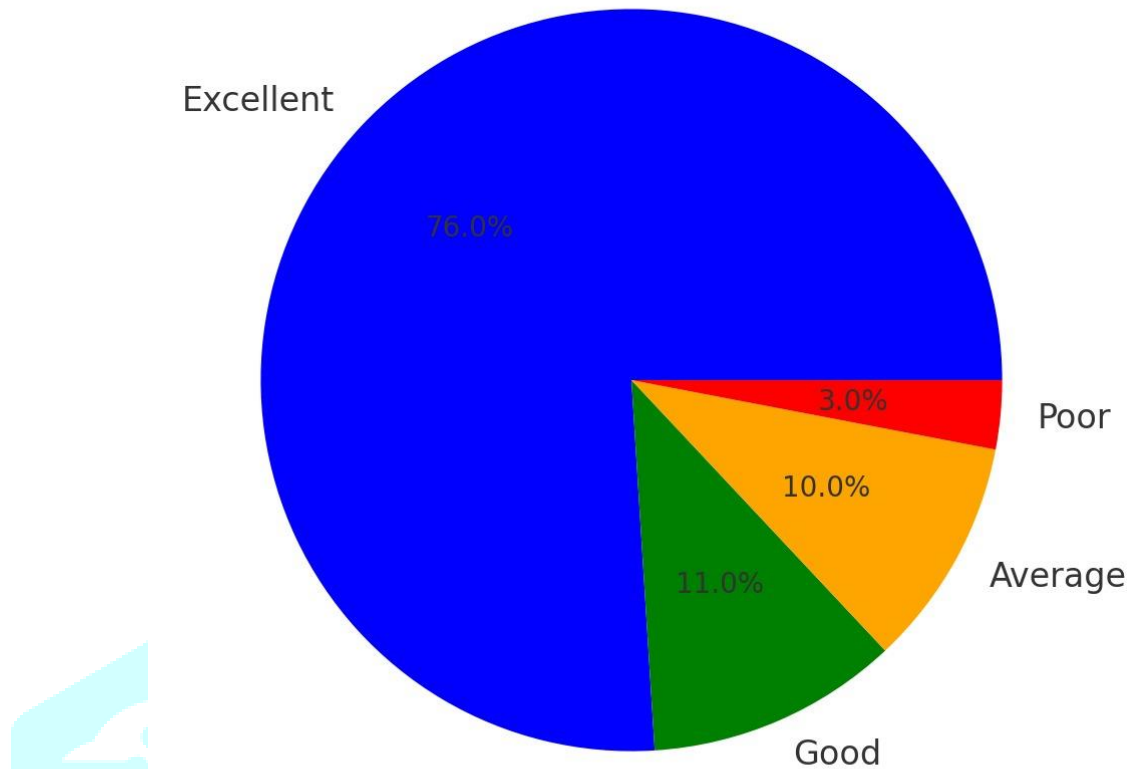
On-time Delivery: 24% of businesses consider their performance to be mediocre, whilst 58% of businesses excel in delivering on time.

Customer Problem Solving: 79% of businesses excel at effectively resolving client issues.

Brand Reputation: 76% of companies uphold a stellar reputation, which guarantees client loyalty.

Pricing plan: 29% use moderate pricing, 8% use very high pricing, and 63% use a high-price plan.

Customer Satisfaction Ratings



4.5 Restrictions :

Data Accessibility: The depth of study is limited by the difficulty in obtaining complete and current data.

Complexity: A comprehensive evaluation is difficult due to value chains' interconnectedness.

Scope Restrictions: The study's generalizability is impacted by its restriction to particular sectors and geographical areas.

Data Reliability: Outdated information and possible inconsistencies affect results. Transparency is impacted by limitations on access to proprietary data.

5. CONCLUSION AND FUTURE SCOPE:

5.1 Conclusion : The majority of businesses successfully control expenses, which facilitates strategic decision-making.

Operational Efficiency: Effective corporate operations are improved by strong resource alignment.

Customer-Centric Strategies: Strong brand reputation, effective problem solving, and high levels of personalization all help to increase customer happiness.

Innovation and Crisis Management: Keeping a competitive edge requires constant improvement.

5.2 Future Scope : Make marketing communications more clear and streamline the purchasing process.

Cutting Lead Times: Automate and optimize logistics to expedite order delivery. Optimize your price strategy by matching pricing models to the perceived worth of your products.

Boosting Innovation: To maintain market leadership, make research and development investments.

Value Chain Assessments: To find areas that need improvement, conduct assessments on a regular basis.

REFERENCES

Porter.M. E (1985) Competitive Advantage: Creating and Sustaining Superior Performance

Value Chain analysis and competitive advantage Journal of General Management Prescott C. Ensign

Dimensions of Sustainable Value Chains: Implications for Value Chain Analysis Andrew Fearn & Marian Garcia, Kent Business School, University of Kent Ben Dent, School of Integrated Systems, University of Queensland

Combining the Global Value Chain and global I-O approaches Discussion Paper Dr. Stacey Fredick, Research Scientist Centre on Globalization, Governance & Competitiveness (CGGC), Duke University, Durham, NC USA.

