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A STUDY ON COMPARATITIVE ANALYSIS OF EFFICIENCY OF INDIAN DAIRY INDUSTRY

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Data Collection

The research is based on secondary data collected from websites and published materials.

3 diary companies were chosen as a sample size (KWALITY, AMUL, and MOTHER DAIRY)

ANOVA, or analysis of variance, is a collection of statistical models used to compare group means and their associated procedures (such as variation among and between groups).

OBJECTIVES OF THE STUDY

- To analyse whether there are any significant differences in the profitability ratio of three selected dairy companies.

SCOPE OF THE STUDY

- The scope of the study is limited to three companies in the dairy industry, and the study period is from 2011 to 22018

HYPOTHESES

- H1: There is significance difference between working capital turnover ratios of Indian dairy companies.

- H2: There is significance difference between fixed asset turnover ratios of Indian dairy

- H3: There is significance difference between total asset turnover ratios of Indian dairy companies.

Table 1: Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Working capital turnover	4.195	2	21	0.029
Fixed asset turnover	20.49	2	21	0.00
Total asset turnover	19.392	2	21	0.00
Inventory turnover	4.96	2	21	0.017

Table 2: ANOVA Outputs of Efficiency Ratio.

		Sum of Squares	Df	Mean Square	F	Sig.
Working capital turnover	Between Groups	4471.675	2	2235.837	0.849	0.442
	Within Groups	55321.53	21	2634.359		
	Total	59793.2	23			
Fixed asset turnover	Between Groups	1272.77	2	636.385	224.665	0.081
	Within Groups	4717.965	21	224.665		
	Total	5990.735	23			
Total asset turnover	Between Groups	31.299	2	15.65	30.073	0.00
	Within Groups	10.928	21	0.52		
	Total	42.227	23			
Inventory turnover	Between Groups	2004.1	2	1002.05	69.497	0.00
	Within Groups	302.79	21	14.419		
	Total	2306.89	23			

Table 3: Post Hoc Output of Efficiency Ratio

Dependent Variable	(I) VAR00006	(J) VAR00006	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Upper Bound
Working Capital Turnover Ratio	Amul	Kwality	-32.75715	25.663	0.424	-97.4425	31.9283
		Mother Dairy	-22.18081	25.663	0.668	-86.8662	42.5046
	Kwality	Amul	32.75715	25.663	0.424	-31.9283	97.4425
		Mother Dairy	10.57633	25.663	0.911	-54.1091	75.2617
	Mother Dairy	Amul	22.18081	25.663	0.668	-42.5046	86.8662
		Kwality	-10.57633	25.663	0.911	-75.2617	54.1091
Fixed Asset Turnover Ratio	Amul	Kwality	-17.77474	7.49441	0.068	-36.6649	1.1155
		Mother Dairy	-7.58805	7.49441	0.577	-26.4783	11.3021
	Kwality	Amul	17.77474	7.49441	0.068	-1.1155	36.6649
		Mother Dairy	10.18669	7.49441	0.38	-8.7035	29.0769
	Mother Dairy	Amul	7.58805	7.49441	0.577	-11.3021	26.4783
		Kwality	-10.18669	7.49441	0.38	-29.0769	8.7035
Total Asset	Amul	Kwality	0.48036	0.36069	0	1.7176	3.5359
		Mother Dairy	2.6267	0.36069	0.394	-1.3895	0.4288
	Kwality	Amul	-0.48036	0.36069	0	1.2372	3.0555
		Mother Dairy	2.14635*	0.36069	0	-3.5359	-1.7176

Turnover Ratio	Mother Dairy	Amul	-2.6267	0.36069	0	-3.0555	-1.2372
		Kwality	-2.14635*	0.36069	0	-3.0555	-1.2372
Inventory Turnover Ratio	Amul	Kwality	-14.25908*	1.89859	0	-19.0446	-9.4736
		Mother Dairy	7.81294*	1.89859	0.001	3.0274	12.5985
	Kwality	Amul	14.25908*	1.89859	0	9.4736	19.0446
		Mother Dairy	22.07202*	1.89859	0	17.2865	26.8575
	Mother Dairy	Amul	-7.81294*	1.89859	0.001	-12.5985	-3.0274
		Kwality	-22.07202*	1.89859	0	-26.8575	-17.2865

The mean difference is significant at the 0.05 level.

In the above table no.2, for working capital turnover ratio, P value 0.442 which is less than 0.05, so alternative hypothesis is accepted at 5% level of significance. Hence it concludes that there is no significance difference between working capital turnover ratios of Indian dairy industry.

For the fixed asset turnover ratio, p value .081 is more than 05, so null hypothesis is accepted at 5% level of significance. Hence it concludes that there is no significance difference between fixed asset turnover ratios of Indian dairy industry.

For the total asset turnover ratio, p value .000 is lehan .05. so null hypothesis is rejected at 5% level significance. Hence it concludes that there is significance difference between total asset turnover ratios of Indian dairy industry.

For Inventory turnover ratio, p value .000 is less than .05, so null hypothesis is rejected. Hence it concludes that there is significance difference between inventory turnover ratios of Indian dairy industry.

Post Hoc Test

A stepwise multiple comparison procedure were used to Identify sample means that are significantly different from each other.The Results from one way Anova do not indicate which of three groups differ from one another, so in many cases the post hoc analysis is done.

Table 3. shows the Post hoc output of Working capital turnover ratio, Fixed asset turnover ratio, Total Asset Turnover Ratio, and Inventory Turnover Ratio. In case of Working capital turnover ratio, Fixed asset turnover ratio, Amul, Sudha, and Mother dairy has no significant relationship with each other as the P- Value (0.424) which is more than 0.05 in maximum cases. But in case of Total asset turnover ratio and Inventory turnover ratio there is a significant relationship between Sudha, Amul,and Mother Dairy, As the P value is less than 0.05 that is 0.00 and 0.001.