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A Study on Multidimensionsal Aspects of Profitability: Evidence from Larsen & Toubro Ltd

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Abstract

The term profitability represents to the ability of an organization to obtain sufficient profit. Profitability is connected to the efficiency of an organization to maximize the profit and wealth at reasonable rate. It is relative measure of the success of the organization in terms of the effective utilization of resources. Scientific study of current trade provides a platform to forecast the possible future trends of the profitability strategic managerial decisions like expansion of the business, rising of additional finance, issue related to bonus and dividend directly connected with profit. To analyze the profitability, the researcher used profitability ratios to determine the earning by considering the variables like EBIT, Gross contribution, Net sales, operating cash flow, ROA, Capital employed, Shareholders equity are considered in the study. An appropriate statistical tools like regression analysis has been employed to measure the relationship between profitability and productivity, which predict the growth of an organization in monetary value during the study period. The researcher made an attempt to measure the profitability of L&T a leading private infrastructure company in India. The researcher made an attempt to measure the profitability of L&T a leading private infrastructure company in India. The study has analyzed the profitability of L&T. Profit being a crucial measure to determine the performance in profitability, internal determinants of the firms, earning power has been ascertained in the study by applying a multiple regression model with EBIT as dependent variable and internal data inputs has independent variable s namely operating profit margin ratio, net profit margin ratio, return on capital employed, return on net worth ratio, return on total assets, operating cash flow to total asset, EBIT to total tangible asset, profit after tax to total tangible assets, EBIT to total assets, retained cash flow to capital employed, EBIT to capital employed, PAT to tangible portion of shareholders equity, interest coverage ratio.

The study conducted based on the financial information for the five year's period from 2014-2018.

Keywords

Profitability, Efficiency, Gross Contribution.

Introduction

Profitability is an efficiency of a company to use the resources at optimum level to generate huge revenue after meeting out the financial obligations. The term profit connected with financial gain which creates the confidence in the mindset of investors, creditors, shareholders and employees of an organization. Profitability looks the direct relationship between income and expected expenditure during the specified period. The main objective of wealth maximization directly depends with profitability in long run. Cash flow activities have been significant influence on profit.

Manufacturing based units involves huge amount of investment. Dynamic activities will have significant influence in future expected profit. The company should have close watch on the financial commitments which directly connected with major determinants of profitability like competition, Demand, availability of raw materials. The present study has been focused to measure the dimensional effect of profitability of a selected company like L&T as it's a core investment company.

Company Profile

Larsen and Toubro limited, commonly known as L & T limited is an Indian multinational amassed company. It was founded in 1936 at Mumbai, Maharashtra, India by two Danish engineers Holk Larsen and Soren Kristian taking fortress in the country. This company is one of the largest and most reputed companies in India's private sector. L&T headquarter is situated in Mumbai. The company has business passion in basic and heavy bulk engineering, construction, realty, manufacturing of capital goods, information technology, and financial services. The company began as a classic of Danish manufacturers of dairy equipment. The products of Larsen & Toubro are heavy equipment, electrical equipment, power generation, construction, engineering, IT service, rapid transit, finance, shipbuilding, real estate. Total equity of the company as per 2019 records were (62,374 crores in rupees) L&T has an international presence with a global spread of offices. Earlier the company was established as a partnership firm. In December 1950 the company converted as a public company with a paid up capital of rupees 2 million.

Statement of the Problem

Financial efficiency connotes the profitability, liquidity, solvency of an organization. Major determinants of revenue and income have been considered as a supporting variable to state the financial performance of the organization but the most important term profitability will support their results of the study to predict the growth of organization in future. High-techno developed private limited company from infrastructural sector has been considered in this study. As the involvement of huge fund and production process the attainment of expected profit of L&T will be difficult one. After the four road way project introduced by union government with headship of the Honorable Prime minister Atal Bihari Vajpayee, companies like L&T got significant attract in infrastructure sector. At present L&T is multi focused infrastructure unit, the revolving fund will be high. With this intention the researcher has made an attempt to check the financial viability based on the selected dynamic profitability ratios during the study period.

Literature Review

Loanlordache 2017 conducted a study on "Hydrogen refueling station infrastructure roll-up an indicative assessment of the commercial viability and profitability" the study aims to evaluate the roll-out of a hydrogen refueling station (HRS) infrastructure in Romania. Tool used for this study was Ratio analysis. It has been identified the assessment of the commercial value and profitability of a hydrogen refueling station network were stable.

N Mukhametova A kolchin 2016 conducted a study on "Gas condensate field infrastructure re-engineering on the declining production stage to increase profitability of exploitation" The objective of work was to develop technical measures for the reconstruction of a major gas condensate field processing facilities central processing plant and assessment of the impact of these measure on the economic efficiency of the plant. Thus study indicated that reengineering was an effective margin increase investment of gas condensate field development.

Abiodun Elijah obayelu 2014 conducted a study on "Effect of rural infrastructure on profitability and productivity of cassava based farms" The study was selected in a multistage random sample technique. The study identified the low infrastructural development in capable of jeopardizing efforts at improving the productivity. Ratio analysis was the tool used for this study and the study was based on cross-sectional survey of 120 cassava farmers selected with a multistage random sampling techniques.

Camelia Burja 2011 conducted a study on “Factors influencing the company’s profitability” The study aims to evaluate company’s performance especially about its profitability, which is useful in substantiating managerial decisions regarding potential changes in the economic resources that the company will be able to control in the future. The study is based on regression analysis and the obtained results emphasize the strong connection between the profitability of the analyzed company.

Nicola Chiara 2007 conducted a study on “Valuing simple multiple – exercise real option infrastructure projects” the study has given clarity that the revenue risk is considerable in infrastructure project financing arrangements such as build operate transfer. So here in this study the multi least square Monte Carlo techniques was presented and illustrated as a promising approach in order to determine the fair value of this real option. The study represents an important step towards improving risk mitigation and facilitating contractual and financial negotiations in BOT projects.

Steve Esselaar 2006 conducted a study on “ICT usage and its impact on profitability of SMES in 13 African countries. This article reports on small and medium enterprise survey carried out by the research. In African countries and aims at understanding the impact of ICT’S on private sector development. In this study several control questions were built into the questioner to check for consistency for responses were conducted. The study concluded that SME’S in promoting economic growth and gaining, increasing awareness. It is said that it has been nearly 25%of its fixed capital to be found in SME sector.

Po-Young-Chu 2005 conducted a study on “Virtual integration and profitability evidence from Taiwan’s IC industry” the study aims to examine the strategy performance consequences of strategic group membership and to further investigate the relationship between the profitability of Taiwan’s IC firms, the tool used for this study is Ratio analysis and the paper was based on a descriptive study. It was found that an increasing number of independent IC design firms seems to support the organization profitability.

Mustafa Younis 2001 conducted a study on “An empirical investigation of hospital profitability in the post-PPS era” the study aims to identify the empirical determinants of hospital profitability, as measured by return on assets using a comprehensive sample of hospitals from all four US regions over post PPS era. The study explains previous empirical models of hospital profitability by considering the effect of additional economical financial variable and the effect of conversion of ownership status. The study concluded the non-linear relationship characterizes the dependence of hospital profitability on bed capacity and occupancy rate.

Anwar shah 1992 conducted a study on “Dynamics of public infrastructure industrial productivity and profitability” the study aims to investigate the contribution of public investment in infrastructure to private sector profitability. Ratio analysis is the tool used for this study, it was found that the study further provides estimate of short run and long run scale economies measures of productivity, growth and technical change.

Cesar AV Queiroz 1992 conducted a study on “Road infrastructure and economic development: diagnostic indicator” This study gives us the information that can be used as indicator of are of weakness or strength in a country road infrastructure stock. The tool used in this study is quantitative research method that is regression analysis. This study clearly shows that there is statistically significant relationship between road and infrastructure and economic development.

Objective of the Study

- To identify and analyze the determinants of the profitability of a company.

Hypothesis

H0: Interest coverage ratios do not have significant influence on profitability.

Methodology

This study aims to make an analysis of the determinants of profitability of selected company. In this study, the major determinants Operating profit, Net profit, return on capital employed, return on net worth, operating cash flow, EBDIT, PAT, EBIT, RCF, tangible assets, total assets, and interest charges have been taken into account to study the profitability. The data used for the study are secondary data in nature. The required data for the company has been collected from the annual reports for the period of 2014-15 to 2018-19. This period is particularly marked by a chance in the implementing phase of GST and Demonetization.

Analysis to the data collected for the study has been made by using ratio analysis and data statistical tools namely mean, standard deviation, and coefficient of variation, one way ‘t’ test has been applied to test the hypothesis. The results of the study will definitely help company, its policy makers lending institutions, government and academicians to evaluate the performance based on profitability.

The data for the study have been extracted from financial statements. These statements are historical and quantitative in nature. The effect of inflation is not considered in the present study. Therefore, the study carries all the limitations that are interest in the financial statement and ratios.

Analysis and Interpretation

The following table include the important 14 profitability ratios, have been employed to interpret the results in terms of profit during the study period.

RATIOS
OPERATING PROFIT MARGIN RATIO: "EBDIT/REVENUE"
NET PROFIT MARGIN RATIO: "PROFIT AFTER TAX/REVENUE"
RETURN ON CAPITAL EMPLOYED: "PROFIT AFTER TAX/CAPITAL INVESTED"
RETURN ON NET WORTH RATIO: "PROFIT AFTER TAX/NET WORTH"
RETURN ON TOTAL ASSETS: "EBDIT/TOTAL ASSETS"
OPERATING CASH FLOW TO TOTAL ASSET: "OPERATING CASH FLOW/TOTAL ASSETS"
EBDIT TO TOTAL TANGIBLE ASSETS: "EBDIT/TOTAL TANGIBLE ASSETS"
PROFIT AFTER TAX TO TOTAL TANGIBLE ASSETS: "PROFIT AFTER TAX/TOTAL TANGIBLE ASSETS"
EBIT TO TOTAL ASSETS: "EBIT/TOTAL TANGIBLE ASSETS"
EBIT TO CAPITAL EMPLOYED: "EBIT/CAPITAL EMPLOYED"
RETAINED CASH FLOW TO CAPITAL EMPLOYED: "RETAINED CASH FLOW/CAPITAL EMPLOYED"
PROFIT AFTER TAX TO TANGIBLE PORTION OF SHARE HOLDERS EQUITY: "PROFIT AFTER TAX/TANGIBLE PORTION OF SHARE HOLDERS EQUITY"
OPERTAING CASH FLOW TO SHARE HOLDERS EQUITY: "OPERATING CASH FLOW/SHARE HOLDERS EQUITY"
INTEREST COVERAGE RATIO: "EBIT/INTEREST"

Table 1.1 Summary of Statistics: Profitability

	LARSEN AND TOUBRO				
RATIOS	**2014**	**2015**	**2016**	**2017**	**2018**
OPERATING PROFIT MARGIN RATIO	0.126	0.123	0.120	0.100	0.096
NET PROFIT MARGIN RATIO	0.057	0.053	0.053	0.062	0.066
RETURN ON CAPITAL EMPLOYED	0.262	0.265	0.297	0.369	0.286
RETURN ON NET WORTH RATIO	0.128	0.120	0.125	0.137	0.143
RETURN ON TOTAL ASSETS	0.063	0.058	0.054	0.052	0.046
OPERATING CASH FLOW TO TOTAL ASSET	0.065	0.052	0.054	0.052	0.054
EBDIT TO TOTAL TANGIBLE ASSETS	0.063	0.058	0.054	0.052	0.047
PROFIT AFTER TAX TO TOTAL TANGIBLE ASSETS	0.028	0.025	0.024	0.032	0.032
EBIT TO TOTAL ASSETS	0.044	0.037	0.035	0.042	0.047
EBIT TO CAPITAL EMPLOYED	0.198	0.176	0.183	0.176	0.209
RETAINED CASH FLOW TO CAPITAL EMPLOYED	0.108	0.142	0.039	0.075	0.122
PROFIT AFTER TAX TO TANGIBLE PORTION OF SHARE HOLDERS EQUITY	0.128	0.120	0.125	0.137	0.144
OPERATING CASH FLOW TO SHARE HOLDERS EQUITY	0.296	0.249	0.283	0.223	0.238
INTEREST COVERAGE RATIO	6.950	5.080	5.470	6.740	8.120

Source: Computed

Findings of the Study

- OPERATING PROFIT MARGIN RATIO
  The L&T sector has revealed a fluctuating trend in operating profit margin ratio during the study period. The year 2014, 2015, 2016 have shown an increase and the year 2017 and 2018 have shown a drastic decrease in the mean value. The highest value (0.126) has been found in the year 2014 and the lowest (0.096) in the year 2018.
- NET PROFIT MARGIN RATIO
  In the L&T sector the net profit margin ratio has registered a mixed trend. During the year 2014, 2017, 2018 have shown an increase and the year 2015 and 2016 have shown a decrease. The maximum has been (0.66) in the year 2018 and the minimum has been (0.053) in the year 2015 and 2016
- RETURN ON CAPITAL EMPLOYED
  The L&T sector has recorded a maximum mean value of (0.369) in the year 2017. There has been decreasing in the year 2014, 2015, 2016 and 2018. The minimum mean value (0.262) has been found in the year 2014.
- RETURN ON NET WORTH RATIO
  The L&T sector has revealed a fluctuating trend in return on net worth ratio during the study period. The year 2014, 2015, 2016 has shown an increase and the year 2017 and 2018 have shown a decrease in the mean value. The highest value (0.143) has been found in the year 2018 and the lowest (0.120) has been found in the year 2015.
- RETURN ON TOTAL ASSETS
  In the L&T sector the return on total assets ratio has registered a mixed trend. During the year 2016, 2017, 2018 have shown a decrease and the year 2014 and 2015 have shown an increase. The maximum has been (0.063) in the year 2014 and the minimum has been (0.046) in the year 2018.
- OPERATING CASH FLOW TO TOTAL ASSETS
  The L&T sector has recorded a maximum mean value of (0.065) in the year 2014. There have been decreasing in the year 2016, 2017, 2018. The minimum mean value (0.052) has been found in the year 2015 and 2017.
- EBDIT TO TOTAL TANGIBLE ASSETS
  The L&T sector has revealed a fluctuating trend in EBDIT to total tangible asset during the study period. The year 2014 and 2015 have shown a increase and the year 2016,2017, 2018 have shown a decrease. The highest value (0.063) is been found in the year 2014 and the lowest value (0.047) has been found in the year 2018.
- PROFIT AFTER TAX TO TOATAL TANGIBLE ASSET
  In the L&T sector the profit after tax to total tangible asset has registered a mixed trend. During the
  year 2014, 2015, 2016 have shown a decrease and the year 2017 &18 have shownan increase. The maximum has been (0.032) in the year 2017 & 2018 and the minimum has been (0.024) in the year 2016.
- EBIT TO TOATL ASSET
  The L&T sector has revealed a fluctuating trend in EBIT to total assets during the study period. The year 2014, 2017, and 2018 has shown an increase and the year 2015 and 2016 has shown a decrease. The highest value (0.047) has been found in the year 2018 and the lowest value (0.035) has been found in the year 2016.

- EBIT TO CAPITAL EMPLOYED
  In the L&T sector the EBIT to capital employed has registered a mixed trend. During the year 2015, 2016, 2017 has shown a decrease and the year 2014 and 2018 has shown an increase. The maximum has been (0.209) in the year 2018 and the minimum has been (0.176) in the year 2015 and 2017.
- RETAINED CASH FLOW TO CAPITAL EMPLOYED
  The L&T sector has recorded a maximum mean value of (0.142) in the year 2015. There have been decreasing in the year 2016 and 2017. The minimum mean value (0.039) in the year 2016.
- PROFIT AFTER TAX TO TANGIBLE PORTION OF SHARE HOLDER'S EQUITY
  The L&T sector has revealed a fluctuating trend in profit after tax to tangible portion of shareholder's equity during the study period. The year 2017 and 2018 has shown an increase and the year 2014, 2015, 2016 has shown a decrease. The highest value (0.144) has been found in the year 2018 and the lowest value (0.120) has been found in the year 2015.
- OPERATING CASH FLOW TO SAHRE HOLDERS EQUITY
  In the L&T sector the operating cash flow to shareholder's equity has registered a mixed trend. During the year 2014 and 2016 has shown an increase and the year 2015, 2017, and 2018 has shown a decrease. The maximum has been (0.296) in the year 2014 and the minimum has been (0.223) in the year 2017.
- INTEREST COVERAGE RATIO
  The L&T sector has revealed a fluctuating trend in interest coverage ratio during the study period. The year 2014, 2017, 2018 has shown an increase and the year 2015 and 2016 has shown a decrease. The maximum has been (8.120) in the year 2018 and the minimum (5.080) in the year 2015.

Table 1.2 Larsen & Toubro Ltd – Effects of IC ratio on Profitability

	constant	Interest coverage ratio	correlation	t-value	sig
Operating profit margin ratio	0.113	0.68	1	18.141	**
Net profit margin ratio	0.582	0.922	-0.898	22.785	**
Return on capital employed	0.2952	0.129	-0.625	15.255	**
Return on net worth ratio	0.1306	0.91	-0.914	31.436	**
Return on total assets	0.546	0.481	0.896	19.114	**
Operating cash flow to total asset	0.554	0.282	0.49	22.693	**
EBDIT to total tangible assets	0.548	0.451	0.895	20.227	**
Profit after tax to total tangible assets	0.282	0.861	-0.848	16.734	**
EBIT to total assets	0.41	0.959	-0.573	18.522	**
EBIT to capital employed	0.1884	0.812	-0.278	28.845	**
Retained cash flow to capital employed	0.972	0.181	0.021	5.343	*
Profit after tax to tangible portion of shareholders' equity	0.1308	0.913	-0.913	30.378	**
Operating cash flow to shareholder's equity	0.2578	0.245	0.803	18.765	**
Interest coverage ratio	52.826	0	-0.68	1.445	NS

Source: Computed

The regression coefficient of IC ratio of L&T sector has positive effect on Operating profit margin ratio, Net profit margin ratio, Return on capital employed, Return on net worth ratio, Return on total assets, Operating cash flow to total asset, EBDIT to total tangible assets, PAT to total tangible assets, EBIT to total assets, EBIT to capital employed, Retained cash flow to capital employed, Profit after tax to tangible portion of shareholders equity, Operating cash flow to shareholders equity and Interest coverage ratio. An increase in IC ratio results in an increase in the depended variables. therefore, the profitability of the L&T sector is dependent on its debt serving capacity. The enhanced debt in the capital structure enables the sector to increase its profitability. T test has been implemented to find whether the IC ratio has significant effect on the selected profitability ratios. High correlation has been found between IC ratio and operating profit margin ratio, return on total assets, EBDIT to total tangible assets and operating cash flow to shareholders' equity. The depended variable mainly operating cash flow to total assets are poorly correlated. The negative values of dependent variables have been affected on independent variables.

Conclusion

The year 2017 and 2018 have been fluctuating profit for the L&T, probably due to a major economic changes like GST and Demonetization in the infrastructure development carried out by the government. The external borrowings have helped the company in improving its operating cash flow. The company has been on top in operating profit margin ratio, return on capital employed and operating cash flow to shareholder's equity. The ICR has effect on all the profitability measure except operating profit margin ratio but it has not influenced return on capital assets, operating cash flow to total asset, EBDIT to total tangible assets, retained cash flow to capital employed and operating cash flow to shareholder's equity. The leverages have no impact on profitability but ICR has influenced profitability in this company.

In general, the firms should borrow based on their earning capacity. The employment of borrowed fund should be effective. The efficient and effective utilization of assets should generate more profits, and in turns, it should reduce the interest liability and the increase the reinvestment.

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