

₹ 100

ISSN - 2249-555X

Volume : 1 Issue : 4 January 2012



Journal for All Subjects

www.ijar.in

Listed in International ISSN Directory, Paris.



ISSN - 2249-555X

Indian Journal of Applied Research

Journal for All Subjects

Editor-In-Chief

Dr A Kumar

Director, College Development Council (CDC)
Director, Internal Quality Assurance Cell (IQAC)
Professor in Management,
Department of Business Administration, Faculty of Management,
Bhavnagar University,

Editorial Advisory Board

Dr. S. N. Pathan
Maharashtra

Dr. SM. Ramasamy
Gandhigram

Dr. M. M. Goel
Kurukshetra

Dr. S. Ramesh
Tamil Nadu

Dr Ramesh Kumar Miryala
Nalgonda.

Dr. B. Rajasekaran
Tirunelveli

Dr. A. R. Saravankumar
Tamilnadu

Dr. Roy M. Thomas
Cochin

Dr. G. Selvakumar
Salem

Dr. Apurba Ratan Ghosh
Burdwan

Dr. Shrawan K Sharma
Uttarakhand

Dr. Sudhanshu Joshi
Uttarakhand

Prof. (Dr.) B Anandampilai
Pudhukottai

Advertisement Details

Position	B/W (Single Color)	Fore Color
Full Inside Cover	₹ 6000	₹ 12500
Full Page (Inside)	₹ 5000	-

Subscription Details

Period	Rate	Discount	Amount Payable
One Year (12 Issues)	₹ 2400	Nil	₹ 2400
Two Year (24 issues)	₹ 4800	₹ 200	₹ 4600
Three Year (36 issues)	₹ 7200	₹ 300	₹ 6900
Five Year (60 issues)	₹ 12000	₹ 600	₹ 11400

You can download the Advertisement / Subscription Form from website www.ijar.in. You will require to print the form. Please fill the form completely and send it to the **Editor, INDIAN JOURNAL OF APPLIED RESEARCH** along with the payment in the form of Demand Draft/Cheque at Par drawn in favour of **INDIAN JOURNAL OF APPLIED RESEARCH** payable at Ahmedabad.

1. Thoughts, language vision and example in published research paper are entirely of author of research paper. It is not necessary that both editor and editorial board are satisfied by the research paper. The responsibility of the matter of research paper/article is entirely of author.
2. Editing of the Indian Journal of Applied Research is processed without any remittance. The selection and publication is done after recommendations of atleast two subject expert referees.
3. In any condition if any National/International University denies accepting the research paper published in IJAR, then it is not the responsibility of Editor, Publisher and Management.
4. Only the first author is entitle to receive the copies of all co-authors
5. Before re-use of published research paper in any manner, it is compulsory to take written permission from the Editor-IJAR, unless it will be assumed as disobedience of copyright rules.
5. All the legal undertaking related to Indian Journal of Applied Research is subject to Ahmedabad Jurisdiction.
7. The research journal will be send by normal post. If the journal is not received by the author of research papers then it will not be the responsibility of the Editor and publisher. The amount for registered post should be borne by author of the research paper in case of second copy of the journal.

Editor,

Indian Journal Of Applied Research

8-A, Banans, Opp. SLU Girls College, New Congres Bhavan, Paldi,
Ahmedabad-380006, Gujarat, INDIA

Contact.: +91-9824097643 E-mail : editor@ijar.in

INDEX

Sr. No	Title	Author	Subject	Page. No.
1.	Statistical Optimization Of Ferulic Acid Esterase Production In Aspergillus Niger Isolate Using Response Surface Methodology	Balljinder Kaur , Neena Garg	Biotechnology	1-6
2.	Development Of Forest Area In Tropics: The Urgency Of People's Participation In The Indian Context	Dr. M. P. Naik	Commerce	7-8
3.	Opportunity For International Corporations At Bop Segments Of Emerging Markets (Focus : India)	Bhudhar Ranjan Chatterjee , Sukanya Chatterjee.	Commerce	9-11
4.	Retail Trade	Viram. J. Vala , Dr. (Prof.) Vijay Kumar Soni	Commerce	12-15
5.	Determinants Of Market Value Added Some Empirical Evidence From Indian Automobile Industry	Dr. A. Vijayakumar	Commerce	16-20
6.	The Welfare Facilities Available To The Workers In Paper Mills In Madurai	Dr. M. Sumathy , A. Vijayalekshmi	Commerce	21-24
7.	Green Marketing - New Hopes And Challenges	Dr. Prashant M. Joshi	Commerce	25-27
8.	A Study On Employee Welfare Measures In Maharashtra State Transport Corporation With Special Reference To Kolhapur District.	Dr. H. M. Thakar , Prof. Urmila Kisan Dubal	Commerce	28-30
9.	Business Environment In South Korea An International Perspective	Dr. M. Kamalun Nabi , Dr. M. Saeed	Commerce	31-35
10.	Market Timing - Implications Of Market Valuation On Share Issues By Indian Companies	L. Ganesamoorthy , Dr. H. Shankar	Commerce	36-38
11.	The Conceptual Framework Of Corporate Social Accounting	Rechanna , Dr. B. Mahadevappa	Commerce	39-50
12.	Labour Welfare Measures And The Extent Of Satisfaction Of Tirupur Garment Employees	Mr. S. Hariharan , Mr. N. Selvakumar, Dr .H. Balakrishnan	Commerce	51-53
13.	Mahila Savstha Aur Jacha-Bacha Ko Bachane Ko Chunoti	Dr. Anup Chaturvedi	Community Science	54-55
14.	Mapping Of Existing Waste Dumping Sites And Newly Proposed Waste Dumping Sites In And Around Chitradurga Taluk, Karnataka State, Using Remote Sensing And GIS Techniques.	Sunil Kumar R. K Chinnaiiah , Suresh Kumar B.V	Earth Science	56-58
15.	A Role Of Municipal Council And Corporation Of Financial Problems In Nanded District (Maharashtra)	Dr. A. S. Pawar	Economics	59
16.	Impact Of Institutional Credit On Weaker Section In Akola District	Dr. Devyanee K Nemade, Dr. Vanita K Khobarkar	Economics	60-62
17.	Right To Education In India	Dr. Pawar A. S.	Economics	63-65
18.	Gramin Ayam Adivasi Mahilo Ke Arthik Shakti : Sukhma Virti (Adipur Jila Ke Gramin Ayam Adivasi Mahilao Ka Ek Ayaktik Adhiyan Shobha Gupta	Shobha Gupta	Economics	66-67

19.	Knowledge On Food Security Education Among Higher Secondary Students	Dr. P. Paul Devanesan , Dr. A. Selvan	Education	68-69
20.	Family Environment As A Determinant of Academic Anxiety And Academic Achievement	Dr. RajKumari Kalra , Ms. Preeti Manani	Education	70-71
21.	Awareness On Man-Made Disaster In Environmental Education Among High School Students	Dr. A. Selvan , Dr. P. Paul Devanesan	Education	72-73
22.	Teaching Strategies For Simplifying Fractions In Mathematics	M. Kavitha , Dr. A R. Saravanakumar	Education	74-76
23.	Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA): A Boon to Tribal Women	Dr. Sherly Thomas	Education	77-78
24.	Sports as a Tool for Interest Oriented Learning	E. Baby Sumanna	Education	79-80
25.	Balanced Scorecard for Higher Education	Jyoti D Joshi	Education	81-83
26.	A Study Of The Interactive Influence Of CAI Package On Academic Achievement	Kunal D. Jadhav	Education	84-85
27.	Reduction Of Fault Current Using SFCL At The Suitable Location In The Smartgrid	Pudi Sekhar , K .Venkateswara Rao , M. Ebraheem , P. Nageswara Rao	Electronics	86-88
28.	HRD Climate in Private Manufacturing Sector: An Appraisal	Dr. Sukhwinder Singh Jolly	Engineering	89-90
29.	Wireless Speed Measurement And Control Of Universal Motor	G. Prasad , G. Ramya Swathi, Dr. P. V. N. Prasad , A. Muneiah	Engineering	91-94
30.	Design Of Decentralized Load-Frequency Controller For Deregulated Hydro-Thermal Power Systems With Non-Linearities	M. Vinothkumar , Dr. C. Kumar , Dr. S. Velusami	Engineering	95-99
31.	Optimization Of Process Parameters For Gas Tungsten Arc Welding Aluminum Alloy A6061 By Taguchi Method	P. Hema , K. Allama Prabhu , Prof. K. Ravindranath	Engineering	100-103
32.	Numerical Approach To Predict The Thermal Performance Of Parallel And Counter Flow Packed Bed Solar Air Heaters	Satyender Singha , Prashant Dhiman , Ritika Kondal	Engineering	104-108
33.	Institute For Entrepreneurship Development Amongst Farmers- Especially Small And Marginal Land Holders.	Sweta Sanjog Metha	Entrepreneurship Development	109-111
34.	Phytoplankton Diversity From Godavari River Water (Maharashtra)	Satish.S.Patil , Ishwar.B.Ghorade	Environmental Science	11-114
35.	Nutrient Adequacy Among Selected Tribal Adolescent Girls Of Kattunayakan Tribes In Tamil Nadu	Somishon Keishing , Saranya .R	Home Science	115-116
36.	Vaigyanic Sacharata Aur Arthik- Samajik Vikas	Dr. Sudobh Kumar	Humanities	117-118
37.	E-Pharmacy In India For Reducing Inter-State Accessibility Dispersion	Satinder Bhatia	Information Technology	119-121
38.	Impact Of Intermediaries' Service Delivery In Insurance Sector	Dr. P. Anbuoli , R. Meikanda Ganesh Kumar	Insurance Sector	122-124

39.	Fate And Human Endeavour In The Mahabharata	Dr Maneeta Kahlon	Literature	125-127
40.	Facets of Hunger in Bhabani Bhattacharya's So Many Hungers and Kamala Markandaya's Nectar in a Sieve	Dr. Paramleen Kaur Syali , Ruchee Aggarwal	Literature	128-129
41.	Business Financial Strategy In Small And Medium Scale Brick Industries In Kolar District, Karnataka State.	Muninarayanappa , Dr. S. Muralidhar	Management	130-132
42.	A Study On Brand Equity Analysis Foreign Global Brands Vs Domestic Popular Brands Of Adult Consumer's Perspective In Coimbatore City	A.Pughazhendi , S. Susendiran , R. Thirunavukkarasu	Management	133-135
43.	Comparative Analysis of Cellular Phone Usage Outline of Undergraduate Students.	Atul Patel	Management	136-138
44.	A Study On Management Practices Of Entrepreneurs In Informal Sector	Dr. P. Vikkraman , Mr. S. Baskaran	Management	139-142
45.	E-commerce: Emerging Channel for Marketing in India	Dr Mahalaxmi Krishnan	Management	143-144
46.	The Role Of Educational Institutions In Imparting Entrepreneurship Qualities Among Student Community	Dr. N. Ramanjaneyalu	Management	145-147
47.	Impulsive buying and In-store shopping environment	Dr. Surekha Rana , Jyoti Tirthani	Management	148-149
48.	A Study On Management Practices Of Entrepreneurs In Informal Sector	Dr. P. Vikkraman , S. Baskaran	Management	150-153
49.	Risk Management Processes And Techniques For Resolving Customer - Supplier Relationship Issues	Pramod Kumar , Prof (Dr.) S.L.Gupta	Management	154-160
50.	Risk Management Processes & Techniques For The Successful Delivery Of Web Based Software Projects	Pramod Kumar , Prof (Dr.) S. L. Gupta	Management	161-166
51.	Effect Of Brand Equity On Consumer Purchasing Behaviour On Car: Evidence From Car Owners In Madurai District	R. Suganya	Management	167-169
52.	Relationship Management Model For Global It Industry.	Rishi Mohan Bhatnagar , Prof (Dr.) S. L. Gupta	Management	170-173
53.	It's A Myth That Kirana Stores Will Be Wiped Out If FDI Is Allowed In Multi Brand Retail Sector In India	Shweta Patel , M R Brahmachari	Management	174-176
54.	Learning Organization	Sitheswaran K , Dr. K. Balanaga Gurunathan	Management	177-178
55.	Behavior Management: A Ready-made Soup For Indian Managers	Winnie Jasraj Joshi	Management	179-180
56.	Customer Relationship Management In Public Sector Banks	Dr. P. Anbuoli , T. R. Thiruvén Kat Raj	Marketing	181-182
57.	Nifedipine Compared With Isoxuprine In Treatment Of Preterm Labor	Dr. Santosh Khajotia	Medical Science	183-184

58.	Single Intraoperative Dose of Tranexamic Acid In Orthopedic Surgery (A Study of Bipolar Modular Prosthesis and Dynamic Hip Screw fixation)	Dr. B. L. Khajotia , Dr. S. K. Agarwal, Dr. Prasant Gadwal	Medical Science	185-187
59.	MVA - A Simple & Safe Surgical Procedure For First Trimester Abortion / Medical Termination Of Pregnancy (MTP)	Dr. Priyamvada Shah , Dr. Sameer Darawade	Medical Science	188-190
60.	Pneumococcal Septic Arthritis in an Infant A Case Report	Dr. Vrishali A Muley , Dr. Dnyaneshwari P Ghadage, . Dr. Arvind V Bhore	Medical Science	191-192
61.	A Clear CSF may not be a Normal CSF A Case Report	Dr. Dnyaneshwari P Ghadage , Dr. Vrishali A. Muley , Dr. Arvind V. Bhore	Medical Science	193-194
62.	Neurectomy For Tic How Much Reliable?	Dr. Monali H. Ghodke , Dr. Seemit V. Shah , Dr. Smita A. Kamtane	Medical Science	195-198
63.	To Assess Acceptability Of Female Condom As A Method Of Temporary Contraception Among Indian Women	Dr Priyanka Shekhawat , Dr. Col (Retd) Gulab Singh, Dr Vidula Kulkarni Joshi	Medical Science	199-200
64.	A Study To Evaluate The Efficacy Of Teaching Intervention On Reduction Of Pediatric Immunization Pain Among Nursing Students	Dr. Ramachandra , Dr. S. Valliammal, Mr. Raja Sudhakar	Nursing	201-202
65.	Screening Of Antenatal Patients For Thalassemia	Dr Mukta Rayate , Dr Durga Karne , Dr Shilpa Bhat, Dr Hemant Damle , Dr Sameer Darawade, Varsha Gogavale	Obstetrics & Gynaecology	203-204
66.	Reservoir Rock Quality of the Lakadong Member in the Eastern Part of Upper Assam Basin, India	Dr. Pradip Borgohain	Petroleum Geology	205-207
67.	Study Of Refractive Index And Excess Parameters For Different Liquid Mixtures At Different Temperatures	Sheeraz Akbar , Mahendra Kumar	Physics	208-210
68.	Refractometric And Excess Parameter Study For Liquid Mixtures Containing High Order Alkanes (C17) And 1-alkanols At Different Temperatures	Sheeraz Akbar , Mahendra Kumar	Physics	211-213
69.	Assessment Of Knowledge About Health Services Available At Subcentre Level Among Village Inhabitants	Balpreet Singh , Jayanti Dutta	Public Health	214-215
70.	Effect Of Yogic, Aerobic And Laughter Exercises On Body Composition (An experimental study)	Dr. Manjappa. P. , Dr. Shivarama Reddy. M	Sports	216-220
71.	Age At Menarche In Physically Active And Non Active Urban Girls Of Patiala District	Jyoti Sharma , Dr. Ajita	Sports Science	221-222
72.	Use Of Ranks For Analysis Of Groups Of Experiments	Dr. Vanita K Khobarkar , Dr. S. W. Jahagirdar, Dr. N. A. Chaube	Statistics	223-225



Determinants Of Market Value Added Some Empirical Evidence From Indian Automobile Industry

* Dr. A. Vijayakumar

* Associate Professor in Commerce, Erode Arts and Science College, Erode

ABSTRACT

Market Value Added is one of the external indicators which give the utmost satisfaction to the investors. Hence, it turns out to be very significant and important to analyse the MVA of selected companies in the Indian automobile industry. Further, Karal Pearson's correlation model has been adopted to establish the relationship between EVA and MVA. Multiple regression models have been carried out to find out the extent of relationship between Market Value Added with the selected financial variables. The results of the study showed that the relationship between MVA and EVA is seen as negative in 65 per cent companies during the study period. Further, the association between MVA and the selected financial variables showed both positive and negative association. The multiple regression analysis showed that sales, EPS and PAT are the best explanation of MVA of Indian automobile industry.

Keywords : Economic Value Added, Shareholders Wealth, Value Based Management, Market Value Added

Corporate performance measurement is one of the emerging areas of research in finance among the researchers all over the world. Several studies are carried to find out what influences the share price (market price) of a company. Corporate performance is affected by various factors ranging from company specific, industry specific and economic variables. For long, there had been wide acceptance on the objective of the firm to maximize the value or wealth maximization. While the principle that fundamental objective of the business concerns is to increase the value of its shareholder's investment is widely accepted, there is substantially less agreement about how this is accomplished (Rappaport, 1986). As the lenders (debt and others), can protect themselves contractually, the objective can be narrowed down to maximizing stockholders value or stockholders wealth. When financial markets are efficient, the objective of maximizing stockholder wealth can be narrowed even further to maximizing stock prices (Damodaran, 1996).

Even through stock price maximization as an objective is the narrowest of the value maximization objectives, it is the most prevalent one. It is argued that the stock prices are the most observable of all measures that can be used to judge the performance of a publicly traded firm. Besides this, the stock price is a real measure of stockholder wealth, since stockholders can sell their stock and receive the price now. While the responsibility of firm value maximization has to be fixed with the managers, using stock prices as a measure of periodic measure of corporate performance throws a serious problem. While many argue that the stock prices are not under the full control of the managers, there are many others who believe that stock price maximization leads to a short-term focus for manager-as the stock prices are determined by traders, short-term investors and analysts, all of whom hold the stock for short-periods and spend their time trying to forecast next quarter's earnings.

According to Rappaport (1986), within a business, there are seven drivers (sales growth rate, operating profit margin, income tax rate, working capital investment, fixed capital investment, cost of capital and forecast duration) that can be managed to create value. The theory suggests that improvement in these value drivers leads to an increase in

shareholders' value. So, traditionally periodic corporate performance is most often measured using some variant of historical accounting income (eg. Net Profit, EPS) or some measures based on the accounting income (eg. ROI / ROCE). However, it had long been recognized that accounting income is not a consistent predictor of firm value creation and the traditional measures are not appropriate for evaluation of corporate performance.

An appropriate measure of corporate performance on one hand should be highly correlated to share holder return and on the other hand should be able to signal the extent of periodic wealth creation. A search for such a measure had been the trigger for the rapidly growing literature on Value Based Management (VBM). Among the set of popular VBM systems, a variant of the traditional residual income measure known as Economic Value Added (EVA) is arguably the most prominent. Therefore, the present study examines whether Economic Value Added has got any association with the shareholders wealth creation.

Review of Literature

Stern (1990)¹ observed that EVA as a performance measure captures the true economic profit of an organisation. EVA-based financial management and incentive compensation scheme gives managers better-quality information and superior motivation to make decisions that will create the maximum shareholder wealth in an organisation. Stewart (1994)² has expanded that adoption of the EVA system by more and more companies throughout the world clearly depicts that it provides an integrated decision - making framework, can reform energies and redirect resources to create sustainable value for companies, customers, employees, shareholders and for management. Grant (1996)³ found that EVA concept might have everlastingly changed the way real profitability is measured. EVA is a financial tool that focuses on the difference between company's after tax operating profit and its total cost of capital. Luber (1996)⁴ confirmed that a positive EVA over a period of time will also have an increasing MVA while negative EVA will bring down MVA as the market loses confidence in the competence of a company to ensure a handsome return on the invested capital.

Banerjee (1997)⁵ has conducted an empirical research to find the superiority of EVA over other traditional financial performance measures. ROI and EVA have been calculated for sample companies and a comparison of both showing the superiority of EVA over ROI. Ethiraj (1998)⁶ derived those stock prices moves up as a company adopts EVA as an internal performance criterion. KPMG - BS study (1998)⁷ assessed top 100 companies on EVA, Sales, PAT and MVA criteria. The Survey has used the BS - 1000 list of companies using a composite index comprising sales, profitability and compounded annual growth rate of those companies covering the period 1996-97. Sixty companies have been found able to create positive Shareholder Value whereas 38 companies have been found to destroy it. Anand, et al (1999)⁸ revealed that EVA and MVA are better measures of business performance than NOPAT and EPS in terms of shareholders' value creation and competitive advantage of a firm. Bao and Bao (1999)⁹ revealed that the EVA is positively and significantly correlated with the firm value. Harihar (1999)¹⁰ highlighted some myths regarding EVA. According to him, EVA calculations are not simple and need a lot of adjustments in the financial books. Further, EVA figures can be manipulated to suit the needs of management. Thenmozhi (1999)¹¹ compared EVA with some other traditional measure of corporate performance viz. ROI, EPS, RONW, ROE, ROCE etc. She has referred to some of the shortcomings of the concept of EVA but maintain that EVA is a better measure of corporate performance. Banerjee (2000)¹² attempted to find out whether Market Value of Firm is the function of current operational Value (COV) and Future Growth Value (FGV). Based on the analysis of his data he comes to the conclusion that in many cases there was a considerable divergence between MVA and the sum total of COA and FGV.

Riceman, et al (2002)¹³ argued that EVA is a performance measure that is being used by an increasing number of companies, but academic research on EVA is limited. Mangala and Simpy (2002)¹⁴ discussed the relationship between EVA and Market Value among various companies in India. The results of the analysis confirm Stern's hypothesis and concluded that the company's current operational value was more significant in contributing to change in market value of share in Indian context. Bardia (2002)¹⁵ revealed that in a dynamic environment, a common investor finds it increasingly difficult to monitor his investments. EVA guides investors in evaluating the performance of the company and monitoring their investments. Stern, Joel (2003)¹⁶ presented the results of Stern Stewart's research on Indian companies, which shows considerable need to improve the wealth creation performance and allocation of capital in the Indian economy. They explained how the effective implementation of the EVA framework could be a solution to address this problem. Balachandran and Sriram (2005)¹⁷ made an attempt to study the value created for the shareholders of the company. They used to determine the relationship between Economic Value Added and dividend paid to the shareholders. The study revealed that the company had utilized the dividend-paying fund ploughing back into the business. The company was very conservative in declaring dividend and always had long-term objective of creating wealth to the shareholders, which has been achieved. Ali M Ghanbari and Narges Sarlak (2006)¹⁸ empirically reviewed the trend of EVA of Indian Automobile Companies. The results indicate that there was a significant increasing trend in EVA during the period of study and the firms in the automobile industry are moving towards the improvement of their firm's value.

Manorselvi and Vijayakumar (2007) in their study revealed that the traditional measures of performance do not reflect the real value addition to shareholders wealth and EVA has to be explained shareholders value addition. Vijayakumar (2008) empirically indicated that Net Operating Profit After Tax (NOPAT) and Return on Net Worth (RONW) are the most significant variables with MVA followed by EVA and EPS. Soral and Shurveer (2009) revealed that EVA has found to have

significant correlation with operating margin. Vijayakumar (2010), in his study supports the hypothesis of Stern and Stewart's that MVA of firm was largely positively associated with EVA in all the selected sectors of Indian Automobile industry. It appears that the concept of EVA, as an emerging concept of financial management is fairly clear in the minds of almost all these researchers whose studies have been reviewed above. In a fast changing business environment, the investor friendly financial performance measures may be the need of hour.

Market Value Added (MVA)

While EVA measures shareholder value addition of firm in terms of its real economic performance, MVA measures market's assessment of firm's value. MVA thus measures value by the management over and above the capital invested in the company by investors.

Market Value Added (MVA) = Market value of company - Capital employed

For a public limited company, its market value is calculated as market value of its equity (number of shares outstanding times their share price) plus book value of debt (since market value of debt is generally not available). Capital employed is effectively the book value of investments in the business made-up of debt and equity. Effectively, the formula becomes

Market Value Added (MVA) = Market value of equity - Book value of equity

These items have been obtained from balance sheet statement of companies. Data for the market price existing on the close of financial year has been collected from the Economic Times, CMIE Prowess and Capitaline databases.

Sampling Selection

Keeping in view the scope of the study, it is decided to include all the companies under automobile industry working before or from the year 1996-97 to 2008-09. There are 26 companies operating in the Indian automobile industry. But, owing to several constraints such as non-availability of financial statements or non-working of a company in a particular year etc., it is compelled to restrict the number of sample companies to 20. Out of 20 selected companies under Indian Automobile Industry, three Multinational Companies (MNC's) namely Hyundai Motors India Ltd, Honda SIEL Cars India Ltd and Ford India Private Ltd were omitted because these companies established their operations in India in different accounting years. The companies under automobile industry are classified into three sectors namely; Commercial vehicles, Passenger cars and Multi-utility vehicles and Two and three wheelers. For the purpose of the study all the three sectors have been selected. It accounts for 73.23 per cent of the total companies available in the Indian automobile industry. The selected 20 companies include 5 under commercial vehicles, 3 under passenger cars and multi-utility vehicles and 9 under two and three wheeler sectors. It is inferred that sample company represents 98.74 percentage of market share in commercial vehicles, 79.76 percentage of market share in passenger cars and Multi-utility vehicles and 99.81 percentage of market share in two and three wheelers. Thus, the findings based on the occurrence of such representative sample may be presumed to be true representative of automobile industry in the country.

The study is mainly based on secondary data. The major source of data analysed and interpreted in this study related to all those companies selected is collected from "PROWESS" database, which is the most reliable on the empowered corporate database of Centre for Monitoring Indian Economy (CMIE). Besides prowess database, relevant secondary data have also been collected from BSE Stock Exchange Official Directory, CMIE Publications, Annual Survey of Industry, Business newspapers, Reports on Currency and Finance, Libraries of various Research Institutions, through Internet etc.

MVA Analysis

MVA is one of the external indicators which give the utmost satisfaction to the investors. From the investor's perspective, increase of the share price is always desirable. The most reliable measure of a management's long term success in adding value is known as "Market Value Added". Hence, it turns out to be very significant and important to analyse the MVA of selected companies during the study period. The present part of analysis examines in detail the MVA of sample companies. A ranking has been done with respect to MVA. Various statistical measures like mean, standard deviation, range, variance, skewness and kurtosis have been computed to understand the central tendency and dispersion of MVA of sample companies. Further Karl Pearson's correlation model has been adopted to establish the relationship between EVA and MVA. Eight variables have been selected which signify the wealth maximisation. Factor analysis has been done to test which among these variables contribute much towards maximizing shareholders wealth. The regression models were run to investigate the strength of relationship between the market value and each of the independent variables. Multiple regression models have been carried out to find out the extent of relationship between dependent variable (MVA) with the selected financial variables.

MVA based frequency distribution of sample companies has been displayed in Table 1. Looking at the Table 1 it is inferred that around 6 per cent to 23.5 per cent of the sample companies have registered negative MVA during the year 1996-97 to 2007-08. However, in the terminal year 2008-09, around 53 per cent of companies (9 out of 17) registered negative MVA. Around 29 per cent to 59 per cent of sample companies are generating positive MVA, but it has been up to 50 crores. About 6 per cent to 35 per cent of the sample companies reported MVA of over Rs.250 crores to Rs.500 crores and around 12 per cent to 41 per cent of the sample companies reported MVA of above Rs.1000 crores during the study period.

Trends in MVA Based Rankings.

Trends in MVA of sample companies (year-wise rankings) and trends in MVA of top five and last five of the sample companies are presented in Table 2 and Table 4. The top five companies include Tata Motors Ltd (under commercial vehicles sector), Maruti Udyog Ltd, Mahindra and Mahindra Ltd (passenger cars and multiutility vehicles sector), Bajaj Auto Ltd and Hero Honda Motors Ltd (two and three wheelers sector). In eight out of thirteen years, Maruti Udyog Ltd and five out of thirteen years Tata Motors Ltd have been holding the first rank. However, in the terminal year 2008-09, Tata Motors Ltd MVA performance is quite discouraging. Among the last five companies includes Ashok Leyland Ltd belongs to commercial vehicles sector and Majestic Auto Ltd, Scooters India Ltd, Kinetic Engineering Ltd and Kinetic Motor Company Ltd belongs to two and three wheelers sector.

Results and Discussion on Statistical Analysis of MVA

Different statistical measures have been computed for understanding the central tendency and dispersion of MVA of sample companies. Company-wise statistical analysis of MVA is computed and presented in Table 3. It is observed from the table that all the selected companies except Ashok Leyland Ltd (94 per cent) have registered positive mean MVA, whereas Tata Motors Ltd stands first in the list with the higher average followed by Maruti Udyog Ltd, Mahindra and Mahindra Ltd, Bajaj Auto Ltd and Hero Honda Motors Ltd. The values of range show the high volatility in MVA and that of standard deviation and variance display the variation scale from central tendency and dispersion. Sixty five per cent of sample companies (11 out of 17) have their MVA positively skewed and forty seven per cent of sample companies (8 out of 17) indicate positive kurtosis reflecting that observations cluster more and with longer tails.

Regression Analysis of selected financial variables

Multiple Regression Analysis has been carried out to explore the extent of relationship existed among dependent and independent variables in case of Indian automobile industry, and also to find out whether a particular independent variable emerges as the most explanatory variable. MVA is taken as the dependent variable and ROCE, Sales, ROS, EPS, ROTA, MP and PAT are taken as the independent variables. The results of multiple regression analysis are presented in Table 5 to Table 7. It is evident from Table 5 that the values of correlation coefficient are coming down and that of the adjusted R-square are going up till the 5th model is reached where the estimated standard error is also minimum. This explains that Sales, EPS and PAT are the best explanation of MVA of Indian automobile industry during the study period. The 6th model reveals that both the coefficients of correlation and adjusted R-Square have bared the sliding trends in their values. The Durbin- Watson model rules out any positive auto-correlation between the dependent and independent variables. The Table 6 presents the results of ANOVA analysis. The F- Statistics found that the value of the residual is the minimum in 5th model and 6th model supporting the observation of Table 6 and Table 7 the values are tested significant through F-Statistics even at 1 per cent level of significance. Table 13 is concerned to come across the most explanatory independent variable or set of variable of MVA in Indian automobile industry. Tested with t-statistics, the table transports that PAT is found significant if tested at 11.8 per cent level where as EPS and sales are observed quite significant even at 1 per cent level of significance. On the whole, Tables 5 to 6 fling beam on single one most significant variable i.e., EPS, Sales and PAT where in PAT stands third and Sales is the best one.

Conclusion

The results of the study showed that 53 per cent to 76 per cent of the sample companies have registered negative EVA during the terminal years of the study period. The top five companies in generating EVA include Bajaj Auto Ltd, Hero Honda Motors Ltd (two and three wheelers sector), Mahindra and Mahindra Ltd (passenger cars and multiutility vehicles sector), Ashok Leyland Ltd and Tata Motors Ltd (commercial vehicles sector). Further, the trends in MVA of sample companies showed Tata Motors Ltd (commercial vehicles sector), Maruti Udyog Ltd, Mahindra and Mahindra Ltd (passengers cars and multiutility vehicles), Bajaj Auto Ltd and Hero Honda Motors Ltd (two and three wheelers sector) are the top in the list. All the selected companies except Ashok Leyland Ltd have registered positive MVA, whereas Tata Motors Ltd stands first in the list with the higher average. Further, correlation analysis showed that EVA and MVA have been associated negatively in 65 per cent companies (11 out of 17) during the study period. The results of multiple regression analysis showed that sales, EPS and PAT are the best explanation of MVA of Indian automobile industry during the study period.

Table 1 : MVA Frequency Distribution of Sample Companies (1996-97 to 2008-09)

MVA	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Negative	1 (5.9)	2 (11.8)	-	1 (5.9)	2 (11.8)	1 (5.9)	1 (5.9)	-	1 (5.9)	3 (17.6)	3 (17.6)	4 (23.5)	9 (52.9)
Up to Rs.250 Cr	7 (41.1)	7 (41.1)	10 (58.8)	8 (47.0)	8 (47.0)	9 (52.9)	7 (41.1)	7 (41.1)	7 (41.1)	5 (29.4)	7 (41.1)	9 (52.9)	6 (35.3)
Rs.250 Cr to Rs.500 Cr	3 (17.6)	3 (17.6)	2 (11.8)	2 (11.8)	2 (11.8)	1 (5.9)	2 (11.8)	3 (17.6)	2 (11.8)	6 (35.3)	4 (23.5)	1 (5.9)	-
Rs.500 Cr to Rs.1000 Cr	2 (11.8)	1 (5.9)	-	2 (11.8)	1 (5.9)	-	2 (11.8)	-	3 (17.6)	1 (5.9)	-	1 (5.9)	-
Above Rs.1000 Cr	4 (23.5)	4 (23.5)	5 (29.4)	4 (23.5)	4 (23.5)	6 (35.3)	5 (29.4)	7 (41.1)	4 (23.5)	2 (11.8)	3 (17.6)	2 (11.8)	2 (11.8)
Total	17 (100)	17 (100)	17 (100)	17 (100)	17 (100)	17 (100)	17 (100)	17 (100)	17 (100)	17 (100)	17 (100)	17 (100)	17 (100)

Figures in brackets denote percentage to total. Source : Computed.

Table 2 : Trends in MVA (Year-wise)

Company	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Ashok Leyland Ltd	6	7	5	6	5	5	10	5	17	15	16	15	15
Tata Motors Ltd	1	3	7	4	4	4	6	7	1	1	1	1	17
Bajaj Tempo Ltd	7	9	8	8	8	9	8	8	10	4	8	11	12
Eicher Motors Ltd	16	14	10	11	11	8	9	9	6	6	6	7	4
Swaraj Mazda Ltd	14	13	12	13	13	12	11	10	9	8	7	6	8
Hindustan Motors Ltd	13	16	17	17	17	17	7	13	8	3	4	4	6
Mahindra and Mahindra Ltd	4	5	4	5	6	7	5	4	2	2	2	2	2
Maruti Udyog Ltd	2	1	1	1	1	1	1	1	3	17	17	16	1
Bajaj Auto Ltd	3	2	2	3	3	3	2	3	5	7	5	9	14
LML Ltd	8	6	9	9	9	10	12	12	11	10	9	5	3
Maharashtra Scooters Ltd	12	10	11	12	14	11	13	11	13	9	10	10	11
TVS Motor Company Ltd	9	8	6	7	7	6	4	6	7	5	15	3	13
Kinetic Motor Company Ltd	10	11	13	10	10	13	14	15	12	11	12	8	5
Hero Honda Motors Ltd	5	4	3	2	2	2	3	2	4	16	3	17	16
Kinetic Engineering Ltd	11	12	14	14	12	14	15	16	15	12	13	13	10
Majestic Auto Ltd	15	15	16	15	15	15	16	14	14	14	14	14	9
Ashok Leyland Ltd	17	17	15	16	16	16	17	17	16	13	11	12	7

Source : Computed.

Table 3 : Company-wise statistical analysis of MVA

Company	Mean	SD	CV	CAGR	Variance	Skewness	Kurtosis	Max.	Min.
Ashok Leyland Ltd	-84.28	1465.73	-17.39	22.07	2148356	-0.53	0.64	2468.99	-3234.77
Tata Motors Ltd	7697.11	9728.89	1.26	4.04	94651370	1.16	0.80	29814.51	-4234.95
Bajaj Tempo Ltd	231.53	159.31	0.69	-9.55	25378	-0.70	2.14	519.06	-146.10
Eicher Motors Ltd	196.44	179.53	0.91	21.58	32232.14	1.06	1.02	620.32	12.44
Swaraj Mazda Ltd	141.42	125.81	0.89	0.97	15828.99	0.36	-1.99	306.09	21.88
Hindustan Motors Ltd	196.96	252.26	1.28	8.71	63637.58	0.64	-1.16	664.39	-84.34
Mahindra and Mahindra Ltd	4604.43	5275.99	1.15	9.99	27836041	1.28	0.05	15304.25	417.72
Maruti Udyog Ltd	6420.60	6750.5	1.05	-2.34	5E+07	-1.00	-0.49	14145	-6021
Bajaj Auto Ltd	3486.52	3232.30	0.93	-27.14	10447752	0.31	-1.08	9212.27	-786.10
LML Ltd	183.25	86.20	0.47	-1.96	7430.24	0.20	-0.52	343.08	40.16
Maharashtra Scooters Ltd	77.43	86.99	1.12	8.90	7566.73	-0.09	1.55	252.59	-109.97
TVS Motor Company Ltd	499.57	750.65	1.50	9.59	563474.20	0.20	0.40	1800.73	-755.82
Kinetic Motor Company Ltd	73.63	41.52	0.56	-1.60	1723.60	0.86	-0.89	146.01	33.80
Hero Honda Motors Ltd	2404.70	3831.54	1.59	13.54	14680683	0.11	-0.34	9662.88	-3587.26
Kinetic Engineering Ltd	29.43	27.35	0.93	-5.46	748.14	-1.48	5.19	74.89	-45.81
Majestic Auto Ltd	17.64	13.65	0.77	-0.31	186.22	-0.11	-0.21	39.32	-7.3
Scooters India Ltd	20.08	32.55	1.62	14.87	1059.40	0.90	-0.38	86.74	-17.27

Source : Computed.

Table 4 : Ranking based on thirteen years average of MVA - comparison (Top 5 Companies and Last 5 Companies)

MARKET VALUE ADDED			
Top Five Companies	Mean Value (Rs. in Crores)	Last Five Companies	Mean Value (Rs. in Crores)
Tata Motors Ltd	7697.11	Ashok Leyland Ltd	-84.28
Maruti Udyog Ltd	6420.60	Majestic Auto Ltd	17.64
Mahindra and Mahindra Ltd	4604.43	Scooters India Ltd	20.08
Bajaj Auto Ltd	3486.52	Kinetic Engineering Ltd	29.43
Hero Honda Motors Ltd	2404.70	Kinetic Motor Company Ltd	73.63

Source : Computed.

Table 5 : MVA and other independent variables - Model Summary (Whole Industry)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1.	.600 ^a	.360	.339	3312.12	
2.	.600 ^b	.360	.342	3304.38	
3.	.600 ^c	.360	.345	3296.78	
4.	.600 ^d	.359	.348	3289.43	
5.	.599 ^e	.359	.350	3282.24	
6.	.593 ^f	.352	.346	3293.25	.940

- a. Predictors: (Constant), ROCE, SALES, ROS, EPS, ROTA, MP, PAT
- b. Predictors: (Constant), SALES, ROS, EPS, ROTA, MP, PAT
- c. Predictors: (Constant), SALES, EPS, ROTA, MP, PAT
- d. Predictors: (Constant), SALES, EPS, ROTA, PAT
- e. Predictors: (Constant), SALES, EPS, PAT
- f. Predictors: (Constant), SALES, EPS
- g. Dependent Variable: MVA

Source : Computed.

Table 6 : MVA and other independent variables - ANOVA (Whole Industry)

Model	Sum of Squares	df	Mean Square	F	Sig.
1. Regression	1.312E9	7	1.874E8	17.086	.000 ^a
Residual	2.337E9	213	1.097E7		
Total	3.649E9	220			
2. Regression	1.312E9	6	2.187E8	20.027	.000 ^b
Residual	2.337E9	214	1.092E7		
Total	3.649E9	220			
3. Regression	1.312E9	5	2.624E8	24.141	.000 ^c
Residual	2.337E9	215	1.087E7		
Total	3.649E9	220			
4. Regression	1.311E9	4	3.279E8	30.301	.000 ^d
Residual	2.337E9	216	1.082E7		
Total	3.649E9	220			
5. Regression	1.311E9	3	4.370E8	40.561	.000 ^e
Residual	2.338E9	217	1.077E7		
Total	3.649E9	220			
6. Regression	1.284E9	2	6.422E8	59.211	.000 ^f
Residual	2.364E9	218	1.085E7		
Total	3.649E9	220			

Source: Computed

- a. Predictors: (Constant), ROCE, SALES, ROS, EPS, ROTA, MP, PAT
- b. Predictors: (Constant), SALES, ROS, EPS, ROTA, MP, PAT
- c. Predictors: (Constant), SALES, EPS, ROTA, MP, PAT
- d. Predictors: (Constant), SALES, EPS, ROTA, PAT
- e. Predictors: (Constant), SALES, EPS, PAT
- f. Predictors: (Constant), SALES, EPS
- g. Dependent Variable: MVA

Table 7 : MVA and other independent variables coefficients (Whole Industry)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
		B	Std. Error	Beta			
1.	(Constant)	124.091	293.846		.422	.673	
	EPS	19.065	3.910	.289	4.876	.000	
	SALES	.472	.096	.606	4.910	.000	
	PAT	-1.835	1.272	-.183	-1.443	.151	
	MP	.264	1.322	.015	.200	.842	
	ROS	-.664	5.939	-.006	-.112	.911	
2.	(Constant)	123.714	292.896		.422	.673	
	EPS	19.072	3.894	.289	4.898	.000	
	SALES	.471	.096	.605	4.922	.000	
	PAT	-1.835	1.269	-.183	-1.446	.150	
	MP	.266	1.317	.015	.202	.840	
	ROS	-.638	5.861	-.006	-.109	.913	
3.	(Constant)	122.627	292.052		.420	.675	
	EPS	19.022	3.858	.288	4.930	.000	
	SALES	.473	.095	.607	4.974	.000	
	PAT	-1.845	1.262	-.184	-1.461	.145	
	MP	.256	1.311	.014	.196	.845	
	ROTA	-2.090	8.274	-.015	-.253	.801	
4.	(Constant)	149.254	257.820		.579	.563	
	EPS	18.983	3.844	.287	4.938	.000	
	SALES	.475	.094	.610	5.042	.000	
	PAT	-1.778	1.213	-.178	-1.466	.144	
	ROTA	-1.861	8.173	-.013	-.228	.820	
	5.	(Constant)	151.220	257.111		.588	.557
EPS		18.779	3.731	.284	5.034	.000	
SALES		.478	.093	.614	5.139	.000	
PAT		-1.844	1.175	-.184	-1.570	.118	
6.		(Constant)	207.417	255.463		.812	.418
		EPS	19.531	3.712	.296	5.261	.000
	SALES	.349	.044	.448	7.976	.000	

Dependent Variable : MVA

Source : Computed.

REFERENCES

Stem Stewart (1990). "One way to build value in your firm. Executive compensation", *Financial executive*, pp. 51-54. | Kusum L. Ailawadi, Norm Borin and Paul W.Fan-is (1995). "Market power and performance: A cross -Industry Analysis of manufacturers and Retailers", *Journal of Retailing*. Vol. 71 (3), pp. 211-245. | Uyemura, Kantor and Pettit, Justin (1996). "EVA for bank value creation: risk management and profitability measurement" *Journal of Applied Corporate Finance*, Vol. 9(2), p.94. | Luber, R.B. (1996). "Who are the real wealth creators", *Fortune*, pp. 2-3. | Dodd, James, L. and Chen Shimin (1996). "EVA: A new Panacea?", *Business and Economic Review*. Vol. 42, pp. 26-28. | Grant, J. (1996). "Foundation of EVA for Investment Management: Just in Time, EVA", *Journal of Financial Management*. Vol. 23(1), pp. 41-45. | Lehn, K., and Makhija, A.K. (1996). "EVA and MVAs as performance measures and signals for strategic change", *Strategy and Leadership*. Vol. 24, p. 35. | O'Byrne, S. (1996). "EVA and Market Value", *Journal of Applied Corporate Finance*, Vol. 9(1), pp. 116-125. | Stephan F. O'Byrne (1997). "EVA and Shareholder Return", *Financial Practice and Education -Spring / Summer*, pp. 50-54. | Banerjee, Ashok (1997). "Economic Value Added (EVA): A Better performance measure". *The Management Accountant*, pp. 886-88. | Bacidore, J.M., Boquist, J.A., Milbourn, T.T., and Thakor, A.V. (1997). "The search for the best financial performance measure". *Financial Analysis Journal*, Vol. 53(3), pp. 11-20. | Lehn, K. and Makhija, A. (1997). "EVA accounting profits and CEO Turnover: An empirical examination, 1985-1994", *Journal of Applied Corporate Finance*. Vol. 10(2), pp.90-97. | Telaranta (1997). "Economic Value Added as a management tool", *Journal of Accounting and Finance*, p. 12. | Kramer, J.K. and Pushner, G. (1997). "An empirical analysis of economic value added as a proxy for market value added", *Financial Practice and Education*, pp. 41-48. | Biddle, G. C., Bowen and Wallace, J.S. (1997). "Does EVA beat Earnings? Evidence on associations with stock returns and firm values", *Journal of Accounting and Economics*, Vol. 24(3), pp.301-336. | KPMG-BS (1998). "Corporate India: An Economic value scoreboard". *The Strategy*. PP.22-25. | Chen, S. and Dodd, J.L. (1998). "Usefulness of Operating Income, Residual Income and EVA: A value relevance perspective", Working paper. Clarion University and Drake University. | Banerjee, Ashok and Jain (1999). "Economic value added and Shareholder wealth: An empirical study of relationship", *Paradigm*, Vol.3 (1), pp.99-135. | Bao, B.H., and Bao, D.H. (1999). "The Association between Firm value and Economic Value Added", *Indian Accounting Review*, Vol. 3(2), pp.161-64. | Evans. John (1999). "An examination of Economic Value Added and Executive Compensation", at <http://www.v.40wdubai.ac.in>. | Banerjee, Ashok (1999). "Economic Value Added (EVA): A better performance measure", *The Management Accountant*, Vol.32 (2), pp.89-93. | Bhattacharyya, K. Ashish and Phani, B.V. (2002). "Economic Value Added: In search of relevance", *Decision*, Vol. 27(2). | Kumar, A. Vinay and Kaur, N. Mohinder (2000). "Executive compensation and corporate performance: An EVA approach", *South Asian Journal of Management*, Vol.9 (3), pp. 12-20. | Banerjee, Ashok (2000). "Linkage between Economic value added and market value: An analysis", *Vikalpa*, Vol. 25(3), pp. 23-36. | Oral Erdogan, Niyazi Berk and Krol Katir Cioglu (2000). "The Economic profit approach in firm performance measurement -Evidence from the Turkish Stock Market", *Russian and East European Finance and Trade*, Vol. 36(5), pp.54-75. | Parasuraman, N.R. (2000). "Economic value added -Its computation and Impact on select banking companies". *The ICFAI Journal of Applied Finance*, Vol. 6, pp. 14-23. | Jonathan K.Kramer and Jonathan R.Peters (2001). "An Inter Industry Analysis of Economic Value Added as a proxy for Market Value Added", *Journal of Applied Finance*, pp. 41-48. | Pablo Fernandez (2001). "Shareholders value creation". *The ICFAI Journal of Applied Finance*, Vol.9 (3), pp. 168-180. | Thampy, A. and Beheli, R., (2001). "Economic value added in Banks", *The ICFAI Journal of Applied Finance*. Vol.7 (1), pp. 180-189. | Manoj, Anand (2002). "Corporate Finance Practices in India: A survey", *Vikalpa*, Vol. 27 (4). | Dyal, Bhatnagar and Chandra Sekar (2002). "In search of a potent measure of financial performance among Indian industries", www.jimsindia.org. | Adnan M.Abdene, Haight, G.T. (2002). "A Fresh look at economic value added: Empirical study of the fortune five -hundred companies", *The Journal of Applied Business Research*, Vol. 18(2). | Eduardo Sandoval (2002). "Financial performance measures and shareholders' value creation: An Empirical Study for Chilean Companies", *The Journal of Applied Business Research*, Vol.17 (3), pp.206-225. | Cyrus A.Ramezani, Luc Soenen and Alan Jung (2002). "Growth, Corporate profitability, and value creation", *Financial Analyst Journal*, pp. 56-65. | Niranjan Swain and Chandra Sekar Mishra (2002). "Economic value added -concepts and cases", *The ICFAI Journal of Applied Finance*, pp. 1012-1020. | Michael L.Costigan, Linda Lovata (2002). "Empirical Analysis of Adopters of Economic value added". *Management Accounting; Research*, Vol. 13(2), pp. 676-682. | Mangala, Deepa and Joura Simpy (2002). "Linkage between economic value added and market value: An analysis in Indian context", *Indian Management Studies Journal*, pp. 55-65. | Bhata and Dayal Bhat Nagar (2003). "EVA for comparison among companies of different industries", *The ICFAI Journal of Applied Finance*, Vol. XXII (3), pp.36-42. | Manor Selvi, A. and Vijayakumar, A. (2007). "Performance of Indian Automobile Industry: Economic Value Added Approach", *Management and Labour Studies*, Vol. 32(4), pp. 451-467. | Ali M.Ghanbari,More, V.S (2007). "The relationship between economic value added and market value added: An empirical analysis in Indian automobile industry". *The ICFAI Journal of Accounting Research*, Vol. 6(3), pp.7-22. | Desiraju Venkata Ramana (2007). "Economic value added and other accounting performance indicators: An empirical analysis of Indian companies", *ICFAI Journal of Accounting, Research*, Vol.6 (2), pp. 7-20. | Vijayakumar, A. (2008). "Linkage between Market Value Added (MVA) and other Financial variables: An analysis in Indian Automobile Industry", *Management and Labour Studies*, Vol. 33(4), pp. 504-521. | Mittal, R.K., Neena Sinha and Archana Singh (2008). "An analysis of Linkage between economic value added and corporate social responsibility", *Management Decision*, Vol.46 (9), pp. 1437-1443. | Vijayakumar, A. (2010). "Economic Value Added (EVA) and Market Value Added (MVA)-An empirical study of relationship". *College Sadhana*, Vol.2(2), pp.141-148.



Sara Publishing Academy
Indian Journal Of Applied Research
Journal for All Subjects



Editor,
Indian Journal Of Applied Research
8-A, Banans, Opp. SLU Girls College,
New Congres Bhavan, Paldi, Ahmedabad-380006.
Contact.: +91-9824097643 E-mail : editor@ijar.in

Printed at Unique Offset, Novatsing Rupam Estate, Opp. Abhay Estate, Tavdipura, Shahibaug, Ahmedabad