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APPENDICES

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1	DRILLBIT PLAGIARISM REPORT
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DrillBit

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Submission Information

Author Name	Sanjay Zala
Title	A STUDY ON FINANCIAL HEALTH OF SELECTED FMCG COMPANIES OF INDIA BY USING DATA ENVELOPMENT ANALYSIS MODEL
Paper/Submission ID	4142484
Submitted by	director.rit@atmiyauni.ac.in
Submission Date	2025-07-29 08:31:30
Total Pages, Total Words	187, 33562
Document type	Thesis

Result Information

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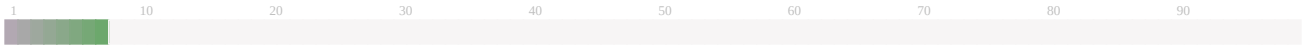

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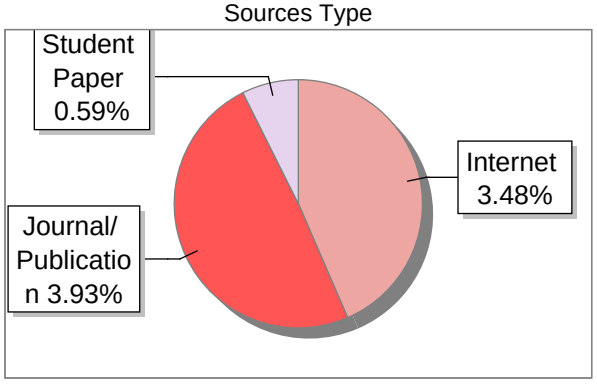

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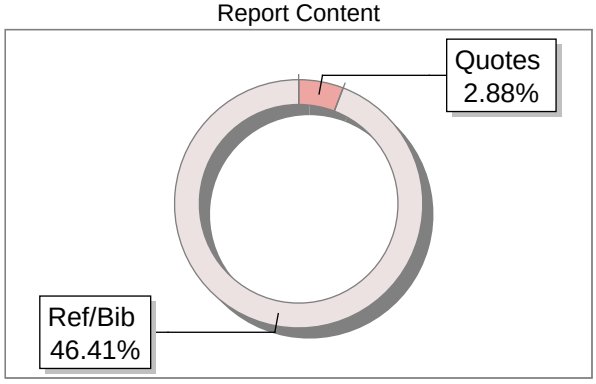

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This is to certify that the paper entitled

"A STUDY ON PERFORMANCE EVALUATION OF SELECTED FMCG COMPANIES OF INDIA BY USING DATA-ENVELOPMENT ANALYSIS MODEL"

Authored by

Zala Sanjay K.
Research Scholar, Atmiya University, Rajkot-Gujarat-India

vol. 53 No. 10 (I)

in

Anvesak A bi-annual Journal
UGC Care Group - 1

ISSN : 0378 - 4568

July – December 2023

Impact Factor: 6.20

Editor
Anvesak
A bi-annual Journal

"A STUDY ON PERFORMANCE EVALUATION OF SELECTED FMCG COMPANIES OF INDIA BY USING DATA-ENVELOPMENT ANALYSIS MODEL"

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Abstract:

Every business enterprise is carried out with an objective of making return that is maximum profit and wealth. All the stakeholders of the company or the business organization will want to know whether the organization will do well in future in order to keep their interest in tact with that organization. It is obligatory to evaluate the performance of companies to make investment in that particular company. So, in present research paper, researcher selected Hindustan Unilever Ltd. and Dabur India Ltd. are selected for the performance evaluation by using Data-Envelopment Analysis model. Data Analysis is measured as the main part of any research. In this research paper data analysis is done by using various statistical tools like averages, ratios and efficiency score by using Data-Envelopment Analysis Model. The period of the study is one year i.e.2018. For this research paper an efficiency score of Hindustan Unilever Ltd. is 0.000668 and Dabur India Ltd. is 0.0327 in march 2022. The score of Dabur India Ltd. is highest in the year 2022. So, it stood at first position and score of Hindustan Unilever Ltd. is 0.000668 so it stood at 2nd position in the year 2022.

Key Words:

- Performance Evaluation,
- Efficiency,
- DEA Model,
- Score

Introduction:

All the business organizations and companies are carried out with an objective of making a good profit. All the stakeholders i.e. Shareholders, Debenture holders, Preference shareholders, creditors and investors of company or the business organization will want to know whether an organization will do well in future in order to keep their interest in that organization. Forensic Accounting is one of the forms of investing accounting that helps to examine the financial records of the company with respect to fraud and distress. In today's competitive world it is necessary to evaluate the performance of the firm or industry on the regular basis to sustain in the market. With the help of evaluation of routine, we can find out the efficiency score of Company.

DEA Model:

Ratio		Weight	Input/ Output
Liquidity Ratio	Current Ratio	0.50	**Input-1**
	Quick Ratio	0.30	
	Working Capital Turnover Ratio	0.20	
	Total	**1**	
Activity Ratio	Account Receivable Turnover Ratio	0.20	**Input-2**
	Inventory Turnover Ratio	0.25	
	Assets Turnover Ratio	0.35	
	Collection Period Ratio	0.20	
	Total	**1**	
Leverage Ratio	Debt Equity Ratio	0.50	**Input-3**
	Interest Coverage Ratio	0.30	
	Equity Ratio	0.20	
	Total	**1**	
Economic Indicator	**EVA**	**1**	**Input-4**
Profitability Ratio	Return on Assets (ROA)	0.35	**Output**
	Return on Capital Employed (ROCE)	0.22	
	Return on Current Assets	0.10	
	Return on Equity	0.18	
	Operating Profit to Sales	0.15	
	Total	**1**	

[Source: Reza Tehrani, M. R. (2012). A Model for Evaluating Financial Performance of Companies by Data Envelopment Analysis. *International Business Research Vol.5*, 8-16.]

Research Gap:

1. Study Period
2. Sample
3. Test

Title of the Study:

"A Study on Performance Evaluation of Selected FMCG Companies of India by using Data-Envelopment Analysis Model"

Objectives of the Study:

1. To measure the Performance of Selected FMCG Company
2. To know the profitability of Selected FMCG Company
3. To measure efficiency score of Selected FMCG Company

Review of Literature:

Vanessa, Carlos & Cristiano (2018) conducted a research paper entitle, "Evaluation of technical efficiency of Brazilian distribution companies of electrical energy through Data Envelopment Analysis". The purpose of this research paper was to analyze efficiency of electrical energy companies. Total 18 companies were selected for the study. The study period was 2012. This research paper conclude that out of 18 companies, 7 companies were efficient as per DEA Model.net profit, Market Capitalization and Total Sales. Number days of authorized innovative medicines considering the France

effects that is input as well as out. The average level of efficiency was 93.45% and out of all 10 Companies were found inefficient as per Data envelopment analysis model.

Shivanisinh Parmar (2017) has done research report entitle "A study on Financial Performance Evaluation of Selected FMCG Companies in India with reference to Data Envelopment Analysis (DEA)" This paper was aimed to analyze financial performance of selected FMCG Companies of India. The population for the study was all listed companies of NSE and BSE. The sample size for study was top 10 FMCG Companies which was based on Revenue and Profit of 2016. The study period was 10 years i.e. 2006-07 to 2015-16. Data analysis was done with the help of Mean, ANOVA and DEA Model. This research report conclude that CPL was more efficient as per DEA Model during study period.

Lam Weng, Fai & Hoe (2017) research paper and title "An empirical investigation on the efficiency of healthcare companies in Malaysia with DEA model" was conducted to evaluate and compare the assistance of healthcare companies which were listed in Malaysia Stock Market. 12 Companies were selected for research work the period of study work was 2011 to 2015. The study concluded that a AHEALTH, HAIO, IHH, PHARMA and YSPSAHARE identified as efficient companies during study period.

Martin Telecky (2017) the research paper entitle "Application of DEA Method to Evaluate Financial Health of Selected Transport Companies" was published in MATEC Web of Conferences in 2017. The purpose of this paper was to measure financial of selected Transport Companies. The period for the study was 2016. 8 Transport Companies were selected for the study. It conclude that only 3 Transport Companies were efficient from selected companies during the study period.

Research Methodology

Population / Universe of Study:

The universe of the study is all listed FMCG Companies which are listed in Bombay Stock Exchange and National Stock Exchange.

Sample Size:

From the whole population top 2 leading Companies i.e. Hindustan Unilever Ltd. And Dabur India Ltd. are selected for the study which are listed in BSE.

Data Collection:

This study is based on secondary data collection so for which data is collected from the published annual reports of selected companies as well as websites and magazines.

Period of the Study:

The period of the study is one year i.e. 2022.

Tools and Techniques:

Data Analysis is considered as the main part of any research. In a this research data analysis is done using statistical tools like

- Averages,
- Ratios
  - ✓ Liquidity Ratio
  - ✓ Activity Ratio
  - ✓ Leverage Ratio
  - ✓ Economic Indicator
  - ✓ Profitability Ratio
- By using Data-Envelopment Analysis model

Data Analysis and Interpretation:

Liquidity Ratio		
Ratio	**Hindustan Unilever**	**Dabur India Ltd.**
Current Ratio	**1.34**	**1.14**
Quick Ratio	**0.98**	**0.60**
Working Capital	**13.82**	**25.07**
Activity Ratio		
Ratio	**Hindustan Unilever**	**Dabur India Ltd.**
Account Receivable	**28.60**	**22.23**
Inventory Turnover	**2.41**	**0.90**
Assets Turnover	**1.06**	**1.37**
Collection Period	**13.77**	**20.28**
Leverage Ratio		
Ratio	**Hindustan Unilever**	**Dabur India Ltd.**
Debt Equity	**14.08**	**8.02**
Interest Coverage	**121.10**	**102.98**
Equity Ratio	**0.008**	**0.0277**
Economic Indicator		
Ratio	**Hindustan Unilever**	**Dabur India Ltd.**
EVA	**51034**	**1399**
Profitability Ratio		
Ratio	**Hindustan Unilever**	**Dabur India Ltd.**
Return on Assets	**24.34**	**30.16**
ROCE	**21.68**	**111.43**
Return on C.A	**81.03**	**72.99**
Return on Equity	**50.50**	**10.88**
Operating profit to Sales	**24.42**	**21.20**

Now multiply with respective weights given in the model in order to get input and output:

Liquidity Ratio					
Ratio	**Weight**	**HUL**	**Total**	**Dabur India Ltd.**	**Total**
Current Ratio	0.5	**1.34**	0.67	**1.14**	0.57
Quick Ratio	0.3	**0.98**	0.294	**0.60**	0.18
Working Capital	0.2	**13.82**	2.764	**25.07**	5.014
Input 1			3.728		5.764
Activity Ratio					
Ratio	**Weight**	**HUL**	**Total**	**Dabur India Ltd.**	**Total**
Account Receivable	0.2	**28.60**	5.72	**22.23**	4.446
Inventory	0.25	**2.41**	0.6025	**0.90**	0.225

Turnover					
Assets Turnover	0.35	**1.06**	0.371	**1.37**	0.4795
Collection Period	0.2	**13.77**	2.754	**20.28**	4.056
Input 2			9.4475		9.2065
Leverage Ratio					
Ratio	**Weight**	**HUL**	**Total**	**Dabur India Ltd.**	**Total**
Debt Equity	0.5	**14.08**	7.04	**8.02**	4.01
Interest Coverage	0.3	**121.10**	36.33	**102.98**	30.894
Equity Ratio	0.2	**0.008**	0.0016	**0.0277**	0.00554
Input 3			43.3716		34.9095
Economic Indicator					
Ratio	**Weight**	**HUL**	**Total**	**Dabur India Ltd.**	**Total**
EVA	1	51034	51034	1399	1399
Input 4					
Profitability Ratio					
Ratio	**Weight**	**HUL**	**Total**	**Dabur India Ltd.**	**Total**
Return on Assets	0.35	**24.34**	8.519	**30.16**	10.556
ROCE	0.22	**21.68**	4.7696	**111.43**	24.5146
Return on C.A	0.1	**81.03**	8.103	**72.99**	7.299
Return on Equity	0.18	**50.50**	9.09	**10.88**	1.9584
Operating profit to Sales	0.15	**24.42**	3.663	**21.20**	3.18
Output			34.1446		47.508

Now find out efficiency with the help of formula:

Hindustan Unilever Limited Company:

Input 1 + Input 2 + Input 3 + Input 4

51090.55

Output = 34.1446

Efficiency = output/Input

=34.1446/51090.55

= 0.000668

Dabur India Ltd. Company:

Input 1 + Input 2 + Input 3 + Input 4

1448.88

Output = 47.508

Efficiency = output/Input

=1448.88/47.508

= 0.0327

Company	Efficiency	Rank
Hindustan Unilever Ltd.	0.000668	2
Dabur India Ltd.	0.0327	1

Conclusion and Findings:

With the help of this study a stakeholder can easily identify the company which is more efficient and which company having comparatively less efficiency score according to DEA Model. Same way company also can know about the financial efficiencyduring study period. For this research paper an efficiency score of Hindustan Unilever Ltd. is 0.000668 and Dabur India Ltd. is 0.0327 in march 2022. The score of Dabur India Ltd. is highest in the year 2022. So, it stood at first position and score of Hindustan Unilever Ltd. is 0.000668 so it stood at 2ndposition in the year 2022.

Limitations of the Study:

- Only 2 companies are selected for the study i.e. Hindustan Unilever Ltd. and Dabur India Ltd.
- Study period is only 1 year i.e. 2022

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Journal Details

Journal Title (in English Language)	Anvesak
Publication Language	English
Publisher	Sardar Patel Institute of Economic and Social Research
ISSN	0378-4568
E-ISSN	NA
Discipline	Social Science
Subject	Economics, Econometrics and Finance (all)
Focus Subject	Economics, Econometrics and Finance (all)
UGC-CARE coverage years	from June-2019 to Present

Madhya Pradesh Institute of Social Science Research, Ujjain
मध्य प्रदेश सामाजिक विज्ञान शोध संस्थान, उज्जैन
(An Institute of ICSSR, Ministry of Education, Govt. of India and Govt. of Madhya Pradesh)

CERTIFICATE OF PUBLICATION

This is to certified that the article entitled

"A COMPARATIVE STUDY OF SELECTED FMCG COMPANIES OF INDIA WITH SPECIAL REFERENCE TO DATA-ENVELOPMENT ANALYSIS MODEL"

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Published in Vol. 30, No: 1, January 2025
Madhya Pradesh Journal of Social Sciences (ISSN: 0973-855X)
UGC-CARE List Group I

Impact Factor: 5.3

Editor-in-Chief

Madhya Pradesh Journal of Social Sciences
A biannually Journal of M. P. Institute of Social Science Research, Ujjain
ISSN: 0973-855X (Vol 30 No 1, January 2025)

"A COMPARATIVE STUDY OF SELECTED FMCG COMPANIES OF INDIA WITH SPECIAL REFERENCE TO DATA-ENVELOPMENT ANALYSIS MODEL"

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Abstract:

Every commercial endeavor is conducted with the goal of generating the greatest amount of wealth and profit. For the purpose of maintaining their interest in the firm or business organization, all of its stakeholders will want to know if it will succeed in the future. Assessment of a company's performance is required before investing in that specific company.

So, in present research paper, researcher has selected 2 FMCG for the performance evaluation by using Data-Envelopment Analysis model. Data Analysis is measured as the main part of any research. In this research paper data analysis is done by using various statistical tools like averages, ratios and efficiency score by using Data-Envelopment Analysis Model. The period of the study is 5 years i.e. from 2019-20 to 2023-24. For this research paper an efficiency score of Varun Beverages Limited is 0.35108, 0.24050, 0.32587, 0.36775 and 0.34350. An efficiency score of Tata Consumer Product is 0.30728, 0.29534, 0.32904, 0.35751 and 0.52384 respectively during 2019-20 to 2023-24.

Key Words:

- Performance Evaluation,
- Efficiency,
- DEA Model,
- Score

Introduction:

All business organizations and corporations are run with the goal of producing a decent profit. All stakeholders, including shareholders, debt holders, preference shareholders, creditors, and investors in a company or business organization, want to know whether the organization will succeed in the future in order to maintain their interest in it. Forensic accounting is a type of investment accounting that examines a company's financial records for signs of fraud or distress. To remain competitive in today's market, firms or industries must regularly analyze their performance. We can determine the company's efficiency score by evaluating its routines.

DEA Model:

Ratio		Weight	Input/ Output
Liquidity Ratio	Current Ratio	0.50	
	Quick Ratio	0.30	
	Working Capital Turnover Ratio	0.20	**Input-1**
	Total	**1**	
Activity Ratio	Account Receivable Turnover Ratio	0.20	
	Inventory Turnover Ratio	0.25	**Input-2**
	Assets Turnover Ratio	0.35	
	Collection Period Ratio	0.20	
	Total	**1**	
Leverage Ratio	Debt Equity Ratio	0.50	
	Interest Coverage Ratio	0.30	**Input-3**
	Equity Ratio	0.20	
	Total	**1**	
Economic Indicator	**EVA**	**1**	**Input-4**
Profitability Ratio	Return on Assets (ROA)	0.35	
	Return on Capital Employed (ROCE)	0.22	**Output**
	Return on Current Assets	0.10	
	Return on Equity	0.18	
	Operating Profit to Sales	0.15	
	Total	**1**	

[Source: Reza Tehrani, M. R. (2012). A Model for Evaluating Financial Performance of Companies by Data Envelopment Analysis. *International Business Research Vol.5*, 8-16.]

Research Gap:

1. Study Period
2. Sample
3. Test

Title of the Study:

"A Comparative Study of Selected FMCG Companies of India with Special Reference to Data-Envelopment Analysis Model"

Review of Literature:

Cristian Barra & Roberto Zotti (2010) the study named "Measuring Teaching and Research Efficiency in Higher Education DEA." A case study from the University of Salerno was done to assess the efficiency, technicality, and scale of the Science and Technology, Humanity, and Social Science sectors. The study period lasted from 2005 to 2009. According to the Data Envelopment Analysis Model, the science and technology sectors were more efficient in terms of research than the humanities and social sciences.

Edirisinghe and Zhang (2010) in their research paper titled "Input/output selection in DEA under expert information, with application to financial markets," they examined a study on fundamental analysis of business firms using periodical financial data to determine an optimized fundamental empowerment index using the Data Envelopment Analysis method. The Data Envelopment Analysis Model was evaluated by over 800 commercial entities, including a sizable portion of the US stock market.

Kimiagari and Farhad (2006) The study "Development of a Model to Measure, Evaluate, and Rank the Financial Performance of Urban Water and Drainage Companies" introduced and assessed numerous

approaches for evaluating company performance. Finally, they proposed a paradigm called the Data Envelopment Analysis paradigm, which is both flexible and comparable.

Objectives of the Study:

1. To measure the Performance of Selected FMCG Company
2. To know the profitability of Selected FMCG Company
3. To measure efficiency score of Selected FMCG Company

Research Methodology

Hypothesis:

- **H_0** = There is no significant difference between **Current Ratio** of Varun Beverages Ltd. and Tata Consumer Products
- **H_1** = There is significant difference between **Current Ratio** of Varun Beverages Ltd. and Tata Consumer Products
- **H_0** = There is no significant difference between **Quick Ratio** of Varun Beverages Ltd. and Tata Consumer Products
- **H_1** = There is significant difference between **Quick Ratio** of Varun Beverages Ltd. and Tata Consumer Products
- **H_0** = There is no significant difference between **Working Capital Ratio** of Varun Beverages Ltd. and Tata Consumer Products
- **H_1** = There is significant difference between **Working Capital Ratio** of Varun Beverages Ltd. and Tata Consumer Products

Population / Universe of Study:

The universe of the study is all listed FMCG Companies which are listed in Bombay Stock Exchange and National Stock Exchange.

Sample Size:

From the whole population top 2 leading Companies i.e. Varun Beverages Ltd. and Tata Consumer Products are selected for the study which are listed in BSE.

Data Collection:

This study is based on secondary data collection so for which data is collected from the published annual reports of selected companies as well as websites and magazines.

Period of the Study:

The period of the study is five years i.e. from 2019-20 to 2023-24.

Tools and Techniques:

Data analysis is considered the primary aspect of any research. In this research data analysis is done using statistical tools like

- Averages,
- Ratios
  - ✓ Liquidity Ratio
  - ✓ Activity Ratio
  - ✓ Leverage Ratio
  - ✓ Economic Indicator
  - ✓ Profitability Ratio
- By using Data-Envelopment Analysis model

Data Analysis and Interpretation:

Varun Beverages Limited

Table Showing various Ratio of Varun Beverages Limited

Ratio	2019-20	2020-21	2021-22	2022-23	2023-24
Current Ratio	0.74	0.66	0.72	0.75	0.89
Quick Ratio	0.49	0.46	0.40	0.42	0.48
Working Capital Turnover Ratio	11.99	7.61	9.71	12.98	35. 31
Account Receivable Turnover Ratio	28.40	20.68	30. 35	48.99	43.85
Inventory Turnover Ratio	8. 34	7.18	3.54	4. 38	3.99
Assets Turnover Ratio	0.49	0. 39	0.50	0.68	0.65
Collection Period Ratio	8.48	12.76	7. 31	5.18	6.15
Debt Equity Ratio	32.28	31.22	25.07	31. 37	33.98
Interest Coverage Ratio	3.24	1.81	5.43	11.97	10.81
Equity Ratio	3.45	3.48	4.78	5.87	4.64
Economic Value Added	4.11	5.94	6.16	8.43	13.09
Return on Assets (ROA)	10.85	5.44	9.29	16.68	18.61
Return on Capital Employed	20. 30	14.45	19.12	30.64	33.61
Return on Current Assets	0.51	0.24	0. 34	0.57	0.79
Return on Equity	3.15	1.56	1.95	2.84	4.01
Operating Profit to Sales	21.44	17.62	17.88	20.56	23.60

[Source: Computed from Data]

Tata Consumer Product

Table Showing various Ratio of Varun Beverages Limited

Ratio	2019-20	2020-21	2021-22	2022-23	2023-24
Current Ratio	3.77	2.75	2.56	2.43	0.83
Quick Ratio	2.61	1.75	1.73	1.67	0.41
Working Capital Turnover Ratio	2.59	2.91	3.32	3.23	16.05
Account Receivable Turnover Ratio	14.05	17.27	19.33	17.70	15.20
Inventory Turnover Ratio	6.19	5.08	2.38	2.31	2.31
Assets Turnover Ratio	0.39	0.37	0.38	0.38	0.38
Collection Period Ratio	20.15	13.12	12.97	14.60	17.77
Debt Equity Ratio	0.29	0.26	0.23	0.25	7.86
Interest Coverage Ratio	28.54	30.57	40.41	44.64	21.67
Equity Ratio	0.76	0.69	0.65	0.60	0.52
Economic Value Added	4.65	8.00	8.86	7.58	10.56
Return on Assets (ROA)	6.09	6.40	8.46	8.40	7.63
Return on Capital Employed	9.27	10.11	12.35	14.36	26.01
Return on Current Assets	0.25	0.22	0.31	0.29	0.46
Return on Equity	7.97	9.33	13.06	14.11	14.73
Operating Profit to Sales	14.13	12.84	14.00	15.49	15.91

[Source: Computed from Data]

Application of ANOVA

Current Ratio:

- **H_0** = There is no significant difference between **Current Ratio** of Varun Beverages Ltd. and Tata Consumer Products
- **H_1** = There is significant difference between **Current Ratio** of Varun Beverages Ltd. and Tata Consumer Products

Table Showing ANOVA Application on Current Ratio

Source of Variation	*SS*	DOF	*MS*	*F*	*P-value*	*F crit*
Between Groups	7.36164	1	7.36164	13.09795	0.006791	5.317655
Within Groups	4.49636	8	0.562045			
Total	11.858	9				

[Source: Computed from Data]

Interpretation:

Above table shows ANOVA application on current ratio. The result of ANOVA application shows that

calculated value of F is 13.09795 and tabulated value of F is 5.317655. so calculated value is more compare to tabulated value it means null hypothesis is rejected and alternate hypothesis is accepted.

Quick Ratio:

- **H_0** = There is no significant difference between **Quick Ratio** of Varun Beverages Ltd. and Tata Consumer Products
- **H_1** = There is significant difference between **Quick Ratio** of Varun Beverages Ltd. and Tata Consumer Products

Table Showing ANOVA Application on Quick Ratio

Source of Variation	*SS*	DOF	*MS*	*F*	*P-value*	*F crit*
Between Groups	3.50464	1	3.50464	11.30201	0.009905	5.317655
Within Groups	2.48072	8	0.31009			
Total	5.98536	9				

[Source: Computed from Data]

Interpretation:

Above table shows ANOVA application on quick ratio. The result of ANOVA application shows that calculated value of F is 11.30201 and tabulated value of F is 5.317655. so calculated value is more compare to tabulated value it means null hypothesis is rejected and alternate hypothesis is accepted.

Working Capital Ratio

- **H_0** = There is no significant difference between **Working Capital Ratio** of Varun Beverages Ltd. and Tata Consumer Products
- **H_1** = There is significant difference between **Working Capital Ratio** of Varun Beverages Ltd. and Tata Consumer Products

Table Showing ANOVA Application on Working Capital Ratio

Source of Variation	*SS*	DOF	*MS*	*F*	*P-value*	*F crit*
Between Groups	245.025	1	245.025	3.047609	0.119001	5.317655
Within Groups	643.1928	8	80.3991			
Total	888.2178	9				

[Source: Computed from Data]

Interpretation:

Above table shows ANOVA application on working capital ratio. The result of ANOVA application shows that calculated value of F is 3.047609 and tabulated value of F is 5.317655. so calculated value is less compare to tabulated value it means null hypothesis is accepted and alternate hypothesis is rejected.

DEA Model Application

Varun Beverages Limited

Table Showing DEA Application on Varun Beverages Limited

Weights	2019-20	2020-21	2021-22	2022-23	2023-24
0.5	0.37	0.33	0.36	0.38	0.45
0.3	0.15	0.14	0.12	0.13	0.14
0.2	2.40	1.52	1.94	2.60	7.06
1.00	**2.91**	**1.99**	**2.42**	**3.10**	**7.65**
0.2	5.68	4.14	6.07	9.80	8.77
0.25	2.09	1.80	0.89	1.10	1.00
0.35	0.17	0.14	0.17	0.24	0.23
0.20	1.70	2.55	1.46	1.04	1.23
1	**9.63**	**8.62**	**8.59**	**12.17**	**11.23**
0.5	16.14	15.61	12.54	15.68	16.99
0.3	0.97	0.54	1.63	3.59	3.24
0.2	0.69	0.70	0.96	1.17	0.93
1	**17.80**	**16.85**	**15.12**	**20.45**	**21.16**
1	**4.11**	**5.94**	**6.16**	**8.43**	**13.09**
0.35	3.80	1.91	3.25	5.84	6.51
0.22	4.47	3.18	4.21	6.74	7.39
0.1	0.05	0.02	0.03	0.06	0.08
0.18	0.57	0.28	0.35	0.51	0.72
0.15	3.22	2.64	2.68	3.08	3.54
1	**12.10**	**8.03**	**10.52**	**16.23**	**18.25**
Input	34.45	33.40	32.29	44.14	53.13
output	**12.10**	**8.03**	**10.52**	**16.23**	**18.25**
Efficiency	0.35108	0.24050	0.32587	0.36775	0.34350

[Source: Computed from Data]

Tata Consumer Products

Table Showing DEA Application on Tata Consumer Products

Weights	2019-20	2020-21	2021-22	2022-23	2023-24
0.5	1.89	1.38	1.28	1.21	0.42
0.3	0.78	0.52	0.52	0.50	0.12
0.2	0.52	0.58	0.66	0.65	-3.21
1.00	**3.19**	**2.48**	**2.46**	**2.36**	**-2.67**
0.2	2.81	3.45	3.87	3.54	3.04
0.25	1.55	1.27	0.60	0.58	0.58
0.35	0.14	0.13	0.13	0.13	0.13
0.20	4.03	2.62	2.59	2.92	3.55
1	**8.52**	**7.48**	**7.19**	**7.17**	**7.31**
0.5	0.15	0.13	0.12	0.13	3.93
0.3	8.56	9.17	12.12	13.39	6.50
0.2	0.15	0.14	0.13	0.12	0.10
1	**8.86**	**9.44**	**12.37**	**13.64**	**10.53**
1	**4.65**	**8.00**	**8.86**	**7.58**	**10.56**
0.35	2.13	2.24	2.96	2.94	2.67
0.22	2.04	2.22	2.72	3.16	5.72
0.1	0.02	0.02	0.03	0.03	0.05
0.18	1.43	1.68	2.35	2.54	2.65
0.15	2.12	1.93	2.10	2.32	2.39
1	**7.75**	**8.09**	**10.16**	**10.99**	**13.48**
Input	25.22	27.40	30.88	30.75	25.73
output	**7.75**	**8.09**	**10.16**	**10.99**	**13.48**
Efficiency	0.30728	0.29534	0.32904	0.35751	0.52384

[Source: Computed from Data]

Conclusion and Findings:

With the help of this study a stakeholder can easily identify the company which is more efficient and which company having comparatively less efficiency score according to DEA Model. Same way company also can know about the financial efficiency during study period. For this research paper an efficiency score of Varun Beverages Limited is 0.35108, 0.24050, 0.32587, 0.36775 and 0.34350. An efficiency score of Tata Consumer Product is 0.30728, 0.29534, 0.32904, 0.35751 and 0.52384

respectively during 2019-20 to 2023-24.

Limitations of the Study:

- Only 2 companies are selected for the study i.e. Varun Beverages Limited and Tata Consumer Products
- Study period is only 5 years i.e. from 2019-20 to 2023-24.

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