International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 14 **Issue:** VIII **Month of publication:** August 2026

DOI: https://doi.org/10.22214/ijraset.2026.84715

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 14 Issue VIII Aug 2026- Available at www.ijraset.com

A Study on Cost Reduction and Financial Efficiency of Dinshaws Ice Cream Factory, Butibori, Nagpur

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Abstract: Cost reduction and financial efficiency are essential for the profitability and competitiveness of manufacturing organizations. This study examines cost reduction practices and financial efficiency with special reference to Dinshaws ice-cream manufacturing operations in Nagpur. The study focuses on major costs such as raw materials, labour, electricity, refrigeration, packaging, transportation, wastage and working capital. Secondary information from company sources and published financial assessments is considered for the analysis. The study indicates that effective procurement, production planning, energy management, wastage control and working-capital management can improve financial efficiency. Published financial information also indicates improvement in the company's revenue and profitability in recent years. The study recommends strategic cost reduction without compromising product quality and customer satisfaction.
Keywords: Cost Reduction, Financial Efficiency, Ice Cream Industry, Cost Control, Profitability, Working Capital, Dinshaws, Nagpur

I. INTRODUCTION

The dairy and ice-cream industry is an important part of the Indian food-processing sector. It faces challenges such as increasing raw-material prices, seasonal demand, electricity costs, refrigeration expenses, packaging costs and transportation expenses.
Dinshaws Dairy Foods has been associated with the dairy and ice-cream business since 1932.
The company operates in several product categories, including ice cream, dairy, bakery and namkeen. Effective cost management is important because manufacturing and distribution require considerable expenditure on ingredients, labour, refrigeration, packaging and cold-chain transportation.

A. Problem Statement

Increasing production and operating costs can reduce profitability. Therefore, identifying unnecessary expenditure and improving operational efficiency are important for maintaining financial performance.

B. Objectives

1) To study the major cost components of ice-cream manufacturing.
2) To examine cost-control practices.
3) To study selected indicators of financial efficiency.
4) To identify factors affecting profitability.
5) To suggest measures for reducing unnecessary costs.

II. LITERATURE REVIEW

Cost reduction aims to eliminate unnecessary expenditure while maintaining product quality and productivity. Studies relating to dairy and food manufacturing emphasize procurement efficiency, supply-chain management, production planning and resource utilization.
Published CRISIL assessments of Dinshaws indicate that milk procurement prices and ice-cream demand have an important influence on profitability. Recent published information also indicates improvement in the company's revenue and profitability.

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However, detailed plant-level cost information is not publicly available. Therefore, this study focuses on major cost areas and their likely relationship with financial efficiency.

III. RESEARCH METHODOLOGY

The study follows a descriptive and analytical research design and mainly uses secondary data.

A. *Sources of Data:*

- Dinshaws official company information
- Published CRISIL rating reports
- Research papers and academic literature
- Books on cost accounting and financial management

B. *Tools of Analysis:*

- Comparative analysis
- Ratio analysis
- Cost-component analysis
- Variance analysis

The study is subject to the limitation that confidential factory-level cost records are not publicly available. Therefore, published financial figures are treated as company-level information rather than specific Butibori factory accounts.

IV. RESULTS AND DISCUSSION

A. *Major Cost Components*

- Raw Materials: Milk, milk solids, sugar, flavors and other ingredients are major production inputs. Supplier selection, bulk purchasing and inventory control can help reduce costs.
- Labour: Training, manpower planning, production scheduling and automation can improve labour productivity.
- Energy and Refrigeration: Ice-cream production requires continuous refrigeration. Energy-efficient equipment, preventive maintenance and temperature monitoring can reduce electricity costs.
- Packaging: Bulk purchasing, standardized packaging and reduction of material wastage can control packaging expenses.
- Transportation: Route optimization, better vehicle utilization and demand-based distribution can reduce cold-chain transportation costs.
- Working Capital: Efficient inventory and receivables management can reduce financing requirements and improve liquidity.

B. *Financial Performance*

Published CRISIL information indicates improvement in Dinshaws financial performance:

Financial Year	Revenue (₹ crore)	PAT (₹ crore)
2021	409	-11
2022	534	2
2023*	756	22
2024*	864	53

*Published/estimated figures reported in relevant CRISIL assessments. These are company-level figures and not plant-specific accounts.

The figures indicate substantial growth in revenue and improvement in profitability between 2021 and 2024.

C. Cost Reduction and Financial Efficiency

The relationship can be represented as:

Cost Control → Lower Production Cost → Higher Margin → Higher Profitability → Improved Financial Efficiency

However, cost reduction should not compromise quality, food safety or customer satisfaction. Strategic cost reduction should focus on eliminating waste and improving productivity.

V. MAJOR FINDINGS

1) Dinshaws has an established presence in the Nagpur dairy and ice-cream market.
2) Raw-material prices, particularly milk prices, influence profitability.
3) Energy and refrigeration are important areas for cost control.
4) Packaging and transportation costs can be reduced through better planning.
5) Production planning can improve capacity utilization.
6) Wastage control can reduce production costs.
7) Effective working-capital management can improve liquidity.
8) Technology and automation can improve productivity.
9) Budgetary and variance analysis can help identify unnecessary expenditure.
10) Cost reduction should maintain product quality and customer satisfaction.

VI. SUGGESTIONS AND RECOMMENDATIONS

1) Strengthen supplier evaluation and raw-material procurement.
2) Conduct regular energy audits.
3) Introduce preventive maintenance for refrigeration equipment.
4) Monitor production-stage wastage.
5) Improve capacity utilization through demand-based production planning.
6) Prepare monthly budgets for major expenses.
7) Monitor inventory, receivables and payables regularly.
8) Use automation where economically beneficial.
9) Optimize transportation routes and vehicle utilization.
10) Evaluate major investments using ROI, NPV and payback-period techniques.

VII. CONCLUSION

The study concludes that cost reduction and financial efficiency are closely related to the profitability and competitiveness of ice-cream manufacturing organizations. In Dinshaw's operations, important areas for cost management include raw materials, labour, electricity, refrigeration, packaging, transportation, wastage and working capital.

Effective procurement, energy management, production planning, budgetary control and wastage reduction can improve operating efficiency. The objective should not be simple cost cutting but strategic cost reduction, which eliminates unnecessary expenditure while maintaining product quality and customer satisfaction.

Further research can be conducted using primary data from the factory, such as production cost, electricity consumption, wastage, labour productivity and working-capital information. This would provide a more detailed assessment of plant-level financial efficiency.

VIII. ACKNOWLEDGMENT

The researcher expresses sincere gratitude to the faculty members, academic guides and all individuals who provided guidance and support in preparing this research paper. The researcher also acknowledges the publicly available information provided by Dinshaws Dairy Foods and published financial assessments used for academic purposes.

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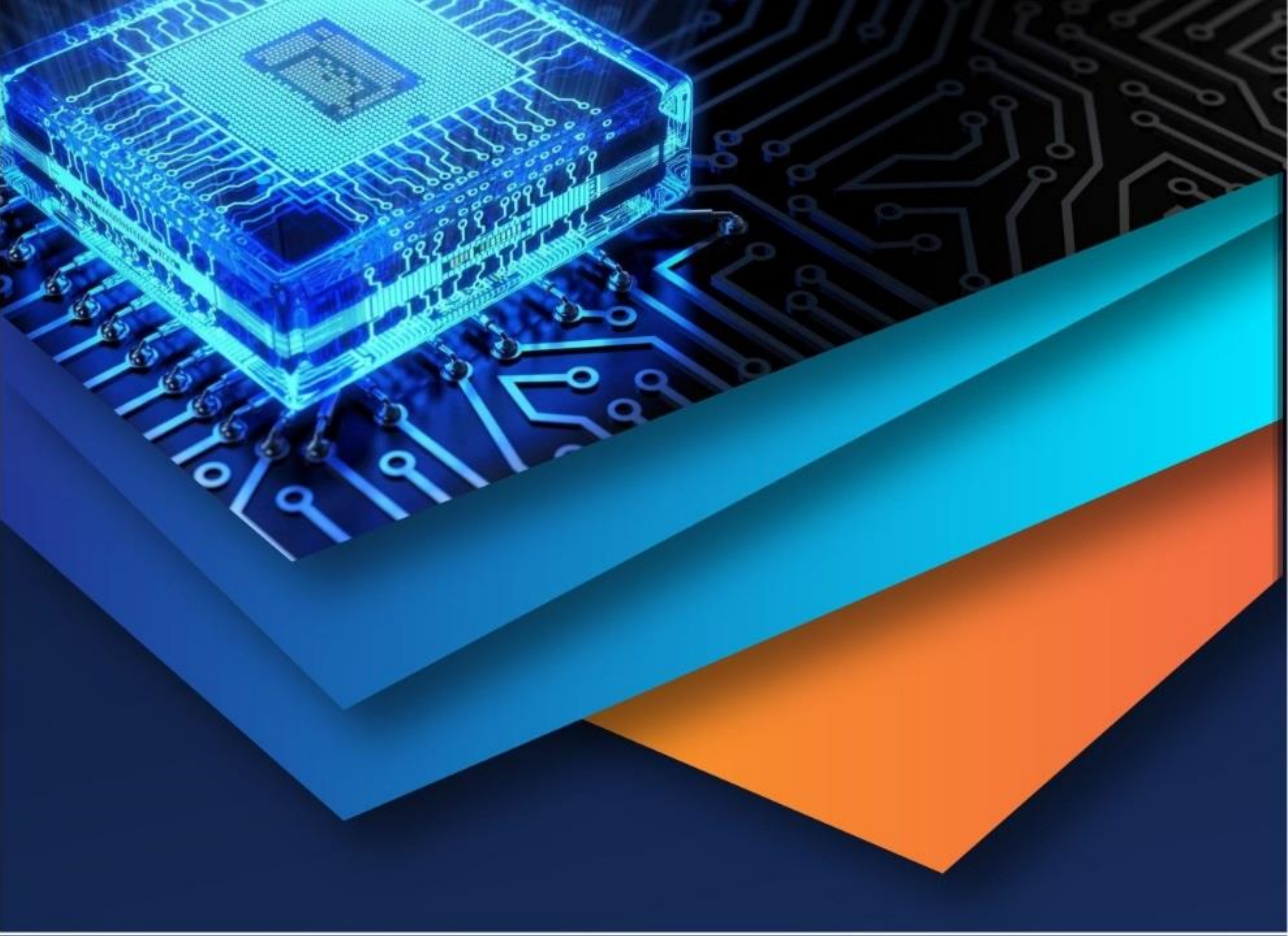

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