

Economic Value Added vis-à-vis Thinking of Indian Corporate Managers: A Survey Analysis

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Abstract

The main rationale of this study is to explore the manager's thoughts towards the hottest idea of financial performance measurement i.e. economic value added or EVA. Debate is going on in corporate world of finance regarding the intrinsic worth and rarity of EVA. EVA was promoted profoundly by Stern Stewart, a New York based consulting firm, during 1990's. The proponent of EVA presented it as the wonder remedy of the millennium in overcoming all corporate ills at one stroke and ultimately helps in raising the wealth of the shareholders, which is identical with the maximization of the firm value. But till date, EVA is the generally misapprehended phrase among the academicians and practitioners of corporate finance. For assessing the ingenious thinking of corporate managers of select industries, this study has been carried on the basis of primary data. For this purpose data has been collected from managers working in information technology (IT) and pharmaceutical industries through a well structured questionnaire. Manager's opinion towards important attributes like perception towards EVA, views regarding superiority, existing status of different financial measurement tools, expected outcomes of EVA, causes of reluctance for applying EVA, heterogeneous perception towards EVA among managers working in select industries and Respondents' opinion towards EVA: without boundaries are essentially measured by using five point interval scales. Out of the 81 valid responses only 3.4% respondent organizations are using Economic Value Added (EVA) as a financial performance measurement tool. Most of the respondents agreed that it is the better financial tool than traditional tools. But, yet Indian corporate is not very sure about its cost, effect and implementation in the organization. They still feel that they should wait and watch. Moreover, there is significant difference between the thinking of the managers of Information Technology and Pharmaceutical industries regarding enthusiastic application of economic value added.

Keywords: Value based management, Economic value added, Market Value Added, NOPAT and Financial performance Measurement tools

JEL Classification: G-30 (Corporate Finance and Governance)

1. Introduction

Touching from the traditional way of measuring a company's performance, based on an accounting arrangement, to a more comprehensible and wide-ranging system that connects the process of measuring results directly with strategy and input objectives within a broader wrap up, makes it possible to assess more precisely how successful a company will be measured in the future. To be winning entrepreneur in a globalized world, it is crucial to learn what other influentials of various industries are doing worldwide. The main purpose of a company in a free enterprise system is to help create value: value for consumers, employees, shareholders, and value (or wealth if you prefer) for the social order. Everyone connected to the company must make every effort to be well knowledgeable and learn proactively to prioritize judgment based on how the levers of value interconnect within the business and their respective involvement to the overall creation of value. During recent years, the field of finance has become more popular first and foremost, thanks to several new techniques and concepts that have asked for transparencies in the financial and non-financial system in the commercial world. These include Activity Based Management, Balance Scorecard, Benchmarking, Good Corporate Governance, TQM, Cash Value Added, Cash Flow Return on Investment, Economic Value Added and Market Value Added variants. Among these innovative modern financial performance tools, EVA over all, exclusively emphasizes on the interests of owners.

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(Bravo, Gaitan and Torres, 2009)¹. But debate is going on in corporate world regarding the merits and demerits of EVA.

1.1 Economic Value Added-the Concept

According to Bhattacharyya and Phani, (2004)² during the 1990s, EVA was promoted most heavily by Stern Stewart, a New York based consulting firm. The firm's founders Joel Stern and Bennett Stewart became the foremost evangelists for the measure. Their success spawned a whole host of imitators from other consulting firms, all of which were variants on the excess return measure. Stern Stewart, in the process of applying this measure to real firms found that it had to modify accounting measures of earnings and capital to get more reasonable estimates of surplus value. But EVA is the largely misapprehended term amid the practitioners of corporate finance. The proponents of EVA are presenting it as the wonder remedy of the millennium in overcoming all corporate ills at one stroke and ultimately help in raising the wealth of the shareholders, which is quite identical with the maximization of the firm value. The charm of EVA lies in its use of cash flow and cost of capital that are determinant of the value of the firm. The academic world in its turn has come up with various empirical studies which either support the superiority of EVA or question the claims of its proponents. Currently the empirical evidence is split almost half way. Some academicians claim EVA is nothing but a new version of the age-old residual income concept recognized by economists since the 1770's. Both EVA and 'residual income' concepts are based on the principle that a firm creates wealth for its owners only if it generates surplus over the cost of the total invested capital. So what is new? Perhaps EVA could bring back the lost focus on 'economic surpluses' from the current emphasis on accounting profit. In a lighter vein, it can be believed that in an era where commercial sponsorship is the ticket to the popularity of even the concept of God, the concept of residual income has not found a good sponsor until Stern Stewart and Company adopted it and re-launched it with a brand new name of EVA.

¹ Bravo, O., Gaitan, I. and Torres, J. (2009). EVA Theory. *Journal of Management for value*, 19-42.

² Bhattacharyya, A.K. and Phani, B.V. (2004). Economic Value Added- A General Perspective. Working Paper Series, Available at SSRN.

Mathematical exploration of EVA: The EVA's mathematical exploration is as follows:

$$\text{EVA} = (\text{adjusted NOPAT} - \text{cost of capital}) \times \text{capital employed} \quad (\text{I})$$

Or

$$\text{EVA} = (\text{Rate of return} - \text{cost of capital}) \times \text{capital} \quad (\text{II})$$

Where;

$$\text{Rate of Return} = \text{NOPAT/Capital}$$

Capital = total assets minus non-interest bearing debt, at the beginning of the year

Cost of capital = cost of equity \times proportion of equity + cost of debt $(1 - \text{tax rate}) \times$ proportion of debt in the capital.

The above cost of capital is nothing but the weighted average cost of capital (WACC), where Cost of equity is normally estimated using capital asset pricing model (CAPM) that estimates the expected return commensurate with the riskiness of the assets. If we define ROI as NOPAT/capital then the above equation can be rewritten as

$$\text{EVA} = (\text{ROI} - \text{WACC}) \times \text{CAPITAL EMPLOYED} \quad (\text{III})$$

Capital being used in EVA calculation is not the book capital, capital is defined as an estimate of the economic book value of all cash invested in going-concern business activities, and capital is essentially a company's net assets (total assets less non-interest bearing current liabilities).

2.0 Review of Previous Studies

The literature of EVA is growing rapidly since its existence, but the concept is still under development and debate, particularly in advanced countries. Singh and Garg (2004) examined the awareness and adaptability of EVA among the corporate managers of 50 selected Indian companies listed at the Mumbai Stock Exchange (BSE) at the end of 2000. They found that the concept of EVA is gaining an increased attention as a financial measure of business performance. On the topic of the performance measurement, the fundamental contribution of EVA is no more subject to the corporate recognition. Since this indicator increases managerial awareness of the capital costs of running a business, and of the adjustments to

the distortions that arise from the adoption of accounting principles. Ultimately it has been emerging in the brains of the top brass of the corporate world in India. On the same pattern Satish and Rau (2009)³ highlight the awareness and applicability of economic value added in Indian banks on the basis of survey report. Indian banks listed on the Mumbai stock exchange (BSE) were analyzed. The study concludes that economic value added in bit by bit is gaining an increased concentration as a financial measure of business performance of banks. For exploring the possibilities of EVA in pharmaceutical industry Kukreja and Giridhar (2005)⁴ evaluated the financial performance of select companies of pharmaceutical industry by using various new breed value-based performance actions. They have calculated correlation of 115 Indian firms to see which metric is more correlated with Market Value Added a measure of exterior performance which is considered to be the best pointer of shareholder value creation. In this study have proved that companies perform healthy on appropriate value based performance metrics and are adequately rewarded by the capital markets. Similarly Chen and Dodd (1997)⁵ reported that EVA measure provides relatively more information than the traditional measures of accounting profits. They also found that EVA and Residual Income variables are highly correlated and identical in terms of association with stock returns.

Proponents of EVA claim that that the calculation of EVA is not typical. Further evidences also state that EVA can be calculated without any problem. Morard and Balu (2009)⁶ developed a realistic model for EVA calculation and tried to make a parallel between Net Income as a measure of accounting profit and EVA as a measure of real economic profit. As a conclusion EVA corresponds better to the idea that creating value for shareholders

should be management's top precedence and it is more adapted to the value based management system. Further Phillips (2007)⁷ assessed that anyone can benefit from applying EVA. It is the structure for complete financial management and incentive compensation system that can guide every decision a company makes, from the boardroom to the shop floor, that can transform a corporate culture; that can pick up the working lives of everyone in an organization by making them more victorious; and that can help them produce better wealth for shareholders, customers and themselves. He further advocated that EVA is a powerful business tool which, if used properly, promises to improve company performance and produce better returns to shareholders. For finding the relationship between the different tools of value based metrics Ptetravicius and Tamosiuniene (2008)⁸ compared the four measures (Market value added, Economic Valued added, Cash Value added, Cash flow return on investment) by the way they integrate the idea of shareholder value, their elasticity in application to the valuation of companies and the measurement of financial performance. They found that value based methods promote the maximization of the economic worth of an organization by allocating its assets to their finest use. On the other hand, Ismail (2005)⁹ identified the relationship between economic value added (EVA) and the company performance in Malaysia. It also sought to explain the ability of EVA, compared to traditional tool, in measuring performance under various economic conditions. For this purpose the sample of the companies comprised most of the companies listed in Bursa Malaysia over the period 1993-2002. This study discovered that traditional tools have a better relationship with the stock return than EVA before the crisis period. However, during economic crisis (1997 and 1998) EVA had an improved relationship with the stock return than conventional tools. After the crises period, none of the performance tools had a relationship with the stock return.

³ Satish, R. and Rau, S.S. (2009). Awareness and Adaptability of Economic Value Addition. SCMS Journal of Indian Management, October-December, 48-57.

⁴ Kukreja, B.K. and Giridhar, B.S. (2005). Value-based performance metrics in the pharmaceutical industry. SCMS Journal of Indian Management, January-March, 60-73.

⁵ Chen, S., and Dodd, J. L. (1997), Economic Value Added (EVA TM): An empirical examination of a new corporate performance measure. Journal of Managerial Issues, 9(3), 318 - 333.

⁶ Morard, B. and Olivia, F.O. (2009), "Developing a practical model for calculating the economic value added," The Bucharest Academy of Economic Studies at <http://www.investopedia.com>.

⁷ Phillips, D., (2007). The Value of Economic Reality: Applying Economic Value Added. Liberty University Spring, 1-30.

⁸ Petravicius, Tomas and Tamosiuniene, Rima (2008). Corporate performance and the measure of value added. Journal of Transport 23 (3), 194-201 also available at www.transport.vgtu.it.

⁹ Ismail, A., (2006). Is economic value added more associated with stock return than accounting earning? The UK evidence. International Journal of Managerial Finance, 2(4), 343-353.

3.0 Objectives and Methodology

The literature of economic value added is growing rapidly but still offers lot of research scope to study this phenomenon in terms of its awareness and adaptability in Indian corporate. The objective of the present study is to examine the awareness and adaptability among Indian managers and convey these results through appropriate media to the proponents and the well wishers of economic value added. The study emphasizes the following objectives.

- a) To examine the extent of awareness and adaptability of Economic Value Added concept among the Managers of Indian Information Technology and Pharmaceutical Sectors; and
- b) to know whether there are differences regarding understanding towards Economic Value Added between the managers of select industries.

Hypothesis H0: There is no significant difference between the managers of Information Technology and Pharmaceutical industries regarding understanding towards economic value added.

3.1 Research Design and Instrument

To study the research objectives and to assess the awareness level among the managers of select industries it is proposed to use the descriptive-cum-exploratory research design on the basis of initial literature review on Economic Value Added and previous research findings on similar kind of study done elsewhere. A mix of these designs provides enough protection against biasness, maximizes reliability and provides opportunities for considering various facets of the research problem. To obtain information on the indicators considered most important regarding awareness and applicability from select industries, the primary data has been collected through a well-structured questionnaire mailed to all select Indian IT and Pharmaceutical companies listed at the National Stock Exchange (NSE) at the end of year 2008. The questionnaire was also made available upon request of some companies through e-mail; wherever necessary some companies were personally visited for this purpose. The respondents were asked to respond on a 'Five Point Scale' ranging from "Strongly Agree to Strongly Disagree". Prior to administering the questionnaire for final survey, Cronbach's Alpha test (Cronbach, 1951) was applied to check the statistical reliability of the questionnaire and an Alpha Coefficient

Value for different factors of awareness and adaptability was found to be .9899 which can be considered reasonably excellent for further data analysis vis-à-vis justifying the reliability of research instrument.

3.2 The Sample and Data Analysis

The sample size for this study has been 190 managers working in Information Technology and Pharmaceutical Secretors at first or second class managerial level like managing director, general managers, or senior manager accounts/ finance/ Human Resource/ Marketing managers. Total 19 questions with 3 questions of multiple choice and 2 of open-ended questions enhanced the interest of respondents. Various studies including this preserve surfacing EVA as sufficient independent variable to MVA for companies in India through secondary data but the studies conducted so far do not suggest about the sensible implementation of EVA by the Indian corporate world. In simple words, to the best of the knowledge of the researchers, there is negligible verification through primary information on the awareness and adaptability of value-added financial performance measure in Indian companies, the researchers have made an attempt in this direction. After putting all efforts for getting the filled questionnaire from the respondents, total 81 questionnaires were obtained. In this manner present study represents the 43% population. An attempt has been made here in this section to bring out the network outcome of the survey so conducted through the questionnaire. First of all the data was figured in the SPSS package. Thereafter the outcome has been analyzed and interpreted with the help of tabulation, percentage, mean, Standard deviation, Skewness and Kurtosis. After that for testing significant difference between the managers of Information Technology and Pharmaceutical industries regarding the understanding towards economic value added Mann-Whitney U test has been applied. This test is used because two independent samples (Managers of Information Technology and Pharmaceutical companies) with ordinal data have been observed in this study. Respondents profile is given in Table 1:

It is evident from the Table 1 that the respondents are from the two companies IT and Pharmaceutical. The 81 respondents filled the questionnaires, on this basis it can be concluded that out of 81 respondents, 36.3% respondent's are from IT and remaining 63.7% are from Pharmaceutical companies. In which 93.8% are Indian

companies and remaining 6.2% are foreign companies. The table also shows the respondent's experience. In which 58% respondents have less than 5 years experience in the company, 28.4% respondents have 5-10 years experience in the company and 13.6% respondents has 10-15 years experience in the company. In the last column

of the table there is annual turnover of the respondents' companies in which 77.8 % companies have less than 2000 cr. turnover, 11.1% companies have the 2001-4000 cr. turnover and 11.1% companies have more than 4000 cr. annual turnover.

Table 1. Respondents Profile at a Glance

Types of Company	Origin of the Respondents' Experience Company	Origin of the Respondents' Experience	Organization's Annual Turn-over (Crore Rs.)
Information Technology	Indian : 93.8%	0-5 Years: 58%	Less than 2000 Cr. : 77.8%
Software development Co.: 19.3%			
Hardware Mfg. Co. : 17%	Foreign : 6.2 %	5-10 Years: 28.4%	2001-4000 Cr. : 11.1%
Pharmaceutical		10-15 Years : 13.6%	More than 4000 Cr.: 11.1%
Bulk Drug Mfg. Co. : 20.5%			
Medicine Mfg. Co. : 33%			
Ayurvedic Medicine Mfg. Co.: 4.5%			
Animal Medicine Mfg. Co. : 1.1%			
Any other : 4.5%			

Source: Primary probe

4.0 Results and Discussion

Indian corporate is facing the charges of less transparency. A number of scams in different industries recently have increased the demand of a best suitable financial performance measurement tool for ensuring the transparency. As claimed by the proponents of EVA that it is the best financial measurement tool which considered the interest of the stakeholders mainly wealth creation for shareholders. Now in this case it is necessary to know the thoughts of executives of Indian corporate that how they perceive this tool i.e. EVA. Hence the study is quite significant, timely and explores the managers' opinion on EVA under the following distinctive sub-heads.

4.1 Respondent's Perception towards Economic Value Added

Eight statements constitute the respondents perception for the present sub-head. Table II throws some light on managers' preference towards the hottest idea of financial performance measurement i.e. EVA. When asked about the new version of age-old residual income concept then 58 (71.6%) managers were in favor of this question and only 7 (8.6%) executives have disagreed that it is a

new version, 54 (67.9%) respondents emphasise on the statement that implementing EVA for decision making motivates managers to deploy resources only on value enhancing activities (supported by Kudla and Arendt, 2000)¹⁰. 37 (44.5%) managers experienced that it helps investors for better investment decision (supported by Freeman, 2004)¹¹. 44 (54.3%) managers claim that EVA is the better financial tool than traditional metrics, 34 (42%) agreed that the true picture of the financial position is reflected by EVA on the contrary 22 (27.2%) respondents are claiming that window-dressing may be possible in EVA using industries. As far as comparison is concerned 48 (59.3%) managers favor EVA for facilitating the all-round comparisons, 44 (54.3%) respondents find that EVA may be used for setting pricing policies but 30 (37%) managers claimed that EVA is a very advanced financial tool and it is not compatible with Indian accounting scenario. Statement that EVA helps investors to take better investment decision scored lowest mean (2.16) and standard deviation (0.715) than other statements.

¹⁰Kudla, R.J. and Arendt, D.A. (2000). Making EVA Work. Journal of corporate Finance, 20 (4), 98-103.

¹¹Freeman, L.N. (2004). Economic value added reflects long-term benefits of investments, projects. Ophthalmology Times, July, 29 (14), P. 60.

On the other hand the values of skewness and kurtosis for the same statement are more than the other values. Lowest mean score and standard deviation confirms that EVA is extremely helpful for better investment decisions. The highest positive value of skewness (1.23) indicates that there are very a few managers who disagree with this statement. Similarly highest kurtosis value for this statement confirms that the curve will be more peaked than the normal curve or leptokurtic. Last statement that EVA is the better measurement tool but it is not usable in Indian industries shows highest mean score (3.025) and

standard deviation (1.107) values. It means that majority of the respondents (63%) do not agree with this statement. Similarly negative values of skewness and kurtosis for this statement of (-.05)(-.939) confirmed that EVA comfortably can be used in India. Except the above discussed two statements the mean values are ranging between 2 and 3, standard deviation and skewness values are less than 1 and kurtosis values are lying less than 3 mean leptokurtic. The results of the respondents' perception have been shown in detail in Table 2:

Table 2. Respondents' Perception Towards Economic Value Added

<i>Particulars</i>	<i>Strongly Agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly Disagree</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Skewness</i>	<i>Kurtosis</i>
New version of age-old residual income concept	7 (8.6%)	51 (63%)	16 (19.8%)	7 (8.6%)	0	2.284	0.746	0.56	0.781
Implementing EVA for decision making encourage managers to deploy resources only on value enhancing activities	3 (3.7%)	52 (64.2%)	16 (19.8%)	10 (12.3%)	0	2.407	0.755	0.95	0.188
Helps investors to take better investment decisions	9 (11.1%)	55 (67.9%)	13 (16%)	3 (3.7%)	1 (1.2%)	2.16	0.715	1.23	3.178
Better Financial tool than ROE, ROA, NPV etc.	7 (8.6%)	37 (45.7%)	23 (28.4%)	12 (14.8%)	2 (2.5%)	2.568	0.935	0.5	-0.159
Reflecting true picture of financial viability	3 (3.7%)	31 (38.3%)	25 (30.9%)	22 (27.2%)	0	2.815	0.882	0.04	-1.119
Facilitate the all-round comparison	3 (3.7%)	45 (55.6%)	21 (25.9%)	12 (14.8)	0	2.519	0.792	0.63	-0.444
Benchmark for setting pricing policies	3 (3.7%)	41 (50.6%)	18 (22.2%)	17 (21%)	2 (2.5%)	2.679	0.933	-0.05	-0.582
Better measurement tool but not usable in Indian industries	6 (7.4%)	24 (29.6%)	19 (23.5%)	26 (32.1%)	6 (7.4%)	3.025	1.107	-0.05	-0.939

Source: Primary probe

4.2 Respondents' Views Regarding Superiority of Economic Value Added

With the help of determining variables, Table 3 reveals the image of EVA superiority. Although EVA has been

implemented successfully in many industries of many nations yet not everyone is satisfied that it is the best financial performance measurement tool that may be the reason for numerous strategic changes in the corporate world.

Table 3 demonstrates 51 (63%) managers accepted that EVA is nearer to the real cash flows of the organization, 34 (42%) managers have ticked that it is easy to calculate and understand, 37 (45.7%) managers were in favor of that it has higher correlation with market value of the firm, 36 (44.5%) managers confirmed that EVA based employee compensation leads to minimize the dysfunctional behavior of the employees, 44 (54.3%) managers agreed that it helps for the evaluation of employees, 45 (55.6%) accepted that it may be the basis for motivating incentive calculation and 47 (58%) managers agreed that it is also helpful for security analysis (supported by Chen and Dodd, 2001)¹³. Mean score of these seven statements

are ranging from 2.506 (Lowest) to 2.84 (Highest) and standard deviation are lying between 0.726 (Lowest) to 0.887 (Highest). Values for standard deviation indicate the low dispersion of the distribution. Mean values confirms that these statements are true in the views of the managers (supported by Ehrbar AL, 1999)¹⁴ that the direct link with MVA also makes EVA an ideal tool for capital budgeting and strategic planning. All values of skewness are positive, which means that more respondents are in favor of these statements. The values of kurtosis for all seven statements stands less than 3, which shows that high peakedness than the normal curve. Table 3 shows these results in detail.

Table 3. Respondents' Views Regarding

Superiority of Economic Value Added

Particulars	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Dev.	Skewness	Kurtosis
Nearer to be real cash flows	2 (2.5%)	49 (60.5%)	19 (23.5%)	9 (11.1%)	2 (2.5%)	2.506	0.823	1.15	0.893
Easy to calculate and understand	2 (2.5%)	32 (39.5%)	25 (30.9%)	21 (25.9%)	1 (1.2%)	2.84	0.887	0.214	-0.966
Higher correlation with market value of the firm	3 (3.7%)	34 (42%)	27 (33.3%)	17 (21%)	0	2.716	0.84	0.194	-0.197
EVA based employee compensation system leads to minimize the dysfunctional behavior of the employees	2 (2.5%)	34 (42%)	23 (28.4%)	22 (27.2%)	0	2.802	0.872	0.168	-1.241
Employees performance evaluation	3 (3.7%)	41 (50.6%)	22 (27.2%)	14 (17.3%)	1 (1.2%)	2.617	0.86	0.594	-0.395
Incentive Calculations	3 (3.7%)	42 (51.9%)	18 (22.2%)	18 (22.2%)	0	2.63	0.872	0.459	-0.986
Security Analysis	1 (1.2%)	46 (56.8%)	24 (29.6%)	10 (12.3%)	0	2.531	0.726	0.794	-0.357

Source: Primary probe

4.3 Existing Status of Different Financial Performance Measurement Tools

The significance of different financial variables in the growth of the select Indian industries is perceived in a

¹³Chen, S., and Dodd, J. L. (1997). Economic Value Added (EVA TM): An empirical examination of a new corporate performance measure. *Journal of Managerial Issues*, 9(3), 318 - 333.

different way by the different respondents as disclosed by Table 4, regarding seven financial performance tools including traditional as well as modern financial performance measurement. The table depicts that as many as 38 (26.2%) respondents considers return on investment

¹⁴ Ehrbar, AL (1999) Using EVA to measure performance and assess strategy. *Journal of Strategy and Leadership*, 27(3), P. 20.

as significant variable followed by another 32 (22.1%) who find the return on equity as better indicator of the organization growth. About 13 respondents (9%) feel that return on assets may be the significant variable whereas operating profit margin is given priority by 24 (16.6 %) respondents. As far as net present value is concerned 31 (21.4%) respondents like it most, on the other hand only 5 (3.4%) respondents have applied the economic value added concept. Remaining 2 (1.4%) respondents had adopted the other measures or the combination of above discussed tools of financial performance. The mean score of 3.007 and standard error value 0.140 also go in favor of the above discussion. It sounds that the efficiency and effectiveness of EVA is still doubtful in Indian companies (supported by Singh and Garg, 2004)¹⁵. At present most companies rely on traditional tool of financial performance measurement and the same is elaborated in Table 4.

Table 4. Existing Status of Different Financial Performance Measure Tools

<i>Particulars</i>	<i>Frequency</i>	<i>Percentage</i>
Return on Investment (ROI)	38	26.2
Return on Equity (ROE)	32	22.1
Return on Assets (ROA)	13	9.0
Operating profit margin (OPM)	24	16.6
Net Present Value (NPV)	31	21.4
Economic Value Added (EVA)	5	3.4
Any other (mix of these)	2	1.4
Mean : 3.007, Std err : 0.140,		

4.4 Expected outcomes of Economic Value Added

Table 5 consisting five statements discloses the results on the worth-whileness of EVA. Expected outcomes have been predicted through 8 statements regarding EVA. When asked from the respondents that EVA is concerned with significant factors for growth of the organization then 47 (21.3%) respondents ticked the power of improving productivity, 37 (16.7%) managers agreed that it will create wealth for shareholders, 28 (12.7%) managers guessed it

as a corporate philosophy, 32 (14.5%) answered that it would enhance the value of the firm, 34 (15.4%) managers replied that it will improve the business knowledge of the firm. 22 (10%) managers accepted that it would enhance the transparency in financial reporting, 10 (4.5%) managers replied in favor of EVA as a corporate governance tool and 11 (5%) agreed that it will also improve the internal corporate governance. The overall mean score of 3.643 and lower value of standard error 0.145 presents the results in the above mentioned direction. Expected outcomes of EVA are elaborated in Table 5:

Table 5. Expected Outcomes of Economic Value Added

<i>Particulars</i>	<i>Frequency</i>	<i>Percentage</i>
Improving Productivity	47	21.3
Creation of wealth for shareholders	37	16.7
Corporate philosophy	28	12.7
Enhance the value of the firm	32	14.5
Improve business literacy of the firm	34	15.4
Corporate governance of the firm	10	4.5
As a public relation tool for the company regarding financial reporting	22	10.0
Improving internal corporate governance of the firm	11	5.0
Mean = 3.643, Std. error = 0.145		

Source: Primary probe

4.5 Causes of Reluctance for Applying EVA

Internationally, some of the companies which are using EVA are Walt Disney, Boeing, Pepsico, Coca-Cola, ATandT, Quaker Oats, Eli Lilly, Georgia Pacific, Tenneco and Whirlpool etc. India also has found followers for EVA. It has already earned favor with journalists and leaders in corporate reporting. However most of them do not calculate EVA strictly, rather they take casual approach in calculating and reporting EVA. When asked from the respondents regarding the reluctance of managers towards economic value added then 43 (31.4%) managers felt that the calculation is typical, 35 (25.5%) managers argued against its relevancy in Indian corporate, 30 (21.9%) managers replied that accounting system of EVA is not compatible with generally accepted accounting principles

¹⁵Singh and Garg, M.C. (2004). Economic Value Added in Indian Corporate. Deep and Deep Publications, Ch.8, 261-273

(GAAP), 15 (10.9%) challenged the superiority of EVA over traditional measures of financial performance and 14 (10.2%) respondents raised a serious question against the EVA that it doesn't give any idea of impact on financial performance due to business cycle variations. The overall mean score of 2.431 and lower value of standard error 0.112 confirms the worthiness of these statements. Indian corporate is not very sure about the effect and implementation of EVA in the organization. They still feel, they should wait and watch (supported by Satish and Rau, 2009).¹⁶ The causes of reluctance are given in Table 6:

Table 6. Causes of Reluctance for Applying EVA

Particulars	Frequency	Percentage
Calculation of EVA is typical	43	31.4
Not relevant in Indian context	35	25.5
Accounting system is not compatible with GAAP	30	21.9
EVA doesn't show the better results than traditional performance measurement tools	15	10.9
EVA doesn't give any idea about the financial performance of the companies that are affected by business cycle variations	14	10.2
Mean = 2.431, Std err = 0.112		

Source: Primary probe

4.6 Heterogeneous Understanding towards EVA in Different Industries

Information technology (IT) and pharmaceutical industries have been seen by some observers as a possible means by which developing countries might "leapfrog" past technologies, in the process of accelerating their rates of economic growth. It is very interesting to find out that whether there are significant differences regarding awareness between the managers of two industries. Table 7(a) and 7(b) throws some light on the output of Mann-Whitney U test. Table 7(a) shows the average rank given to each group of managers on each statement. Mean rank of IT companies' managers are ranging from 17.03 (minimum) to 28.00 (maximum). On the other hand, mean rank of pharmaceutical companies' managers are within the series of 49.49 (minimum) to 56.45 (maximum). This means that the awareness of pharmaceutical companies managers tend to be stronger than those for IT companies managers. Table 7(b) portrays that the statistics of U test and the significance levels on the basis of a grouping variable i.e. type of company, which shows that calculated value of Z (Z_{calc}) are greater than the critical value of $Z_{0.05}$ (at 5% significance level, $Z_{0.05} = -1.96$) for all statements regarding awareness. The calculated value of Z starts with -4.868 (U=368, p=.001) and ends up to -7.714 (U=30, p=.001) with strong awareness among pharmaceutical companies' managers. Hence, null hypothesis is rejected and it can be concluded that there are significant differences between the managers of Information Technology and pharmaceutical industries regarding understanding towards economic value added.

Table 7(a). Mann-Whitney U Test, Ranks

Statement	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig (2 tailed test)
New version of age-old residual income concept	325.000	853.000	-5.150	.000
Implementing EVA for decision making encourage managers to deploy resources only on value enhancing activities	333.500	861.500	-5.108	.000
Helps investors to take better investment decisions	368.000	896.000	-4.868	.000
Better Financial tool than ROE, ROA, NPV etc.	150.000	678.000	-6.537	.000
Reflecting true picture of financial viability	29.000	557.00	-7.712	.000

¹⁶ Satish, R. and Rau, S.S. (2009). Awareness and Adaptability of Economic Value Addition. SCMS Journal of Indian Management, October-December, 48-57.

<i>Statement</i>	<i>Mann-Whitney U</i>	<i>Wilcoxon W</i>	<i>Z</i>	<i>Asymp. Sig (2 tailed test)</i>
Facilitate the all-round comparison	232.000	760.000	-5.933	.000
Benchmark for setting pricing policies	174.000	702.000	-6.391	.000
Better measurement tool but not usable in Indian industries	17.000	545.000	-7.695	.000
Nearer to be real cash flows	285.000	813.000	-5.514	.000
Easy to calculate and understand	30.000	558.000	-7.714	.000
Higher correlation with market value of the firm	72.500	600.500	-7.328	.000
EVA based employee compensation system leads to minimize the dysfunctional behavior of the employees	60.000	588.000	-7.442	.000
Employees performance evaluation	174.000	702.000	-6.410	.000
Incentive Calculations	188.500	716.500	-6.282	.000
Security Analysis	232.500	760.500	-5.998	.000
Existing status for different financial tools of financial performance measurement	96.000	624.000	-7.284	.000
Causes of Reluctance for applying EVA	176.000	704.000	-6.695	.000

<i>Statement</i>	<i>Type of Company</i>	<i>N</i>	<i>Mean Rank</i>	<i>Sum of Ranks</i>
New version of age-old residual income concept	IT	32	26.66	853.00
	Pharma	49	50.37	2468.00
Implementing EVA for decision making encourage managers to deploy resources only on value enhancing activities	IT	32	26.92	861.50
	Pharma	49	50.19	2459.50
Helps investors to take better investment decisions	IT	32	28.00	896.00
	Pharma	49	49.49	2425.00
Better Financial tool than ROE, ROA, NPV etc.	IT	32	21.19	678.00
	Pharma	49	53.94	2643.00
Reflecting true picture of financial viability	IT	32	17.41	557.00
	Pharma	49	56.41	2764.00
Facilitate the all-round comparison	IT	32	23.75	760.00
	Pharma	49	52.27	2561.00
Benchmark for setting pricing policies	IT	32	21.94	702.00
	Pharma	49	53.45	2619.00
Better measurement tool but not usable in Indian industries	IT	32	17.03	545.00
	Pharma	49	56.65	2776.00
Nearer to be real cash flows	IT	32	25.41	813.00
	Pharma	49	51.18	2508.00
Easy to calculate and understand	IT	32	17.44	558.00
	Pharma	49	56.39	2763.00
Higher correlation with market value of the firm	IT	32	18.77	600.50
	Pharma	49	55.52	2720.50
EVA based employee compensation system leads to minimize the dysfunctional behavior of the employees	IT	32	18.38	588.00
	Pharma	49	55.78	2733.00
Employees performance evaluation	IT	32	21.94	702.00
	Pharma	49	53.45	2619.00

Statement	Type of Company	N	Mean Rank	Sum of Ranks
Incentive Calculations	IT	32	22.39	716.50
	Pharma	49	53.15	2604.50
Security Analysis	IT	32	23.77	760.50
	Pharma	49	52.26	2560.50
Existing status for different financial tools of financial performance measurement	IT	32	19.50	624.00
	Pharma	49	55.04	2697.00
Causes of Reluctance for applying EVA	IT	32	22.00	704.00
	Pharma	49	53.41	2617.00

4.7 Respondent's Opinion towards EVA

Without Boundaries: It is not advisable to bind the respondents for giving the answers merely within the criteria of options. Keeping this point in mind two open-ended questions were set in the questionnaire through which opinions and beliefs beyond questionnaire were extracted. Following this track when asked the perception towards EVA as a performance measurement tool for excellence in Pharmaceutical/ Information Technology industry through an open-ended question then there were different views of executives. Views of all respondents can be categorized into three groups.

First group of executives were in favor of these tools and said that this is a good idea but not used by the government firms. They directly attacked the govt. and suggested the central and state governments for applying it. These respondents were very optimistic towards economic value added as financial performance measurement tool and guessed high demand and bright future of these tools in our nation for coming years. On the other hand some executives stressed that Economic Value Added (EVA) may be developed as better performance measurement tool since it considers Net Operating Profit After Tax (NOPAT), Weighted Average Cost of Capital (WACC) and Capital Employed (CE) there by covering main performance measurement variables. Knowledge regarding EVA needs to be spread in the corporate for its proper understanding and utilization. Further it could be helpful for setting the trend, increase in productivity and investors for better investment decision. Similarly some executives were of the opinion that it is a new concept to calculate the profit and something has been done in pharmaceutical and information technology industries and lot has to be done regarding the adaptability of EVA as a performance measurement tool in India. Economic value added also can enhance the amount of compensation for

the executives of IT industry. Further respondents have highlighted the transparency issue regarding the EVA. Transparency can be ensured through the use of these tools. Adaptability of EVA tools could be encouraged by educating finance managers. The compatibility with the objective of wealth maximization is the important feature described by the executives. It is the law of nature that different persons have different perception towards any phenomenon and the same is happening here.

Second group of the executives are of the dual nature one side they have counted the positive effects of EVA and also criticized the hottest idea of financial performance measurement i.e. EVA. Few respondents focused the superiority of EVA than other traditional measures but also forecasted that it will take long time for Indian pharmaceutical and IT companies to adopt EVA as performance measurement tool. Executives have explored that production/manufacturing companies can't enjoy the facilities of this modern evaluation tool. EVA is a good performance measurement tool but they all don't agree that it is best one. Some executives found EVA unsuitable as modern financial measurement tool since its application was not within their authority and approval was required from owners or higher authorities.

It has been rightly said that change is inevitable to all human being. Some executives were absolutely against the new financial performance measurement tool EVA, because they were using the other traditional performance measurement tools. Some respondents have criticized the hottest concept EVA, because this modern tool is beneficial only for non-manufacturing companies. Developed nations where a major portion of gross domestic product (GDP) comes from non-manufacturing activities can enjoy this measurement tool EVA. The executives of pharmaceutical industry claimed that EVA is not compatible with pharmaceutical manufacturing firms.

They argued that good profit and quality control are the important determinants for excellence in pharmaceutical industry on the other hand some executives shared that EVA is not compatible with existing infrastructure. Further some are of the opinion that EVA is now old measurement tool, there are lot of other tools which are cheaper and more easy to use.

Despite these questions it is wise to give a chance to the respondents for honest views regarding the topic and the experience with this specific questionnaire through an open-ended question focusing on suggestions/recommendation /criticism etc. At the end of the questionnaire we have also given a chance to the executives of selected industries for specifying their recommendations, suggestions and criticism. Few executives argued that for implementing EVA successfully elastic organizational structure is required and it may further be simplified. Some stressed for promoting this tool through mass media among top managers of the organization. Seminar, symposium and workshops could be conducted for better understanding of this tool. Some executives are of the opinion that this performance measurement tool EVA should be promoted in Asian countries through motivation. Further some executives said that by encouraging the interest of managers with parallel implementation of EVA based compensation plan the image of EVA among managers can be boosted.

5.0 Summing Up

Information technology and pharmaceutical industries have been observed by scholars as a potential means by which developing countries might “leapfrog” past technologies, in the process of accelerating their economic growth. Both industries are being indispensable for quality of human life and coordination of the organizational activities correspondingly. The corporate manager should however believe that the company’s objective is to maximize Market Value Added, since it reflects the premium or discount of the market value relatively to the capital invested in the companies. For Indian corporate there seems to be very little empirical evidence to hold up the Stern Stewart claim that EVA was superior tool to traditional performance measures.

The present paper brings in to play contemporary apprehensions regarding the performance measures, and it also does take into account the expectations of

stakeholders in the financial valuation of companies. Most of the respondents have no disagreement on the usefulness of the EVA, however, many of them still use traditional accounting measures. Managers of companies can understand the intricacies in EVA, but seldom have they succeeded in the prevailing on the floor employees and managers on the need to adopt the EVA as a performance indicator to achieve better results.

While the benefits of EVA are undeniable, for many companies in India, implementation challenges are major obstacles to reaping the reward. Indian corporate sector has initiated for EVA, and it has already earned favour with journalists and leaders in corporate financial reporting. On the other hand, most of them do not calculate EVA strictly; rather they take casual approach in calculating and reporting EVA. Only few companies are using this value based financial performance metrics for excellence. Moreover there is also heterogeneous perception regarding economic value added between the different industries. At last, debate is going on in India regarding the relevancy of this financial performance tool in Indian corporate sector but the emergence of the concept cannot be denied at all.

5.1 Managerial Implications

The LPG (Liberalization, Privatization, and Globalization) policies by the Govt. of India have made remarkable impacts on information technology (IT) and pharmaceutical industries. The average growth rate of the pharmaceutical industry in last 5 years remains around 10%. The estimated Rs. 20000 crore domestic pharmaceutical segments depending on its clinical research and manufacturing strengths to face the stiff competition prevalent in the industry. Similarly there is an impression that India is world class in information technology (IT). This is mainly due to the success of India’s software industry and contribution of people of Indian origin in IT revolution in the United States. The fact is that IT sector in the country has increased at an incredible rate of 35% every year. Both industries have become the robust industries or economic facets, have an increased productivity, particularly in the developed world and therefore are a key drivers of economic growth. Economies of scale and insatiable demand from consumers characterize these rapidly growing sectors. Further, the development of Indian capital market, both in depth and breadth along with the increased awareness among the shareholders, has increased the pressure on the

companies to consistently perform better.

For protecting the interest of stakeholders there is absolute need of some unique financial performance measurement tool, which should be helpful for the maximization of wealth, especially for shareholders. For verifying its relevance in Indian corporate EVA has been discussed quite extensively in India in recent years in academic and business circles widely. However its actual application and disclosure in annual statements is limited to a few of companies. Companies which are well known for their corporate governance are known to be in the forefront in discussing and arriving at EVA in their annual statements. At the end of the day, this study may motivate managers of Indian corporate for taking best suitable decision for predicting the worthiness of EVA in Indian context.

6.0 Future Scope of Research

Present research analyzed the managers' thoughts regarding the economic value added of the major attributes of awareness with respect to the applications of recently developed financial measurement tool (EVA) in Indian corporate. Although EVA has received considerable attention in recent years and is used by many prominent Indian firms, there has been a limited primary data based study of these performance measures. After observing the results of present study it can be concluded that managers are accepting that EVA is an improvement in the area of corporate finance. But very few companies are applying EVA for the measurement of financial performance in Indian corporate. Mostly companies where EVA has been applied, they are taking casual approach in calculating and reporting EVA. Future research might examine the suitability of EVA in Indian corporate, and which component of EVA contribute to increase or decrease its information content. It would also be interesting to assess the explanatory power of EVA from both a time series perspective and over a large universe of firms. Some finer models, such as industry- specific and sector specific model based on large number of organization may provide more reliability towards EVA. In future research it should also be considered how the drivers of value are influenced by EVA. Impact of EVA based compensation can be measured on the employees working in Indian corporate. The work done in this paper represents a small step in that direction and will encourage further research aimed

at understanding these reasons for applying EVA.

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