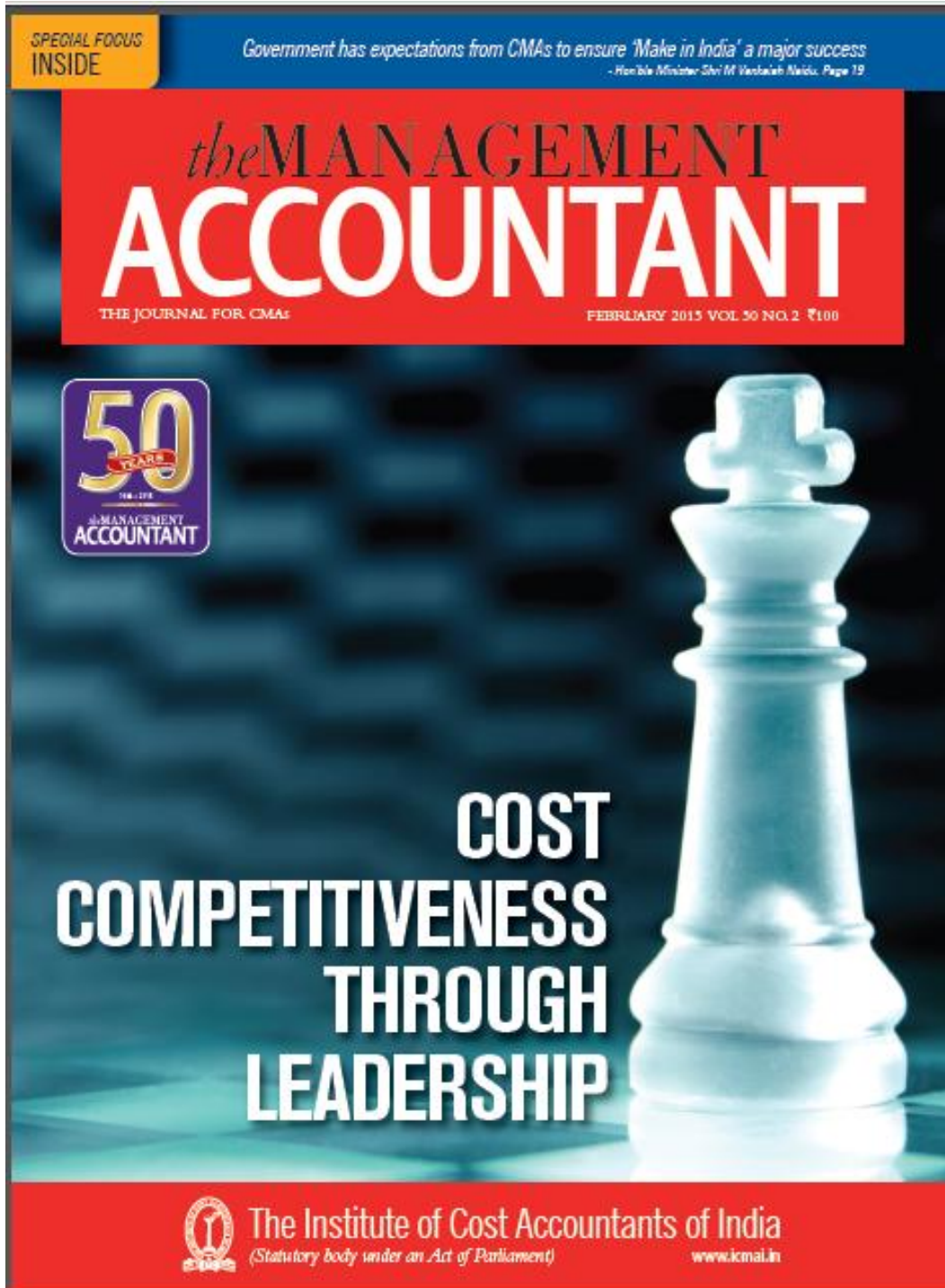


ANNEXURE-X
(Publication No 1)



6
From the
Editor's desk

7
President's
communiqué

10
Chairman's
communiqué

13
NCC 2015

20
ICAI-CMA Snapshot

57
CMA
 Dossier

58
From the
Research Desk

107
Institute News

116
Competitiveness
Index



52 Cost leadership
strategies in Indian
scenario: A study of the
steel industry

TAXATION



60 Reaching the high-
hanging fruits: Reform
and progress in Cenvat
Credit Law

64 The GST Bill: On the
Threshold of making
Fiscal History

67 Tax Tidbits

GOLDEN JUBILEE

73 50 Years of Management
Accounting Research
in India

FOREIGN TRADE



84 Impact of Foreign
Trade Policies on
Indian Economy

AUDIT

92 Planning under
Continuous Audit
approach

IFRS

98 IFRS in India:
Challenges and the
Way Forward

SPECIAL ARTICLE

102 Market Power and
Regulation: From Great
Economics to Good
Policies

The Management Accountant technical data

Periodicity: Monthly
Language: English

Overall Size: - 26.5cm x 19.5cm
Screens: up to 130

Subscription
Inland: ₹1,000 p.a. or ₹100 for a single copy
Overseas: US\$150 by airmail

Concessional subscription rates for registered students of the
Institute: ₹300 p.a. or ₹30 for a single copy

Advertisement rates per insertion

	₹	US\$
Back Cover	50,000	2,500
Inside Cover	35,000	2,000
Only, Full Page	20,000	1,500
Only, Half Page	12,000	1,250
Only, Qtr. Page	7,500	750

The Institute reserves the right to refuse any matter of
advertisement detrimental to the interests of the Institute. The
decision of the Editor in this regard will be final. For any query,
mail to journal.advt@icmai.in

COST LEADERSHIP STRATEGIES IN INDIAN SCENARIO: A STUDY OF THE STEEL INDUSTRY

This study was done to search for the cost leader in the steel industry and to justify the cost leadership strategies for steel industry. Descriptive statistics was used and a modified Du Pont model was applied to observe the strategies of firms



Ujjwal Das
Research Scholar,
Assam University,
Silchar



Prof. A. L. Ghosh
Professor,
Assam University,
Silchar

COST leadership is a business strategy (i.e. comparatively lowest operation cost in the industry) that a firm must adopt mainly to make competition irrelevant (Steve Job). Cost is the amount of resources used for something which must be measured in terms of money¹. Michael Porter defined strategy in 1980 as the "...broad formula for how a business is going to compete, what its goals should be, and what policies will be needed to carry out those goals" and the "...combination of the ends (goals) for which the firm is striving and the means (policies) by which it is seeking to get there."² Porter (1980) broadly propounded cost leadership strategy for the first time. Cost leadership aims at reducing costs throughout the value chain and reaching the lowest cost structure possible. A cost leader enterprise puts products with an acceptable quality and limited standard features on the market in order to gain competitive advantage and to maximize its market share. Such kinds of enterprises appeal to a wide group of customers.

Statements of problem

Cost competitiveness has been at the heart of the Japanese success in 1980s. This will help

to enhance the competitive strength of individual firms by utilizing the available resources efficiently and effectively. Buckley's view of competitiveness is at the firm level (Buckley et al., 1988); a firm is said to be competitive if it can produce goods and services of superior quality at a relatively lower costs than its domestic and international competitors. While Porter (1998) argues that competitiveness meant the ability to compete in world markets with a global strategy. As a result, it became firms' ultimate goal to craft cost leadership strategies (Porter). The firm takes advantage of cost leadership by creating new market pace with innovative product and services. The cost leadership strategy has been successfully implemented in Japan. For example, the Toyota company system - its superior competitiveness in cost reduction, quality and delivery time, has provided the impetus for a worldwide shift toward increasing efficiency through cost-cutting strategies (Schonberger, 1994). Cost leadership strategies are preferred in developing countries such as Indonesia, Malaysia, India and China where they have lower labour cost, and hence, a lower production cost (Aulakh et al. 2000).

Literature review

Various discussions were held across the

world in the area of cost leadership strategies and several other theories have emerged. The following paragraph has been made to highlight a few contextual literatures for the present study.

Utterback and Abernathy (Utterback, 1975) theoretically describes three competitive strategies associated with the innovative patterns of firms: performance maximizing, sales maximizing and cost minimizing. Porter (Porter M., 1980) suggests that differentiation, cost leadership and focus are the strategies that provide firms with the ability to attain a competitive advantage and outperform rivals in an industry by cost reduction in every stage. Miller (Miller, 1988) suggests four broad categories of dimensions that reflect competitive strategies. These dimensions are differentiation, cost leadership, focus and asset parsimony. The cost leadership dimension measures if firms are producing products cheaper than their competitors. Schuler and Jackson (Schuler, 1987), based on Porter's typology, identify three competitive strategies that firms can use to gain competitive advantage: innovation, quality enhancement and cost reduction. Under the cost reduction strategy, a firm tries to be lowest cost producer in the industry. Ward, Bickford and Leong (Ward, 1996) propose four basic strategic configurations: niche differentiator, broad differentiator, cost leader and lean competitor. Cost leaders attempt to offer products at a lower price than competitors. In addition to Porter's generic competitive strategies, some strategy textbooks offer a fifth strategic choice, namely best

cost provider strategy (Thompson, 1999) and integrated low cost differentiation strategy (Hitt, 2007). These strategies imply that a firm can gain advantages by offering products with unique features at a lower price compared with its competitors. Chang, Lin, Wea and Sheu (Chang, 2002) develop three strategy categories are classified: pre-emptive/first mover, low cost/follower and differentiation/follower. The low cost/follower firm enters the market late or has a late adoption of new technology. These firms try to achieve competitive advantage by strict cost control policies.

The competitive advantage of cost leadership is achieved by performing important value chain activities at lower cost than competitors (Porter M., 1985). Cost leadership requires a strong focus on the supply side as opposed to the demand side of the market, as this requires a high level of competitor orientation (Day, 1998). Cost Leadership tends to be more competitor oriented rather than customer oriented (Frambach, et al, 2003). Cost-leadership strategy strives to supply a standard, no-frills, high-volume product at the most competitive price to customers (Li & Li, 2008). The cost leadership strategy is an integrated set of action taken to produce goods or services with features which are acceptable to customers at the lowest cost, relative to that of competitors (Ireland, 2011). An important requirement of the cost leadership strategy is "heavy up-front capital investment in state-of-the-art equipment" (Porter, 1980). So,

Kiechel (1981) says that in order to maintain cost leadership a firm should therefore "buy the largest, most modern plant in the industry." In basic industrial commodities, such as pulp, paper, and steel "knocking a couple of percentage points off production costs has far more strategic impact than all the weapons the marketer could employ in these industries" (Bennett & Cooper, 1979). According to this theory, the market-share leader can underprice competition because of its lower costs due to its cumulative experience, thus "further hastening its drive down the curve" (Kiechel, 1981).

Objectives

The following objectives are framed for the study:

- (i) To search the cost leader in steel industry.
- (ii) To justify the cost leadership strategies for steel industry.

Hypothesis

Following hypothesis is generated for the study:

H₀: The firms across the steel industry aren't following any special strategies except cost leadership strategies.

Research methodology

Analytical research was conducted to attain the aforesaid objectives. We consider top six steel companies in the category of Steel industry (Large and Mid. & Small) as classified in the Capitaline Corporate database. To search the cost leader we have considered variables, such as; Net Sales (NS), Adjusted Net Profit (ANP), APATM (Adjusted profit after tax margin), R. & D expenses (R. & D), Assets Turnover(AT), RONO(Return on Net

1 Cost and Management Accounting Book by Directorate of studies, ICAL page no-6.
2 Porter, Michael E. (1980). Competitive Strategy. Free Press. ISBN 0-684-54145-7

Operating Assets), PBIDTM(%), MS (Market Share), Cost of Production (COP) during the period covering six years ending on March 31, 2014. To measure the significance of the variables descriptive statistics was used and modified Du Pont model was applied to observe the firm's strategies.

Palepu and Healy (2008) suggest that a firm pursuing cost leadership strategy may generate a relatively low profit margin but balance that against a relatively high asset turnover. Little et al (2009) concluded that the Du Pont model enabled them to determine that for a firm to be successful with cost leadership it was through generating asset turnover while success with differentiation was through generating profit margins. Philip et al. (2011) shows that some firms follow differentiation strategies (i.e. profit margin is high and asset turnover is low) and cost leadership strategies (i.e. profit is low and asset turnover is high).

The modified Du Pont model is as follows:

$$\text{RONOA} = \text{OPM} \times \text{AT}$$

Where; RONOA (Return on Net Operating Assets) = Net Income / (Fixed Assets + Net Working Capital)

OPM (Operating Profit Margin) = (Operating Income / Sales); AT (Asset Turnover) = (Sales / Net Operating Assets); Operating Income = Sales - Cost of Sales - Operating Expenses; Net Operating Assets = Accounts Receivable + Inventory + Net Property, Plant, and Equipment.

Results and discussion

We have followed modified Du Pont model and below table is showing the Mean and Sd. val-

ue of the selected variables for six year starting from March, 2009 to March 2014 (Ref: Table A).

It was seen from the above table that most of the selected firms are in low PBIDTM mean like Uttam Value Ste. (2.78), Jindal Stain. (10.90), SAIL (17.30), JSW Steel (19.55) and their COP/NS ratio is very high but Tata Steel (33.59) and Bhushan steel (25.91) are in high PBIDTM and comparatively low COP/NS ratio. Mean AT ratios of Uttam Value Ste is very high i.e 1.84 and for Bhushan steel it is lowest i.e. 0.64. RONOA of Uttam Value Ste is 5.76 and for Bhushan steel is 15.76 with this the ROE is negative for Uttam Value Ste. whereas 16.36 for

Bhushan steel. In the above table we have seen that more than 70% market share held by SAIL, Tata Steel and JSW steel. Tata Steel enjoys high PBIDTM compare to other sample companies but mean of AT ratio also highest i.e. 1.20 and COP to sales ratio is 0.58 finally, RONOA is 40.26. SAIL enjoys moderate PBIDTM but AT ratio is 0.80 and COP to Sales is 0.87, RONOA is 13.68. For JSW steel PBIDTM is moderate (=19.55), AT ratios (=1.01), COP/NS (=0.84) and RONOA is 19.70.

Conclusion

From the aforesaid analysis it may be inferred that Uttam Value Ste

Table A: Mean value of selected components during the year end 2009-14.

		Tata Steel	Uttam Value Ste.	SAIL	Bhushan Steel	JSW Steel	Jindal Stain.
AT	Mean	1.20	1.84	0.80	0.64	1.01	0.81
	SD	0.19439	0.38682	0.07007	0.38982	0.06348	0.14335
PBIDTM %	Mean	33.59	2.78	17.30	25.91	19.55	10.90
	SD	4.77727	2.7685	6.90768	3.34379	3.06591	5.03595
RONOA	Mean	40.26	5.76	13.68	15.76	19.70	8.93
	SD	8.39886	5.03188	5.31779	7.71999	3.76329	4.87745
MS	Mean	0.13	0.02	0.19	0.04	0.12	0.04
	SD	0.01506	0.00816	0.02503	0.00548	0.03834	0.00837
APATM	Mean	16.89	-2.84	8.86	8.83	6.63	-0.72
	SD	3.54337	3.15942	4.71952	4.87698	2.2143	4.88587
COP/NS	Mean	0.58	0.99	0.87	0.77	0.84	0.92
	SD	0.0295	0.02317	0.04517	0.02858	0.02066	0.04561
ROE	Mean	14.40	-0.09	13.17	16.36	13.64	-0.44
	SD	4.39894	0.22045	8.37471	9.83718	5.09784	18.53661
RBD	Mean	59.87	0.07	120.50	NA	35.66	0.89
	SD	17.27698	0.04243	12.37017		20.75533	0.46685
RBD % to NS	Mean	0.19	0.00	0.25	NA	0.03	0.01
	SD	0.0437	0	0.02881		0.03886	0.00983

Source: Capitaline corporate database & self calculations

has truly followed cost leadership strategies as its AT ratio (=1.84) is the highest and PBIDTM also very low (=2.78), RONOA is 5.76. With this strategy that company is able to increase market share near about 87% during these periods. Again ROE (-0.09) is too low that indicate pure cost leadership isn't appropriate for steel industry. On the other hand Bhushan Steel follow pure differentiation strategy as its AT ratio (=0.64) is lowest, PBIDTM (=26) and RONOA is 15.76, ROE is very high (=16.36) but MS growth is 42%. When we observe the result of industry leader on base of market leader then SAIL, Tata Steel, JSW steel follow mixed or hybrid strategies and they spend money on R&D expenses (R&D mean 120.50, 59.87&35.66 respectively) to develop the quality of product. Tata Steel is the company which manages cost better (PBIDTM=33.59 & COP/NS=0.58) and is able to increase MS (=25%) during the periods and ROE (14.4) also high.

References

1. Aulakh, P.S. (2000). Export strategies and performance of firms from emerging economies: Evidence from Brazil, Chile and Mexico. *Academy of Management Journal* (43(3)), 342-361.
2. Bennett, R. C., & Cooper, R. G. (1979). Beyond the marketing concept. *Business Horizons*, June, pp. 76-83.
3. Bingxin Li, C., & Juan Li, M. (2008). Achieving superior financial performance in China: differentiation, cost leadership or both? *American Marketing Association, Journal of Marketing*, 3, 1-22.
4. Buckley, P., Pass, C., and Prescott, K. (1988). *Measures of international competitiveness: a critical survey. Journal of Marketing Management*, vol 4, , 175-200.
5. Chang, S.C., Lin, N.P. & Sheu, C. (2002). Aligning manufacturing flexibility with environmental uncertainty in high-tech industry. *International Journal of Production Research*, 40(18), 4765-4780.
6. Day, G., & Wensley, R. (1998). *Assessing advantage: A framework for diagnosing competitive superiority. Journal of Marketing*, 52, 1-20.
7. Frambach, R. T. (2003). *The Influence of Business Strategy on New Product Activity: The Role of Market Orientation. International Journal of Research in Marketing* (20(4)), 377-397.
8. Hitt, M. H. (2007). *Management of strategy: Concepts and cases. Australia: Thomson/South Western*.
9. Ireland, R. H. (2011). *The Management of Strategy - International Edition (9th ed.)*. South-Western, : Cengage Learning.
10. Kiechel, W, III. (1981a). *The decline of the experience curve. Fortune*, October 5, pp. 139-146.
11. Little, P.L., Little B.L., Coffey, D. (2009) *The Du Pont Model: evaluating alternative strategies in the retail industry. Academy of Strategic Management Journal*, Jan 2009, vol.8, pp 71-80
12. Miller, D. (1988). *Relating porter's business strategies to environment and structure: Analysis and performance implications. Academy of Management Journal* (31(2)), 280-308.
13. Palepu, K. & P. Healy (2008). *Business analysis and valuation: Using financial statements (Fourth edition)*. Mason, OH: Thomson Southwestern.
14. Little, Philip L.; Mortimer, John W.; Keene, Marvin A.; Henderson, Linda R. (2011). *Evaluating the effect of recession on retail firms' strategy using DuPont method: 2006-2009*, *Journal of Finance and Accountancy*; Sep2011, Vol. 7, p1
15. Porter, M. (1980). *Competitive strategy - Techniques for analyzing industries and competitors*. New York: The Free Press.
16. Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. Free Press
17. Porter, M. E. (1990). *The Competitive Advantage of Nations*. New York: The Free Press.
18. Porter, M.E. (1998). *Competitive advantage: Creating and sustaining superior*
19. Performance. New York, NY: Free Press.
20. Schonberger, R. (1994). *Human Resource management lesson from a decade of total quality management and reengineering. California Management Review* (36(4)), 109-134.
21. Schuler, R. S. & Jackson, S.E. (1987). *Linking Competitive Strategies with Human Resource Management Practices. The Academy of Management Executive*, 3, 207-219.
22. Thompson, A. A. (1999). *Strategic Management, Concepts and Cases (11 ed.)*. Boston: McGraw-Hill Irwin.
23. Utterback, J. E. (1975). *A dynamic model of process and product innovation. Omega*, 3(6), 639-656.
24. Word, P. B. (1996). *Configurations of manufacturing strategy, business strategy, environment and structure. Journal of Management* (22(4)), 597-626. 

ujjwal.das06@gmail.com

TAXMANN®'S

COMPANY LAW



✓ An Authentic & Comprehensive Commentary on provisions of Companies Act, 2013

✓ A New Approach Commentary on the Companies Act, 2013 which

- does not adopt Commentaries written on the Companies Act, 1956
- does not pass off Comments on the 1956 Act provisions as Comments on Companies Act, 2013
- does not carry huge and irrelevant Appendices

✓ This 5 Volume Commentary is Duly supported by an Always updated® Web Edition

✓ A well structured Commentary on Companies Act 2013. Commentary on each section incorporates

- An overview of the section giving a bulleted bird eye view of the provision.
- Overview is followed by Comprehensive Commentary on each sub-section/clause of the relevant section
- Commentary is duly supported by plethora of Indian & Foreign Case Laws as well as Circulars and Notifications issued by MCA
- Text of the section & relevant rules are given together to give a perfect reading
- Provisions of the Act and Rules are interwoven and explained comprehensively to give a complete purport of the provisions

✓ A Comprehensive & Point-wise Comparative Study of the Companies Act, 2013 & Companies Act, 1956 to enable the reader to understand the transition from Old Law to New Law

✓ Commentary duly incorporates at respective places provisions of Listing Agreement/SEBI Rules/Table F of Schedule II/Secretarial Standards/AS/Ind AS/Auditing Standards, etc.

✓ Comprehensive Commentaries on new Concepts, viz., Corporate Social Responsibilities/New Clause 49/Account Audit & Auditors/Independent Director, etc.



Price: ₹ 11,800 (For a Set of 5 Vols.)

*Till December 2015

Call your Bookseller or

Delhi: 011-4562222
Member: 022-2534668/0159
022-2247996
020444746
Ahmedabad: 079-2688900/2253
07911577071

Bangalore: 0886294991
Bhopal: 0734105770
Bhubaneswar: 0675071392
Chennai: 0899038946
Cochin: 0224441746
Hyderabad: 0391041481

Delhi: 0202241477
Jaipur: 0204814522
Lucknow: 079422067
Mumbai: 0227422573
Patna: 0156299633
Pune: 020804542

Pay Online: www.taxmann.com/online

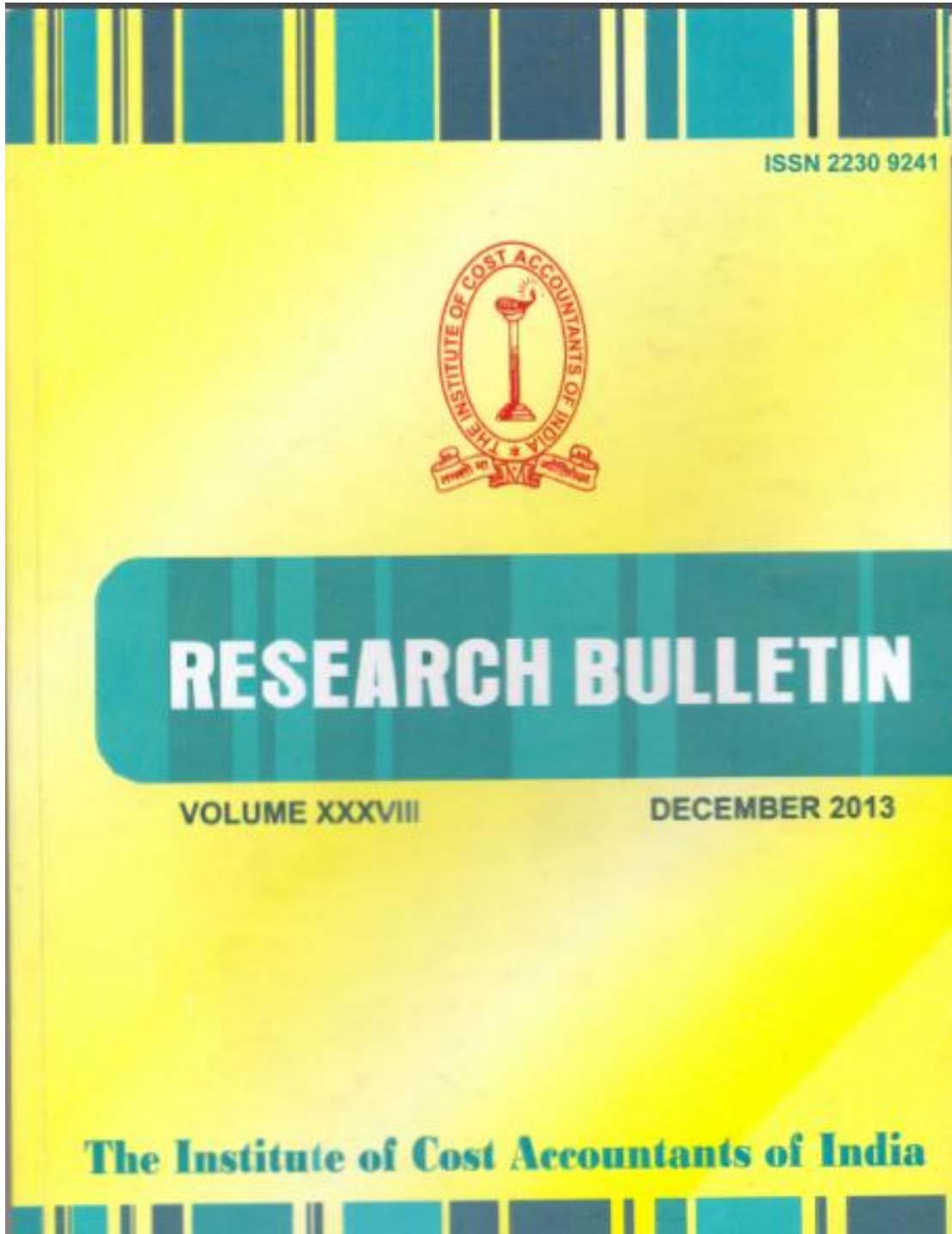
Post: TAXMANN
59/32, New Borega Road,
New Delhi - 110 005 (India)
Email: sales@taxmann.com



The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)

www.kmai.in

ANNEXURE-XI
(Publication No 2)



Ms. Suparna Nandy (Pal)

Assistant Professor, Department of Economics, Vidyasagar Evening College, Kolkata.
Author can be reached at: supa_nandi@rediffmail.com

Dr. Arup Kr. Chattopadhyay

Professor, Department of Economics, University of Burdwan, Burdwan, West Bengal.
Author can be reached at: arup.chatto@yahoo.co.in

Shri Ujjwal Das

Research Scholar, Department of Business Administration, Assam University, Silchar.
Author can be reached at: ujjwal.das06@gmail.com

Dr. R K Raul

Department of Business Administration, Assam University, Silchar.
Author can be reached at: rkraul@yahoo.com

Shri T. D. Obuile

Research Scholar, Degree in B. Fin(University of Botswana), Gaborone.
Faculty of Business, University of Botswana, Gaborone.
Author can be reached at: obuiletd@mopipi.ub.bw

Prof. B. N. Swami

Professor, Faculty of Business, University of Botswana, Gaborone.
Author can be reached at: BONUNS@mopipi.ub.bw

**Cost Structure Strategies : An empirical study in the Software industries in India**

Ujjwal Das

R K Raul

Abstract :

Cost structure issues in recent years gained momentum in the context of attaining competitive advantage of the firms competing globally. The present study attempts to investigate the nature of cost components and its impact on Reported Net Profit of the firms during the financial meltdown regime to formulate appropriate strategy for avoiding their financial distress. The software companies, victim of current recession, are considered for study covering 8 years from 2004-05 to 2011-12. Research outcome shows that overseas demand slowdown coupled with immunity in reducing the cost components led to aggravating financial woes of the software companies over the years and urged upon crafting of blue ocean strategy.

Key Words: Competitive Advantage, Financial Meltdown, Cost Components.

Introduction :

Cost structure in relation to a firm simply implies the nature and quantum of cost distributed in the process of production of goods or services. It encompasses both direct and indirect cost including the financial costs. More specifically, it takes into account the cost incurred in respect of development of an idea of the product or service, the acquisition of raw materials, labour and capital, along with the creation of production facilities. The firms are concerned with the cost structure analysis for numerous counts mainly to achieve the cost leadership within its peer group. Cost base evaluation establishes fundamental competitiveness which enables the firm for adopting intelligent market pricing strategies.

Cost structure varies from industry to industry depending on nature, size and financial structure. Henderson aptly viewed that (Carl, M. S., W. Stern, 2006) sustainability of the companies in the hypercompetitive milieu over time depends on achieving and maintaining differentiation. As a result, it became firms' ultimate goal to craft cost leadership strategies (Porter). Cost leadership is one business strategy (i.e. comparatively lowest operation cost in the industry) that a firm must adopt mainly to make competition irrelevant (Steve Job). The firm takes advantage of cost leadership by creating new market pace with innovative product and services.

Statement of the problem :

The company across the industries attempted to formulate appropriate financial strategies in the context of reducing the overall cost. Since July 2008, despite several attempts to bail out the crisis of the century, silverlining is still awaited. Sharp increases in asset prices coupled with demand slowdown and a speedy expansion of credit often coincide to rapid accumulation of debts. As corporations and households get overextended and face difficulties in meeting their debt obligations, they reduce investment and consumption,



which in turn led to a decrease in economic activity. The cascading affect of demand slowdown particularly in the USA and Euro Zone has impacted external demands from all export oriented economy across the globe (Kose, 2009). The IT industry faced a severe heat of the financial crisis in the context of demand slowdown. This has warranted the organizations to adapt to downsizing, layoff and restructuring policies as a short term measures to remain competitive in the environment.

Under this backdrop an attempt has been made to assess how the firms in the IT sectors are pursuing the cost structure strategies to remain competitive in the financial crisis regime.

Objectives of the study:

The following objectives are framed for the study:

- To investigate the nature and component of firms' operational and financial cost over the years.
- To analyse the impact of cost components on the firm's bottom line.
- To evolve cost control mechanism for the companies to remain competitive in the market.

Literature review:

Some relevant literatures were reviewed to identify the research gap if any in the context of cost structure strategies of the firms in the recent years particularly during the financial crisis period. The genesis of corporate competitive strategies is mostly attributed to Michael E. Porter's contribution towards the industry attractiveness and relevant generic competitive business strategies (Porter, M.E. 1980). Dess and Davis (Dess, 1984) and Hambrick (D, Hambrick. 1983) in their studies in respect of different industry supported Porter's contentions. Amit (Amit, R. 1986) and Hall & Howell (Hall, G.H. 1985) argued that sources of cost economies are relevant in the context of learning effects, economies of scale, and economies of scope.

The Boston Consultancy Group (BCG, 1972) observed that significance of cost leadership as an independent strategy is based on the presumption that the experience curve declines continually with accumulated output over time. In the similar vein, Charles W.L. Hill (1988) found that a firm needs to follow its sustainable competitive advantage on a simultaneous and continuous pursuit to attain both cost leadership and differentiation. Beiting Cheng, Ioannis Ioannou, and George Serafeim (2011) in a paper investigated the role of better CSR for ensuring better finance and found that firms with better CSR performance face significantly lower capital constraints. Hall (1980) observed that the most successful firms could not simultaneously pursue both a differentiation and a low-cost strategy. In a diagonally opposite study, White (1986) observed that those firms successfully combine both low cost and differentiation had achieved highest return on investment. Tyagi (2001) established a relationship between industry-average performance and strategic diversity among a broad cross-section of firms. It was observed from the Industry-average performance measured in terms of Tobin's q and accounting profitability, that, the size, operating margin, asset composition, asset utilization, and focus are the basic structural factors that are directly associated with the performance of the firms.

To restrain recessionary impacts on the industry and the firm in particular Pearce (2002)



viewed that the firms need to adopt to different strategies like; retrenchment, tightening credit, maintaining budgets, maintaining prices, increasing liquidity, reducing debt, deferring capital expenditures, and pursuing selective growth. Mooney (1991) in his study observed that during recession companies are tempted to reduce advertising expenditures. Reduction in such expenses is immediately reflected in an increase in the bottom line of the company. However, other entrepreneurs have found that recessions are good times to maintain advertising budgets. McKinsey's study reported that companies that truly transform their approach to overhead costs aligning their costs with their strategies and maintaining a strong commitment to the effort can be the winner of the game (Nimocks, 2005).

From the aforesaid literature we found that no study has so far been undertaken considering the variables impacting firm's growth sustainability as well as profitability covering global financial meltdown period. Besides, studies relating to cost strategies of the firm especially in the context of financial crisis regime as well as in the IT sector, worst sufferer in the recent times, is at the nascent stage.

Hypothesis:

It has been seen that the firms were pushed into a hypercompetitive environment in the context of liquidity crisis in the external economies, sluggish demand in abroad affecting export potentiality, high interest rate, and above all low investors' confidence both in home and abroad. The firms are struggling hard to evolve strategies to leverage its operation in view of maintaining bottom-line and market share. Therefore following hypothesis is generated for the study:

- The firms across the industries have adapted to the changing economic situation in the context of evolving competitive cost structure strategy to ensure its growth trajectory over the years.

Research Methodology:

Empirical research was conducted to attain the aforesaid objectives. We consider top 10 IT firms in the category of Computer Software (Large) as classified in the Capitaline Corporate database. To analyse the cost structure of the firms under study we have considered variables, such as; Employee cost (EC), Selling & Administration Expenses (SAE), Advertisement Expenses (ADV), R & D expenses (RDE), Expenses in earning of foreign exchange (Forex), Interest cost (INTE), and Reported Net Profit (RNP) during the period covering eight years ending on March 31, 2012. These variables were selected based on review of literature. To measure the significance of the variables descriptive statistics was used and correlation coefficient measure was applied to examine the degree of association between the variables.

Besides following multivariate model was used to assess the efficacy of the independent variables in explaining the impact on dependent variable Reported Net Profit (RNP)

$$Y_{it} = \beta_0 + \beta_1 EC + \beta_2 SAE + \beta_3 ADV + \beta_4 RDE + \beta_5 Forex + \beta_6 INTE + \mu_{it}$$

Here; μ_{it} = Error term. β_0 is the unsystematic predictable constant component or the estimated constant i = Selected Computer Software (Large) companies.

**Results and discussion:**

We have calculated the CAGR for each of the variables during the period from March 31, 2005 to March 31 2012 in three different time lags (TL) namely; TL₁ covers total period (2005-12), TL₂ indicates pre-recession period (2005-08), and TL₃ represents Post Recession (bail-out period 2009-12)

Reported net profit (RNP) of the firm is generally impacted by direct cost and indirect cost. In order to assess the impact of each of the costs we considered direct cost which includes, material cost, Employee (Labour) cost, and direct over head, and indirect cost which consists of Employee cost (salary), Interest paid, R&D, other expenditure.

We assumed that during the regime of demand slowdown the firms had adopted competitive cost strategy to remain competitive in the market. We further assume that with attaining cost leadership the firms over the years could access to the international market and earn considerable foreign exchange and increase Reported Net Profit as well as ROCE (return on capital employed).

It was seen from the Annexure table (I, II, III) that CAGR of PAT of the software firms (large) under study grew at 33.07 % during 2005-2008 and declined to 29.46 % during 2009-12 revealing the fact that software industry was largely affected by demand slowdown in the export region. This is also reflected by the Standard deviation which is found to be highest (6997.58) in post recession period. As a result low turnover impacted the Total Income, PAT, capital Employed and Net worth during the post financial crisis regime.

The return on investment (ROI) under the value maximization principle should necessarily be at least higher than the rate at which the company borrows as well as average cost of capital (WACC). The analysis exhibited that the ROCE grew at 16.90% (CAGR) during pre recession period but moved to negative zone (-26.82%) during the post recession period. The reason of such decline may be attributed to demand slowdown inter-alia high interest burden. The spurt in borrowing cost of all most all companies in the pre recession period has significantly eroded shareholders' earnings afterwards as the company had not reduced the debt obligations. In this respect it may be mentioned that the growth of Debt -Equity ratio (DER) was found to be negative in the post recession period (CAGR -19.68%) in comparison to CAGR 16.74% in pre recession period.

Indian Software Industry as a whole generally relies on overseas demand particularly from the Europe and North America region. The total Sales turnover of the industry has declined considerably resulting in lowering in Forex earnings i.e. from 36.16% in pre-recession to 5.5% in post-recession period. On the other hand, employees cost has also reduced from 41.12 % to 8.16% but not at the same pace of growth of sales (CAGR) during the period under review.

It was found from the Annexure table I; that in all the time lags (TL) Mphasis has turned to be the Industry leader in respect growth of RNP (48.04 %), ROCE (14.58%) and debt repayment capacity. The Total Expenditure grew at (CAGR) 43.41% during entire period due to increase in the employee cost, selling & distribution overhead and interest burden. The other companies under study witnessed positive growth in RNP such as; Tech Mahindra (30.60%), TCS (29.15%) and HCL Tech (28.93%). PAT of Tech Mahindra grew at 30.60%



RESEARCH BULLETIN

against its Total expenditure at 27.61% in which Interest cost shares significant part. It was almost debt free company during pre recession period while in FY 2010 it paid interest ₹160 cr. TCS witnessed highest amount of operating income amongst its peer to the tune of ₹ 38,105.4 cr as on March 31, 2012 and PAT grew at 29.15% against its growth of total Expenditure at 24.11%. The growth of ROCE however, had plummeted as employee cost and selling & distribution expenditure comparatively surged during post recession era. The Satyam computer did not fare well in the pre-recession period due to obvious reason of confiscation of company's accounts. However the operating income picked up only after the management is being controlled by Govt. and also after the merger with Tech Mahindra.

It has been observed that most of the companies have enhanced their manpower by recruiting more people which basically led to increase in employee cost. Further, other costs like - Selling & distribution overhead, Interest cost etc had also increased in the context of hike in interest rate, inflation etc. Polaries Financial was the worst performer during the pre recession period as total expenditure grew at 13.43% involving huge employee cost over the years and finally resulted in a loss (PAT, -0.50%).

The Annexure table -III covering period 2009 to 2012 exhibited that most of the firms are found to be the worst performer even in their entire lifetime. Polaries Financial was exceptional as its RNP grew from negative to positive zone in this time lag. An insightful analysis of cost structure revealed that the total expenditure has considerably dwindled due to significant reduction in the employee cost about 4% over the previous time lag. The PAT grew at 19.24% may be due to their improvement in the volume of business in domestic and overseas market. Similarly, Mphasis (from 63.86 % to 43.52 %) and TCS (from 35.03 % to 32.71 %) have generated more earning during this period. Mphasis managed to perform well in Indian business segment. Its domestic Sales revenue jumped from ₹ 288.5 cr in FY 2011 to ₹ 556 cr FY 2012. The Revenue Expenditure declined from 47.20% in pre recession period to 11.26 % in post post-recession period. The Mphasis's overseas business especially in USA & EMEA region was badly affected by recession. Its sales revenue in USA, EMEA & APAC region was ₹ 2454.05 cr, ₹ 750.9 cr & ₹ 447.63 cr in March 31, 2010 and reduced to ₹ 2216.66 cr, ₹ 557.89 cr & ₹ 217 cr as on March 31, 2012 respectively. Industry leader TCS was also not free from the recessionary impact. Forex earning was plummeted from 30.87% in pre-recession period to 22.28% in post-recession period following the drop in sales in America and Euro Zone from ₹ 12718 Cr. & ₹ 6487.6 cr in March 31, 2009 to ₹ 22415 cr. & ₹ 9386 cr in March 2012 respectively. The total expenditure had significantly declined (from 31.89% to 15.97%), particularly in the Employee cost (from 71.50% to 17.45%), Selling and Administration Exp (from 37.78% to 12.51%) except interest cost. TCS is the only company did not follow in reduction of R&D cost which grew from ₹ 42.31 cr in March 31 2009 to ₹ 127.16 cr. in March 31, 2012.

Thus, the software firms exclusively depending on overseas market were undoubtedly affected by the recession despite their reduction in total expenditure. However, interest cost was found to be most deterrent of firm's profitability.

Now to find interrelationship among the variables as identified earlier we have calculated correlation matrix for each of the sample firms.



Table A: Pearson Correlation of HCL Technologies (n = 8)

	Reported Net Profit	Rev. exp in foreign earning	Employee cost	S & D Exp	Advt Exp	R& D cost	Interest cost
Reported Net Profit	1.000						
Rev. exp in foreign earning	.393	1.000					
Employee Cost	.918**	.227	1.000				
S & D Exp	.813**	.292	.920**	1.000			
Advt Exp	.547	.703*	.629*	.789**	1.000		
R& D cost	-.194	.760	-.278	-.103	.493	1.000	
Interest cost	.711**	-.091	.855*	.877**	.469	-.485	1.000

Source : Self calculation

It is seen that cost components like employee cost, Selling and Distribution Expenses and interest cost have significant influence on the reported net profit (RNP). Interestingly, R&D cost is negatively related to RNP in case of HCL Technologies. The reason of such negative relationship may be attributed to firm's inability to leverage the benefit of R&D expenditure because of demand slowdown in developed countries; America and Euro Zone in particular. Similarly we have calculated the correlation of coefficient among the aforesaid variables in all other sample companies. However the findings do not differ from the above.

Now, to assess the impact of each of the above cost components on the reported net profit (RNP) we have conducted multiple regression analysis.

The results are summarized in the table hereunder:

Table B: Regression Results, RNP dependent variable (2005 to 2012).

Cos	β Value (Standardized Coefficients)						R ²	F value (Sig.)
	Rev. Exp In foreign earning	Employee Cost	S&D Exp.	Advertisement Exp.	R&D Cost	Interest cost		
Software Industry Large	.023	.106	.407	NA	NA	.515	.997	249.917** (.000)
HCL Technologies	.610	.809	.729	-1.050	.164	.008	.974	6.292(.296)
Igate Computer	-.694	.717	.853	-.035	NA	-.354	.912	2.060(.483)



RESEARCH BULLETIN

Infosys	.569	-.120	.563	-.113	.070	.085	.999	239.049* (.049)
MphasiS	1.926	.485	-1.216	.208	-.154	-.032	.986	23.669* (.041)
Oracle Fin. Services	2.339	-3.788	1.256	-.712	NA	1.039	.993	54.001* (.018)
Polaris Financial	.032	.883	.312	-.130	NA	-.314	.861	2.485(.311)
Mahindra-Satyam Computer	-2.343	4.059	-1.265	-.434	.107	-1.608	.994	27.505(.145)
TCS	.699	-1.579	1.064	NA	.797	.061	.992	51.204* (.019)
Tech Mahindra	-.700	1.354	.272	-.490	NA	-.155	.614	0.637(.704)
Wipro	-.242	.653	-.348	1.383	NA	-.622	.997	140.605** (.007)
Source : self calculation								

The Coefficient of Determination (R^2), in Infosys (0.999), Wipro & Software Industry Large (0.997), Mahindra- Satyam Computer (0.994), Oracle Fin.Serv. (0.993), TCS (.992), MphasiS (.986) is found to be significantly large indicating the fact that regression is well fitted which is confirmed by the statistically significant F values. Generally, if the significance value of the F statistic is small (smaller than say 0.05) then the independent variables do a good job explaining the variation in the dependent variable. From the above table it has been found that the independent variables considered in the model have explained more than 90% variation in the Reported Net Profit (RNP) of sample companies except Polaris Financial and Tech Mahindra. In other words, the independent variables; revenue expenses in Forex earning, Employee Cost, Selling & Administration Exp., Advertisement Exp., R&D Exp., and Interest cost are perfectly explaining the variations in the Reported Net Profit of the firm. However, in case of the other sample companies where regression is not significant, it indicates the fact that management should devise strategy to leverage their potentiality in leveraging benefits of these expenditures.

The β value of Employee cost was found to be highest (4.059) in case of Mahindra Satyam Computer followed by Tech Mahindra (1.354) and Polaries Financial (0.883). It indicates that employee cost has significant impact on the RNP of the companies. In other words, the knowledge based companies could only flourish with talent pool in their employee portfolio and thus, such cost needs to be incurred for acquiring and retaining key employees. On the contrary, the negative β value (-3.788) for employee cost in case of Oracle Financial Service indicates the fact that the company's talent pool is not contributing towards its growth of RNP.



Selling & Admin Expenses in case of Oracle Financial Service ($\beta=1.256$), TCS ($\beta=1.064$) and Polaris Financial ($\beta=0.853$) have positive impact on dependent variable, RNP. While, Mahindra -Satyam Computer ($\beta=-1.256$), MphasiS ($\beta=-1.216$) and Wipro ($\beta=0.348$) needs urgent steps to control such expenditure. Similarly, Advertisement Expenses have negative impact on profitability in most of the companies like HCL Technologies ($\beta=-1.050$), Oracle Financial Services ($\beta=-0.712$) etc except Wipro ($\beta= 1.383$) and MphasiS ($\beta= 0.208$). Interestingly, none of companies have leveraged the benefit of R&D expenditure as the β value is either negative or less than 1.0. On the other hand, all companies were experiencing the high burden of interest cost over the period under review.

Conclusion:

From the aforesaid analysis it may be inferred that financial recession made significant dent in the bottom line of the software firms. The study exhibited a strong correlation particularly between Reported Net Profit and Interest cost and selling & Distribution expenses. Moreover, the firms particularly in the context of demand slowdown and low investors confidence failed to leverage benefit from R&D expenditure and their existing talent pool. The profitability of the firm, however, would gain momentum with the pace of growth of turnover as variables like; employees cost, R&D expenditure and S& D cost except interest cost (cost of borrowing) would bring synergy in the firms (high R^2 followed by significant F value). The soundness in the bottom line of the firms therefore hinges on crafting of firm specific strategy like; recruiting and retaining key personnel, restructuring the debt obligations, and strengthening the R&D wings. Besides, developing strategic alliance, widening market access, augmenting further talent pool and so on as a part of crafting of *blue ocean strategy* would definitely lead the software giants to regain their leadership status in the market.

However, analysis pertaining to intra as well as inter firm and industry taking the basket of cost components in a large canvas would give significant result for evolving comprehensive and competitive cost structure strategy.

**References :**

- BCG. (1972). Perspectives on experience. Boston: Boston Consulting Group .
- Beiting Cheng, I. I. (2011). Corporate Social Responsibility and Access to Finance. HBR
- Carl, M. S., W. Stern, (2006) (ed). Classic Concepts and New Perspectives: The Boston Consulting Group on Strategy: (2nd ed.). John Wiley & Son, Inc.
- D. Hambrick. (1983). High Profit Strategies in a mature capital goods industry: A Contingency approach. *Academy of Management Journal* (28), 687-707.
- Dess, G. (1984). Porter's generic strategies as determinants of strategic group membership and organisational performance. *Academy of Management Journal* (27), 467-488.
- Hall, W. (1980). Survival Strategies in a Hostile environment. *Harvard Business Review*, 75-85.
- Hall, G.H. (1985). The Experience curve from the economists' perspective. *Strategic Management Journal*. (6), 197-212.
- Kose, M. A. (2009). Financial Globalization: A Reappraisal, IMF Staff Papers .
- Mooney, P. (1991). Taking advantage of recession. *Asian Business*, 27(1).
- Nimocks, S. P. (2005). Managing overhead costs. *The McKinsey Quarterly*, 41 (2), 106-117.
- Pearce, J. (2002). Business tactics for confronting economic recession and planning for recovery. *Economic Growth*.
- Porter, M.E. (1980). *Competitive Strategy*. New York: The Free Press.
- Amit, R. (1986). Cost Leadership strategy and experience curves. *Strategic Management Journal* (27), 281-292.
- Tyagi, R. K. (2000 & 2001). Cost Leadership and Pricing. *Economic Letters* (72), 189-193.
- W.L. Hill, C. (1988, July). Differentiation versus low cost or differentiation and low cost: A Contingency Framework. *The Academy of Management Review*, 401-412.
- White, R. (1986). Generic Business Strategies, Organisational context and performance: An empirical investigation. *Strategic Management Journal* (7), 217-231.
- www.costmatters.com (visited on 10.11.2012)
- www.pwc.com (accessed on 20.02.2012)



Annexure Table I*: CAGR of financial performance as the sample companies during March 2005 to March 2012.

Companies Parameters		Software Industry Large	HCL Tech	IGate Computer	Infosys	Mphasis	Oracle Fin.Serv.	Polaris Financial	Mahindra-Satyam Computer	TCS	Tech Mahindra	Wipro
Rev.exp in foreign earning	CAGR	19.25	11.05	29.64	25.18	24.43	17.09	14.39	9.24	21.84	25.51	25.24
	SD	12488.28	197.20	152.68	3582.11	340.40	191.06	217.09	1029.4	2797.32	634.42	3705.70
	CV	40.80	26.32	62.26	49.07	65.24	34.20	54.76	32.11	39.48	43.92	52.61
Employee Cost	CAGR	16.77	34.70	21.43	25.38	70.23	17.97	15.40	8.93	39.22	30.37	23.66
	SD	16674.66	1113.70	301.10	4160.04	564.68	299.39	248.77	1184.27	5411.84	679.10	3457.86
	CV	42.82	55.33	41.42	47.71	80.87	34.58	32.83	31.82	53.62	53.84	43.85
S & D Exp	CAGR	15.43	22.74	6.65	16.97	37.66	9.30	4.75	4.94	21.91	12.63	21.87
	SD	2287.01	259.88	38.30	442.49	136.58	46.58	19.93	267.22	547.54	164.50	574.66
	CV	29.57	39.69	18.83	31.73	63.11	17.57	18.03	35.09	39.40	34.53	37.97
Advertisement Exp.	CAGR	NA	34.36	-1.59	9.01	NA	-30.44	-0.90	-20.54	NA	0.21	23.13
	SD	NA	8.21	1.43	12.76	.0035	2.40	3.14	2.44	NA	1.62	84.85
	CV	NA	46.51	30.14	18.60	282.84	102.51	65.36	66.44	NA	52.10	46.55
R&D Cost	CAGR	NA	NA	NA	16.99	NA	NA	NA	-100	NA	NA	NA
	SD	NA	7.38	NA	8.99	0.27	NA	NA	1.19	41.98	64.72	NA
	CV	NA	165.79	NA	88.88	190.56	NA	NA	117.49	76.50	131.68	NA
Interest Cost	CAGR	61.93	50.28	-5.37	10.41	58.18	NA	11.80	46.86	6.72	NA	95.40
	SD	289.66	44.11	2.05	0.52	3.02	.11	-9.89	12.99	6.72	64.72	198.71
	CV	89.95	93.23	35.66	37.63	114.17	138.68	48.19	102.06	65.14	131.68	135.75
Total Expenditure	CAGR	21.80	28.22	17.58	24.64	43.41	27.61	14.58	10.47	24.11	27.61	24.93
	SD	31164.89	1659.96	1033.86	5569.17	997.07	331.73	310.17	4211.10	6841.91	1333.73	6795.71
	CV	44.98	45.88	34.75	46.46	68.69	57.47	32.78	69.48	46.09	47.01	45.67
Reported Net Profit	CAGR	21.66	28.93	17.04	23.77	48.04	27.61	19.74	6.98	29.15	30.60	17.73
	SD	7988.75	475.78	170.70	2182.35	385.38	331.73	64.125	3186.99	2914.97	336.88	1314.79
	CV	44.38	47.26	41.57	44.63	91.78	57.47	62.84	-1414.69	55.95	75.51	39.21
Debt Equity Ratio	CAGR	60.80	22.96	NA	NA	NA	NA	NA	NA	-100.00	NA	40.85
	SD	0.78	0.09	NA	NA	0.018	NA	.017	0.13	0.052	0.22	320.53
	CV	94.53	97.10	NA	NA	123.44	NA	282.84	207.41	271.24	122.51	236.62
ROCE	CAGR	-5.92	14.00	4.12	-2.81	14.58	-0.33	9.96	-1.66	-8.44	-9.81	-7.93
	SD	143.88	8.50	3.13	4.75	14.89	2.45	7.122	15.43	21.60	27.33	17.53
	CV	31.01	32.73	17.28	10.97	50.02	11.49	43.09	83.17	35.53	39.63	-266.53



RESEARCH BULLETIN

Annexure Table II *: CAGR of financial performance as the sample companies during March 2005 to March 2008. (Pre-recession period)

Companies Parameters		Software Industry Large	HCL Tech	IGate Computer	Infosys	Mphasis	Oracle Fin.Serv	Polaris Financial	Mahindra- Satyam Computer	TCS	Tech Mahindra	Wipro
Rev.exp in foreign earning	CAGR	33.42	34.98	32.88	32.80	47.20	25.93	14.13	36.93	28.04	62.23	26.93
	SD	7489.51	267.27	75.04	1742.82	141.55	122.85	63.78	1272.42	1573.77	740.65	1148.34
	CV	37.05	34.05	52.59	38.74	54.64	29.84	18.79	43.65	31.10	68.23	29.45
Employcc Cost	CAGR	41.12	52.28	23.65	34.85	162.66	30.81	17.26	36.18	71.50	51.31	35
	SD	10425.64	529.63	152.78	2062.43	295.8	216.09	124.63	1323.03	3223.75	393.42	1899.74
	CV	41.39	43.91	28.90	38.34	100.85	34.49	21.99	39.35	54.44	54.74	37.14
S & D Exp	CAGR	33.44	44.60	18.10	23.62	93.29	17.82	0.79	33.88	33.78	38.99	31.56
	SD	2165.45	201.59	39.89	299.44	97.21	51.79	7.11	272.29	342.56	222.82	340.28
	CV	35.52	42.30	21.61	27.53	82.61	21.90	6.51	37.55	34.87	53.70	32.24
Advertisement Exp.	CAGR	NA	120.73	14.20	13.10	NA	-16.08	1.60	3.92	NA	-9.78	26.43
	SD	NA	11.37	1.55	14.5	.005	1.97	1.37	1.94	NA	1.73	35.61
	CV	NA	74.15	35.29	22.39	200	46.39	22.50	37.59	NA	60.39	30.83
R&D Cost	CAGR	NA	NA	NA	71	NA	NA	NA	-19.36	30.16	NA	NA
	SD	NA	8.62	NA	5.66	NA	NA	NA	0.76	16.30	NA	NA
	CV	NA	96.79	NA	113.14	NA	NA	NA	37.22	68.56	NA	NA
Interest Cost	CAGR	78.95	50.27	16.67	0	89.25	NA	0.55	98.45	-30.98	NA	175.76
	SD	59.44	5.50	1.97	0	2.25	NA	0.125	3.09	3.35	5.04	55.78
	CV	72.69	43.65	29.93	0	124.92	NA	19.69	72.61	61.60	119.29	168.12
Total Expenditure	CAGR	38.98	48.67	23.70	32.91	89.92	27.05	13.43	34.61	31.89	58.30	37.14
	SD	17797.68	1070.41	242.27	1187.00	559.81	306.10	126.36	1624.30	3306.27	1199.85	3661.69
	CV	41.85	43.06	30.06	37.74	79.62	30.44	17.82	38.06	34.80	63.30	38.99
Reported Net Profit	CAGR	33.07	33.34	26.03	32.91	63.86	27.63	-0.50	31.75	35.03	66.09	27.02
	SD	4650.76	320.71	108.78	1187.00	75.44	98.75	27.33	405.21	1173.28	125.85	728.18
	CV	36.97	45.01	36.97	37.74	63.04	32.81	54.95	31.60	36.62	73.80	30.92
Debt Equity Ratio	CAGR	16.74	-37.0	NA	NA	NA	NA	NA	NA	-100.00	NA	111.79
	SD	0.13	0.01	NA	NA	NA	NA	NA	NA	0.07	0.03	0.08
	CV	76.19	70.71	NA	NA	NA	NA	NA	NA	156.61	132.66	144.63
ROCE	CAGR	16.90	22.20	4.06	-7.52	32.35	-11.18	-2.31	-0.34	-21.90	35.73	-11.32
	SD	124.43	11.04	1.82	4.57	6.19	3.20	5.41	0.90	25.59	26.11	5.99
	CV	25.96	45.52	11.29	9.89	34.51	15.39	49.30	2.96	35.21	44.34	15.93

ANNEXURES – XI
(List of Other Publications)

- ❖ “*Cost structure strategies- A study on finance sector after reforms*” has been published in *20'th Vol. VUJCOM, ISSN 0973-5917, 2015.*
- ❖ “Cost leadership strategies in Indian scenario: a study on steel Industry” has been published in “*The Management Accountant*”, *Feb, 2015 issue, ISSN 0972-3528.*
- ❖ “Cost Competitiveness in MSMEs in India: A strategic approach” has been published in “*Cost Competiveness in Micro, Small and medium Enterprises in India*”, *June, 2015, ISBN: 978-93-83360-23-9, The Elegant Publications, Kolkata.*
- ❖ “Cost Competitiveness in MSMEs: A Study on Leather Industry in India” has been published in “*Cost Competiveness in Micro, Small and medium Enterprises in India*”, *June, 2015, ISBN: 978-93-83360-23-9, The Elegant Publications, Kolkata.*
- ❖ “CAS – A Must for Cost Competitiveness: Evidence from some Selected Companies” has been published in “*The Management Accountant*”, *Aug, 2014 issue, ISSN 0972-3528.*
- ❖ "Turning Cost Cutting Into Cost Competitiveness: Empirical Evidence From Some Selected Companies" has been published in “*The Management Accountant*”, *May 2014 issue, ISSN 0972-3528.*
- ❖ “Cost Structure Strategies: An empirical study in the Software industries in India” has been published in *Research Bulletin, The Institute of Cost Accountants of India, Vol. - XXXVIII, December, 2013, ISSN 22309241.*