COST REDUCTION TECHNIQUES AND ITS IMPACT OF FINANCIAL PERFORMANCE

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INTRODUCTION OF THE STUDY

In any firm there are two functions, namely Production function, Cost function. At the time of starting the production firm costs is decided and varies circumstantially. As the production increases the fixed cost remains same but the variable cost increases with increase in the production. There are only two ways to maximize profit of the organization either to increase sale price of product, to reduce cost of product. Cost reduction implies real and permanent reduction in the unit cost of goods manufactured or services rendered without impairing their product suitability for the use intended. The main objective of the study is to evaluate the application of cost control/reduction tools and techniques in manufacturing organizations

OBJECTIVES OF THE STUDY

➢ To study the relationship between cost reduction and organizational performance

➢ To evaluate the problem associated with cost reduction in an organization

➢ To analyse the company's ability to meet current obligations and their liquidity positions.

➢ To analyse the proportions of debt equity utilised in financing the company's assets.

REVIEW OF LITERATURE

Krzysztof Urbanieced al (2018) This chapter discusses the applications of Process Integration methods to the design of energy systems, and water and wastewater systems, of beet sugar plants. Characteristic features of conventional sugar plants based on purification of raw beet juice and evaporating crystallisation are reviewed, the design of plant retrofit aimed at improvements in energy and water use is discussed, and case studies are presented. A concept of the sugar production process based on cooling crystallisation of raw beet juice is then outlined, and the design of an energy system and a water and wastewater system for a conceptual beet sugar plant employing the new process is discussed.

SumateSathitbun-anan et al (2018) Sugarcane is one of the most promising sources of green energy for a major sugar producing country like Thailand. Any efforts to improve energy efficiency in sugar industry would result for green energy production and more avoided GHG emissions. This paper assesses the

potentials for energy saving and GHG emission reduction in sugar production in Thailand. It is found that there is a wide gap between the most efficient mills and the less efficient ones among the country's 47 mills, with specific steam consumption ranging from 400 to 646 kg steam/ton cane. Thus significant potential exists for energy saving and GHG emission reduction in many mills, using some of the 17 commonly common technologies/measures identified.

L. Cutz (2019) This paper aims to evaluate the potential for electricity and ethanol production in Central America using sweet sorghum, performing a techno-economic analysis. The study proposes the integration of sweet sorghum into Central American sugar mills, by using the existing machinery to process this crop during off-season. A process simulation and a cost model were developed to estimate the technical and economic feasibility of sweet sorghum integration. The data on various parameters used for techno-economic assessment were collected from an existing sugar mill and distillery in Central America. The results show that a sugar mill operating 2 months during off-season could obtain an average revenue of US$ 3 M for a crushing rate of 6500 t/d. Ethanol production costs are estimated to be 24.76 ¢US$/L. In case a new CHP plant is built, a sugar mill operating under the integrated scenario would have a payback period of 4.49 years, as compared to 7.47 years for a sugar mill using sugarcane bagasse as the only fuel. Although several studies highlight the potential of sweet sorghum for ethanol production, the results from this work prove that sweet sorghum must also be seen as a viable feedstock for electricity production. A sensitivity analysis was also performed to determine the variation of the average cost of electricity and ethanol with the variables used in the economic analysis. For all analysed scenarios the effects of installed capacity and crop yield prevailed over the increasing costs of land and transportation.

L. Anojkumar et al (2019) The material plays an important role in an engineering design process. The suitable material selection for a particular product is one of the vital tasks for the designers. In order to fulfil the product's end requirements, designers need to analyze the performance of various materials and spot suitable materials with precise functionalities. Due to the presence of large number of materials with diverse properties, the material selection process is complicated and time consuming task. There is a necessity of systematic and efficient approach towards material selection to choose best alternative material for a product. The aim of this paper is to describe the application of four Multi Criteria Decision Making methods for solving pipes material selection problem in sugar industry.

Maria Magdalena TurekRahoveanuet al (2020) This paper proposes an economic instrument designed to assess the competitive nature of the sugar industry in Romania. In the first part of the paper is presented the

theoretical background underlying index (HHI) and its calculation methodology. Then comes the results of a first application of this index for a total of 10 plants in the sugar industry, the robustness of these results is discussed. We believe HHI is a proactive tool that may prove useful competition authority, in its pursuit of continuous monitoring of various industries in the economy and in the internal decision-making on resource allocation institution (Peacock, and Prisecaru, 2013).The starting point of our research is to free competition in the European market with competitors much stronger than Romanian plants, plants that produce at a price lower than the domestic ones. In our study we will see if it is a concentration of production in factories around the strongest in Romania, concentration accompanied by the collapse of those who could not resist the market.

Adriana P. Ramónetal**(2020)** This work focuses on the ultrasound-assisted hydrolysis of yam to obtain fermentable sugars using phosphoric acid or enzymes as catalysts. In the chemical and enzymatic hydrolyses the effects of temperature and catalyst concentration on the amount of fermentable sugar released were evaluated. The same experiment was carried out with and without ultrasound. For chemical hydrolyses, the maximum amounts of fermentable sugars obtained were 0.155 g sugar g^{-1} dry material and 0.205 g sugar g^{-1} dry material, whereas for enzymatic hydrolysis the maximum fermentable sugars obtained were 0.32 g sugar g^{-1} dry material and 0.42 g sugar g^{-1} dry material, without and with ultrasound, respectively. These experiments demonstrated that the amount of fermentable sugars differs according to the type of hydrolysis applied. In this work, ultrasound increased the yield for chemical and enzymatic hydrolysis, showing a promising technology to be used for hydrolysis.

RESEARCH METHODOLOGY

The evaluation of the study is based on the secondary data collected from the annual reports, journal and magazine. The analysis drawn and recommendations made are based of the facts, graphs and diagrams which are given to represent statistical data of the study.

DATA ANALYSIS AND INTERPRETATION

COMPARATIVE BALACE SHEET FOR THE YEAR OF 2017-2018

LIABLITIES	2017	2018	Increase / Decrease	Percentage
ASSETS				

Current assets:				
Inventories	2208.90	2230.63	(21.73)	101.65
Sundry Debtors	1185.21	1230.37	(45.16)	26.24
Cash and bank balance	179.53	32.56 1302.48	146.97	1.22
Loans and advances	787.17	---	(515.31)	1.52
Fixed deposit	---		---	---
Total (a)	4360.81	4796.04	435.23	130.63
Fixed assets:				
Net block	3327.51	3713.17	(385.66)	8.62
Capital work in progress	387.82	577.31	(189.49)	2.04
Total (b)	3715.33	4290.48	1175.15	10.66
Investment	1230.00	1534.48	(304.48)	4.03
Miscellaneous expense	4.31	7.31	(3)	1.43
Total (c)	1661	10628.31	917.86	146.75
TOTAL ASSETS (A+B+C)	**9310.46**	**10628.31**	**2528.24**	**288.04**
LIABILITIES				
Current liabilities:				
Current liability & provision	3995.59	5334.35	(1338.76)	2.98
Total (a)	3995.59	5334.35	1338.76	2.98
Share capital				
Net worth	2656.68	2898.41	(241.73)	10.99
Total (b)	2656.68	2898.41	241.73	10.99
Total debt (c)	2658.19	2395.53	262.66	10.12
TOTAL LIABILITIES (A+B+C)	**9310.46**	**10628.31**	**1317.83**	**24.09**

Source: Secondary Data

INTERPRETATION:

From the above table shows the comparative balance sheet on 2017-2018. In the year of 2018 fixed assets are increased for 4290.48. The net worth has been increased by Rs. 2898.41. The current assets have increased to 4796.04 The current liabilities have been increased to Rs. 5334.35

COMPARATIVE BALACE SHEET FOR THE YEAR OF 2018-2019

LIABLITIES	2018	2019	Increase / Decrease	Percentage
ASSETS				
Current assets:				
Inventories	2230.63	1896.02	334.61	6.66
Sundry Debtors	1230.37	1419.41	(189.04)	6.50
Cash and bank balance	32.56	13.94	18.62	1.74
Loans and advances	1302.48	1458.89	(156.41)	8.32
Fixed deposit	---	---	---	---
Total (a)	4796.04	4788.26	7.78	23.22
Fixed assets:				
Net block	3713.17	5281.88	(1564.71)	2.37
Capital work in progress	577.31	688.93	(111.62)	5.17
Total (b)	4290.48	5970.81	1676.33	18.55
Investment	1534.48	2337.63	(803.15)	1.91
Miscellaneous expense	7.31	0.00	0.00	0.00
Total (c)	1541.79	2337.63	803.15	1.91
TOTAL ASSETS (A+B+C)	**10628.31**	**13096.71**	**1684.11**	**30.76**
LIABILITIES				
Current liabilities:				
Current liability & provision	5334.35	5136.78	(299.37)	16.15
Total (a)	5334.35	5136.78	299.37	16.15
Share capital				
Net worth	2898.41	4455.11	(1556.7)	1.86
Total (b)	2898.41	4455.11	1556.7	1.86

Total debt (c)	2395.53	3504.82	(1109.29)	2.15
TOTAL LIABILITIES (A+B+C)	**10628.31**	**13096.71**	**2965.36**	**20.16**

Source: Secondary Data

INTERPRETATION:

From the above table shows the comparative balance sheet on 2018-2019. In the year of 2019 fixed assets are decreased for 5970.81. The net worth has been increased by Rs. 4455.11. The current assets have decreased to 4788.26. The current liabilities have been decreased to Rs. 5136.78.

COMPARATIVE BALACE SHEET FOR THE YEAR OF 2019-2020

LIABLITIES	2019	2020	Increase / Decrease	Percentage
ASSETS **Current assets:**				
Inventories	1896.02	1188.70	707.32	2.68
Sundry Debtors	1419.41	1299.01	120.4	11.78
Cash and bank balance	13.94	11.69	2.25	6.19
Loans and advances	1458.89	1677.51	(218.62)	6.67
Fixed deposit	---	---	---	---
Total (a)	4788.26	4176.91	22691.97	27.32
Fixed assets:				
Net block	5281.88	5659.87	(377.99)	13.97
Capital work in progress	688.93	181.53	507.4	1.35
Total (b)	5970.81	5841.4	129.41	15.32
Investment	2337.63	2789.69	(452.06)	5.17
Miscellaneous expense	0.00	0.00	0.00	0.00
Total (c)	2337.63	2789.69	452.06	5.17
TOTAL ASSETS (A+B+C)	**13096.71**	**12808**	**23273.44**	**47.81**

LIABILITIES				
Current liabilities:				
Current liability & provision	5136.78	4476.2	660.58	7.77
Total (a)	5136.78	4476.2	660.58	7.77
Share capital Net worth	4455.11	4447.89	7.22	617
Total (b)	4455.11	4447.89	7.22	617
Total debt (c)	3504.82	3883.91	(379.09)	9.24
TOTAL LIABILITIES (A+B+C)	**13096.71**	**12808**	**1046.89**	**634.01**

Source: Secondary Data

INTERPRETATION:

From the above table shows the comparative balance sheet on 2019-2020. In the year of 2020 fixed assets are increased for 5841.4. The net worth has been decreased by Rs.4447.89. The current assets have decreased to 4176.91. The current liabilities have been decreased by Rs. 4476.2

COMPARATIVE BALACE SHEET FOR THE YEAR OF 2020-2021

LIABLITIES	2020	2021	Increase / Decrease	Percentage
ASSETS **Current assets:**				
Inventories	1188.70	1398.53	(209.83)	5.66
Sundry Debtors	1299.01	1257.69	41.32	31.43
Cash and bank balance	11.69	751.29	(739.6)	0.01
Loans and advances	1677.51	1879.45	(201.94)	8.30
Fixed deposit	---	---	---	---
Total (a)	4176.91	5286.96	1110.05	45.4
Fixed assets: Net block	5659.87	4233.74	1426.13	3.96

Capital work in progress	181.53	120.14	61.39	2.95
Total (b)	5841.4	4353.88	1487.52	6.91
Investment	2789.69	2648.83	140.86	19.80
Miscellaneous expense	0.00	0.00	0.00	0.00
Total (c)	2789.69	2648.83	140.86	19.80
TOTAL ASSETS (A+B+C)	**12808**	**12289.67**	**2738.43**	**72.11**
LIABILITIES **Current liabilities:**				
Current liability & provision	4476.2	5601.46	(1125.26)	3.97
Total (a)	4476.2	5601.46	1125.26	3.97
Share capital Net worth	4447.89	4096.89	351	12.67
Total (b)	4447.89	4096.89	351	12.67
Total debt (c)	3883.91	2591.34	1292.57	3
TOTAL LIABILITIES **(A+B+C)**	**12808**	**12289.67**	**2768.83**	**19.64**

Source: Secondary Data

INTERPRETATION:

From the above table shows the comparative balance sheet on 2020-2021. In the year of 2021 fixed assets are decreased for 4353.88. The net worth has been decreased by Rs. 4096.89. The current assets have increased to 5286.96. The current liability has been increased to Rs. 5601.46.

TREND ANALYSIS

	SALES		NET PROFIT		TOTAL EXPENSES	
YEAR	**AMOUNT**	**TREND %**	**AMOUNT**	**TREND %**	**AMOUNT**	**TREND %**
2017	12393.36	**100**	631.30	**100**	10365.13	**100**
2018	14134.08	**114.04**	565.98	**89.65**	12228.27	**117.97**
2019	12481.20	**100.71**	433.71	**68.70**	11332.75	**109.33**

2020	9943.43	**80.23**	29.38	**4.65**	9352.99	**90.23**
2021	14485.93	**116.88**	334.81	**53.03**	12588.16	**121.45**

Source: secondary data

INTERPRETATION

The sales, Net profit and Total expenses percentage was above 100% in the year of 2017. The company Net profit is decreased for 53.03to trend percentage in 2017. Sales trend percentage is 116.88percent in 2017 and the next Total expenses percentage is 121.45in 2017.

TREND ANALYSIS
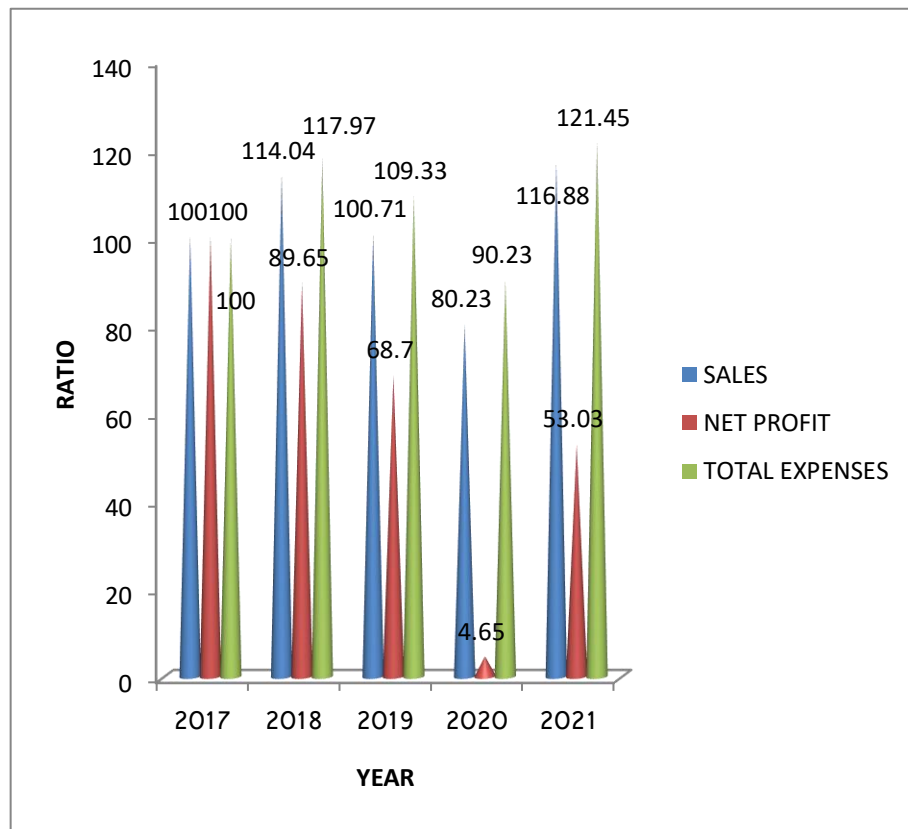
COMPARATIVE BALACE SHEET

15.From the above table shows the comparative balance sheet on 2017-2018. In the year of 2018 fixed assets are increased for 4290.48. The net worth has been increased by Rs. 2898.41. The current assets have increased to 4796.04 The current liabilities have been increased to Rs. 5334.35

16.From the above table shows the comparative balance sheet on 2018-2019. In the year of 2019 fixed assets are decreased for 5970.81. The net worth has been increased by Rs. 4455.11. The current assets have decreased to 4788.26. The current liabilities have been decreased to Rs. 5136.78.

17.From the above table shows the comparative balance sheet on 2019-2020. In the year of 2020 fixed assets are increased for 5841.4. The net worth has been decreased by Rs. 4447.89. The current assets have decreased to 4176.91. The current liabilities have been decreased by Rs. 4476.2.

18.From the above table shows the comparative balance sheet on 2020-2021. In the year of 2021 fixed assets are decreased for 4353.88. The net worth has been decreased by Rs. 4096.89. The current assets have increased to 5286.96. The current liability has been increased to Rs. 5601.46.

TREND ANALYSIS

19. sales, Net profit and Total expenses percentage was above 100% in the year of 2018. The company Net profit is decreased for 53.03to trend percentage in 2018. Sales trend percentage is 116.88percent in 2018 and the next Total expenses percentage is 121.45in 2018.

CONCLUSION

From the results, it can be concluded that all the independent variables (liquidity ratio,Leverage ratio and profitability ratio) have an impact on LYBP. NPM has a strongPositiverelationship with LYBP. This variable is the most influential factor regardingThe company'sfinancial performance. The next most influential variables are DR andCR, which also affects the company's financial performance after the NPM. TheseResults are in line with those of Vanitha and Selvam (2010) for a manufacturingCompany in which profitability was the major factor affecting financial performanceAfter merger. In addition, Collins and Clark (2003) stated that top managers areImportant for firm performance.

In conclusion, profitability ratios are the key factors which highly influence theFinancial performance of LYB rather than liquidity and leverage ratios. NPM isThe most influential variable that affects the company's net income, which means theIncrease in profitability will boost the company's financial performance.

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