



# A Study on the Profitability and Growth of Dairy Industries in India

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**Abstract** – A Dairy farming is a cornerstone of India’s agricultural economy, contributing significantly to rural livelihoods, employment generation, and nutritional security. India has sustained its position as the world’s largest milk producer, about 247.87 million tonnes in 2024-25 producing MT of milk with a strong 5.62% CAGR over the last decade. Profitability is driven by high-value, value-added products (VAPs) like cheese and yogurt, with industry revenue expected to grow 11–13% in FY26. The sector supports over 80 million farmers. Despite this impressive growth, the sector continues to face multiple structural and systemic challenges that limit productivity, profitability, and sustainability, particularly for small-holder farmers who dominate dairy production. This Study is based on the objective of the evaluation of the liquidity, solvency, profitability and Growth return performance of the companies viz, Hatsun Agro Product, Dodla Dairy, Vadilal Industries, Heritage Foods, and Parag Milk Foods over a period of 5 years from 2020 to 2025.

**Keywords** – Profitability, Solvency, Growth, ROE, ROCE.

## I. INTRODUCTION

India contributes 24% of global milk production, the India dairy market size was valued at USD 135.30 billion in 2024. The market is projected to grow from USD 146.80 billion in 2025 to USD 274.09 billion by 2032, exhibiting a CAGR of 9.33% during the forecast period. India is currently the largest producer of milk and one of the world’s largest exporters of dairy products. The Indian dairy industry contributes 5% to the national economy and directly supports over eight crore farmers and shift toward high-margin items like yogurt, cheese, and flavored milk is driving revenue, with VAPs accounting for over 28% of revenue for some players. Increased use of artificial insemination (565.55 lakh procedures in 2024–25) and sex-sorted semen is improving herd productivity. The major producers in India are Uttar Pradesh, Maharashtra, Himachal Pradesh, Madhya Pradesh, Rajasthan, Punjab, and Tamil Nadu. Moreover, the government has taken several initiatives for the development of the dairy industry in India; a few initiatives undertaken by the government to further boost the opportunities in the dairy sector in India are Rashtriya Gokul Mission, National Dairy Development Board (NDDB), State Cooperative Dairy Federations, National Programme for Dairy Development (NPDD), and Dairy Entrepreneurship Development Scheme (DEDS).

## II. REVIEW OF LITERATURE

**P. Narayanan (2017):** The paper studies how cooperative structures influence financial outcomes in the dairy sector. It concludes that farmer-based cooperative systems promote steady financial growth and equitable profit distribution, contributing to overall industry development.

**Meena Kumari (2019):** The study analyses revenue growth, net profit margins, and asset turnover ratios of leading dairy companies. It identifies that technological advancements, product diversification, and branding

significantly impact financial outcomes. The paper emphasises the importance of strategic financial planning for long-term sustainability.

**S. Patel (2020):** This research compares the financial efficiency of Amul with private dairy firms. Using trend analysis and return on capital employed (ROCE), the study concludes that cooperative models ensure stable growth, while private firms show faster expansion but face higher financial risk.

**Anil Kumar (2021):** This research applies ratio analysis to examine liquidity, solvency, and efficiency of selected milk processing companies and working capital management practices. The study recommends improving operational efficiency and reducing financial leverage to enhance stability.

## III. RESEARCH DESIGN AND METHODOLOGY

### Objectives of the Study

The following are the specific objectives of the study

1. To analyse the liquidity and solvency position of selected Dairy companies.
2. To analyse the profitability position of selected Dairy Companies.
3. To analyse the Growth of selected Dairy Companies in India.

### Scope of the Study

The present study aims at assessing the profitability position of selected Dairy companies in India. The study could help the company as well as the investors to understand its financial efficiency.

It aims to help the management to find out its financial problems at present and the specific areas in the business, which might need some effort for more effective and



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efficient utilization of its resources. The study is conducted for a period of five years for selected companies.

**Sources of Data:** This study is based on secondary data, extracted from [www.moneycontrol.com](http://www.moneycontrol.com). for the period from 2021 to 2025 which is a reliable and empowered corporate database. In addition to this, supportive data is collected from books, journals, annual reports and various news-papers.

**Research Methodology:** The methodology adopted to analyse is through ratio analysis, and interpret general financial statements to assess the profitability position. Further a comprehensive analysis is carried by applying statistical techniques namely mean, standard deviation, co-efficient of variance and analysis of variance.

#### Type of Research: Discreptive and Analytical type

**Sample Design:** As the complete source list of all the Dairy Companies is not available, the data for this study is selected based on convenience sampling method. Among the companies listed with major stock exchange of India namely, Bombay Stock Exchange and National Stock Exchange of India five companies with consistent financial data are selected. Certain companies are excluded owing to irregular and/or inconsistent financial data support. The following are the selected pharmaceutical companies of the study 1. HATSUN AGRO PRODUCT 2. DODLA DAIRY 3.. VADILAL INDUSTRIES 4. HERITAGE FOODS and PARAG MILK FOOD Period of the Study. The study covers a period of five years from the financial year 2020-21 to 2024-25. Analysis of Profitability and growth.

#### Analytical Tools:

##### A. Financial Accounting tools

The liquidity, profitability and growth of the selected companies is measured with the help of the following ratios, and the results are interpreted: 1. Current Ratio, 2. Quick Ratio, 3. Net Profit Ratio 4. Solvency Ratio 5. Net Profit Ratio 6. Return on Equity Ratio 7. Return On Capital Employed 8. Interest on investment 9. Interest on Coverage

Ratio 10. Interest on investment Ratio. 11. Debt-Equity Ratio

**B. Statistical Tools:** Mean and Standard Deviation are used and to check the validity of the data F-test is applied by using ANOVA-table.

#### Hypothesis Test -1

- H0: There is no significance difference between the Current Ratio of Dairy Industries
- H1: There is a significance difference between the Current Ratio of Dairy Industries

#### Hypothesis Test -2

- H0: There is no significance difference between the Solvency Ratio of Dairy Industries
- H1: There is a significance difference between the Solvency Ratio of Dairy Industries

#### Hypothesis Test -3

- H0: There is no significance difference between the Solvency Ratio of Dairy Industries
- H1: There is a significance difference between the Solvency Ratio of Dairy Industries

#### Hypothesis Test -4

- **H0:** There is no significance difference between the ROA of Dairy Industries
- **H1:** There is a significance difference between the ROA of Dairy Industries

#### Limitation of the study

The study is based on only five selected dairy companies The study examines the profitability, solvency and growth through ratio analysis only.

The study is based on secondary data obtained from selected five dairy companies listed in NSE and BSE The study period is 5 years, i.e. from 2020-21 to 2024-25

#### Data Analysis and Interpretation

##### CURRENT RATIO

Current Ratio							
Companies	2020-21	2021-22	2022-23	2023-24	2024-25	Mean	Sd
Hatsun Agro Product	0.53	0.56	0.63	0.86	0.63	0.642	0.12
Dodla Dairy	1.93	1.88	1.83	2.64	3.89	2.434	0.79
Vadilal Industries	0.87	1.08	1.14	1.50	2.13	1.34	0.44
Heritage Foods	1.23	1.59	1.43	1.69	1.77	1.54	0.19
Parag Milk Food	1.71	1.67	2.03	2.00	2.06	1.89	0.17

(SOURCE: [www.moneycontrol.com](http://www.moneycontrol.com))

As per the above analysis the average Current Ratio of Dodla Dairy is 2.43 times and Hatsun Agro is 0.12. Dodla Dairy shows highest Current Ratio in the year 2024-25

#### Application of F-Test : Hypothesis Test -1

To check the validity of the data F-test is applied by using ANOVA-table.

- H0: There is no significance difference between the Current Ratio of Dairy Industries
- H1: There is a significance difference between the Current Ratio of Dairy Industries



Anova Table					
Source Of Variance	Sum Of Square	Df	Mean Square	F - Ratio	Critical Value (At 5%)
Ssb	7.66	(5-1)=04	1.915	4.1450	F(4,20)=5.80
Ssw	9.24	(25 - 5)=20	0.462		
Total	16.9	(25 - 1)= 24			

(Source: Calculated by author)

The above table shows that, the calculated value of F is 5.80 which is greater than the table value of 2.87, at 5% level of significance with d.f v1=4, v2= 20, Hence H0 is rejected. There is a significance difference between Current Ratios' of all the dairy companies.

**QUICK RATIO**

QUICK RATIO							
COMPANIES	2020-21	2021-22	2022-23	2023-24	2024-25	Mean	SD
HATSUN AGRO PRODUCT	0.11	0.13	0.07	0.15	0.08	0.11	0.03
DODLA DAIRY	1.29	1.24	1.33	1.09	3.80	1.75	1.03
VADILAL INDUSTRIES	0.28	0.32	0.27	0.49	0.80	0.43	0.20
HERITAGE FOODS	0.28	0.47	0.24	0.85	0.84	0.54	0.26
PARAG MILK FOOD	0.70	0.78	1.01	1.08	1.22	0.96	0.19

( SOURCE: www.moneycontrol.com)

As per the above analysis the average Quick Ratio of Dodla Dairy is 1.75 times and Hutsun Agro is 0.11 . Dodla Dairy shows highest Quick Ratio in the year 2024-25

**SOLVENCY RATIO**

SOLVENCY RATIO							
COMPANIES	2020-21	2021-22	2022-23	2023-24	2024-25	Mean	SD
HATSUN AGRO PRODUCT	0.74	0.91	0.77	0.84	0.77	0.81	0.06
DODLA DAIRY	0.18	0.05	0.04	0.03	0.03	0.07	0.06
VADILAL INDUSTRIES	0.36	0.46	0.28	0.19	0.17	0.29	0.11
HERITAGE FOODS	0.11	0.08	0.10	0.20	0.21	0.14	0.05
PARAG MILK FOOD	0.03	0.44	0.26	0.21	0.21	0.23	0.13

(SOURCE: www.moneycontrol.com)

other companies and variability of solvency ratio is very less in Heritage Foods, Hatsun and Dodla Dairy.

Anova Table					
Source Of Variance	Sum Of Square	Df	Mean Square	F - Ratio	Critical Value (At 5%)
Ssb	1.7088	(5-1)=04	0.4272	44.73	F(4,20)= 5.80
Ssw	0.1911	(25 - 5)=20	0.0095		
Total	1.8999	(25 - 1)= 24			

**Application of F-Test:** Hypothesis Test -2

To check the validity of the data F-test is applied by using ANOVA-table.

- **H0:** There is no significance difference between the Solvency Ratio of Dairy Industries
- **H1:** There is a significance difference between the Solvency Ratio of Dairy Industries

(Source: Calculated by author)

The above table shows that, value of 44.73, at 5% level of significance with d.f v1=4, v2= 20, Hence H0 is rejected. There is a significance difference between Solvency Ratios' of all the dairy companies.

From the above table, it clearly shows that, Average solvency ratio of Hatsun Agro is highest as compared to

**NET PROFIT RATIO**

Net Profit Ratio							
Companies	2020-21	2021-22	2022-23	2023-24	2024-25	Mean	Sd
Hatsun Agro Product	4.42	3.90	2.29	3.35	3.29	3.45	0.71



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Dodla Dairy	5.90	6.51	3.67	5.29	7.39	5.75	1.25
Vadilal Industries	-6.78	1.90	8.03	10.52	11.25	4.98	6.74
Heritage Foods	6.03	3.48	2.05	2.43	4.12	3.62	1.41
Parag Milk Food	1.00	-2.65	2.43	3.01	3.66	-3.28	11.64

Source Of Variance	Sum Of Square	Df	Mean Square	F - Ratio	Critical Value (At 5%)
Ssb	421.9748	(5-1)=04	105.4937	2.1732	F(4,20)=5.80
Ssw	970.8452	(25 - 5)=20	48.5422		
Total	1392.82	(25 - 1)=24			

(SOURCE: [www.moneycontrol.com](http://www.moneycontrol.com))

As per above analysis, it clearly shows that, Dodla Dairy shows highest average net profit of 5.75 over a period of 5 years, as compared to other companies. Where as Parag

Milk showing negative average net profit over a period of 5 years.

**Application of F-Test : Hypothesis Test -3**

To check the validity of the data F-test is applied by using ANOVA-table.

- **H0:** There is no significance difference between the Net Profit Ratio of Dairy Industries
- **H1:** There is a significance difference between the Net Profit Ratio of Dairy Industries  
(Source: Calculated by author)

The above table shows that, value of 2.1732, at 5% level of significance with d.f v1=4, v2= 20, Hence H0 is Accepted .There is no significance difference between Net Profit Ratio of all the dairy companies.

**RETURN ON ASSET (ROA)**

Companies	2020-21	2021-22	2022-23	2023-24	2024-25	Mean	Sd
Hatsun Agro Product	7.90	7.00	4.42	5.64	5.90	6.17	1.19
Dodla Dairy	12.00	13.59	8.52	11.81	16.08	12.40	2.47
Vadilal Industries	-4.80	2.02	11.46	14.85	15.02	7.71	7.84
Heritage Foods	16.91	11.39	5.87	7.22	11.08	10.49	3.86
Parag Milk Food	1.06	-40.06	4.32	5.20	6.55	-4.59	17.83

(SOURCE: [www.moneycontrol.com](http://www.moneycontrol.com))

Source Of Variance	Sum Of Square	Df	Mean Square	F - Ratio	Critical Value (At 5%)
Ssb	264.93	(5-1)=04	66.23	0.6425	F(4,20)=5.80
Ssw	2061.44	(25 - 5)=20	103.072		
Total	2326.37	(25 - 1)=24			

As per the above analysis Dodla dairy exhibiting highest averag ROA of 12.40 times as comared to the other companies.

Application of F-Test : Hypothesis Test -4

To check the validity of the data F-test is applied by using ANOVA-table.

- H0: There is no significance difference between the ROA of Dairy Industries
- H1: There is a significance difference between the ROA of Dairy Industries

(Source: Calculated by author)

The above table shows that, F-value of 0.6425, at 5% level of significance with d.f v1=4, v2= 20, Hence H0 is Accepted .There is no significance difference between ROA of all the dairy companies.

**RETURN ON INVESTMENT (ROI)**

Companies	2020-21	2021-22	2022-23	2023-24	2024-25	Mean	Sd
Hatsun Agro Product	13.84	11.65	6.48	9.23	9.43	10.13	2.48
Dodla Dairy	15.18	16.37	10.29	14.32	18.63	14.96	2.75
Vadilal Industries	-8.38	3.22	19.28	20.89	19.64	10.93	11.64
Heritage Foods	22.00	14.17	8.08	9.44	14.60	13.66	4.89
Parag Milk Food	1.83	-66.48	6.61	8.20	10.01	-7.97	29.38

(SOURCE: [www.moneycontrol.com](http://www.moneycontrol.com))



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Average ROI of Dodla and Heritage Dairies are highest ,i.e14.96 and 13.66.Dodla is performing better as compared to other companies.

**DEBT-TO-EQUITY**

Debt-To-Equity							
Companies	2020-21	2021-22	2022-23	2023-24	2024-25	Mean	Sd
Hatsun Agro Product	97.17	112.84	103.69	141.94	139.47	119.02	18.41
Dodla Dairy	5.08	3.62	3.88	4.47	4.20	4.25	0.50
Vadilal Industries	40.56	40.48	47.03	36.53	36.51	40.22	3.85
Heritage Foods	11.39	9.39	8.29	9.83	12.30	10.24	1.43
Parag Milk Food	8.56	8.11	6.53	7.07	7.43	7.54	0.72

(SOURCE: www.moneycontrol.com)

From the above analysis , it clearly shows that,average **RETURN ON EQUITY (ROE)** Debt-Equity ratio of Dodla Dairy is more efficient as compared to other companies. i.e 4.25 times.

DEBT-TO-EQUITY							
COMPANIES	2020-21	2021-22	2022-23	2023-24	2024-25	Mean	SD
HATSUN AGRO PRODUCT	97.17	112.84	103.69	141.94	139.47	119.02	18.41
DODLA DAIRY	5.08	3.62	3.88	4.47	4.20	4.25	0.50
VADILAL INDUSTRIES	40.56	40.48	47.03	36.53	36.51	40.22	3.85
HERITAGE FOODS	11.39	9.39	8.29	9.83	12.30	10.24	1.43
PARAG MILK FOOD	8.56	8.11	6.53	7.07	7.43	7.54	0.72

(SOURCE: www.moneycontrol.com)

Average Return on equity of Hatsun Agro Product is Rs. 1103,which is higher than other companies, Vadilal Industries also shows average ROE OF Rs. 727.03. But

Dodla and Heritage Foods showing consistent ROE over a period of 5 years.

**INTEREST ON COVERAGE RATIO**

INTEREST ON COVERAGE RATIO							
COMPANIES	2020-21	2021-22	2022-23	2023-24	2024-25	Mean	SD
HATSUN AGRO PRODUCT	3.30	2.94	1.78	2.32	2.13	2.49	0.55
DODLA DAIRY	13.96	25.17	95.78	151.35	277.15	112.68	96.16
VADILAL INDUSTRIES	-1.58	0.79	7.49	9.20	18.43	6.87	7.04
HERITAGE FOODS	10.99	45.13	28.18	17.67	17.10	23.81	12.00
PARAG MILK FOOD	0.85	-11.01	1.27	1.20	1.59	-1.22	4.90

(SOURCE: www.moneycontrol.com)

As per the above analysis average interest coverage ratio is highest in case of Dodla as compared to the other

companies,i.e112.68 times,which indicates strong ability to pay debt.

**RETURN ON CAPITAL EMPLOYED**

RETURN ON CAPITAL EMPLOYED							
COMPANIES	2020-21	2021-22	2022-23	2023-24	2024-25	Mean	SD
HATSUN AGRO PRODUCT	0.20	0.15	0.09	0.12	0.13	0.69	0.04
DODLA DAIRY	0.23	0.20	0.12	0.19	0.24	0.99	0.04
VADILAL INDUSTRIES	-0.11	0.04	0.26	0.28	0.26	0.74	0.16
HERITAGE FOODS	0.30	0.20	0.11	0.15	0.22	0.98	0.06
PARAG MILK FOOD	0.04	-0.65	0.06	0.07	0.11	-0.36	0.29

(SOURCE: www.moneycontrol.com)

As per the above analysis average return on capital employed of Dodla Dairy is highest ,0.99 times as



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compared to other companies, whereas, Pragati milk is comparatively negative

INTEREST ON INVESTMENT							
COMPANIES	2020-21	2021-22	2022-23	2023-24	2024-25	Mean	SD
HATSUN AGRO PRODUCT	50.49	59.83	57.64	51.97	47.81	267.74	4.49
DODLA DAIRY	155.67	328.04	2173.37	2156.06	2916.38	7729.52	1100.92
VADILAL INDUSTRIES	18.35	30.92	70.57	66.27	123.93	310.04	36.87
HERITAGE FOODS	135.32	829.14	1015.78	459.10	273.49	2712.82	332.05
PARAG MILK FOOD	39.51	43.25	54.64	45.02	39.90	222.33	5.49

### Findings

#### From the above analysis:

- Average Current Ratio and Quick Ratio of Dodla is comparatively high
- Average solvency ratio of Hatsun Agro is highest as compared to other companies
- Dodla Dairy and Vadilal industries shows highest average net profit over a period of 5 years, as compared to other companies.
- Average solvency ratio of Hatsun Agro is highest as compared to other companies
- Average ROA of Dodla and Heritage Foods are highest as compared other companies
- Dodla and Heritage are having highest ROE
- Average Interest on Coverage Ratio is high in case of Dodla Dairy.
- Average ROCE of Dodla and Heritage Foods are high as compared to other companies
- Average Interest on Investment of Dodla and Heritage are highest as compared to other companies.
- To check the validity of the data ,F-test applied at 5%level of significance ,Current ratio are showing significant differences
- There is no significance difference between Solvency Ratio of all the dairy companies.
- There is no significance difference between Net Profit Ratio of all the dairy companies.
- There is no significance difference between ROA of all the dairy companies.
- All companies are performing good, but Dodla and Heritage Food are best performer among the Dairy industries in India

## XI. CONCLUSION

In the world, India is the largest manufacturer and consumer of milk. The total milk contribution of India is 24% globally. The top five milk producing companies of India are performing good in regards to liquidity, solvency , profitability and growth and contributing to the agriculture sector of the economy . Dodla Dairy and Heritage Foods are showing excellent performance. Milk production in India is necessary for fulfilling the nutritional requirement, creation of rural employment and development of the rural economy. Many states of India like Gujarath,,Panjab,Karnataka contributing to the Indian Milk Industries.Amul, an Indian dairy cooperative, has a brand

worth of over three million US dollars, making it one of the most valuable brands in the world. Karnataka Milk Federation and Amul , Gujarat based Co-operatives are two most powerful entities in the nation.

## REFERENCES

1. (n.d.). Retrieved September 20, 2023, from <https://tractorkarvan.com/blog/milk-production-in-india>
2. Alam, M. A., Sampa, A. Y., Anny, S. A., & Afrin, S. (2022, June 30). Financial profitability analysis of dairy milk production in some selected areas of Bangladesh. *Int. J. Agril. Res. Innov. Tech.*, 182-187. doi:<https://doi.org/10.3329/ijarit.v12i1.61050>
3. Baban, O., Sami, S., & Ibrahim, M. (2023). Evaluation Efficiency Of The Financial Performance Of The Dairy Sector For The Jordanian Dairy Sector For The Period 2010-2020. *Social Science Journal*, 13, 2544-2554. Retrieved August 3, 2023
4. Chandra, P. (2013). *Financial Management Theory and Practice* (third ed.). Tata Mcgrawhill Education Private Limited. Retrieved January 27, 2021
5. Dairy industry in India - statistics & facts. (2023, October 12). A.MInhas. Retrieved from [https://www.statista.com/topics/5347/dairy-industry-inindia/?kw=&crmtag=adwords&gclid=Cj0KCQiA35urBhDCARIsAOU7QwkBTmVqm4QnVBtNk-\\_NSeyc1A84Ffpdq6VliMeDFmMjTAVAIepzIw8aAvywEALw\\_wcB#topicOverview](https://www.statista.com/topics/5347/dairy-industry-inindia/?kw=&crmtag=adwords&gclid=Cj0KCQiA35urBhDCARIsAOU7QwkBTmVqm4QnVBtNk-_NSeyc1A84Ffpdq6VliMeDFmMjTAVAIepzIw8aAvywEALw_wcB#topicOverview)
6. Khan, M. A., Ahmed, M. F., & Azhar, S. (2021, June 1). Financial analysis of dairy companies in India A comparative study of selected companies. *AMA*, 51(01), 1159-1170. Retrieved August 3, 2023, from <https://www.researchgate.net/publication/352895362>
7. Pandey, I. M. (2015). In *Financial Management* (pp. 584-593). Vikas Publishing House PVT LTD. Retrieved April 26, 2022