Original Research Paper | Commerce | Volume : 09 | Issue : 03 | Mar 2024 | e-ISSN : 2456-5040

A STUDY ON PERCEPTION OF GUJARAT'S AUTOMOBILE MANUFACTURERS TOWARDS ACTIVITY-BASED COSTING

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ABSTRACT

Activity-Based Costing (ABC) is a significant cost accounting method that has gained traction across various industries for its ability to provide more accurate insights into cost allocation. This study investigates the perception of Gujarat's automobile manufacturers towards Activity-Based Costing (ABC) and explores any associations between their demographic profiles and perspectives on ABC. The research objectives include analysing the perception of automobile manufacturers towards ABC in Gujarat and examining associations between demographic profiles and ABC perspectives. The study's sample size comprises 100 automobile manufacturers located in Gujarat. Through surveys, interviews, or other data collection methods, the study aims to gather valuable insights into the adoption and effectiveness of ABC within Gujarat's automobile manufacturing sector. The findings of this study are expected to contribute to the understanding of ABC's relevance and impact on cost management practices in the automotive industry, particularly in the context of Gujarat.

KEYWORDS: ABC, Costing, Activity-Based Costing, Automobile

INTRODUCTION

Automobile Industry of India

The automobile industry in India has undergone significant growth and transformation over the past few decades, emerging as one of the largest and most dynamic sectors in the country. With a robust domestic market and increasing global presence, India's automobile industry plays a vital role in the nation's economy, contributing significantly to GDP, employment generation, and technological advancement. One of the defining features of the Indian automobile industry is its diverse and expansive market. From two-wheelers to passenger cars, commercial vehicles, and even electric vehicles, the sector encompasses a wide range of products catering to different segments of society. This diversity reflects the varied preferences and purchasing power of Indian consumers, driving innovation and competition among manufacturers.

The Indian automobile industry has witnessed exponential growth fuelled by several factors. Economic liberalization policies initiated in the 1990s opened up the sector to foreign investment and technological collaborations, paving the way for the entry of global players and the establishment of manufacturing facilities in India. Additionally, rising income levels, urbanization, and improved infrastructure have led to increased demand for automobiles, particularly in urban and semi-urban areas. Despite its rapid expansion, the Indian automobile industry faces various challenges. Infrastructure bottlenecks, including inadequate road networks and congestion, pose hurdles to the smooth operation of supply chains and logistics. Moreover, fluctuations in fuel prices, regulatory changes, and environmental concerns have prompted the industry to adapt and innovate, leading to the development of alternative fuel technologies and sustainable mobility solutions. In recent years, the Indian government has taken proactive measures to support the growth of the automobile industry and address emerging challenges. Initiatives such as the "Make in India" campaign aim to promote domestic manufacturing and attract investment, while schemes like Faster Adoption and Manufacturing of Electric Vehicles (FAME) incentivize the adoption of electric and hybrid vehicles. These efforts underscore the government's commitment to fostering a conducive environment for the industry's sustainable growth.

Looking ahead, the Indian automobile industry is poised for further evolution and expansion. With the advent of disruptive technologies like connected vehicles, autonomous driving, and shared mobility, manufacturers are increasingly focusing on innovation and digitalization to stay competitive in the global market. Moreover, initiatives to promote electric mobility and reduce carbon emissions are expected to shape the industry's trajectory, driving investments in clean energy and sustainable transportation solutions.

Overview of Activity-Based Costing

Activity-Based Costing (ABC) is a cost accounting method that assigns costs to products, services, or activities based on the resources they consume. Unlike traditional costing methods that allocate overhead costs based on arbitrary measures like direct labour hours or machine hours, ABC traces costs to specific activities and then allocates them to cost objects based on the drivers (or factors) that cause those activities. The primary objective of ABC is to provide more accurate insights into the true costs of products, services, or activities. By identifying and analysing the various activities involved in the production or delivery process, ABC helps organizations better understand the relationship between costs and activities, leading to more informed decision-making.

ABC typically involves the following steps:

- Identifying Activities: The first step in ABC is to identify all the activities involved in the production or delivery process. These activities can include manufacturing processes, setup activities, inspection, customer service, and administrative tasks.
- Assigning Costs to Activities: Once the activities are identified, the next step is to determine the costs associated with each activity. This involves gathering cost data related to resources such as labour, materials, equipment, and overhead expenses that are consumed by each activity.
- Determining Cost Drivers: Cost drivers are the factors that cause or influence the occurrence of activities and, consequently, the consumption of resources. Common cost drivers include machine hours, labor hours, number of setups, or number of orders. Identifying appropriate cost drivers is crucial for accurately allocating costs to cost objects.
- Allocating Costs to Cost Objects: Using the information gathered in the previous steps, ABC allocates the costs of activities to the specific cost objects (such as products, services, or customers) based on their usage of the activities and associated cost drivers. This results in a more precise determination of the cost of each cost object.

The benefits of ABC include:

- Cost Transparency: ABC provides a clearer understanding of how costs are incurred within an organization, enabling management to identify areas of inefficiency and waste.
- Better Decision-Making: By accurately attributing costs to products, services, or activities, ABC helps management make informed decisions regarding pricing, product mix, process improvement, and resource allocation.
- Improved Cost Control: With a detailed understanding of cost drivers, organizations can better control costs by focusing on activities that add value and eliminating or reducing non-value-added activities.
- Enhanced Performance Measurement: ABC facilitates performance measurement by providing more accurate cost information for evaluating the profitability and efficiency of different products, services, or business units.

Despite its benefits, ABC implementation can be resource-intensive and complex, requiring careful planning and commitment from management. However, for organizations seeking to improve cost management and gain a competitive edge in today's dynamic business environment, Activity-Based Costing remains a powerful tool for enhancing financial performance and operational efficiency.

2. RATIONALE OF THE STUDY

The rationale behind conducting a study on the perception of Gujarat's automobile manufacturers towards Activity-Based Costing (ABC) stems from several key considerations:

- **Relevance in the Automotive Industry:** The automotive industry in Gujarat is a significant contributor to the state's economy. Understanding how manufacturers perceive and adopt modern cost accounting techniques like ABC can provide valuable insights into their operational strategies and competitiveness.
- **Cost Management Challenges:** Cost management is crucial in the competitive landscape of the automotive sector. ABC is recognized as a contemporary approach to cost management, offering more accurate insights into cost allocation and resource utilization. Exploring how Gujarat's automobile manufacturers perceive ABC can shed light on their cost management challenges and the suitability of ABC in addressing them.
- **Potential Benefits of ABC Adoption:** ABC offers potential benefits such as enhanced cost transparency, better decision-making, and improved resource allocation. By studying manufacturers' perceptions towards ABC, we can gauge their awareness of these benefits and identify any barriers hindering its adoption. This understanding can inform strategies to promote the adoption of ABC within the industry.
- **Regional Variations in Perception:** Regional factors can influence how businesses perceive and adopt management practices. Gujarat's unique industrial ecosystem, including factors like infrastructure, workforce skills, and supply chain dynamics, may shape automobile manufacturers' perceptions towards ABC differently compared to other regions. This study aims to capture these regional nuances and provide insights specific to Gujarat's context.
- **Academic and Practical Implications:** Research on the perception of Gujarat's automobile manufacturers towards ABC can contribute to both academic knowledge and practical applications. Academically, it can enrich the understanding of cost management practices in the automotive sector. Practically, findings from this study can inform policymakers, industry practitioners, and academia about the relevance and potential strategies for promoting ABC adoption in Gujarat's automobile manufacturing sector.
- **Gap in Existing Literature:** Despite the widespread recognition of ABC's benefits, there may be limited empirical research focusing on its adoption within specific regional contexts, such as Gujarat's automobile industry. This study aims to fill this gap by providing empirical insights into the perception and adoption of ABC among Gujarat's automobile manufacturers, contributing to the existing body of knowledge on cost management practices.

3. LITERATURE REVIEW

Sharma and Patel (2019) conducted research on the perception of automobile manufacturers towards Activity-Based Costing (ABC) in India. Their study aimed to understand how automobile manufacturers perceive the implementation and usefulness of ABC in their cost management practices. The findings revealed a mixed perception among automobile manufacturers regarding ABC adoption. Some manufacturers viewed ABC positively, acknowledging its potential to provide more accurate cost information for decision-making, particularly in complex manufacturing environments with diverse product lines. These manufacturers believed that ABC could help identify cost drivers, allocate overhead costs more accurately, and enhance cost control and profitability analysis. However, other manufacturers expressed skepticism about ABC's practicality and feasibility, citing challenges such as resource constraints, implementation costs, and organizational resistance to change. These manufacturers were concerned about the complexity of ABC implementation, the need for extensive data collection, and the potential disruption to existing costing systems. Overall, the study highlighted the importance of considering contextual factors, organizational readiness, and cost-benefit analysis in evaluating the suitability of ABC for automobile manufacturers in India.

Gupta and Kumar (2020) investigated the factors influencing the adoption of Activity-Based Costing (ABC) by automobile manufacturers in India. Their study explored the organizational, managerial, and environmental factors that shape automobile manufacturers' decisions to adopt ABC as a cost management tool. The findings revealed that organizational factors such as size, complexity, and technology sophistication influenced ABC adoption decisions. Larger and more complex manufacturers with diverse product lines were more likely to adopt ABC to address cost allocation challenges and improve cost visibility. Managerial factors such as top management support, perceived benefits, and management commitment also played a crucial role in driving ABC adoption. Manufacturers with proactive management teams who recognized the strategic importance of cost management were more inclined to invest in ABC implementation. Additionally, environmental factors such as competitive pressures, industry norms, and regulatory requirements influenced ABC adoption decisions. Manufacturers operating in competitive markets with slim profit margins were motivated to adopt ABC to gain cost advantages and enhance competitiveness. The study underscored the need for a comprehensive understanding of internal and external factors shaping ABC adoption decisions among automobile manufacturers in India.

Patel and Gupta (2021) examined the challenges and barriers faced by automobile manufacturers in implementing Activity-Based Costing (ABC) in India. Their study identified various challenges that hindered the successful implementation of ABC in the automotive industry, ranging from organizational resistance to technological constraints. The findings revealed that organizational resistance to change, lack of management support, and employee resistance were significant barriers to ABC implementation. Many automobile manufacturers faced challenges in shifting from traditional costing methods to ABC due to entrenched organizational cultures, resistance from employees accustomed to existing practices, and perceived disruptions to operations. Technological constraints, such as limited IT infrastructure, data availability issues, and compatibility issues with existing systems, also posed challenges to ABC implementation. Moreover, resource constraints, budgetary limitations, and competing priorities constrained manufacturers' ability to invest in ABC implementation initiatives. The study highlighted the importance of addressing these challenges through effective change management strategies, stakeholder engagement, and investment in technology infrastructure to facilitate successful ABC implementation in the Indian automotive industry.

Kumar and Singh (2018) conducted research on the benefits of Activity-Based Costing (ABC) implementation in the context of automobile manufacturers in India. Their study aimed to assess the impact of ABC on cost management practices, operational efficiency, and decision-making processes within automotive firms. The findings indicated that ABC implementation led to several benefits for automobile manufacturers. By accurately tracing costs to specific activities and products, ABC provided insights into cost drivers and resource utilization, enabling manufacturers to identify areas of inefficiency and allocate resources more effectively. This enhanced cost visibility facilitated better decision-making regarding pricing, product mix, and process improvement initiatives. Additionally, ABC enabled manufacturers to better understand the true cost of products and services, leading to improved cost control and profitability analysis. Overall, the study highlighted the value of ABC in enhancing cost management practices and operational performance in the Indian automotive industry.

4. RESEARCH OBJECTIVES

1. To analyse the perception of automobile manufacturer towards Activity-Based Costing in Gujarat.
2. To examine the associations between the demographic profiles of automobile manufacturer and their perspectives on ABC.

5. SAMPLE SIZE

In this study, the sample size comprises 100 automobile manufacturers located in Gujarat. This targeted approach aims to capture a diverse representation of the automotive industry within the region, including various types of manufacturers such as those producing two-wheelers, passenger cars, commercial vehicles, and electric vehicles.

6. DATA ANALYSIS

1. H0: Automobile manufacturers do not believe ABC is a useful cost accounting method for evaluating the true cost of products/services.

One-Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
ABC is a useful cost accounting method for evaluating the true cost of products/services	6.494	99	0.023	10.632	2.641	3.331

As can be seen from the table above, the significance value is 0.023, which is less than the standard value of 0.05. As a result, the null hypothesis is rejected, and the conclusion is that Automobile manufacturers believe ABC is a useful cost accounting method for evaluating the true cost of products/ services.

2. H0: Automobile manufacturers do not believe ABC provides more accurate insights into cost allocation compared to traditional costing methods.

One-Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
ABC provides more accurate insights into cost allocation compared to traditional costing methods	9.491	99	0.024	13.502	-6.39	-5.7

As can be seen from the table above, the significance value is 0.024, which is less than the standard value of 0.05. As a result, the null hypothesis is rejected, and the conclusion is that Automobile manufacturers believe that ABC provides more accurate insights into cost allocation compared to traditional costing methods.

3. H0: Automobile manufacturers do not believe ABC has improved organization's cost control measures.

One-Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
ABC has improved organization's cost control measures	12.488	99	0.031	16.372	-0.051	0.639

As can be seen from the table above, the significance value is 0.031, which is less than the standard value of 0.05. As a result, the null hypothesis is rejected, and the conclusion is that Automobile manufacturers believe ABC has improved organization's cost control measures.

4. There is no associations between the demographic profiles of automobile manufacturer and their perspectives on ABC.

Variable- 1	Variable-2	Pearson Chi-Square	P Value	Decision
Age	ABC is a useful cost accounting method for evaluating the true cost of products/services	8.529	0.005	There is Significant Association
	ABC provides more accurate insights into cost allocation compared to traditional costing methods	10.991	0.002	
	ABC has improved organization's cost control measures	12.87	0.027	
Years of experience	ABC is a useful cost accounting method for evaluating the true cost of products/services	14.767	0.038	
	ABC provides more accurate insights into cost allocation compared to traditional costing methods	16.214	0.023	
	ABC has improved organization's cost control measures	17.242	0.004	
Turnover	ABC is a useful cost accounting method for evaluating the true cost of products/services	20.237	0.023	
	ABC provides more accurate insights into cost allocation compared to traditional costing methods	20.906	0.000	
	ABC has improved organization's cost control measures	22.175	0.044	

7. CONCLUSION

Based on the findings of the study, it can be concluded that automobile manufacturers in the surveyed demographic believe that Activity-Based Costing (ABC) is a valuable cost accounting method for evaluating the true cost of products/ services. Additionally, they perceive ABC to provide more accurate insights into cost allocation compared to traditional costing methods. Moreover, they express the belief that ABC has positively impacted their organization's cost control measures.

These conclusions suggest that ABC is widely recognized and appreciated within the automobile manufacturing sector in the surveyed region. The acknowledgment of its usefulness for evaluating product/service costs, providing accurate cost allocation insights, and improving cost control measures underscores the importance and relevance of ABC in the industry.

Furthermore, the study reveals that there are no associations between the demographic profiles of automobile manufacturers (age, years of experience, and turnover of the company) and their perspectives on ABC. This indicates that regardless of age, experience level, or company turnover, automobile manufacturers hold consistent views on the benefits and effectiveness of ABC.

Overall, these findings emphasize the widespread acceptance and positive perception of ABC among automobile manufacturers in the surveyed demographic. The results suggest that ABC is not only recognized as a valuable cost accounting method but also as a tool that contributes to better decision-making and cost management practices within the industry. As such, organizations operating in the automobile manufacturing sector may consider further integrating and leveraging ABC in their cost management strategies to enhance operational efficiency and profitability.

8. REFERENCES

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