

**VARIANCE IN DECISION MAKING IN BALANCED SCORECARD
PERSPECTIVES – AN EMPIRICAL STUDY OF TWO INDUSTRIES IN INDIA**

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Abstract

Liberalization of economy has empowered private sector to contribute a major part to the development of the national economy. Measuring and managing corporate performance is always a matter of concern for the internal and external users of the corporate financial reports. Under this rationale, financial perspectives have been in use traditionally. But it is equally true that measurement of performance involves multidimensional approaches and use of financial perspectives alone cannot give an acceptable reflection because they have their own precincts. Accordingly, there arises the need for application of multidimensional approaches for measurement and management of corporate performance.

Pictorial presentation is attempted here to make a review of decision making aspects under the new strategic corporate performance management tool – Balanced Scorecard, which suggest evaluation of the present age companies by creating future value through investment in customers, suppliers, employees, procedures, technology, and innovation; besides the usual financial angle. Following four perspectives, viz. Financial, Customer, Internal Business, Learning and Growth; BSC balances these objectives among non-financial and financial, leading and lagging, operations and finance. BSC in India is studied through its application in Information Technology and Fast Moving Consumer Goods industries. The four customary perspectives of BSC have been studied through a survey of 36 companies.

Keywords: *Balanced Scorecard, IT, FMCG, Likert scale, Variance, NFI*

I. Introduction

A new approach to strategic corporate performance management was developed in early 1990's by Robert Kaplan and David Norton. They named this system as the 'Balanced Scorecard' (BSC), which recognizes the weaknesses of the traditional measurement approaches and

provides a clear prescription as to how the performance can be better measured by the companies for survival and growth.

BSC is a measurement as well as a management system that enables organizations to clarify their vision and strategy and translate them into action. It provides feedback around both the internal business processes and external outcomes for continuous improvement of strategic performance and results. BSC transforms strategic planning from an academic exercise into the nerve center of an enterprise. Kaplan and Norton (1992) describe the innovation of the balanced scorecard in the following words:

The balanced scorecard retains traditional financial measures. But financial measures tell the story of past events, an adequate story for industrial age companies for which investments in long-term capabilities and customer relationships were not critical for success. These financial measures are inadequate, however, for guiding and evaluating the journey that information age companies must make to create future value through investment in customers, suppliers, employees, processes, technology, and innovation.

They further illustrated BSC as a methodology and framework that translates strategy to actionable and measurable objectives. Following four perspectives, BSC balances these objectives among non-financial and financial, leading and lagging, operations and finance. These perspectives are briefly explained below.

I. Financial Perspective:

Financial data are a common language for analysis and comparison. The key performance indicators are: ROI, RI, ROCE, EVA[®], etc. Some of the relevant issues would be the financial targets and their drivers, kind of revenues to be achieved and the budget for such target.

II. Customer Perspective:

Organizations must be aware about the perspective of their customers. Large customer base leads to more revenue and a good financial health. The key performance indicators are: CRM through customer satisfaction, customer retention, customer profitability, market share, etc. Customer segmentation and distribution channels developments are to be carried on effectively to fulfill this perspective.

III. Internal Business Process Perspective:

This perspective includes internal business process to ensure highest possible quality of products and services. The firms' products and services must meet the market requirement, both in

quantity and quality. The key performance indicators are: process improvements, supply chain management, etc.

IV. *Learning and Growth Perspective:*

This perspective focuses on people and their attitude, culture, knowledge, intellect, development, ability to learn and grow for sustaining change and improvement. In a knowledge-based organization, human resource is the most critical resource and in today's environment of rapid changes, employees need to learn continuously. Organizations, on the other hand, must provide adequate resource and scope to facilitate corporate development. The key performance indicators are: employee satisfaction, employee retention, employee productivity, competitive advantage in knowledge capital over the competitors, etc. (Dan, 2010)

Balanced Scorecard concept was evolved in USA and is widely accepted there. We want to study how this concept is adopted by the corporate and trade practices of third world countries, especially India, to compete in the global market. Thus, some of the important issues concerning the BSC in Indian corporate sector are:

- Is it feasible for application of Balanced Scorecard in all sorts of industries? Will the approach towards BSC formulation be general or situation-specific?
- Is it possible for ICAI or regulatory authorities to issue measurement standards and disclosure norms of non-financial tools? Can these standards be used for intra and inter firm comparison?
- Is BSC flexible enough to get itself altered or adjusted with the ever-changing nature of the business?
- Have the companies already adopted BSC in any other name or terminology?
- The resistance to change may come from the perceived winners on the top of the value-chain who prefer to enjoy benefits of distorted information. Can management endorsement and apolitical encouragement get past these barriers?
- BSC is an ever-changing model to be redesigned and rebuilt regularly. Can the corporate executives improve their habit of getting ready-made push-button solution?
- If the BSC consultants prepare a BSC model, do the customers have the fundamental knowledge to carry it out?
- Can the relevant data for BSC model be collected through direct interaction?

The present study will look into some of the above issues. The remainder of the study is organised as follows. In section II literature review is carried out to outline research gap. Section III of this article deals with objectives and methodology. Section IV contains data analysis and findings. Conclusions and limitations are given in section V.

II. Literature review and Research gap

The concept of Balanced Scorecard evolved in the US in 1990, when Nolan Norton Institute (a research wing of KPMG) sponsored a one-year multi-company study entitled 'Measuring Performance in the Organisations of the Future'. The outcome of this study came out in the form of Balanced Scorecard by Kaplan and Norton.

In 1990, Prahalad and Hamel published their paper in HBR, which advocated identifying the area of core competence regarding cycle time, quality, skill of workforce, productivity and technology, required to ensure continued market supremacy. Companies should excel in these competencies and take specific measures. It was pointed out that large companies' competencies are weakening due to failure in the technological development and product designing. Their core competence area 'innovation' can be matched with the Internal Business Process Perspectives, suggested in the BSC model.

Keasey, Aisthorpe, Hudson, Littler (1999) linked Balanced Scorecard with strategy, evaluation, stakeholders' expectation, value creation etc. They pointed out the utility of BSC through customisation of Scorecard design. The BSC tool must be flexible as it is an ever changing model depending on the need of organisation from time to time.

BSC implementation requires proper communication and alignment of targets with strategy. Following this tune, Niven (2002), one of the prominent advocates of BSC, discussed 'cascading the scorecard' through driving the Balanced Scorecard mentality and methodology deep into the fabric of the organisation and to make BSC a new management tool. He had given thrust on giving importance on the opinion of all levels of management towards the orchestration of BSC strategy. In 2005, Niven further developed his work by incorporating strategy maps and good communication tool to the model. He proved linkage between 'Corporate Governance' and BSC in the next edition. Also he updated the information and explained the pros and cons of BSC implementation in a Canadian electric utility company.

Brewer's (2004) article shows the interest on BSC of other SAARC countries besides India. He found that defining strategy is very difficult as most of the companies do not have access to structured approaches to translate high-level strategy statement into specific scorecard measures. To identify and bridge the gap between strategy and performance measurement, he introduced Value Dynamics Framework (VDF).

From the year 1991 to 1998, Harvard Business Review had given thrust on the topic of measuring corporate performance and came out with some mention-worthy contributions. Way back in 1991, Eccles pointed out that "leading indicators of business performance cannot be found in financial data alone". He advocated building up of performance metrics by following the competitors or the leader of the industry. In that period of information technology he opined for developing hardware, software and communication technology to generate the performance data. In the paper, focus was given on market share, quality of product, innovation, HR, customer satisfaction as aspects of performance measurement on quarterly, annual or bi-annual bases. The article concluded with tracking non-financial measures and reinforcing new competitive strategies with essence on developing information architecture, putting the technology to support this architecture, aligning bonus and other incentives, drawing outside resources, and designing an internal process to ensure the immediate four activities to occur. Meyer (1994), following the BSC of Kaplan and Norton, suggested the measures to be taken to implement BSC in a team-based organisation. He pointed out how cross functional teams are to be established and how a group can be formed to build a measurement system. He put emphasis on adopting only a handful of measures under proper help from the senior managers. Lack of expert guidance and training to devise the measures has been compared by Meyer with "trying to drive a car without a dashboard". Drucker (1995) highlighted the way of information gathering, arranging and manipulation. In this article, Activity Based Costing (ABC) technique is used to integrate value analysis, process analysis, quality management and overall costing system into one analysis. Four "diagnostic" information are recommended, viz. wealth creation, productivity, competence and resource allocation information, to be kept in an executive's tool kit for data analysis and performance evaluation. Ness and Cucuzza (1995) too have discussed the potential of Activity Based Costing (ABC) in measuring financial performance over the traditional system. They studied the application of ABC in few US companies and made critical comparisons regarding the adoption and implementation of a new performance appraisal system.

The companies had to afford experts for educating the employees with principles and mechanics of activity based management, but on getting the prompt benefit from the endeavour, they 'quickly dumped the old accounting system' of performance measurement. Simons and Dávila (1998) came out with a new concept of Return on Management (ROM) defined as the ratio between 'Productive organisational energy released' and 'Management time and attention invested'. ROM gauges the payback from a company's scarcest resource: managers' time and energy. High ROM indicates efficient administration and good performance of the company. The authors have suggested five acid tests in the context of applying ROM, viz. (1) whether the opportunities are at all achievable, (2) whether the fear of failure has been taken into account while deciding the critical performance measures, (3) whether managers can recollect the key diagnostic measures from the cluster of measures, (4) whether the new venture will lead to drowning in a sea of paperwork, and (5) whether the employees are protected as well as watched upon by the top level management. They indicated strategies in financing, growth, competition, product and market position will have effect on ROM; and also cautioned us about the allies and enemies of high ROM.

Now we delve into the *Indian studies and practice* of Balanced Scorecard. Prior to 2000, most of the Indian studies considered financial aspect as a complete tool for corporate performance measurement and basically given thrust on the calculation and projection of EVA[®]. In India, BSC theory and practice are in infancy.

In the journal of ICAI of August 2001, Paramsvivan tried to explain the different perspectives of BSC through a series of monthly articles and probably his effort is the footmark of Balanced Scorecard in Indian scenario. He started his study through customers' need and satisfaction and called for a survey to find out competitors' strategy in Customer Relationship Management (CRM). Like Gregory and Myers, he also asked the Chartered Accountant to develop competitive intelligence to assist their clients. In his next month's article, he discussed with research and development management which is similar to 'Learning and Growth Perspective' as advocated by Kaplan and Norton. In his concluding article, he integrated these perspectives to give a 're-look for performance management framework to measure both internal and external processes' to provide competitive advantage to an organisation and then he used the term 'Balanced Scorecard' in his last month's writing in this series.

Some Indian publications discussed with one specific perspective of BSC. The authors gave their opinion in favour of developing the BSC through gradual development of individual perspectives. Needles Jr. *et al* (2002) suggested a strategy of 'Discipline of Market Leadership' (DML) to the customers' perspective to identify the existence of market leadership and to build up the same for better financial performance. The model included sales and customer related financial indicators like cash flow yield, cash return on assets and cash return on sales to resolve strategic non-financial indicators. Similarly, Sheik Mohamed (2003) had chosen only the financial perspective of Balanced Scorecard in his article in *The Management Accountant*. He discussed different ratio analyses, ROI, EVA[®], and ROCE as financial measurements. He suggested how these figures can be used in time series analysis for intra-firm and inter-firm comparisons. The non-financial perspectives of Balanced Scorecard are not discussed here.

The case study of some Indian companies regarding practice of Balanced Scorecard is seen in the research paper of Gupta, Sarkar, Samanta (2004). They discussed the Indian scenario and analysed the practice of following Balanced Scorecard or other similar methodology. India's position with global practices is compared here.

Singh and Kumar (2009) studied the Indian and global scenario of performance measurement. They opined that the contemporary competitive environment expects manufacturing and service organisations, to acquire new capabilities for competitive success. The growing criticism of financial measures in the performance measurement system was also addressed in the article. Their study pointed out that "new generation performance measurement system" balanced scorecard looks beyond the traditional financial measurement of performance and examines the organization's operations from four perspectives. The study is an attempt to examine "conceptual framework of Balanced Scorecard and its implementation and experiences at global level and national level".

From the above survey of literature, it can be concluded that while the western countries are now in the implementation phase of BSC and trying to solve the incidental problems, India is still at its promotional stage. That is why; empirical studies are not up to the western standard, regarding both quality and quantity.

As Balanced Scorecard is of recent origin, in India not much research work has been done. Few articles have appeared in different conferences and journals, which primarily discuss existing conceptual aspects in brief and, in a few cases only, some practices. A systematic research work

towards applicability of Balanced Scorecard for overall upliftment of the organizations under certain specified industries has not appeared in published form as yet. Accordingly, the proposed study aims at fulfillment of this vacuum.

III. Objectives and methodology

In the competitive globalised market, companies will have to strive hard to achieve success and growth. For this, they have to identify the critical success factors and manage them efficiently. Traditional measurement tools have their own limitations and are suggested to be replaced by measures like Economic Value Added (EVA[®]), Market Value Added (MVA) and Balanced Scorecard (BSC). Of these measures, the Balanced Scorecard has wider appeal in the contemporary literature in view of its multi-dimensional nature both as a measurement and management tool.

The *main objective* of this study would therefore be to assess the role of the perspectives of BSC in measuring and managing corporate performance in the new competitive economy particularly in Indian context.

More *specifically* the study will attempt to: -

- i) Identify the role of Balanced Scorecard (BSC) as a measure of corporate performance as well as a management tool for improvement of performance;
- ii) Justify the applicability of BSC to boost up the severity of framing up a tool for corporate performance measurement and management;
- iii) Search for the practice, if any, of BSC in two specified industries in India;
- iv) Suggest ways and means to bring about improvement in the corporate measurement process.

The study is of empirical type. We have selected the Information Technology and Fast Moving Consumer Goods (FMCG) industries in India. It is noticed that after the introduction of LPG model in India, the Information Technology (IT), IT enabled services (ITES) and the Fast Moving Consumer Goods (FMCG) sectors in India are facing tougher competition. Although the modern measurement and management tool, the BSC, has universal appeal for application to all industries for producing desired results, its application in the three specified sectors may be more effective than the other traditional industries. These industries have better prospects in the new economy. The leading companies in these industries were chosen to find out their approach

towards competitive sustainability through implementation of Balanced Scorecard. The sample is selected from BSE-IT index, BSE-FMCG index as on 1st April, 2016. The final set of the companies consists of 20 IT and 16 FMCG companies. Annual reports of selected companies were studied for this purpose. Suitable accounting and statistical tools was applied to draw logical inferences. Although no time period has been specifically selected, contemporary periods have been selected for the study.

A draft questionnaire was developed based on the review of literature and circulated to a group of prominent academics and chief financial officers for feedback as a part of the pilot study. The final questionnaire asked the companies to respond to a Likert scale of 0 to 5 (where 0 means 'not used,' 1 means 'unimportant,' and 5 means 'most important'). The responses have been suitably analysed thereafter. (Dan, 2012)

Hypotheses Formulated: The two sets of companies are homogeneous only among their respective industry groups. Sample test for difference of the two variances has been used to investigate whether management's motivations and decision choices differ across firms over different sectors besides difference over cost management systems, and use of performance measurement systems across the firms. To serve these purposes, we have formulated the hypothesis as follows:

Null Hypothesis (H_0) = There is no significant variation in decision criteria across firms due to industry variance [$\sigma_1^2 = \sigma_2^2$].

Alternative Hypothesis (H_1) = Significant variation is seen in decision criteria across firms on the ground of industry variance [$\sigma_1^2 > \sigma_2^2$].

We have tested these hypotheses in section III dealing with the empirical study of Indian IT and FMCG industries.

IV. Data analysis and findings

Duly filled up questionnaires were received from 36 companies out of which 20 (55.56%) are from IT sector and the rest 16 (44.44%) companies are from FMCG industry. Those responses were verified from annual reports and the website of Ministry of Company Affairs, Govt. of

India (www.mca.gov.in), wherever possible. Taking the value of net asset employed (2007-08), the sample companies are distributed into four different sizes as shown in table 1.

Table 1: Size of Sample Companies

Net asset employed (Rs./crore)	No. of Companies	Percentage of Total
Below 100	1	2.78
100 – less than 500	12	33.33
500 – less than 1000	14	38.89
1000 and Above	9	25.00
Total	36	100.0

Source: Calculated by the author

The values of net asset employed have a mean of Rs. 994.65 crore.

Table 2 summarises the responses received on use of the performance measurement tools by the companies.

Table 2: Use of Performance Measurement Tools

	No. of Companies			Percentage		
	IT	FMCG	Total	IT	FMCG	Total
ROI/ROCE/Brand revenue/market share	20	16	36	100	100	100
EVA [®]	14	7	21	70	43.75	58.33
Balanced Scorecard	12	9	21	60	56.25	58.33

Source: Calculated by the author

Thus, it is clear that the traditional practice of measuring performance through ROI, ROCE and market share is still predominantly prevailing. EVA[®] as a development in this subject got popularity among the select companies. Balanced Scorecard, a recent entrant in this field, is gaining importance fast. In respect of use of BSC by sample companies in present India, we find that the practice (43.9%) is better than the same in the USA as revealed by an early stage study of US companies (Rigby, 2001). Between the industries, no major difference is noticed in respect of the use of BSC. In the case of EVA[®], IT companies are ahead of FMCG companies.

Views received from the companies on the necessity for performance measurement and management vary widely (table 3).

Table 3: Necessity of use of Performance Measurement Tools

	No. of Companies	Percentage
Balancing profit, growth, and control	36	100
Balancing short-term results against long-term capabilities and growth opportunities	26	72.2
Balancing performance expectations of different stakeholders	29	80.6
Balancing opportunities and management attention	22	61.1
Balancing the motives of human behavior	5	13.9

Source: Calculated by the author

The performance measurement and management tools are mainly focused to balancing profit growth and control. These tools also balance the long-term and short-term objectives with attention to cater the need of different stakeholders. Human behavioural aspects got the minimum importance (13.9%) in this respect.

We have quantified the results given under Likert scale, and calculated the mean score (μ) for different categories of companies. These are shown in table 4.

Table 4: Perspectives of Performance Measurement and Management

	Financial perspective (FIN)	Customers' perspective (CUS)	Internal business perspective (INT)	Learning & growth perspective (LEA)
IT	3.75	3.39	2.62	2.28
FMCG	4.51	3.3	3.01	3.08

Source: Calculated by the author

We notice some industry-wise difference in the perspectives concerned. Financial perspectives are traditionally given top priority in measuring business performance. The high mean in customer perspectives indicates both the industries as customer oriented and sustaining through buyers' market. However, these summation scores are deceptive to some extent. Under each perspective many aspects are studied. There are few instances where too low score in a certain aspect reduced the overall perspective importance. For further insight, we studied overall Likert score for each perspective and prepared frequency distribution in table 5A for the sample 36 companies.

Table 5A: Frequency Distribution of Overall Likert Score for Sample Companies

	MIMP*	%	IMP	%	OIMP	%	RIMP	%	UIMP	%	NU	%
FIN⁺⁺	0	0	36	100	0	0	0	0	0	0	0	0
CUS	0	0	34	94.4	2	5.6	0	0	0	0	0	0
INT	0	0	0	0	35	97.22	1	2.78	0	0	0	0
LEA	0	0	22	61.11	14	38.89	0	0	0	0	0	0

Source: Calculated by the author

The above table shows higher frequency concentration towards 'important' parameter for financial, customer, and learning and growth perspectives. The other perspective is used occasionally as the situation demands. We check (table 5B) whether industry-wise classification shows some other pattern.

**Table 5B: Frequency Distribution of Overall Likert Score for Companies
from Select Industries**

	Industry	MIMP	%	IMP	%	OIMP	%	RIMP	%	UIMP	%	NU	%
FIN	IT	0	0	20	100	0	0	0	0	0	0	0	0
	FMCG	0	0	16	100	0	0	0	0	0	0	0	0
CUS	IT	0	0	18	90	2	10	0	0	0	0	0	0
	FMCG	0	0	16	100	0	0	0	0	0	0	0	0
INT	IT	0	0	0	0	20	100	0	0	0	0	0	0
	FMCG	0	0	0	0	15	93.75	1	6.25	0	0	0	0
LEA	IT	0	0	20	100	0	0	0	0	0	0	0	0

* MIMP = Most important, IMP = Important, OIMP = Occasionally important, RIMP = Rarely important, UIMP = Unimportant, NU = Not used.

⁺⁺ **FIN** = Financial perspective, **CUS** = Customers' perspective, **INT** = Internal business perspective, **LEA** = Learning and growth perspective

	FMCG	0	0	2	12.5	14	87.5	0	0	0	0	0	0
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Source: Calculated by the author

Table 5B reveals some detailed fact. Financial perspectives are as usual getting importance from both the industries. Fast moving consumables are always customer oriented product, so they consider higher importance to customers' perspective. Under internal business process perspective we consider the business systems that ensure the operation and stability of any business. As all the companies are from BSE indices, they maintain a good standard in their processing. So, we do not notice any marked difference between the two select industries. Learning, growth and knowledge escalation is always a primary perception for IT sector companies.

To give more light in reconciling tables 5A and 5B, the mean of the individual perspectives are analysed further under several sub-parts as shown in table 6A through table 6D. Here we have taken the mean (μ) and standard deviation (σ) of decisional responses obtained through the questionnaire to get idea about the central tendency and level of importance of individual aspects; also how much variation is there among the companies from each industry category, that will be known through the standard deviation. Then for each decision attribute F-test is carried out to test whether the variances of two populations are equal. In order to deal exclusively with the right tail of the distribution, while taking ratios of sample variances we put the larger variance in the numerator of $F = s_1^2 / s_2^2$. In order to apply this test, we have ensured that both populations are normally distributed, both samples are drawn independently from each other, and within each sample, the observations are sampled randomly and independently of each other. The critical values are taken at 95% level of confidence.

Table 6A: Specific Performance Indicators under Financial Perspective

	IT	FMCG	IT	FMCG	F	d.f.	Critical	Conclusion
	μ	μ	σ	σ			<i>F</i>	
ROI	4.6	4.5	0.598	0.632	1.1325	15,19	2.2341	$\sigma_1^2 = \sigma_2^2$
Working capital per day	4.15	4.69	0.745	0.479	2.3911	19,15	2.3398	$\sigma_1^2 > \sigma_2^2$
Cash flow on investment	3.65	4.5	0.671	0.516	1.6653	19,15	2.3398	$\sigma_1^2 = \sigma_2^2$
Ratio analysis for liquidity and solvency	3.65	4.5	0.671	0.730	1.2010	15,19	2.2341	$\sigma_1^2 = \sigma_2^2$

Growth rate in tangible assets	2.7	4.38	0.571	0.719	1.6044	15,19	2.2341	$\sigma_1^2 = \sigma_2^2$
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Source: Calculated by the author

The financial perspective scores hardly differ between the categories. All measurement tools got importance except the daily calculations for working capital. Some IT firms have given less importance to working capital as they are not much worried over their operating cycle analysis. The growth rate in tangible assets got occasional importance as it is considered at the end of financial periods only and that too for the production units.

Table 6B: Specific Performance Indicators under Customers' Perspective

	IT μ	FMCG μ	IT σ	FMCG σ	F	d.f.	Critical F	Conclusion
Customer satisfaction in terms of quality	4.15	4.13	0.671	0.885	1.7640	15,19	2.2341	$\sigma_1^2 = \sigma_2^2$
On-time delivery	2.80	3.50	0.768	0.632	1.4543	19,15	2.3398	$\sigma_1^2 = \sigma_2^2$
Customer satisfaction in terms of service	4.30	2.31	0.571	0.479	1.4052	19,15	2.3398	$\sigma_1^2 = \sigma_2^2$
Image, reputation, and brand	2.35	3.38	0.587	0.719	1.5187	15,19	2.2341	$\sigma_1^2 = \sigma_2^2$
Percentage of sales from new products	3.70	4.63	1.081	0.500	4.6122	19,15	2.3398	$\sigma_1^2 > \sigma_2^2$
Responsive after-sales service	3.30	1.69	0.801	0.793	1.0071	19,15	2.3398	$\sigma_1^2 = \sigma_2^2$
Number of customer suggestions	3.15	3.50	0.745	0.730	1.0274	19,15	2.3398	$\sigma_1^2 = \sigma_2^2$

Source: Calculated by the author

The overall customer perspective score is very high, but the individual tools got variety scores. Customer satisfaction is the undoubtedly major tool in this perspective followed by brand reputation and percentage of sales from new products. The on-time delivery facet got average aggregate score from IT sector as these companies do not consider it much important. FMCG companies are least bothered about their after-sales service and customer satisfaction which

lowered down the aggregate score. None of the industries considered general customer suggestions as priority measure to be incorporated in their product/service, may be due to technical expertise involved in their operations. Variance in the aspect of revenue from new product is more in case of IT companies. The version upgradation is not considered as new product for them. So, unless an entirely new concept is born, IT companies are not willing to address it as a new product.

Table 6C: Specific Performance Indicators under Internal Business Process Perspective

	IT μ	FMCG μ	IT σ	FMCG σ	F	d.f.	Critical F	Conclusion
Unit cost	2.65	3.38	0.587	0.619	1.1268	15,19	2.2341	$\sigma_1^2 = \sigma_2^2$
Number of defects (complaints) per million of output / hundred of services	3.00	3.81	0.918	0.403	5.1140	19,15	2.3398	$\sigma_1^2 > \sigma_2^2$
Cycle time	1.25	3.25	0.444	0.775	3.0805	15,19	2.2341	$\sigma_1^2 < \sigma_2^2$
Wastage and scrap as a percentage of sales	1.20	3.44	0.696	0.727	1.1074	15,19	2.2341	$\sigma_1^2 = \sigma_2^2$
Distribution reach	1.25	3.88	0.444	0.719	2.6527	15,19	2.2341	$\sigma_1^2 < \sigma_2^2$
New product / service introduction interval	4.45	3.25	0.510	0.856	2.8523	15,19	2.2341	$\sigma_1^2 < \sigma_2^2$
Number of training hours	3.85	2.50	0.366	0.966	7.0470	15,19	2.2341	$\sigma_1^2 < \sigma_2^2$
Stock-out percentage / Shortage of workers	2.30	3.69	1.342	0.479	7.7512	19,15	2.3398	$\sigma_1^2 > \sigma_2^2$
Percentage of components/services outsourced	4.40	1.13	0.681	1.310	3.7559	15,19	2.2341	$\sigma_1^2 < \sigma_2^2$
Ratio of number of skilled employees to total employees	1.80	1.81	0.616	0.655	1.1476	15,19	2.2341	$\sigma_1^2 = \sigma_2^2$

Source: Calculated by the author

In this perspective we notice that in most of the cases (7 out of 10) the null hypothesis is getting rejected, the variances among the industries in decision making aspects from internal business process perspective are not same.

Tools like unit cost, distribution mode, and shortage of workforce and got lower score in IT sector. As IT companies are not having physical output, most of them do not use cycle time and wastage factors. As the job requirements are very much expertise specific, ratio between skilled and unskilled human resource got little importance from both the industries and we also notice that there is no variance between their decision criteria. Outsourcing is a considerable element for software business, whereas FMCG firms rely on total control of activities. T&D activities are prominent for the IT industries due to its basic nature of fast changing. Few FMCG companies felt the need of regular knowledge upgradation, which is clear from the alternate hypothesis.

Table 6D: Specific Performance Indicators under Learning and Growth Perspective

	IT μ	FMCG μ	IT σ	FMCG σ	F	d.f.	Critical F	Conclusion
Market share / Growth in market share	3.50	3.69	0.513	0.479	1.1332	19,15	2.3398	$\sigma_1^2 = \sigma_2^2$
Percentage of sales from new customers	0.50	3.31	0.688	0.479	2.0398	19,15	2.3398	$\sigma_1^2 = \sigma_2^2$
Raw material substitutes	0.20	3.31	0.523	0.793	2.3295	15,19	2.2341	$\sigma_1^2 < \sigma_2^2$
Number of employee suggestions	3.70	3.38	0.470	0.885	3.5909	15,19	2.2341	$\sigma_1^2 < \sigma_2^2$
Vendor development	0.30	3.63	0.657	0.500	1.7036	19,15	2.3398	$\sigma_1^2 = \sigma_2^2$
Reduction in cycle time	3.65	3.63	0.489	0.500	1.0579	15,19	2.2341	$\sigma_1^2 = \sigma_2^2$
Growth rate in knowledge based assets	3.65	1.13	0.489	1.310	7.2641	15,19	2.2341	$\sigma_1^2 < \sigma_2^2$

Source: Calculated by the author

Regarding market share or market growth all the companies from both the industries given almost same importance score. Acquiring new customers and expanding market share is more importance for FMCG companies as their products depends heavily on customer preferences. Raw material substitute is obviously a matter of concern for the manufacturing units, so

difference in opinion is noticed for FMCG companies. IT companies give more importance to the ideas offered by their own employees and the companies are not different in this aspect. However, the variance in this respect is more for FMCG sector. Vendor development is done only for the business engaged in production, so low score was expected from software development companies. As reduction in cycle time leads to savings in working capital the companies are undisputed in this feature. Comparatively, IT sector is more sophisticated than the FMCG, so they need regular development of their knowledge based assets (KBA) to avoid the threat of getting technologically obsolete. However, some of the FMCG companies studied also given importance to KBA which is reflected through high σ -value and rejection of H_0 .

Lastly, we enquired about the acceptability of BSC in terms of all the basic performance indicators. 18 responses were received from the users of BSC. It appeared that about 93% of the respondents either agree or strongly agree that BSC addresses all basic performance indicators. So, BSC shows its acceptability among most of its users and potential users.

On the question of problems faced in implementing BSC, it was revealed that though 38% of the users have not faced any major difficulty, yet main problems of implementing BSC lies in lack of clarity among the perspectives (68%), difficulty in assigning weights to them (63%), quantification of measures (47%), and due to the existence of many measures under each individual perspective (67%). Other minor problems exist in fixing weights among the different perspectives (31%), establishing cause and effect relationship among them (11%), and shortage of resources (13%).

From the figures of last two paragraphs we observe that BSC has proved its utility among the user group. The non-user companies are also competent to adopt it, as they are already following the elements of BSC perspectives and even something more. The problem lies in identifying the facet and areas of implementation, quantifying and assigning weightage to the sub-elements as well as the main perspective.

V. Conclusions and Limitations

The use of sophisticated measuring tools and the pattern of performance management in the Indian corporate sector are in line with developed countries, the United States, the United Kingdom, Japan and Sweden. The focus of performance management is on balancing gain,

growth and control. Indian companies are also concerned about the latest opportunities that consider future growth and sustainability under a fierce competitive economy.

The individual importance scores of perspectives differ from the overall Likert scores when all the factor scores are taken into consideration. This was due to the fact that, one important perspective may not have all important sub-parts; conversely, a less-important perspective may have some important elements. For analysis purpose, individual Likert score was considered and comments are given separately as the total summation score may not always give the true inner picture.

The modern Indian managers have evolved scorecard mechanisms for measurement and management of performance in a more logical, systematic and scientific way. Thus, the non-users of BSC are also using the same approaches like the user group; only difference is being not using those measures in an orderly manner. Hence, our analysis could find out difference among them in the ground of methodical use of existing practices, and not in the number of measures involved in performance management.

It may therefore be suggested that, besides the traditional financial measurement tools, Indian corporate people should include the other non-financial indicators in a more robust way to get competitive advantage through better performance management.

Service sectors must show awareness towards betterment of environment. Similarly, service to the society at large should become an integral part of their regular business.

All the leading companies should follow Balanced Scorecard. It is clearly observed that they are capable of implementing BSC. In fact, some companies are following the facets of BSC, without following the pro-forma. Only lacuna is in framing those perspectives in a logical framework. So, implementation of BSC will not invite any extra effort or resource, yet can serve as a scientific and better performance measurement and management tool.

Going by the problems reported in our study of implementing BSC, phase-wise implantation of BSC can be suggested. Directive for implementation in 'one go' may create adverse effect in the mindset of the executives. Whereas, feeling the improvement in the implemented areas, managers of the 'uncovered' area may willingly get shelter under BSC. The availability of detailed information for implementing BSC requires proper information technology backing and

initially expensive; this difficulty can be overcome by phasing out the implementation in different activities across the organisation.

Both financial and non-financial indicators are required by the management for better decision making. Similarly, stakeholders too require relevant NFIs besides the reported financial result for better decision making. The standard setters and the regulatory system administrators, namely The Ministry of Corporate Affairs, Securities and Exchanges Board of India (SEBI) and the Institute of Chartered Accountants of India (ICAI), can think of a structure of summarised report consisting both financial performance and NFIs. This practice may apparently go against doctrine of indoor management, yet, on the ground of relevance and comparability, such alteration can be suggested to our present practice of reporting.

Measurement and management of corporate performance being a vast area, this study could not naturally cover everything due to time and resource constraints. Accordingly, some of the *limitations* may be mentioned below:

- Only two industries have been selected for the present study. Consideration of other industries from manufacturing and service sectors may give different results in the area of corporate performance management.
- The change in performance of a company before and after use of BSC could not be done as BSC is not implemented in any particular point of time for all its activities; rather it is implemented in phases even within a company.
- No public-sector company was a part of our sample for reason mentioned earlier. Hence, we cannot show the awareness of government in this area.
- The cost-benefit analysis in implementing BSC has not been made on the assumption that the use of BSC outweighs costs as appearing in the literature from the industrialised countries. A perception study of Indian executives in this context may give different results.

In spite of the above, the present study has its own significance. Apart from discussion of conceptual aspect of corporate performance management and its backdrop, latest developments have been pointed out. We have also focused upon the practice of BSC for two major Indian industries in particular and for other companies outside India in general. This has its own relevance in the present context. It helps implementing a complete performance measurement tool to boost up the rigour of management control and decision making.

References

- Brewer, Peter. (2004), “Putting strategy into the BSC”, *The Cost & Management*, ICMAB, Dhaka, January – February.
- Dan, Anish Kumar (2010). “Balanced Scorecard: A Measurement and Management Tool for Corporate Performance – An Empirical Study”, *Indian Accounting Review*, June.
- Dan, Anish Kumar (2012). *Balanced Scorecard for Corporate Performance Management: An Evaluation in Indian Context*, LAP Lambert Academic Publishing, Saarbrücken, Germany.
- Drucker P.F. (1995). “The Information Executives Truly Need”, *Harvard Business Review*, HBSP, Jan-Feb.
- Eccles R.G. (1991). “The Performance Measurement Manifesto”, *Harvard Business Review*, HBSP, Jan-Feb.
- Gupta, A., Sarkar, P., Samanta, P. K. (2004). “BSC – An Emerging International Performance Measurement”, *The Journal of Accounting & Finance*, October – March.
- Kaplan, Robert S., Norton, David P. (1992). “The Balanced Scorecard – Measurement that Drive Performance”, *Harvard Business Review*, January-February.
- Kaplan, Robert S., Norton, David P., Lowes, Arthur. (1996). *Balanced Scorecard: Translating Strategy into Action*, Harvard Business School Press.
- Keasey, K., Aisthorpe, P., Hudson, R., Littler, K. (1999). “Shareholder and Stakeholders’ Approach to Strategic Performance Measurement using Balanced Scorecard”, *CIMA Research Foundation Update*, CIMA, Summer.
- Meyer, C. (1994). “How the Right Measures Help Teams Excel”, *Harvard Business Review*, HBSP, May-June.
- Needles, B. E. Jr., Frigo, M. L. and Powers, M (2002). “Strategy and Financial Ratio Performance: The Case of an Emerging Economy”, *Indian Accounting Review*, Vol. 6(2), December.
- Ness, J.A. and Cucuzza, T.G. (1995). “Tapping the Full Potential of ABC”, *Harvard Business Review*, HBSP, Jul-Aug.

- Niven, Paul R. (2002). *Balanced Scorecard, Step-by-step: Maximizing Performance and Maintaining Results*, John Wiley & Sons. Inc., NY.
- Niven, Paul R. (2005). *Balanced Scorecard Diagnostics: Maintaining Maximum Performance*, J. Wiley & Sons, NJ.
- Paramsivan, Thirumoorthy. (2001). “Balanced Scorecard: From Performance Measurement to Performance Management”, *The Chartered Accountant*, ICAI, November.
- Paramsivan, Thirumoorthy. (2001). “New Opportunities: Competitive Intelligence”, *The Chartered Accountant*, ICAI, August.
- Paramsivan, Thirumoorthy. (2001). “Research and Development Management”, *The Chartered Accountant*, ICAI, September.
- Prahalad, C. K., Hamel, Gary. (1990). “The Core Competence of the Corporation”, *Harvard Business Review*, HBSP, May-June.
- Rigby, Darrell. (2001). “Management Tools and Techniques: A Survey,” *California Management Review*, 43(2), Winter, p.139-160.
- Sheik Mohamed, M. (2003). “Balanced Scorecard – A Financial Measure”, *The Management Accountant*, ICWAI, November.
- Simons, R., Dávila, A. (1998). “How High Is Your Return on Management”, *Harvard Business Review*, HBSP, Jan-Feb.
- Singh, Manjit and Kumar, Sanjeev (2009). *Balanced Scorecard Implementations: Global and Indian Experiences*, *Indian Management Studies Journal*, vol. 13.