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COMPARISON OF TOP INDIAN AND GLOBAL IT COMPANIES USING DU PONT 5 POINT ANALYSIS

Shreya Pal[*1] & Tishya Kapoor[2]
[*1&2]Indian Institute of Technology Delhi

ABSTRACT

The paper compares the top 4 companies in the Information Technology (IT) sector of India with the top 5 companies in this sector in the world. These companies have the highest market capitalisation in their given sector in India and the world respectively. Du Pont 5 Point Ratio analysis has been carried out for each company. The performance of the Indian IT sector has been analysed in comparison to the world by taking weighted average of the various ratios according to the market capitalisation percentage of the constituent companies. A paired T-test analysis has been used to compare and analyse these ratios for India and the world. It is seen that Indian companies have an exceptionally high operating profit ratio but a low equity multiplier ratio. Moreover, the Return on Equity (ROE) computed in the recent years of Indian companies is seen to be less than the other top companies. This is in contrast to its earlier performances. Thus, new innovations are needed to ensure that IT sector continues to be one of the most important sectors in our country.

Keywords: *Du Pont 5 Point Analysis , Paired T-Test, Market Capitalization, IT Sector, Return On Equity, India.*

1. INTRODUCTION

Indian IT sector is one of the key players in the recent economic transformation of the country and has contributed significantly to the changing perception of India in the global economy. This has made India world's largest sourcing destination in the world for this industry. Investment in this sector has increased significantly over the past few years. In fact, according to a recent Department of Industrial Policy and Promotion report, inflows worth US $ 17.5 billion has been recorded between 2000 and 2015[1]. Also, the Indian government has taken many initiatives to promote the IT sector in recent years, like the launch of Digital India Initiative, construction of Technology incubator in Hyderabad (T-Hub), etc. [1].

The Indian Information Technology sector can be further divided into four components: hardware, IT services, software products and business process management [2]. In this paper, we have considered the top 4 IT services company in India and have compared their return on equity with the top 5 IT services companies in the world over a span of the last 9 years.

2. MATERIAL AND METHODS

In this paper we have used Du Pont 5-Point Ratio analysis to calculate and analyse the Return on Equity (ROE) for the top firms constituting the IT services sector in India and the world. Return on Equity gives a measure of how well a company's management is able to create value for its shareholders as it is related to the rate of return that stockholders get on their investment. Hence ROE is a profitability ratio that is based on the returns of the shareholders [3]. Also, it is a good indicator of the performance level of the firm in terms of its operation level and its financial position.

ROE = Net income / Shareholder's equity

However, for a complete picture, it is important to break the ROE into its components and analyse each component affecting the overall ROE. There are two ways of breaking down ROE: Du Pont 3-Point analysis and Du Pont 5-Point analyses.

The three step equation breaks ROE into three components:

ROE = (Net profit margin) * (Asset turnover) * (Equity multiplier)

Wherein, Net profit margin indicates the operating efficiency of the firm and is given by the net profit divided by total revenue of the company

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Asset turnover denotes the asset use efficiency (how effectively the company makes use of its assets)
Equity multiplier denotes the financial leverage of the company (a measure of how much the company is leveraged) [4].
ROE = (Net income / Sales) * (Sales / Assets) * (Assets / Shareholders Equity)

Equity here consists of share capital of ordinary shareholders and share premium and reserves [5]
5 step calculations: Du Pont 5-Point analysis further breaks down the net profit margin.
ROE = [(Operating profit margin) * (Asset turnover) * (Interest burden) * (Equity multiplier) * (Tax burden)]

Tax burden = Earnings after Taxes (EAT)/Earnings Before taxes (EBT)
Interest burden = Earnings before taxes (EBT)/ Earnings before interest and taxes (EBIT)
Operating profit margin = Earnings before interest and taxes (EBIT)/ Net Sales
Asset Turnover = Net Sales / Total Assets
Equity Multiplier = Total Assets/ Average Equity
Return on Equity = EAT / Average Equity

After obtaining the component ratios and the value of return on equity, for comparing the performance of the Indian IT sector and top IT companies of the world, we obtained the weighted average of ROE and component ratios based on the market capitalisation of the constituent firms for each year. Following which, a comparison was drawn between these weighted averages using a paired T – Test analysis. It has assisted us in comparing the values of means of the two sets of data obtained.

The above method aims at examining the financial and operational performance of the Indian IT sector with respect to top international firms in this sector. The accounting data for the firms was obtained from their official annual financial reports, which were obtained from their official websites. Our study includes nine years of data of the top 4 Indian IT service companies and 5 top IT service companies (based on their market capitalisation). Further, analysis has been done among Indian companies as well as on the combined data.

Following are the details of the companies considered in the analysis:

Table 1. Top four companies of the Indian IT services sector.

Company	Market capitalisation share in 2014-15
Tata Consultancy Services Ltd	41.99%
Infosys Ltd	22.23%
Wipro Ltd	12.01%
HCL Technologies Ltd	10.59%

Table 2. Top five companies of the IT services sector in the world.

Company	Market capitalisation share in 2014-15
IBM	8.1%
HP	4.3%
Accenture	4.1%
Fujitsu	3.9%
SAP	2.5%

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3. RESULTS

A. Tax Burden

Table 3. Comparison of tax burden of top Indian and global IT companies.

Year	Global	India
2006	0.720	0.851
2007	0.669	0.856
2008	0.690	0.866
2009	0.786	0.860
2010	0.767	0.787
2011	0.715	0.774
2012	0.777	0.744
2013	0.909	0.727
2014	0.668	0.763
2015	0.855	0.772
2016	0.842	0.758
2017	0.695	0.790
mean	0.758	0.796

Figure 1. Graph of tax burden of the top companies of the world and India (IT sector).

B. Interest Burden

Table 4. Comparison of interest burden of top Indian and global IT companies.

Year	Global	India
2006	0.956	0.972
2007	0.959	0.985
2008	0.942	0.925
2009	1.009	0.871
2010	0.961	0.953
2011	0.963	0.938
2012	0.983	0.922
2013	0.998	0.885
2014	0.959	0.991
2015	0.964	0.994
2016	0.756	0.993
2017	0.668	0.988
mean	0.927	0.951

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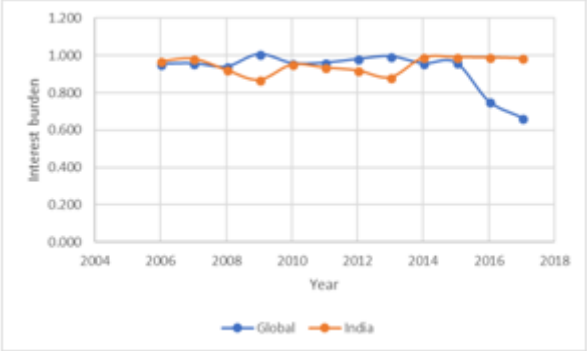

Figure 2. Graph of interest burden of the top companies of the world and India (IT sector)

C. Asset Turnover Ratio

Table 5. Comparison of tax burden of the top Indian and global IT companies.

Year	Rest of the world	India
2006	1.192	1.881
2007	1.199	2.542
2008	1.225	1.324
2009	1.172	1.328
2010	1.136	1.666
2011	1.143	1.590
2012	1.162	1.114
2013	1.121	1.062
2014	1.113	1.017
2015	0.692	0.969
2016	0.756	0.957
2017	0.668	1.018
mean	1.083	1.404

Figure 3. Graph of asset turnover ratio of the top companies of the world and India (IT sector)

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D. Operating Profit Margin

Table 6. Comparison of operating profit margin of the top companies of India and the world (IT sector)

Year	Rest of the world	India
2006	0.118	0.232
2007	0.127	0.232
2008	0.125	0.238
2009	0.125	0.229
2010	0.134	0.243
2011	0.150	0.249
2012	0.112	0.242
2013	0.139	0.234
2014	0.145	0.266
2015	0.191	0.279
2016	0.193	0.285
2017	0.187	0.258
mean	0.145	0.249

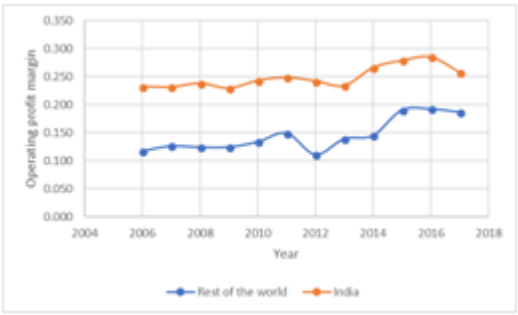

Figure 4. Graph of operating profit margin of the top Indian and global IT companies.

E. Equity Multiplier

Table 7. Comparison of equity multiplier of the top Indian and global IT companies.

Year	Rest of the world	India
2006	3.451	1.016
2007	2.767	0.979
2008	2.749	1.065
2009	3.744	1.141
2010	3.873	1.082
2011	4.075	1.059
2012	4.509	1.480
2013	4.202	1.519
2014	5.815	1.401

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2015	4.812	1.335
2016	4.995	1.234
2017	5.532	1.273
mean	4.210	1.216

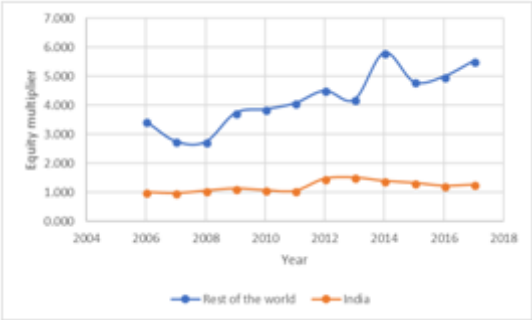

Figure 5. Graph of equity multiplier of the top Indian and global IT companies

F. Return on equity

Table 8. Comparison of return on equity of the top Indian and global IT companies.

Year	Rest of the world	India
2006	0.286	0.367
2007	0.235	0.485
2008	0.242	0.269
2009	0.326	0.261
2010	0.403	0.329
2011	0.456	0.304
2012	0.344	0.274
2013	0.407	0.243
2014	0.512	0.287
2015	0.505	0.277
2016	0.522	0.254
2017	0.377	0.261
mean	0.385	0.301

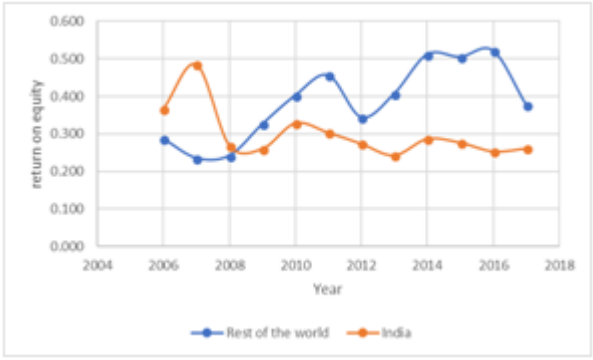

Figure 6. Graph of return on equity of the top Indian and global IT companies.

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G. Paired t-test

Table 9. Paired t test for various ratios for top Indian and global IT companies.

Sample	Mean Ratio (World)	Mean Ratio (India)	Mean Difference	T-Stat value	Null Hypothesis
Tax Burden	0.758	0.796	-0.038	-1.412	Not Rejected
Interest burden	0.927	0.951	-0.024	-0.768	Not Rejected
Asset Turnover	1.083	1.404	-0.321	-2.149	Rejected
Profit Margin	0.145	0.249	-0.104	-10.311	Rejected
Equity Multiplier	4.210	1.216	2.994	10.416	Rejected

4. DISCUSSION

From the study of statistics, it is known that there is significant difference in the two particular values of a paired t test if the significance is less than 0.05[6]. Using this information, it can be seen that there is a significant difference in the equity multiplier and the operating profit margin. For asset turnover ratio the value is 0.053 thus it is too close to know whether any difference is there or not. The ratio giving return on equity is not very different for the Indian IT sector and the rest of the world since the value of significance is 0.627. Similarly, for the interest burden and the tax burden ratio the difference is not very significant due to higher values of significance.

The main difference between the top Indian IT companies and the top global IT companies is in the operating profit margin and equity multiplier. In case of operating profit, the picture is very good for India since it is working at a much higher profit margin than even the top companies of the world. This can be easily seen from the graph of operating margin profit.

The formula of equity multiplier is Total Assets/Average Equity. This ratio is much less for Indian IT sector than for the top IT sectors of the world. This can be due to the fact that the Indian IT sector has really less assets when compared to the other top IT companies. The top company in the world in IT sector, IBM, had total assets of 117532 million dollars at the end of 2014 compared to 73660.88 crores of assets of TCS, the top company of India.

5. CONCLUSION

In this paper we have compared the top IT sector companies of the world with that of India using Du Pont 5-point ratio and paired T Test. In the above analysis we compared the mean ratios of tax burden, interest burden, asset turnover ratio, equity multiplier and operating profit margin of the companies selected. These ratios provided a unique insight into the IT sector. IT sector has emerged as one of the fastest growing sectors in India and its contribution to India's GDP has increased from 1.2% in 1998 to 7.5% in 2012. The aggregate revenues was US $147 billion in 2015, whereas the export revenue stood at US$99 billion and domestic at US $48 billion, which comes out to be a growth rate of more than 13% [7].

Thus the analysis done in the paper assumes a very important role in concluding the exact areas in which this sector needs to work in order to compete with the best in the world. Using our analysis, we concluded that there is significant difference in the equity multiplier ratio and the operating profit margin. The operating profit margin shows that Indian IT sectors are one of the most profitable in the world. On the other hand, the lower values of equity multiplier can be attributed to the lower net assets of Indian companies when compared to that of the rest of the world. Thus, Indian IT companies should focus on building up their net assets and thus

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improving their equity multiplier. The study of asset turnover ratio is also very enlightening, it shows that although this ratio is nearly the same now but a few years back Indian companies had a much higher asset turnover ratios as compared to the rest of the world. The return on equity was also greater for Indian companies in its initial years but now it has become lower.

The recent years have seen a new facet of IT sector emerging, the solution-based services with the adoption of digital technologies like mobility, analytics and cloud. We are seeing a declining market growth in the traditional services businesses and double digital growth in the emerging digital space. Thus, Indian companies really need to push for incorporation of digital technology in their service portfolios in order to continue growing at phenomenal rates and to regain the momentum of earlier years. Projects like 'Digital India' launched by Prime Minister Narendra Modi seems to be a step in the right direction and more initiatives like this are needed.

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