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# Editorial

It gives me immense pleasure to present before you Vol.VII, No. 1 of Business Spectrum, the peer reviewed and UGC listed e-Journal of IAA South Bengal (Midnapore) Branch. Although we are late, we are picking up and the gap would be narrowed by the next issue. This time we have accommodated five quality articles on different areas of business.

Dr. Anish Kumar Dan in his article on 'Variance in Decision Making in Balanced Scorecard Perspectives - An Empirical Study of Two Industries in India' has mentioned the new strategic corporate performance management tool – Balanced Scorecard and made an evaluation of the present age companies on the basis of their ability to create future value through investment in customers, suppliers, employees, procedures, technology and innovation along with the usual financial analysis.

Professor Samir Ghosh and Dr. Nirmal Chakraborty in their article on 'Working Capital Management in a Pharmaceutical Company, Lupin Ltd.- An Empirical Study' have documented **a**n inverse relationship between liquidity and profitability and a positive relationship between profitability and efficiency for the sample company.

Mrs. Jaba Rani Patta in her article on 'A Comparative Study on Working Capital Management between Profit-Making and Loss-Making FMCG Companies in India' has observed that for both profit-making and loss-making FMCG companies, receivables collection period and debt ratio has significant and negative impact on profitability, but for profit-making companies current assets turnover has significant positive impact on profitability whereas for loss-making companies current assets to total assets ratio and size have significant and positive impact on profitability.

Dr. Santanu Bisai in his article on 'Socio-economic Status of Women Members of SHGs in the Regions of Drought-Prone Districts of West Bengal' has observed that the formation of SHGs and flow of microfinance have made the women of backward and poor community economically strong.

Srirupa Ray in her article on 'Research Perspectives on Corporate Social Responsibility - A Review of Literature' has discussed the studies already made in the field of corporate social responsibility and mentioned the scope for future research in the area.

Before I conclude I profusely thank all the contributors and Reviewers, Desk Editor and Executive Editor for their hearty co-operation in bringing out this volume of Business Spectrum.

**Professor Samir Ghosh**

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

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**Abstract**

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

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

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

## I. Introduction

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

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

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

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

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

I. ***Financial Perspective:***

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

II. ***Customer Perspective:***

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

III. ***Internal Business Process Perspective:***

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

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

IV. ***Learning and Growth Perspective:***

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

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

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

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

## II. Literature review and Research gap

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## III. Objectives and methodology

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

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

More *specifically* the study will attempt to: -

i) Identify the role of Balanced Scorecard (BSC) as a measure of corporate performance as well as a management tool for improvement of performance;

ii) Justify the applicability of BSC to boost up the severity of framing up a tool for corporate performance measurement and management;

iii) Search for the practice, if any, of BSC in two specified industries in India;

iv) Suggest ways and means to bring about improvement in the corporate measurement process.

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

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

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

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

| | | |
|---|---|---|
| Null Hypothesis ($H_0$) | = | There is no significant variation in decision criteria across firms due to industry variance [$\sigma_1^2 = \sigma_2^2$]. |
| Alternative Hypothesis ($H_1$) | = | Significant variation is seen in decision criteria across firms on the ground of industry variance [$\sigma_1^2 > \sigma_2^2$]. |

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

## IV. Data analysis and findings

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

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

**Table 1: Size of Sample Companies**

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

Source: Calculated by the author

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

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

**Table 2: Use of Performance Measurement Tools**

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

Source: Calculated by the author

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

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

**Table 3: Necessity of use of Performance Measurement Tools**

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

Source: Calculated by the author

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

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

**Table 4: Perspectives of Performance Measurement and Management**

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

Source: Calculated by the author

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

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

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

Source: Calculated by the author

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

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

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

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

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

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **FMCG** | 0 | *0* | 2 | *12.5* | 14 | *87.5* | 0 | *0* | 0 | *0* | 0 | *0* |

Source: Calculated by the author

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

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

**Table 6A: Specific Performance Indicators under Financial Perspective**

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

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Growth rate in tangible assets | 2.7 | 4.38 | 0.571 | 0.719 | 1.6044 | 15,19 | *2.2341* | $\sigma_1^2 = \sigma_2^2$ |

Source: Calculated by the author

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

**Table 6B: Specific Performance Indicators under Customers' Perspective**

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

Source: Calculated by the author

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

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

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

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

Source: Calculated by the author

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

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

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

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

Source: Calculated by the author

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

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

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

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

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

## V. Conclusions and Limitations

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

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

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

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

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

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

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

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

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

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

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

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

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

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# WORKING CAPITAL MANAGEMENT IN A PHARMACEUTICAL COMPANY, LUPIN LTD. -- AN EMPIRICAL STUDY

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**Abstract**

An efficient working capital management is a vital component of success and survival for small and growing business. The objectives of this study are to examine the impact of working capital management of Lupin Ltd. on profitability, efficiency and overall performance of the company during the period 1999-2000 to 2013-14. From ratio analysis we had not found any definite trend of liquidity, profitability and efficiency. In factor analysis, gross profit ratio, current ratio and inventory ratio were found to be principal factor of profitability, liquidity and efficiency respectively of the selected company during the study period. An inverse relationship between liquidity and profitability and a positive relationship between profitability and efficiency was observed from the regression result.

***Key words:*** *Liquidity, Profitability, Efficiency, Working Capital Management.*

## 1. Introduction:

Working capital means the amount of capital which is required for day to day normal operation of an organization. It is used for running the main operating activities of the concern. For maintaining continuity in main operating activities, a firm has to invest a part of its capital in current assets. It has also to use another part of capital for meeting its current liabilities. It helps by creating income of the firm in an accounting period by means of a recurring rotation of the current assets and current liabilities. The working capital management plays an important role,

for success or failure of firm in business because of its effect on firm's profitability as well as on liquidity.

The basic theme of working capital management is to provide adequate support for smooth and efficient functioning of normal day to day business operation by striking a trade off among the three proportions of working capital, liquidity, profitability and risk. In the present environment of cut throat competition business does not have any other alternative, than cutting the cost of its operations in order to be competitive as well as financially strong. It is in this connection that effective management of working capital plays a vital role.

Academicians are sharply divided into two schools of thought. According to one school of thought, "Working capital is not a factor of improving profitability and there may be a negative relationship between them" whereas the other school of thought argues that "Investment in working capital plays a vital role to improve corporate profitability and unless there is a minimum level of working capital, output and sales cannot be maintained". They argue that inadequacy of working capital keeps fixed assets inoperative.

In fact the relationship between working capital and profitability is still a debatable issue, further more only a few studies on pharmaceutical industry in connection with examining, the relationship among working capital, liquidity, profitability, and efficiency have been carried out in India in the recent past. Apparently a large number of considerations play a vital role in the development of arguments and counter arguments in this regard. In this backdrop of this academic debate an attempt has been made to evaluate the interrelationship among working capital management, liquidity, profitability and efficiency of Lupin Ltd. during the period 1999-2000 to 2013-14.

## 2. Profile of Lupin Ltd.

Lupin Ltd. is among the top five pharmaceutical companies in India. Lupin Ltd. is dedicated to delivering high-quality, branded and generic medications trusted by healthcare professionals and patients across geographies. It's headquarter is in Mumbai, India. The company is strongly research focused. It has a program for developing new chemical entities. The company has a state-of-the-art R&D center in Pune and is a leading global player in Anti-TB, Cephalosporins (anti-infectives) and Cardiovascular drugs (ACE-inhibitors and cholesterol reducing agents) and

has a notable presence in the areas of diabetes, anti-inflammatory and respiratory therapy. The company has been earning profit since 1999-2000 continuously. For the financial year ended 31st March 2014, Lupin's consolidated turnover and profit after tax were Rs. 8939.38 crore and Rs. 2324.22 crore respectively.

3. **Literature Review:** A few articles had studied on different issues of working capital management and their impact on profitability, efficiency etc.

**Gill. A & Biger. N (2010)** in their article, **"The relation between working capital management and Profitability: Evidence from the United States",** published in 'Business and Economics Journal' vol. 2010, BEJ-10 had tried to find out a relationship between working capital management and profitability. A sample of 88 American firms listed on New York Stock Exchange for a period of three years from 2005-2007 was selected. They found statistically significant relation between the cash conversion cycle and profitability measure through gross operating profit. It follows that managers can create profit for their companies by handling correctly the cash conversion cycle and keeping accounts receivables at an optimum level.

**Danuletiu, Adina Elena (2010)** in her article, **"Working Capital Management and Profitability: A case study of Alba county companies",** published in Annales Universitatis Apulensis Series oeconomica, vol. 12(1) pp 364-374 examined the relation between the working capital management and profitability by using Pearson correlation analysis and using a sample of 20 annual financial statements of companies, covering the period 2004-2008. She had concluded that there is a weak negative linear correlation between working capital management indicators and rate of profitability.

**H. Jamal Zubairy (2010)** in his article, **"Impact of Working Capital Management and Capital Structure on Profitability of Automobiles Firms in Pakistan,** studied the effect of working capital management on profitability on the automobile production industry in Pakistan during the period 2000-2008. Current ratio has been used as the indicator of working capital management and financial leverage has been used as the indicator of capital structure. With the help of correlation coefficient and regression analysis, he concluded that companies must increase current assets and decrease current liabilities for maximizing profitability. There is a

positive relation existing between profitability and financial leverage and an inverse relation existed between operational leverage and profitability.

**Chatterjee, Saswata (2010)** in his article, **"The Impact of Working Capital Management on the Profitability of the listed Companies in the London Stock Exchange"** found that a negative relationship exists between working capital management and profitability i.e. increase in cash transformation cycle would result in a reduction in profitability and a negative relationship exists between liquidity and profitability as well.

**Mojtahedzadeh, Vida. Tabari S.H.Alavi. & Mosayebi, R (2011)** in their article, **"The relationship between working capital management and profitability of the companies (Case studies: Listed companies on (T.S.E)** published in 'International Research Journal of Finance and Economics' issue 76, PP 158-166 considered the relationship between working capital management and corporate profitability. The finding established a negative relationship between cash conversion cycle, no. of days of accounts receivable and corporate profitability but no significant relationship was found between average period of retention and profitability. They concluded that there existed a significant relationship between corporate profitability and working capital management. They also found a positive relationship between sales and profitability and a negative significant relationship between financial debt ratio and profitability.

**Aminu,Yusuf. (2012)** in his article, **"A nexus between liquidity and profitability trade offs for working capital management in Nigeria's manufacturing sector"** published in 'International Journal of Arts and Commerce' vol-1 no-6, PP 55-58 had concluded that the profitability/liquidity trade off had always been inconclusive.

The article had focused on liquidity and profitability in manufacturing sector in Nigeria. It had not discussed the components of working capital. However, the article had not considered how the working capital financing be made for optimum level of working capital.

From the review of the literatures, the following points emerge:

- The assessment of operating performance of liquidity management had been made by considering either a particular company or a few companies belonging to particular industry like sugar, paper, steel, textile etc for a period of five to seven years only.
- A very few studies had been carried on liquidity management of pharmaceutical companies in India. Most of the studies are descriptive.
- A few studies had carried empirical tests where Karl Pearson's correlation co-efficient had been used to establish relationship between liquidity and profitability. Current ratio, Liquid ratio, inventory turnover ratio and debtor's turnover ratio had been taken as the liquid ratio in most of the studies.
- A few articles had analyzed working capital performance of a particular company or a few companies belonging to a particular industry. Moreover, in many of the cases the findings of the studies had failed to draw any meaningful conclusion. However, payables which are the important part of working capital management had been omitted by most of the articles.
- The articles had not analyzed working capital management in depth. Principal component analysis to identify the major components which are responsible for changing liquidity, profitability and efficiency has not been done in the articles.

  However, while making the present study it has been attempted to consider the significant pharmaceutical company belonging to the pharmaceutical industry in India.

## 4. Research Gap:

Although several studies have been made in the area of working capital management, a few studies have been carried out in the Pharmaceutical Industry. Moreover, no comprehensive indices were formed to examine the relationship between liquidity and profitability. Hence, the present study is an attempt to contribute to the existing literature.

## 5. Objectives of the study

The main objective of the study is:

1. To assess the performance of working capital management of LUPIN Ltd.

To attain this main objective, the following objectives are to be attained:

a) To analyze the liquidity, profitability and efficiency position of the selected company.

b) To analyze the impact of liquidity and efficiency on profitability of the company under study.

**Study Period**

The study has covered a period of fifteen years starting from the financial year 1999-2000 to 2013-2014. The financial year starts from 1st day of April every year and ends on 31st March of the next year.

## 6. Database and Methodology

To assess the working capital performance of the selected company, secondary data have been collected and used.

**Sources of Data:**

Secondary data on different items like Inventory, Debtors, Bills Receivable, Cash in hand , Cash at bank , Sundry creditors, Bills payable , Gross Working Capital, Net Working Capital, blocking period of each components of Current Assets, Gross Profit, turnover etc. of the selected pharmaceutical company have been collected from published annual reports.

**Methodology:**

To assess the working capital management of selected pharmaceutical company from accounting point of view, Liquidity analysis, Profitability analysis, Efficiency analysis, have been done with the help of different accounting ratios. In Liquidity analysis, Current Ratio (CR), Quick Ratio (QR) and Absolute Liquid Ratio (ALR) have been considered. Profitability analysis has been carried out with the help of Gross Profit, Net Profit and Return on Capital Employed (ROCE). In efficiency analysis, Inventory Turnover Ratio (ITR), Debtors Turnover Ratio (DTR), Cash Turnover Ratio (CTR), Working Capital Turnover Ratio (Operating Cycle Period) and Creditors Turnover Ratio have been analyzed. Gross Profit Ratio, Net Profit Ratio and Return on Capital Employed have been expressed in percent and Inventory Turnover Ratio, Debtor Turnover Ratio, Cash Turnover Ratio, Working Capital Turnover Ratio; Creditors Turnover Ratio have been expressed in terms of numbers. All the liquidity analysis ratios like Current Ratio, Quick Ratio and Absolute Liquid Ratio are expressed in proportion. To know the principal component of liquidity, profitability and efficiency, factor analysis has been considered. For determining impact of profitability on liquidity and efficiency, regression analysis has been done.

In liquidity analysis, the short term solvency of the selected company has been considered. These are calculated as follows:

- **Current Ratio (CR):** It expresses the relation of the amount of current assets to the amount of current liabilities. It has been calculated by dividing current assets by current liabilities. Current assets include Inventories, Trade Receivables and Cash and Bank balance. Current Liabilities include mainly Trade Payables. It is a traditional measure used in ascertaining the ability of a firm to meet its short-term obligations. The higher the current ratio, the larger is the amount available per rupee to meet short-term obligations and the greater is the security available to the creditors.
- **Quick Ratio (QR):** This ratio is a more rigorous measure of liquidity as compared to the current ratio. It is a refinement of current ratio as it excludes non liquid current assets such as inventories, prepaid expenses etc from the total current assets. This ratio has been calculated by dividing the liquid assets by liquid liabilities. Liquid liabilities have been calculated by subtracting the bank overdraft from the entire current liabilities.
- **Absolute Liquid Ratio (ALR):** this ratio is known as super quick ratio or cash position ratio. The ratio is useful only when used in conjunction with current ratio and quick ratio. It expresses the relation of the amount of absolute liquid assets to the amount of liquid liabilities. The higher the absolute liquid ratio, the larger is the amount available per rupee to meet immediate obligations and the greater is the security available to the creditors.

**In Profitability analysis,** we have judged the profitability position of the selected company. Profitability ratios include the following:

- **Gross Profit Margin ratio:** It has been calculated by dividing gross profit by net sales and multiplied by 100. Gross profit is the profit in sales after deducting all the trading expenses like the cost of raw materials, the direct expenses on purchases, excise duty, etc. Gross Profit margin is an indicator of the percentage of sales revenue which is above the cost. For making a pricing decision this margin can be utilized for decreasing the price. Theoretically it can be said that the price of a product can be decreased maximum up to the extent of gross profit margin, decrease in price up to this margin would give the firm enough revenue to continue

the operations. The more the gross profit margin, the more is the strength to meet competition in the competitive market.

- **Net Profit Margin Ratio**: The net profit margin, also known as net margin, indicates how much net income a company makes with total sales achieved. It has been calculated as dividing net profit by net sales and multiplied by 100. A higher net profit margin means that a company is more efficient at converting sales into actual profit.
- **Return on Capital Employed (ROCE):** Return on Capital Employed or ROCE is a profitability ratio that measures how efficiently a company can generate profits from its capital employed by comparing net operating profit to capital employed. It has been calculated as dividing operating profit by capital employed and multiplied by 100.

**In efficiency analysis** I had judged the management efficiency of current assets and current liabilities of the selected companies. Efficiency ratios include:

- **Inventory Turnover Ratio (ITR):** This ratio measures the efficiency of inventory management of a firm. It is computed dividing cost of goods sold by average inventory maintained during the year. A high Inventory turnover ratio indicates more frequently the stock are sold which implied less amount is blocked in inventory , resulting a high level of efficiency in inventory management and it is good from the liquidity point of view whereas a low ratio implies excessive inventory levels than warranted by volume of operation. Higher inventory turnover ratio, lesser the working capital requirement and vice versa.
- **Debtors Turnover Ratio (DTR):** Debtors turnover ratio highlights credit and collection policy pursued by a firm. It is calculated dividing credit sales by average debtors. It tests the speed with which debtors are converted into cash. The liquidity of a firm is directly influenced by this speed. A high Debtors turnover ratio reflects the promptness of debtors' collectivity i.e. smooth flow of liquidity and a low Debtors turnover ratio indicates longer average collection period i.e. shrinkage of liquidity and also proves inefficiency in credit management.
- **Cash Turnover Ratio (CTR):** This ratio measures how many times per year it replenishes its cash balance with its sales revenue. It measures the efficiency of cash management. High cash turnovers mean that a company is going through its cash cycles quickly. The higher the

CTR, the higher is the efficiency of cash management and vice-versa. A higher cash turnover ratio is generally better than a lower one.

- **Working Capital Turnover Ratio:** It is known as cash conversion cycle. Operating cycle is the number of days a company takes in realizing its inventories in cash. It is called Operating Cycle because this process of producing / purchasing inventories, selling them, recovering cash from customers, using that cash to purchase / produce inventories and so on is repeated as long as the company is in operations.

  Operating Cycle is a measure of operating efficiency and working capital management of a company. A short operating cycle is good as it tells that the company's cash is tied up for a shorter period. A longer operating cycle tells that the company's cash is blocked for a longer period which is not good for the company.

- **Creditors Turnover Ratio:** It highlights credit and payment policy pursued by a firm. It is calculated by dividing credit purchase by average creditors. An average creditor is the half of opening creditors and closing creditors. The quality of creditors influences the liquidity of a firm. It tests the speed with which cash is being paid to creditors. The liquidity of a firm is directly influenced by this speed. Thus, creditors' velocity indicates the efficiency of payables management in a company. A high creditors turnover ratio reflects the promptness of creditors' payment i.e. shrinkage of liquidity and also proves inefficiency in credit management and a low creditors turnover ratio indicates longer average payment period i.e. high liquidity.

7. **Analysis of data:**

7.1 The following table reflects different ratios of liquidity, profitability and efficiency position of Lupin Ltd. over the study period 1999-2000 to 2013-14

**Table 1: Liquidity, Profitability and Efficiency Ratios of LUPIN**

| YEAR | Liquidity Ratio | | | Profitability Ratio | | | Efficiency Ratio | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | CR | QR | ALR | GP ratio | NP ratio | ROCE | ITR | DTR | CTR | CRTR | WTR |
| 1999-2K | 5.45 | 4.49 | 0.18 | 30.85 | 3.46 | 12.35 | 2.99 | 1.64 | 23.17 | 2.81 | 1.57 |
| 2000-01 | 4.72 | 3.72 | 0.1 | 18.07 | 7.15 | 15.47 | 4.69 | 2.79 | 54.72 | 4.05 | 1.61 |
| 2001-02 | 3.17 | 2.55 | 0.08 | 21.12 | 8.05 | 19.53 | 4.92 | 2.75 | 45.57 | 2.63 | 1.83 |
| 2002-03 | 2.91 | 2.39 | 0.05 | 18.10 | 7.08 | 19.22 | 5.95 | 3.04 | 69.63 | 2.64 | 2.25 |
| 2003-04 | 2.19 | 1.45 | 0.05 | 23.23 | 12.34 | 33.14 | 4.20 | 5.45 | 78.26 | 2.57 | 4.23 |
| 2004-05 | 2.03 | 1.28 | 0.06 | 11.96 | 7.19 | 14.77 | 4.12 | 4.94 | 51.01 | 2.50 | 3.89 |
| 2005-06 | 3.37 | 2.59 | 1.13 | 18.35 | 10.98 | 19.49 | 4.35 | 4.74 | 3.62 | 2.73 | 1.91 |
| 2006-07 | 3.19 | 2.32 | 0.76 | 16.80 | 14.89 | 19.03 | 4.11 | 4.14 | 5.62 | 2.85 | 2.12 |
| 2007-08 | 3.06 | 1.95 | 0.38 | 21.02 | 16.3 | 23.71 | 3.25 | 4.07 | 11.97 | 2.95 | 2.47 |
| 2008-09 | 1.97 | 1.19 | 0.01 | 19.43 | 14.09 | 24.74 | 3.33 | 4.17 | 243.58 | 2.12 | 3.97 |
| 2009-10 | 2.97 | 2.06 | 0.04 | 22.79 | 17.52 | 24.47 | 3.99 | 4.03 | 98.61 | 2.98 | 2.71 |
| 2010-11 | 3.11 | 2.15 | 0.04 | 21.32 | 17.95 | 23.19 | 4.20 | 3.64 | 119.99 | 3.31 | 2.62 |
| 20011-12 | 2.85 | 1.91 | 0.02 | 19.12 | 14.92 | 21.78 | 3.88 | 3.61 | 280.45 | 2.92 | 2.63 |
| 2012-13 | 3.08 | 2.08 | 0.02 | 26.45 | 17.63 | 34.87 | 3.94 | 3.80 | 354 | 3.23 | 2.90 |
| 2013-14 | 3.79 | 2.79 | 0.1 | 32.58 | 24.84 | 40.91 | 4.39 | 3.13 | 61.11 | 3.62 | 2.54 |
| Mean | 3.19 | 2.32 | 0.20 | 21.41 | 12.95 | 23.11 | 4.15 | 3.73 | 100.08 | 2.93 | 2.62 |
| SD | 0.92 | 0.86 | 0.32 | 5.32 | 5.66 | 7.86 | 0.72 | 0.97 | 106.99 | 0.48 | 0.81 |

Source: Calculated by the author

**Current Ratio:**

In the above table, the current ratio of the selected pharmaceutical company has been displayed during the study period. It is found that the current ratio of Lupin is always above the standard norms (2:1) except in 2008-2009. The average CR during the study period is 3.19 with a standard deviation 0.92. A declining trend is found during the period under study.

**Quick Ratio (QR):**

In the above table, the quick ratios of the selected pharmaceutical companies reflect a declining trend throughout the study period. The mean QR of the selected company is 2.32 and its standard deviation is 0.86.

**Absolute Liquid Ratio (ALR):**

From the above table, it is found that the Absolute Liquid Ratio is always below the standard norms of 0.5:1 except in 2005-2006 and 2006-2007. Since 2007-2008, the ratio has been declining. The average absolute liquid ratio of the selected company is 0.20 with a standard deviation 0.32.

**Gross Profit Ratio:**

From above table, it is seen that the Gross Profit Ratio of Lupin shows an increasing trend during the study period. The average value of gross profit ratio of Lupin Ltd. is 21.41 with its standard deviation 5.32.

**Net Profit Ratio:**

From above table, the net profit ratio of the selected company is found to have an increasing trend during the study period. In the recent year, the net profit ratio of Lupin Ltd. was the maximum. The mean and standard deviation of Net Profit Ratio were 12.95 and 5.66 respectively.

**Return on Capital Employed (ROCE):**

From the above table, it is observed that the average ROCE of Lupin Ltd was 23.11% with its standard deviation 7.86. The ratio had followed no trend during the study period.

**Inventory Turnover Ratio (ITR):**

In the above table, the inventory Turnover ratio of the selected company was 2.99 in the initial year. The ratio fluctuated between 2.99 and 5.95 with mean 4.15 and standard deviation 0.72 during the period under study.

**Debtors Turnover Ratio:**

From the above table, The Debtors turnover ratio of the selected company was found to have an increasing trend during the period under study. It ranges between 1.64 and 5.45 with mean 3.73 and Standard deviation 0.97 during the study period. It indicated that the promptness of debtors' collectivity was increased during the study period.

**Cash Turnover Ratio (CTR):**

From the above table, the average cash turnover ratio of the selected company was 100.08 with standard deviation 106.99 during the study period. The ratio ranges between 3.62 in 2005-06 and 354 in 2012-13.

**Working Capital Turnover Ratio:**

From the above table, the working capital turnover ratio of the selected company was found to have an increasing trend during the study period. The mean and standard deviation of the ratio were found to be 2.62 and 0.81 respectively during the study period.

**Creditors Turnover Ratio:**

From the above table, the creditor's turnover ratio was found to have no trend during the study period. The average creditor's turnover ratio maintained by the selected company during the study period was 2.93 with standard deviation 0.48.

**7.2 Factor analysis of Liquidity, Profitability and Efficiency position of the selected pharmaceutical company**

In the above section the pharmaceutical company's liquidity, profitability and efficiency position had been analyzed by using the relevant ratios for each of these positions and the performance of the selected pharmaceutical company was assessed on the basis of these positions. But it can be safely said that not all these three factors with their constituent ratios were not equally important in determining performance of the selected pharmaceutical company. Someone of these factors may be more important than others in terms of its explaining power or predictive power. Further, all the ratios may not move in the same direction to derive valid conclusion. An attempt is made here to club the homogeneous ratios in the form of either liquidity or efficiency ratio through factor analysis.

**Liquidity Factor:**

To construct liquidity factor, three ratios namely, current ratio, absolute liquid ratio and liquid ratio have been clubbed through factor analysis and it is observed from the table below that the principal component (or factor) represents 93.37% of the total sampling variations of the three related ratios and its Eigen value is 1.605. As the Eigen value of the first factor is only greater than one, so according to Kaiser's criterion only first principal component is to be chosen as the liquidity factor. It should be mentioned in this connection that according to Kaiser's criterion only those principal components will be chosen whose Eigen values are greater than one. Further Bartlett's test sphericity is estimated to be 43.225, which is found to be significant at 1% probability level. This implies that here principal component analysis is a fruitful exercise in clubbing the basic ratios (e.g. Current ratio, Absolute Liquid ratio and Liquid ratio). From the values of the last column of the table (related to factor matrix in factor 1) it is also observed that in the constructed first principal component the contributions of the first basic two ratios are more than 46.9%.

**Table 2: Factor analysis result for Liquidity Factor**

| Factor (F) | Eigen Value | Percent of Variation | Factor Matrix in Factor 1 |
|---|---|---|---|
| 1 | 1.605 | 93.37 | .533 (Current Ratio) |
| 2 | .102 | 5.94 | .469 (Absolute liquid ratio) |
| 3 | .0118 | .69 | .010 (Liquid ratio) |

Source: Calculated by the author

Bartlett's test of sphericity is estimated to be 43.225*

**Efficiency Factor:**

To construct principal component for efficiency factor, five basic variables, namely, inventory turnover ratio, debtor turnover ratio, cash turnover ratio, creditor turnover ratio and working capital turnover ratio have been clubbed and applying Kaiser's criterion (Eigen value >1), first principal component has been selected as efficiency factor which represents 44.358% of the sample variations of the related basic five variables (see the following table). Further, Bartlett's test of sphericity is estimated to be 15.984, which is found to be significant at 1% probability level, implying that the principal component analysis is required to club the variables of efficiency ratio.

**Table 3: Factor analysis result for Efficiency Factor**

| Factor (F) | Eigen Value | Percent of Variation | Factor Matrix in Factor 1 |
|---|---|---|---|
| 1 | 2.218 | 44.358 | -.598 (Inventory Turnover ratio) |
| 2 | 1.097 | 21.942 | .344 (Debtor Turnover ratio) |
| 3 | .874 | 17.487 | .721 (Cash Turnover Ratio) |
| 4 | .623 | 12.452 | -.665 (Creditor Turnover ratio) |
| 5 | .188 | 3.761 | .924 (Working Capital Turnover ratio) |

Source: Calculated by the author

Bartlett's test of sphericity is estimated to be 15.984*

In the constructed principal component for efficiency factor, the contributions of the basic variables are more than 34% (being positive or negative according to their nature).

**Profitability Factor:**

Similarly, through factor analysis, the principal component for profitability factor has been constructed and the results are presented in the following table. Here Bartlett's test of sphericity is estimated to be 17.606, which is found to be significant at 1% probability level and so principal component analysis may be statistically accepted here.

**Table 4: Factor analysis result for Profitability Factor**

| Factor (F) | Eigen Value | Percent of Variation | Factor Matrix in Factor 1 |
|---|---|---|---|
| 1 | 2.173 | 72.425 | .720<br>(Gross profit Ratio) |
| 2 | .664 | 22.142 | .875<br>(Net profit ratio) |
| 3 | .163 | 5.143 | .943<br>(Return on capital employed) |

Source: Calculated by the author

Bartlett's test of sphericity is estimated to be 17.606*

On the basis of Kaiser's criterion (Eigen value> 1) first principal component had been selected and it explains 72.425% of the total sampling variation of the basic variables. The constructed principal component signifies the combined effect of the profitability ratios and in this principal component contributions of the basic variables are not less than 72% (see the last column of the table).

After the construction of the principal components, Regression of GP (dependent variables) has been estimated on the principal component of liquidity ($F_1$) and efficiency ($F_2$). The estimated regression results are presented below:

Adjusted $R^2$ = .898***

[F=2.732]

GP= 19.720**-2.79***$F_1$+1.733**$F_2$

(9.058) (1.38) (1.783)

DW=1.329

**8. Findings of the study:**

The liquidity trends of Lupin Ltd. were in increasing during the recent years of the study. Current ratio was above the standard norm. Therefore, it can be said that working capital performance in respect of current ratio is satisfactory. The performance of quick ratio was also satisfactory under the study period. The company was in a position to recovery its working capital 139 days on an average in a year under the study period .The company was maintaining a good return in terms of Return On Capital Employed under the study period.Net profit margin of the company was satisfactory. The principal component of working capital comprises of inventories and sundry debtors. In factor analysis, Gross profit ratio, Current Ratio and Inventory Ratio were found to be principal factor of profitability, Liquidity and Efficiency respectively of the selected company during the study period. An inverse relationship between liquidity and profitability and a positive relationship between profitability and efficiency was observed from the regression result. The impact of overall working capital policy on profitability in this industry is proved to be significant; it is also evident that overall performance of this industry, working capital plays a vital role.

**9. Conclusion**

From the analysis of major findings we can conclude that Lupin Ltd. had managed its liquidity position better and following aggressive policy in working capital financing (decreasing trend of quick ratio and absolute liquid ratio). Consequently, profitability of the company had increased (indicated by high ROCE), besides improvement of efficiency (measured by high debtors turnover, cash turnover ratios).

Finally we can say that better working capital management in Lupin Ltd. had significant and positive impact on profitability of the company.

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# A COMPARATIVE STUDY ON WORKING CAPITAL MANAGEMENT BETWEEN PROFIT MAKING AND LOSS MAKING FMCG COMPANIES IN INDIA

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**Abstract**

The present study is an attempt to compare working capital management on profitability between selected top 10 profit making companies with 10 loss making FMCG companies as per BSE/NSE for the period1999-2000 to 2013-2014. Return on Assets was taken as indicator of firm's profitability. A panel data analysis had been done to examine the relationship between working capital management and profitability. The study showed that in case of profit making companies, receivable collection period and financial debt ratio had significant and negative impact on profitability and current assets turnover had significant and positive impact on profitability. But in case of loss making companies, receivable collection period, inventory holding period, cash conversion cycle, current ratio, and financial debt ratio had significant and negative impact on profitability and current assets to total assets ratio and size had significant and positive impact on profitability.

***Keywords:*** *FMCG Companies, Working capital management, Return on Assets*

## 1. Introduction:

Working capital management is an integral component of the overall corporate strategies which aimed to create shareholders value. Working capital is the most crucial factor for maintaining liquidity, survival, solvency and profitability of business. Efficient working capital management is highly desirable for firm's growth and sustainability because of its effect on profitability and risk. Working capital management is important due to many reasons. Most of the manufacturing firms have current assets about half of the total assets. Day to day operating transection of the firm is performed with the help of these current assets. An excessive level of current assets is generated idle fund from which no return is obtained. However firms with too few current assets may hamper production, purchase and

sales. Efficient working capital management helps to maintain desire level of working capital by removing the problem of inadequate and redundant amount of working capital. Profitability of a firm depends on proper utilisation of the current assets. An efficient working capital management involves the decision of the amount and composition of current assets and the financing of these assets. It helps to maintain desire level of liquidity of the firm. The effectiveness of the fixed assets depends on the current assets. Working capital management makes required change in working capital by keeping consistency with the changes in degree of effectiveness of the fixed assets. Amongst the research issues in the field of corporate finance, working capital management is one of the most significant research problems. Sometimes, organizations face the problem of insolvency or bankruptcy due to insufficient of liquidity. So, it is required for all companies to maintain an optimal level of working capital.

The present study focuses on FMCG industry. The FMCG industry of India is the fourth largest industry in the country. The large base of FMCG industry is now producing wide range of food, toiletries, soap, body wash, shampoos, cosmetics, toothpastes, shaving products, detergents, bulbs, batteries as well as electronics products. FMCG is a classic case of low margin and high volume business. It is one of the fastest developing sectors in the Indian economy. The market size of FMCG in India is estimated to grow from US$ 30 billion in 2011 to US$ 74 billion in 2018. Like other manufacturing industry FMCG industry's turnover does not depend upon their production, it depends upon the capability to sales in the competitive market, therefore maximum resources are utilized for marketing and promotion of product rather than manufacturing activities, etc. FMCG companies due to efficient supply chain management and efficient inventory holding, level of inventory comes down to significant lower level as compared to other industry (such as manufacturing). Similarly due to the cash base of business, level of debtors are also lower which significantly decreases the level of current assets another important change in the nature of investors is, rational thinking about investment.

In this context, it makes sense to look at how working capital management impact on profitability of both profitmaking and lossmaking Indian FMCG companies.

## 2. Review of literature:

The results from the notable studies that have been carried out are briefly mentioned below:

**Deloof (2003),** in his article "Does Working Capital Management Affect Profitability of Belgian Firms?" found a significant negative relation between gross operating income and

the number of days accounts receivable, inventories and accounts payable of Belgian firms. The study suggested that managers can create value for their shareholders by reducing the number of day's accounts receivable and inventories to a reasonable minimum. **Padachi (2006),** in his article "Trends in Working Capital Management and its Impact on Firms' Performance: An Analysis of Mauritian Small Manufacturing Firms" for a sample of 58 manufacturing firms for the period 1998-2003 indicated that high investment in inventories and receivables was associated with lower profitability. The study also showed an increasing trend in the short-term component of working capital financing. **Raheman & Nasr (2007),** in their article "Working Capital Management and Profitability – Case of Pakistani Firms" showed that there is a strong negative relationship between variables of the working capital management and Profitability and significant negative relationship between liquidity and profitability. The study also showed that there is a positive relationship between size of the firm and its profitability and a significant negative relationship between debt used by the firm and its profitability. **Mohamad & Saad (2010),** in their article "Working Capital Management: The Effect of Market Valuation and Profitability in Malaysia" showed that there are significant negative associations between working capital variables with firms performance. The study also showed that Current Assets to Total Assets Ratio have positive significant relationships with Tobin Q, return on asset and return on invested capital and cash conversion cycles, current asset to current liabilities and current liabilities to total asset ratio have negative significant relations with Tobin Q, return on asset and return on invested capital. Total debt to total assets is negatively significant with return on asset only but insignificant with return on invested capital, while positively significant with Tobin Q. **Ali (2011),** in his article "Working Capital Management and the Profitability of the Manufacturing Sector: A Case Study of Pakistan's Textile Industry" for a sample of 160 textile firms for the period 2000 to 2005 showed that Return on assets is significantly and negatively related to average days receivable and average day payable, significantly and positively related to average days in inventory and cash conversion cycle. **Charitou, Lois, Santoso (2012),** in their article "The Relationship between Working Capital Management and Firm's Profitability: An Empirical Investigation for an Emerging Asian Country" for a sample of 728 listed firm in Indonesian Stock Exchange for the period 1998 to 2010 indicated that the Cash Conversion Cycle and Net Trade Cycle are positively related with the firm's profitability. **Lingesiya & Nalini (2013),** in their article "Working Capital Management and Firms' Performance: An Analysis of Sri Lankan Manufacturing Companies" for a sample of 30 listed company for the period 2006 to 2010 emphasized that high investment in

inventories and receivables lead to lower profitability and current assets to total assets lead to higher profitability. The study also conclude that the working capital management very much influences on profitability of manufacturing companies and increase of the cash conversion cycle leads to less profitability. Current ratio and Quick ratio were positively related to the profitability. **Jayarathne (2014),** in his article "Impact of Working Capital Management on Profitability: Evidence from Listed Companies in Sri Lanka" for a sample of 20 listed company from Colombo Stock Exchange for the period 2008-2012 indicated that the profitability is negatively associated with the account receivable period, inventory turnover period, and cash conversion cycle and positively associated with account payable period. **Maheswari (2015),** in his article "Financial Performance of Hero Honda Motors Limited, New Delhi" for the period 2002-03 to 2009-10 showed that the liquidity, profitability and solvency position of the company are highly satisfactory financial performance. The study also recommended reducing the creditors and other short term loans to the maximum possible extent so as to help keep a good amount of liquidity in the future periods.

## Research gap:

On the basis of the above literatures, it is found that earlier literature had not done comparative study of working capital management on profitability between the profit making and loss making FMCG companies in India. In this context, it makes sense to look at how working capital management impact on profitability both in case of profitmaking and lossmaking Indian FMCG companies.

## 3. Objective of the study:

To assess empirically a comparative study of impact of working capital management on profitability between profitmaking and lossmaking FMCG companies in India.

## 4. Hypothesis:

$H_{0:}$ There is no association between working capital management and profitability of both the profitmaking and lossmaking FMCG companies.

$H_{1:}$ There is an association between working capital management and profitability of both the profitmaking and lossmaking FMCG companies.

## 5. Database and Methodology:

The study was mainly based on secondary data. Data were collected from the published annual reports of the selected companies and Ace Equity database. There were 20 FMCG companies selected from listed in NSE or BSE (Appendix 1). I had taken top10 profit making companies and bottom 10 loss making companies of which data were available from

published report. The companies were selected on the basis of their last (2000-2014) fifteen years average net profit. For analyzing the data, panel data regression had been used. The panel analysis had been done with the help of STATA Package.

I had calculated mean values of different variables to get average, standard deviation and coefficient of variation have used to get fluctuations or variation about the mean values of the financial variables. For identifying the nature of the trend in each of the selected ratios during the period under study linear trend equation was fitted and in order to examine whether the slopes of the trend lines were statistically significant or not t-test was used. The estimated coefficient of the straight line trend equation $Y_t = a + b_t$.

Where, $Y_t$ = the variable whose over time trend is measured;

t = time variable; a= intercept;

b =coefficient of the time variable which measures the slopes of the trend lines;

In panel data estimation three models namely the Pooled OLS regression model, Fixed effects model (FEM) and Random effect model (REM) are estimated for each analysis. In Pooled OLS regression model is neglect the cross section and time series nature of data. FEM allows for Heterogeneity or individuality among 20 companies by allowing having its own intercept value and in REM have a common mean value for the intercept. The choice amongst the three model three statistical test, viz, the Restricted F Test, Breusch-Pagan Lagrange Multiplier Test and Hausman Test are carried out. The Restricted F Test is applied to make a choice between Pooled OLS regression model and FEM. On the other hand, Breusch-Pagan Lagrange Multiplier Test is applied to make a choice between Pooled OLS regression model and REM. The test is based on the null hypothesis that Pooled OLS regression model is appropriate. Rejection of null hypothesis suggests that there are Random effects in the relationship. The Hausman Test (1978) is applied to make choice between the FEM and REM the test is based on the null hypothesis that REM is appropriate. If probability of $Chi^2$ is significant I use FEM. If probability of $Chi^2$ is insignificant I use REM. To judge the stationary of the selected variables I had done panel unit root test by Levin-Lin-Chu unit-root test. The VIF was used measure of the degree of multi-collinearity of an independent variable with the other independent variables in a regression model. Robust standard error was used to remove the problem of heteroskedasticity in the models.

The indicator employed for firm's profitability was return on assets (ROA) it is better measure because it relates the profitability of the business to the asset base. The efficiency ratios were receivable collection period (RCP), inventory holding period (IHP), accounts payable period (APP), Cash conversion cycle (CCC) and Current assets turnover (CATURN).

Current ratio (CR) was measured liquidity of firms. Current liabilities to total assets (CLTA) and Current Assets to total assets (CATA) were used to check financing and investing policy of working capital management. Financial debt ratios (FDR) and natural logarithm of sales (LOS) were represented leverage and size of the firms. All the variables were used in the ratio calculation and the formula of the ratios are given in the Appendix 2.

In order to assess a comparative analysis of impact of working capital management on profitability between profitmaking and lossmaking FMCG companies in India, I had fitted four regression models as follows:

**Model 1:** In this model I had examined the impact of efficiency of receivable management on financial performances of the companies, assuming other variables remain constant.

$$ROA_{it} = \beta_0 + \beta_1 RCP_{it} + \beta_2 CATURN_{it} + \beta_3 CR_{it} + \beta_4 CATA_{it} + \beta_5 CLTA_{it} + \beta_6 FDR_{it} + \beta_7 LOS_{it} + u_{it}$$

**Model 2:** In this model, I had examined the impact of efficiency of Inventory management on financial performances of the companies measured by ROA, assuming other variables remain constant.

$$ROA_{it} = \beta_0 + \beta_1 IHP_{it} + \beta_2 CATURN_{it} + \beta_3 CR_{it} + \beta_4 CATA_{it} + \beta_5 CLTA_{it} + \beta_6 FDR_{it} + \beta_7 LOS_{it} + u_{it}$$

**Model 3:** In this model, I had examined the impact of efficiency of payable management on financial performances of the companies measured by ROA, assuming other variables remain constant.

$$ROA_{it} = \beta_0 + \beta_1 APP_{it} + \beta_2 CATURN_{it} + \beta_3 CR_{it} + \beta_4 CATA_{it} + \beta_5 CLTA_{it} + \beta_6 FDR_{it} + \beta_7 LOS_{it} + u_{it}$$

**Model 4:** In this model, I had examined the impact of efficiency of Cash management on financial performances of the companies, assuming other variables remain constant.

$$ROA_{it} = \beta_0 + \beta_1 CCC_{it} + \beta_2 CATURN_{it} + \beta_3 CR_{it} + \beta_4 CATA_{it} + \beta_5 CLTA_{it} + \beta_6 FDR_{it} + \beta_7 LOS_{it} + u_{it}$$

## 6. Findings:

In order to assess a comparative analysis of impact of working capital management on profitability between profitmaking and lossmaking FMCG companies in India, I had calculated the profitability ratio, efficiency ratio, liquidity ratio, investing ratio, financing ratio, leverage ratio and other related ratios which were depicted in the following table:

**Table 1: Descriptive statistics of variables of selected profitmaking FMCG companies**

| | Profitability | Efficiency | | | | | Liquidity | Investing | Financing | Leverage | Size |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Return on Assets (ROA) | Receivable collection period (RCP) | Inventory holding period (IHP) | Accounts payable period (APP) | Cash Conversion Cycle (CCC) | Current Assets Turnover (CATURN) | Current ratio | Current Assets to Total Assets (CATA) | Current Liabilities to Total Assets (CLTA) | Financial Debt Ratio (FDR) | Natural Logarithm of sale (LOS) |
| 2000 | 23.21 | 18 | 37 | 119 | -64 | 4 | 2.30 | 0.50 | 0.36 | 0.47 | 7.85 |
| 2001 | 24.81 | 21 | 37 | 127 | -69 | 3 | 2.91 | 0.53 | 0.38 | 0.50 | 7.92 |
| 2002 | 27.33 | 26 | 38 | 145 | -81 | 3 | 2.67 | 0.54 | 0.36 | 0.47 | 7.98 |
| 2003 | 26.90 | 22 | 37 | 147 | -89 | 3 | 2.77 | 0.57 | 0.37 | 0.43 | 8.00 |
| 2004 | 28.92 | 18 | 36 | 140 | -86 | 3 | 2.13 | 0.61 | 0.41 | 0.47 | 8.05 |
| 2005 | 31.42 | 17 | 36 | 129 | -76 | 3 | 2.09 | 0.60 | 0.41 | 0.47 | 8.12 |
| 2006 | 32.12 | 13 | 36 | 127 | -78 | 3 | 1.82 | 0.59 | 0.42 | 0.47 | 8.25 |
| 2007 | 33.23 | 10 | 33 | 119 | -75 | 3 | 1.52 | 0.65 | 0.50 | 0.52 | 8.41 |
| 2008 | 36.56 | 10 | 35 | 122 | -77 | 3 | 1.51 | 0.66 | 0.53 | 0.58 | 8.54 |
| 2009 | 38.34 | 9 | 35 | 117 | -73 | 3 | 1.55 | 0.61 | 0.47 | 0.57 | 8.74 |
| 2010 | 37.02 | 10 | 36 | 130 | -84 | 3 | 1.50 | 0.65 | 0.51 | 0.60 | 8.78 |
| 2011 | 36.46 | 12 | 37 | 104 | -55 | 3 | 1.35 | 0.56 | 0.45 | 0.60 | 8.93 |
| 2012 | 35.46 | 11 | 37 | 86 | -37 | 3 | 1.41 | 0.58 | 0.43 | 0.56 | 9.08 |
| 2013 | 33.72 | 11 | 35 | 86 | -41 | 3 | 1.46 | 0.55 | 0.42 | 0.51 | 9.24 |
| 2014 | 37.59 | 11 | 34 | 87 | -42 | 3 | 1.62 | 0.56 | 0.39 | 0.46 | 9.34 |
| Maximum | 38.34 | 26 | 38 | 147 | -37 | 4 | 2.91 | 0.66 | 0.53 | 0.60 | 9.34 |
| Minimum | 23.21 | 9 | 33 | 86 | -89 | 3 | 1.35 | 0.50 | 0.36 | 0.43 | 7.85 |
| Average | 32.21 | 15 | 36 | 119 | -68 | 3 | 1.91 | 0.58 | 0.43 | 0.51 | 8.60 |
| Standard Deviation | 4.93 | 5.25 | 1.23 | 20.11 | 16.98 | 0.20 | 0.54 | 0.05 | 0.05 | 0.06 | 0.51 |
| Coefficient of variation (CV) | 15.29 | 35.97 | 3.42 | 16.91 | -24.80 | 6.25 | 28.08 | 8.04 | 12.61 | 11.02 | 5.88 |
| Slope of the Trend line | 0.984 | -0.944 | -0.136 | -7.514 | 2.468 | -0.015 | -0.103 | 0.003 | 0.006 | 0.006 | 0.112 |
| t-value | 7.174* | -4.880* | -2.064*** | -6.122* | 3.070* | -1.25 | -5.980* | 1.163 | 2.057*** | 2.160** | 20.585* |

*Source: Computed by the author*

From the above table it is found that in case of Profit making companies the average return on assets was 32.21. The standard deviation was 4.93 and the coefficient of variation percentage was 15.29. The straight line trend fitted to the ROA indicated an increasing trend which was statistically significant at 1 per cent level.

The average receivable collection period was 15 days. It indicated prompt payment made by the customers and a tightening of credit policies. The standard deviation was 5.25 and the

coefficient of variation percentage was 35.97. The straight line trend fitted to the RCP was in a decreasing trend and statistically significant at 1 per cent probability level.

The average Inventory holding period was 36 days. It indicated a relatively low level of stocks and efficient of inventory management. The standard deviation was 1.23 and the coefficient of variation percentage was 3.42. The straight line trend fitted to the IHP was in a decreasing trend and statistically significant at 10 per cent probability level.

The average accounts payable period was 119 days. The standard deviation was 20 and the coefficient of variation percentage was 17. The straight line trend fitted to the APP was in a decreasing trend and statistically significant at 1 per cent probability level.

The average cash conversion cycle was -68 days. The standard deviation was 17 and the coefficient of variation percentage was -25. The straight line trend fitted to the CCC was in an increasing trend and statistically significant at 1 per cent probability level.

The average current assets turnover was 3.22. The standard deviation was 0.20 and the coefficient of variation percentage was 6.25. The straight line trend fitted to the CATURN during the study period failed to identify significant downward trend.

The average current ratio is 1.91, below the standard norms (2:1). The s.d. was 0.54 and the CV percentage was 28.08. The straight line trend fitted to the CR indicated a decreasing trend which was statistically significant at 1 per cent level.

The average current assets to total assets were 0.58. The standard deviation was 0.05 and the coefficient of variation percentage was 8.04. The straight line trend fitted to the CATA during the study period failed to identify significant upward trend.

The average current liabilities to total assets were 0.43. The standard deviation was 0.05 and the coefficient of variation percentage was 12.61. The straight line trend fitted on CLTA indicated an increasing trend, which was also statistically significant at 10 per cent probability level. It indicates that there was a significant upward trend in financing total assets from short term sources. An increase in the ratio of the current liability to total assets will lead to an increase in profitability as well as risk. Because a short term source of finance are less expensive then long term sources.

The average financial debt ratio was 0.51. The standard deviation was 0.06 and the coefficient of variation percentage was 11.02. The straight line trend fitted to the FDR indicated an increasing trend which was statistically significant at 5 per cent level.

The average Natural logarithm of sale was 8.64. The standard deviation was 0.51 and the coefficient of variation percentage was 5.88. The straight line trend fitted to the LOS indicated an increasing trend which was statistically significant at 1 per cent level. It indicated that there was a significant upward trend in gross sales.

**Table 2: Descriptive statistics of variables of selected loss-making FMCG companies**

| | Profitability | Efficiency | | | | | Liquidity | Investing | Financing | Leverage | Size |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Return on Assets (ROA) | Receivable collection period (RCP) | Inventory holding period (IHP) | Accounts payable period (APP) | Cash Conversion Cycle (CCC) | Current Assets Turnover (CATURN) | Current Ratio | Current Assets to Total Assets (CATA) | Current Liabilities to Total Assets (CLTA) | Financial Debt Ratio (FDR) | Natural Logarithm of sale (LOS) |
| 2000 | 5.54 | 70 | 54 | 83 | 41 | 3 | 4.39 | 0.47 | 0.14 | 0.64 | 4.62 |
| 2001 | -0.90 | 118 | 76 | 72 | 121 | 2 | 4.82 | 0.49 | 0.17 | 0.72 | 4.62 |
| 2002 | 5.74 | 277 | 126 | 295 | 108 | 3 | 3.71 | 0.44 | 0.18 | 0.76 | 4.61 |
| 2003 | 3.07 | 877 | 262 | 295 | 844 | 3 | 3.34 | 0.46 | 0.19 | 0.80 | 4.70 |
| 2004 | 0.50 | 581 | 124 | 272 | 432 | 3 | 4.63 | 0.47 | 0.17 | 0.87 | 4.81 |
| 2005 | 4.71 | 239 | 64 | 151 | 153 | 3 | 3.39 | 0.43 | 0.18 | 0.84 | 4.83 |
| 2006 | 10.21 | 92 | 72 | 218 | -54 | 2 | 4.48 | 0.48 | 0.19 | 0.71 | 4.93 |
| 2007 | 7.45 | 58 | 69 | 147 | -20 | 2 | 3.70 | 0.51 | 0.19 | 0.68 | 5.07 |
| 2008 | 5.28 | 59 | 76 | 111 | 24 | 2 | 4.40 | 0.52 | 0.16 | 0.65 | 5.29 |
| 2009 | -3.15 | 55 | 105 | 108 | 52 | 3 | 4.24 | 0.47 | 0.14 | 0.66 | 5.16 |
| 2010 | -1.43 | 52 | 126 | 135 | 44 | 3 | 3.94 | 0.50 | 0.17 | 0.71 | 5.16 |
| 2011 | -2.02 | 62 | 93 | 118 | 38 | 3 | 1.88 | 0.43 | 0.37 | 0.74 | 5.35 |
| 2012 | 0.76 | 96 | 94 | 140 | 51 | 2 | 1.94 | 0.44 | 0.38 | 0.78 | 5.46 |
| 2013 | 0.54 | 130 | 139 | 136 | 133 | 2 | 1.52 | 0.39 | 0.45 | 0.79 | 5.28 |
| 2014 | 0.83 | 90 | 219 | 373 | -64 | 2 | 1.42 | 0.39 | 0.48 | 0.84 | 5.06 |
| Maximum | 10.21 | 877 | 262 | 373 | 844 | 3 | 4.82 | 0.52 | 0.48 | 0.87 | 5.46 |
| Minimum | -3.15 | 52 | 54 | 72 | -64 | 2 | 1.42 | 0.39 | 0.14 | 0.64 | 4.61 |
| Average | 2.47 | 190 | 113 | 177 | 127 | 3 | 3.45 | 0.46 | 0.24 | 0.75 | 5.04 |
| Standard Deviation | 3.87 | 235.23 | 58.35 | 90.86 | 230.52 | 0.48 | 1.19 | 0.04 | 0.12 | 0.07 | 0.29 |
| Coefficient of variation (CV) | 156.37 | 123.49 | 51.49 | 51.35 | 181.72 | 19.01 | 34.38 | 8.85 | 49.91 | 9.73 | 5.72 |
| Slope of the Trend line | -0.343 | -21.214 | 2.825 | -9.457 | -19.50 | -0.068 | -0.199 | -0.004 | 0.072 | 0.003 | 0.057 |
| t-value | -1.557 | -1.509 | 0.8 | -2.074*** | -1.47 | -2.932** | -4.086* | -1.737 | 4.440* | 0.679 | 6.961* |

*Source: Computed by the author*

From the above table it is found that in case of loss making companies the average return on assets was 2.47. The standard deviation was 3.87 and the coefficient of variation percentage

was 156.37, an indication of instability in the profitability of the company. The straight line trend fitted to the ROA during the study period failed to identify significant downward trend.

The average receivable collection period was 190 days. The standard deviation was 235.23 and the coefficient of variation percentage was 123.49, an indication of instability in receivable collection period of the company. The straight line trend fitted to the RCP during the study period failed to identify significant downward trend.

The average Inventory holding period was 113 days. The standard deviation was 58.35 and the coefficient of variation percentage was 51.49, an indication of instability in Inventory holding period of the company. The straight line trend fitted to the IHP during the study period failed to identify significant upward trend.

The average accounts payable period was 177 days. The standard deviation was 91 and the coefficient of variation percentage was 51, an indication of instability in accounts payable period of the company. The straight line trend fitted to the APP was in a decreasing trend and statistically significant at 10 per cent probability level.

The average cash conversion cycle was 127 days. The standard deviation was 231 and the coefficient of variation percentage was 182, an indication of instability in cash conversion cycle of the company. The straight line trend fitted to the CCC during the study period failed to identify significant downward trend.

The average current assets turnover was 2.55. The standard deviation was 0.48 and the coefficient of variation percentage was 19.01. The straight line trend fitted to the CATURN was in a decreasing trend and statistically significant at 5 per cent probability level.

The average current ratio is 3.45, which is above the standard norms (2:1), indicating holding more current assets in relation to current liabilities. The s.d. was 1.19 and the CV percentage was 34.38. The straight line trend fitted to the CR indicated a decreasing trend which was statistically significant at 1 per cent level.

The average current assets to total assets were 0.46. The standard deviation was 0.04 and the coefficient of variation percentage was 8.85. The straight line trend fitted to the CATA during the study period failed to identify significant downward trend.

The average current liabilities to total assets were 0.24. The standard deviation was 0.12 and the coefficient of variation percentage was 49.91. The straight line trend fitted on CLTA indicated an increasing trend, which was also statistically significant at 1 per cent probability level.

The average financial debt ratio was 0.75. The standard deviation was 0.07 and the coefficient of variation percentage was 9.73. The straight line trend fitted to the FDR during

the study period failed to identify significant upward trend.

The average Natural logarithm of sale was 5.04. The standard deviation was 0.29 and the coefficient of variation percentage was 5.72. The straight line trend fitted to the LOS indicated an increasing trend which was statistically significant at 1 per cent level. It indicated that there was a significant upward trend in gross sales.

**Regression Analysis:**

In order to select the appropriate model, Pooled OLS regression model, fixed effects model (FEM) and Random effect model (REM) are carried out. It is found that both in case of profitmaking and lossmaking Indian FMCG companies of test statistics in Restricted F Test, Breusch-Pagan Lagrange Multiplier Test were statistically significant, whereas Hausman Test was not statistically significant these models. Hence the regression results of the REM were used for statistical inference and further analysis of the individual coefficients these models. A scrutiny of VIF showed that the estimated models did not suffer from severe multi-collinearity problem both in case of profitmaking and lossmaking Indian FMCG companies (Appendix 3&4). Robust standard error was used to remove the problem of heteroskedasticity in these models.

**Table 3: Regression results of the effect of working capital management on return on assets of profitmaking Indian FMCG companies under random effect model:**

| Model | RCP (Model 1) | | IHP (Model 2) | | APP (Model 3) | | CCC (Model 4) | |
|---|---|---|---|---|---|---|---|---|
| Variable | Coefficient | z-Stat | Coefficient | z-Stat | Coefficient | z-Stat | Coefficient | z-Stat |
| Intercept | 11.43051 | 0.81 | 2.843471 | 0.11 | 6.630426 | 0.46 | 4.262214 | 0.28 |
| RCP | -0.4662604 | -2.55** | --- | --- | --- | --- | --- | --- |
| IHP | --- | --- | 0.0193967 | 0.09 | --- | --- | --- | --- |
| APP | --- | --- | --- | --- | -0.0195925 | -1.22 | --- | --- |
| CCC | --- | --- | --- | --- | --- | --- | 0.0043526 | 0.26 |
| CATURN | 3.437709 | 1.64* | 3.771977 | 1.24 | 3.564748 | 1.6 | 3.672855 | 1.6 |
| CR | 0.7431544 | 1 | -0.7046685 | -1.51 | -0.7350294 | -1.45 | -0.6950744 | -1.42 |
| CATA | 11.80798 | 0.96 | 11.7761 | 0.9 | 10.20431 | 1.05 | 11.0315 | 1.1 |
| CLTA | 17.45254 | 1.14 | 20.83081 | 1.34 | 23.61646 | 1.29 | 21.70408 | 1.2 |
| FDR | -25.17213 | -3.74* | -27.43156 | -3.91* | -27.88731 | -3.49* | -27.61641 | -3.51* |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| LOS | 6.368466 | 0.7 | 18.32859 | 1.3 | 15.56982 | 1.17 | 17.76987 | 1.29 |
| Wald $\chi^2$ | 15888.36* | | 17530.73* | | 3891.48* | | 14478.90* | |
| R2-Within | 0.4535 | | 0.3354 | | 0.3419 | | 0.3357 | |
| R2-Between | 0.3292 | | 0.3326 | | 0.3241 | | 0.3306 | |
| R2-Overall | 0.3475 | | 0.3141 | | 0.3125 | | 0.3132 | |
| No. of Obs. | 150 | | 150 | | 150 | | 150 | |

*Source: Computed by the author*

*Note: * 1% Significance level; ** 5% Significance level; *** 10% Significance level;*

From the above Table, it is found that Wald $\chi^2$ test was significant at 1% probability level for profitmaking Indian FMCG companies, therefore all models were well fitted.The coefficient of return on assets of the selected profitmaking FMCG companies India was negatively significant with the coefficient of Receivable collection period (RCP) which implies that Indian profit making FMCG companies can improve their profitability by reducing the receivable collection period. It indicates that a more restrictive credit policy is giving customers less time to make their payments improves performance. The return on assets was negatively associated with the coefficient of accounts payable period and positively associated with the coefficient of inventory holding period and cash conversion cycle. But they were not significant, which implies that return on assets do not differ significantly across the Indian profitmaking FMCG companies depending on their inventory holding period, accounts payable period and cash conversion cycle. ROA was significantly positively related to the coefficient of current assets turnover in model 1 which implies that as Indian profit making FMCG companies are able to increase the working capital turnover, it will enhance the profits of the firm as well. The variable, financial debt ratio was used as a proxy for leverage which was significantly negatively associated with ROA in all the models which implies decreasing the financial debt ratio will generate more profit for the Indian profit making FMCG companies. Current assets to total assets ratio, current liabilities to total assets ratio and natural logarithm of sales had insignificant positive impact on profitability and current ratio had insignificant negative impact on profitability, which were not proven in case of Indian profit making FMCG companies.

**Table 4: Regression results of the effect of working capital management on return on assets of lossmaking Indian FMCG companies under random effect model:**

| Model | RCP (Model 1) | | IHP (Model 2) | | APP (Model 3) | | CCC (Model 4) | |
|---|---|---|---|---|---|---|---|---|
| Variable | Coefficient | z-Stat | Coefficient | z-Stat | Coefficient | z-Stat | Coefficient | z-Stat |
| Intercept | -4.143112 | -1.17 | -3.678529 | -1.16 | -8.498569 | -6.2* | -4.392539 | -1.33 |
| CATURN | 0.6116749 | 1.33 | 0.4560728 | 0.93 | 0.416778 | 0.88 | 0.6397752 | 1.44 |
| CR | -0.4440117 | -1.65*** | -0.4118617 | -1.52 | -0.3906187 | -1.09 | -0.3802994 | -1.38 |
| CATA | 10.1946 | 1.8*** | 8.260133 | 1.47 | 6.866143 | 1.37 | 9.152331 | 1.69*** |
| CLTA | -4.938846 | -0.68 | -3.082173 | -0.43 | -3.34733 | -0.49 | -4.525594 | -0.62 |
| FDR | -32.09413 | -2.53** | -32.03644 | -2.4** | -33.12046 | -2.33** | -31.75696 | -2.52** |
| LOS | 0.6642193 | 0.73 | 0.9174076 | 1.17 | 1.979329 | 2.77* | 0.7234191 | 0.83 |
| RCP | -0.0021951 | -5.58* | --- | --- | --- | --- | --- | --- |
| IHP | --- | --- | -0.0075145 | -6.17* | --- | --- | --- | --- |
| APP | --- | --- | --- | --- | 0.002558 | 1.26 | --- | --- |
| CCC | --- | --- | --- | --- | --- | --- | -0.0019936 | -7.71* |
| Wald $\chi^2$ | 69363.82* | | 54587.73* | | 1239.89* | | 6730.64* | |
| R2-Within | 0.3189 | | 0.3181 | | 0.2684 | | 0.3234 | |
| R2-Between | 0.2092 | | 0.1704 | | 0.5021 | | 0.2041 | |
| R2-Overall | 0.2968 | | 0.2874 | | 0.3005 | | 0.2994 | |
| No. of Obs. | 150 | | 150 | | 150 | | 150 | |

*Source: Computed by the author*

*Note: * 1% Significance level; ** 5% Significance level; *** 10% Significance level;*

From the above table, it is found that Wald $\chi^2$ test was significant at 1% probability level for lossmaking Indian FMCG companies, therefore all models were well fitted.The coefficient of return on assets of the Indian loss making FMCG companies was negative significant with the coefficient of receivable collection period which implies that Indian loss making FMCG companies can improve their profitability by reducing the receivable collection period. It indicates that a more restrictive credit policy to customers will improve its performance. The coefficient of inventory holding period had negative and significant impact on ROA, which indicates inventory policy of the Indian loss making FMCG companies had affected adversely on its profitability. The coefficient of accounts payable period had positive insignificant impact on ROA, which implies that return on assets had not significant impact by the accounts payable period of the Indian lossmaking FMCG companies. The cash conversion cycle had negative and significant impact on ROA, which implies that decreasing the cash conversion cycle will generate more profits for the Indian loss making FMCG companies. ROA is insignificantly positively related to the coefficient of current assets turnover. The current ratio which is a traditional measure of liquidity has a significant negative relationship with ROA, which confirms that liquidity and profitability has inverse relationship. It indicates that high current ratio involving greater current asset than current liability will reduce the profitability of the firms. So, the Indian loss making FMCG companies need to maintain a trade-off between profitability and liquidity. To check the working capital investment policy as current assets to total assets ratio was used in the regression. The variable CATA showed a significant positive relationship with the profitability which showed that Indian loss making FMCG companies was following the conservative policy of working capital management. The current liabilities to total assets ratio which is a measure of financing policy has an insignificant negative relationship with ROA in case of Indian loss making FMCG companies. Financial debt ratio is used as a proxy for leverage which is significantly negatively associated with ROA which means increase in the financial leverage leads to decrease in the return on assets of the Indian loss making FMCG companies. The natural logarithm of sales was used as proxy for size of the Indian loss making FMCG companies shows a significant positive relationship with profitability which implies that which implies that larger market sizes seem to favor the profitability, therefore larger firms more profitable.

## 7. Conclusion:

The present study analyzed a comparative study of working capital management between

profitmaking and lossmaking FMCG companies in India taking top10 profit making companies and bottom 10 loss making companies from listed in NSE or BSE as sample and being analyzed for a period of 15 years from1999-2000 to 2013-14. ROA had been used as a proxy for firm's performance. From the study it is found that the average receivable collection period, inventory holding period, accounts payable period, cash conversion cycle, current ratio, and financial debt ratio of profitmaking companies were less than lossmaking Indian FMCG company average. The average return on assets, current assets turnover, current assets to total assets ratio, current liabilities to total assets ratio and size of profitmaking companies were more than lossmaking Indian FMCG company average. The regression result showed that in case of profitmaking companies, receivable collection period and financial debt ratio had significant and negative impact on profitability and current assets turnover had significant and positive impact on profitability. Other variables like inventory holding period, accounts payable period, cash conversion cycle, current ratio, current assets to total assets ratio, current liabilities to total assets ratio and size were found to have insignificant impact on firm's profitability. But in case of lossmaking companies, receivable collection period, inventory holding period, cash conversion cycle, current ratio, and financial debt ratio had significant and negative impact on profitability. Current assets to total assets ratio and size had significant and positive impact on profitability. Other variables like current assets turnover, accounts payable period and current liabilities to total assets ratio were found to have insignificant impact on firm's profitability.

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**Appendix 1: List of Selected FMCG companies**

| Profitmaking companies | Lossmaking companies |
|---|---|
| Britania Industry Ltd | Agro Dutch Industries Ltd |
| Colgate – Palmolive (India) Ltd | Golden Tobacco Ltd |
| Dabur India Ltd | Gopala Polyplast Ltd |
| Emami Ltd | Indian Extractions Ltd |
| Hindustan Unilever Ltd | Modern Dairies Ltd |
| ITC Ltd | Mount Everest Mineral Water Ltd |
| Marico Ltd | Murli Industries Ltd |
| Nestle India Ltd | Phoenix International Ltd |
| Procter & Gamble Hygiene Health Care Ltd | Venlon Enterprises Ltd |
| Reckitt Benckiser (India) Ltd | Yashraj Containers Ltd. |

**Appendix 2: Measurement of Variables and Abbreviations**

| Abbreviations | Variables | Measurement |
|---|---|---|
| ROA | Return on total assets | EBIT/Total Assets |
| CATA | Current Assets to Total Assets | Current Assets / Total Assets |
| CLTA | Current Liabilities to Total Assets | Current Liabilities / Total Assets |
| FDR | Financial Debt Ratio | Total Debt/Total Assets |
| CR | Current Ratio | Current Assets / Current Liabilities |
| CATURN | Current Assets Turnover | Net Sales / Current Assets |
| RCP | Receivable Collection Period | (Average Accounts Receivable / Sales) * 365 |
| IHP | Inventory Holding Period | (Average Inventory / Cost of Goods Sold) * 365 |
| APP | Accounts Payable Period | (Accounts Payable / Purchase) * 365 |
| CCC | Cash Conversion Cycle | RCP + IHP - APP |

| | | |
|---|---|---|
| LOS | Market Size | Natural Logarithm of Sales |

**Appendix: Result of Variance Inflation Factor (VIF) of Profitmaking Companies**

| Variable | RCP (Model 1) | IHP (Model 2) | APP (Model 3) | CCC (Model 4) |
|---|---|---|---|---|
| RCP | 2.54 | ---- | ---- | ---- |
| IHP | ---- | 1.45 | ---- | ---- |
| APP | ---- | ---- | 1.82 | ---- |
| CCC | ---- | ---- | ---- | 1.98 |
| CATURN | 2.13 | 2.22 | 2.63 | 2.41 |
| CR | 2.78 | 1.83 | 1.92 | 2.09 |
| CATA | 2.69 | 2.86 | 2.73 | 2.70 |
| CLTA | 2.42 | 2.39 | 2.74 | 2.75 |
| FDR | 1.07 | 1.06 | 1.08 | 1.08 |
| LOS | 1.10 | 1.02 | 1.14 | 1.09 |

**Table: Result of Variance Inflation Factor (VIF) of Lossmaking Companies**

| Variable | RCP (Model 1) | IHP (Model 2) | APP (Model 3) | CCC (Model 4) |
|---|---|---|---|---|
| RCP | 1.29 | ---- | ---- | ---- |
| IHP | ---- | 1.29 | ---- | ---- |
| APP | ---- | ---- | 1.04 | ---- |
| CCC | ---- | ---- | ---- | 1.21 |
| CATURN | 1.24 | 1.32 | 1.25 | 1.24 |
| CR | 1.36 | 1.32 | 1.30 | 1.31 |
| CATA | 1.28 | 1.28 | 1.26 | 1.26 |
| CLTA | 1.18 | 1.17 | 1.17 | 1.17 |
| FDR | 1.13 | 1.14 | 1.12 | 1.14 |
| LOS | 1.66 | 1.44 | 1.39 | 1.59 |

# SOCIO-ECONOMIC STATUS OF WOMEN MEMBERS OF SHGS IN THE REGIONS OF DROUGHT-PRONE DISTRICTS OF WEST BENGAL

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**Abstract**

The present study analyses the role of SHGs in improving the socio-economic status of women and to delve into the impact of such group-formation on the decision making powers of the women members in their respective families in the context of most backward and drought-prone districts West Medinipur, Purulia and Bankura. One of the escape routes to solve the problems of drought prone areas is the formation of SHGs. The formation of SHGs and the flow of microfinance has been generating hope to the most vulnerable section of the society, particularly the women of backward and poor community, who have the ability as well as willingness to rise out of the poverty and become economically self-sufficient. The percentage of illiterate members in both drought-prone areas and non-drought-prone areas was seen to have decreased to some extend after the formation of SHGs. The overall mean monthly per capita income for the SHGs households in the non-drought prone areas was also higher than that in the drought-prone areas.

***Key words:*** *Socio-economic status, decision-making role, microfinance, Self-help group*

## 1. Introduction

The formation of Self-help Groups (SHGs) and the flow of microfinance has been generating hope to the most vulnerable section of the society, particularly the women of backward and poor community, who have the ability as well as willingness to rise out of the poverty and become economically and socially empowered. These SHGs are supposed to ameliorate the status of such woman as participants, decision makers and beneficiaries in the democratic, economic, social and cultural spheres of life.

West Medinipur, Purulia, Bankura district of West Bengal are the most backward and drought-prone districts (so called Jangalmahal). The inhabitants of this area are mostly from the primitive tribes, scheduled caste, scheduled tribe and other backward communities. The most

backward section of the people are from the primitive tribes such as Lodha, Sabar, Kerisetc. who still live in forests and locations far from the main stream.The process of rural development in the drought prone areas is particularly constrained by both unfavorable agro-climatic conditions and poorly developed infrastructural facilities, viz., transport and communication, electricity and irrigation, marketing and warehousing facilities etc. Moreover, in these areas, the benefits of the percolation effects, if any, are often appropriated mainly by the rural elites, which further accentuate the inequality in the rural areas. One of the escape routes to solve the said problems of drought prone areas of West Bengal is the formation of SHGs.

There are some institutional factors include the rules and regulations under which the government-linked SHGs function and evaluated in the process of upgradation. That is, the SHGs are assessed through a grading process whereby they are being graded as Grade I and Grade II by the local self-government (viz. through panchayat and the bank) on the basis of some definite criteria.The second elevation (Grade II) is made after six months of receipt of revolving fund and then the groups become eligible to get the facility of credit linkage scheme.These institutional factors are shown in Table 1 against the status of SHGs (whether they are performing very good, good or unsatisfactory on the basis of marks allotted for each factor). It is to be noted that for a SHG to be qualified for Grade I the minimum mark to be secured has been fixed at 70 and for Grade II it is 80.

**Table 1 Institutional factors required for SHGs for qualifying Grade I and Grade II**

| Sl No. | Factors to be Checked | Very good | Good | Unsatisfactory |
|---|---|---|---|---|
| 1 | Group size | 15 to 20 (5 marks) | 10 to 15 (3 marks) | Less than 10(2 marks) |
| 2 | Type of members | Only very poor members(5marks) | 2 or 3 not very poor members(3 marks) | Many not poor members(2 marks) |
| 3 | Number of meetings | Four meetings in a month (5 marks) | Two meetings in a month (3 marks) | Less than two meetings in a month (no marks) |
| 4 | Age of group | More than two years (10 marks) | 1 to 2 years(7 marks) | 5 to 1 years(5 marks) |
| 5 | Attendance of members | More than 90% (10 marks) | 70 to 90% (5 marks) | Less than 70% (2 marks) |
| 6 | Participation of members | Very high level of participation (5 | Medium level of participation (3 marks) | Low level of participation(2 marks) |

| | | | | |
|---|---|---|---|---|
| | | marks) | | |
| 7 | Savings collection within the group | Four times a month (10 marks) | Three times a month (7 marks) | Less than three times a month(5 marks) |
| 8 | Beneficial of members from internal loan | Above 50% members (5 marks) | 20% to 50% members (3 marks) | Less than 20% members (2 marks) |
| 9 | Interest on internal loan | Depending upon the purpose (5 marks) | 2 or 3 rupees per hundred per month (3marks) | More than 3 rupees per hundred per month (2 marks) |
| 10 | Utilization of savings amount by | Fully used for loaning to members (7 marks) | Partly used for loaning (5 marks) | Poor utilization (3 marks) |
| 11 | Loan recoveries | More than 90% (10 marks) | 70 to 90% (7 marks) | Less than 70% (3 marks) |
| 12 | Maintenance of books | All books are regularly maintained and updated (15 marks) | Most important registers (minutes, savings, loans etc.) are updated (8 marks) | Irregular in maintaining and updating books (5 marks) |
| 13 | Accumulated savings | More than Rs. 5,000 (10 marks) | Rs. 3,000 to 5,000 (7 marks) | Less than Rs. 3,000 (5 marks) |
| 14 | Knowledge of the rules of the SHG | Known to all (5 marks) | Many members know the rules. Some have little knowledge of it. (3 marks) | Most of the members do not know the rules (2marks) |
| 15 | Education level | More than 30% of members can read and write (5 marks) | 20 to 30% members can read and write (3 marks) | Less than 20 members know to read and write (2 marks) |
| 16 | Change the leader of the group | One time in a year (5 marks) | One time in 1 to 2 year (3 marks) | One times in above 2 year (2 marks) |

*Source: Office of DRDC, PaschimMedinipur*

Following the above criteria, the features of SHGs i.e, the number of SHGs passed Grade-I and Grade-II, the number of groups received revolving fund, they involved in credit-linkagescheme and frequency of availing loanduring 2000-01 to 2011-12 based on primary survey is shown in table 2.

**Table 2 Distribution of SHGs by the Features of SHGS in drought prone vis-à-vis non-drought-Prone Areas, 2000-01to 2011-12**

| **Features** | **SHGs in** drought-prone areas | **SHGs in non-**drought-prone areas |
|---|---|---|
| Passed Grade I | 91.7 | 100 |
| Revolving fund received | 85.4 | 100 |
| Passed Grade II | 58.3 | 59.5 |
| Credit linked | 18.8 | 16.7 |
| Frequency of availing loan: | | |
| (a) Once | 39.6 | 38.1 |
| (b) Twice | 37.5 | 42.9 |
| (c) Thrice or more | 14.6 | 19 |
| Total | 100 | 100 |

***Source:*** *Field Survey (2011-12)*

## 2. Review of the existing literature

In respect of socio-economic status, women empowerment we reviewed some existing literature. We got some positive effect as well as some negative effect in the decision making role of the members of SHGs. Katz (1981) observed that the members of SHGs acted differently after becoming members of SHGs to improve their socio-economic status.Hulme and Mosley (1996) indicated that the microfinance could reduce the isolation of women. When they came together in groups they had an opportunity to share information and develope their ideas which were not there previously.Shrestha (1998) indicated that women members were only able to make decisions regarding small purchases of necessary items like groceries independently after their participation in SHGs; otherwise they depended on their husbands.Nedumaran, Palanisami, and Swaminathan (2001) measured the economic impact of socio-economic status of SHGs in Solan District of Himac hal Pradesh in terms of an increase in annual incremental income and they showed that all SHGs recorded an increase in their income.Jain(2003) showed that the SHGs enhanced equality in the status of women as participants, decision makers and beneficiaries in the democratic, economic, social and cultural sphere of life. Progress of women as a result of SHG formation could be ascertained by examining various indicators.Pitt, Shahidurand Cartwright (2003) examined the effects of men's and women's participation in group-based micro-credit progrmme. They showed that women's participation in micro-credit progrmmes helped to increase women's empowerment. However, Johnson (2004) stated that having women

as key participants in microfinance projects did not automatically lead to empowerment. Sometimes negative impacts could be witnessed. She referred to increased workloads, increased domestic violence and abuse.

## 3. Objective of the study

(a) To analyze the pattern of literacy among the women before and after the formation of SHGs
(b) To look into the matter of level of poverty among the members
(c) To analyze the income and savings of the members
(d) To delve into the impact of such group-formation on the decision making powers of the
(e) women members in their respective families.

## 4. Methodology and Sample Design

The present study is based particularly on primary data. Interview schedules had been used as the main tool for data collection. We have chosen two sample draught prone districts of west Bengal, viz., PaschimMedinipur and Bankura. The blocks of these sample districts (PaschimMedinipur district consists of 29 blocks and Bankura district consists of 22 blocks) are treated as first stage sample units. We have chosen eight drought-prone blocks (Binpur-II, Gopiballavpur-II, Jhargram, Jambani, Chhatna, Khatra and Saltora) and seven non-drought prone blocks (Kharagpur -II, Salboni, Binpur - I, Debra, Bishnupur, Kotolpur and Indus) respectively. The sample SHGs have been chosen from both drought prone (48 sample SHGs) and non-drought prone blocks (42 sample SHGs). Our sample SHGs in drought prone areas consist of 552 members( all of them are female members) and the sample SHGs in non-drought prone areas consist of 455 members out of which about 97 per cent of members belong to female category. The socio-economic variables chosen for this study are education (years of education, level of education, gender preference in providing educational opportunities), children enrollment and poverty level before and after group formation, changes in decision making pattern of the female members in their respective families.

The difference between drought-prone areas and non-drought-prone areas in respect of per capita savings, per capita income, per capita income from SHG activities has been tested by using equality of variance (F-test) and equality of mean (t-statistic).

(a) ***F-test***

The null hypothesis $H_0$: $\sigma_1^2 = \sigma_2^2$ against the alternative hypothesis

$H_1$: $\sigma_1^2 \neq \sigma_2^2$ where $s_1$ and $s_2$ = sample standard deviation of sample 1 and sample 2 and $\sigma_1^2$ and $\sigma_2^2$ = population variance.

F-test = $\frac{s_1^2}{s_2^2} * \frac{\sigma_2^2}{\sigma_1^2}$

If the calculated value of F ($F_0$) is higher than the table value of F ($Fn_1$-1, $n_2$-1, α /2)

where $n_1$-1, $n_2$-1are degrees of freedom and α /2 is the level of significance. Then null hypothesis is rejected, i.e, population variance is unequal.

**(*b) t-test***

If$\sigma_1 \neq \sigma_2$ then to test $H_0$: $\mu_1 = \mu_2$ against $H_1$: $\mu_1 \neq \mu$. We use t-test.

Here t-statistic = $\frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$

Where $s_1$ and $s_2$ = sample standard deviation, $\bar{x}_1$, $\bar{x}_2$ = sample means and $n_1$ and $n_2$ = sample sizes

If the calculated value of t ($t_0$) is greater than the table value of t ( $t_{n_1+n_2-2,\frac{\alpha}{2}}$), then the null hypothesis is rejected.

If$\sigma_1 = \sigma_2$, then t-statistic = $\frac{\bar{x}_1 - \bar{x}_2}{S\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$

Where S is combined variance i.. $S = (n_1 - 1)s_1^2 + (n_2 - 1)s_2^2$

## 5. Demographic Characteristics of Sample Households

The majority of our sample SHG's are run by female members. Now, the caste wise division of these members shows the dominance of SC and ST category. Out of 552 members in drought prone areas, 24.3percent belong to general category, 34.6 percent belong to SC category, 37.1

percent to ST category and the rest 4 percent belong to OBC category. This composition in non-drought prone areas also indicates similar picture. Out of 455 members in non-drought prone areas, 36.5 percent belong to general category, 37.6 percent to SC category, 19.1 percent to ST category and the rest 6.8 percent belong to OBC category.

## 6. Analysis and Findings:

The analysis and findings which follow from this study are discussed in the following sub-sections. Section 6.1 analyses the literacy level of the members of SHGs in drought prone areaand non-drought prone area. Section 6.2discusses the incidence of Poverty of the members of Self-help groups, Section 6.3 analyses the income and Savings of the members of SHGs and Section 6.4 analyses the decision making roles of the members of SHGs and Section 7 makes concluding observations.

### 6.1 Literacy level

Education is vital for improving the living conditions of human beings and for the promotion of social progress. According to the definition given in Population Census, all those persons who can read and write a single sentence with comprehension is treated as literate irrespective of the numbers of classes passed [Sing, 2012]. Education and women empowerment are closely inter-connected since educational attainments enable them to respond, to appreciate, to challenge their traditional roles and to raise their voice for a positive change in their lives (Banerjee, 2009).The majority of our sample SHGs are run by female members. Now, the caste wise division of thesemembers shows the dominance of SC and ST category. Out of 552 members in drought prone areas, 24.28 percent belong to general category, 34.6 percent belong to SC category, 37.14 percent to ST category and the rest 3.98 percent belong to OBC category. This composition in non-drought prone areas also indicates similar picture. Out of 455 members in non-drought prone areas, 36.48 percent belong to general category, 37.58 percent to SC category, 19.12 percent to ST category and the rest 6.81 percent belong to OBC category.

The level of education of the members of sample SHGs can be indicated on the basis of the following categorization: Illiterate, Up to Primary level, Up to Upper Primary level, Up to Secondary level, Up to Higher Secondary level, Up to Under Graduate Level and Post Graduate Level.

The change, if any, in their educational level before and after Group formation in drought prone areas and non-drought prone area has been indicated in Table 3. Before the formation of SHGs,out of 552 members in drought prone areas, 47.3 per cent members of SHGs are found to be illiterate and out of 455 members in non-drought prone areas, about 47 per cent i.e., 212 members are found to be illiterate; 16.7 per cent i.e., 92 members in drought prone areas and 19.3 per cent i.e., 88 members in non-drought prone area have studied up to Primary level (we assume that those who are literate, i.e., read and sign their names, fall in the category of Primary level education i.e., literate and class I passed have been clubbed into same category). Again, 25 per cent members in drought prone area and 22.64 per cent members in non-drought prone areas have studied up to Upper Primary level. Only 8.7 per cent members in drought prone areas and 8.13 per cent members in non-drought prone areas are within the category of secondary education level before Group formation. However, this situation has changed after group formation. Out of 552 members in drought prone areas, 13 per cent members are illiterate and out of 455 members in non-drought prone areas, 10.3 per cent members remain illiterate.

**Table 3 Level of Education of the members of SHGs in drought prone area and non-drought Prone area before and after Group Formation**

| **Level of Education** | **Before Group formation** | | **After Group formation** | |
|---|---|---|---|---|
| | Percentage of members in drought prone area | Percentage of members in non-drought prone area | Percentage of members in drought prone area | Percentage of members in non-drought prone area |
| Illiterate | 47.3 | 46.7 | 13.0 | 10.3 |
| Primary Education | 16.7 | 19.3 | 51.0 | 55.7 |
| Upper Primary Education | 25 | 22.6 | 25 | 22.6 |
| Secondary Education | 8.7 | 8.1 | 8.7 | 8.1 |
| Higher Secondary Education | 1.8 | 2.0 | 1.8 | 2.0 |
| Under Graduate Level | .5 | .9 | .5 | .9 |

| | | | | |
|---|---|---|---|---|
| Post Graduate Level | - | .4 | - | .4 |
| Total | 100 | 100 | 100 | 100 |

***Source:*** *Field Survey (20011-12);*

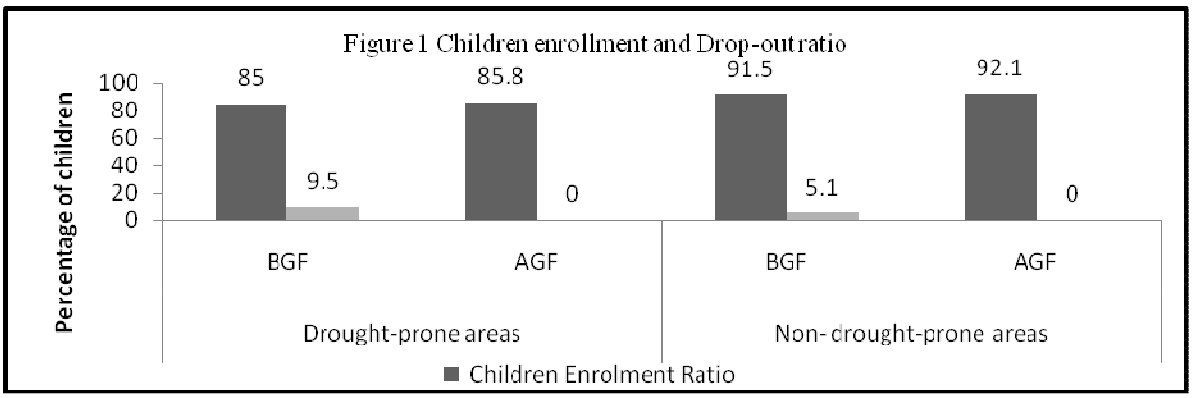
Further, about 51 per cent members in drought prone areas and 55.6 per cent members in non-drought prone areas have studied up to Primary level. Again, 25 per cent members in drought prone areas and 22.6 per cent members in non-drought prone areas have studied up to Upper Primary level. Only 8.7 per cent members in drought prone areas and 8.1 per cent members in non-drought prone areas have studied up to secondary level after Group formation. Therefore, there has been a drastic fall in the number of illiterate members (most of whom are women) both in absolute and relative terms. Table-1 shows that the number of illiterate members has decreased from 261 to only 72 in drought prone areas, i.e. the illiterate members who constituted about 47 per cent of total members of SHGs in drought prone areas, has been reduced to about 13 per cent. A similar trend has been observed in case of non-drought prone areas also. In many cases the group members have learned how to sign only after joining their respective SHGs and thus, it can be safely said that learning opportunities before the illiterate women can be widened through their participation in SHGs. In fact, they did not feel any necessity to sign their names or acquire the capability to read and write before group formation. The female members, before Group formation, had to remain busy in domestic works and child care activities and they had no opportunity to acquire this capability.

*Enrolment Status of Children*

The progress of literacy and education depends upon the propensity of children to go to school and also to complete at least the primary level. Enabling all children to obtain primary education has been the key challenge of the state government. The Gross Enrolment Ratio (GER) and Net Enrolment Ratio (NER) are two widely used indicators to assess children's participation rates in schools. GER is the total enrolment at a given level of education regardless of age divided by the estimated child population. NER gives the age specific participation for each education level (Jana and Dasgupta, 2012).

The distribution of childrenof SHG members by enrolment and drop-out before and after the group formation in drought-prone areas is shown in Figure 1. We found that the children enrolment ratio was 85 per cent and the drop out rate 9.5 per cent before group formation. For

instance, the five children of GholaBiswamataSwanirbhar Dal dropped out from their school because their parent thought that if they could engage themselves in any motor garage, they could earn some money. The two children of RaghunathJeuSwanirbharGhosthi dropped out at the age of 19 and 21 because of lack of finance for continuing their education. The five children of RangamatiSwanirbharGhosthi dropped out at the age of 17 as they went to another state to earn livelihood. All groups were from Indpur block.




Source: Field survey (2011-12)

One child of DubraMaa Tara Swasahayak Dal dropped out at the age 13 because of apathy towards education. One child of Sri SriMaaSitala SGSY Dal in Jamboniblock could not enroll itself in a school because of lack of awareness. The children enrollment, however, increased after the group formation because rate of literacy among women could be widened through their participation in SHGs. Thus they became much aware about their children's education.

In non-drought-prone areaschildren's enrolment ratio was 91.5 per cent and 5.1 per cent childrendropped out before the group formation whereas 92.1 per cent children got enrollment in schools and no child dropped out after the group formationin non-drought-prone areas.

### 6.2 Poverty

In our analysis, the members those who hold BPL card is considered to be under BPL (below poverty line) category and who hold Antodoya Anna Joyona card is considered to be under 'extremely poor' category. Before group formation, out of 552 members of 48 sample SHGs in the drought prone areas, the incidence of poverty was higher among the members belonging to SC and ST category. Table- 4 indicates that in drought prone areas, about 19 per cent members in general category, about 30 per cent in SC category and about 32 per cent in ST category

remained below the poverty level before group formation. Therefore, about 85 per cent members (viz. 439 out of 552 members) of SHGs were in BPL (Below Poverty Level) category in the drought prone areasbefore group formation. Again, out of these 552 members in DPAs, about 3 per cent members in general category, 1 per cent in SC category and about 2 per cent in ST category are considered to be extremely poor in the drought prone areasbefore group formation.

But this situation has changed to some extent after group formation because of their involvement in SHG activities and getting job opportunities in mid-day meal schemes. After group formation, incidence of poverty has declined among the members of all social categories except that in case of SC categories. After the formation of groups, out of 552 members, about 17 per cent members of general category, 30.9 per cent of SC category and 30.6 per cent of ST category are found to remain below poverty level in drought prone areas. Therefore, there has been a marginal reduction in the incidence of poverty among the members of SHGs in the drought prone areas after group formation, viz. from 84.6 percent to 82.25 percent. However, percentage of extremely poor members remained same as before even after group formation.Therefore, though the incidence of poverty has declined among the members of all social categories in absolute sense, but in relative sense, this has not declined in any significant way in drought prone areas.

So far as the members of sample SHGs in non-drought prone areas are concerned, it is observed that before group formation, out of 455 members of 42 sample SHGs in non-drought prone areas, about 27 per cent members in general members, 30.9 per cent in SC category and 15.8 per cent in ST category remained below poverty level. Therefore, about 80 per cent members fall under BPL category in non-drought prone areas before joining the group. Again, it is observed that before joining the group, about 1.3 per cent members in general category, 1.8 per cent in SC category and 2.4 per cent in ST category are considered to be extremely poor in Non-drought prone areas.

**Table 4 Distribution of the members of the SHGs in the drought prone areas and non-drought prone areas by their socio-economic status**

| Category | Before Group formation | | After Group formation | |
|---|---|---|---|---|
| | Percentage of members in drought prone area falling in | Percentage of members in non-drought prone area falling in | Percentage of members in drought prone area falling in | Percentage of members in non-drought prone area falling in |

| | APL | BPL | Extremely Poor | APL | BPL | Extremely poor | APL | BPL | Extremely poor | APL | BPL | Extremely poor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gen | 3.1 | 19.0 | 2.2 | 7.7 | 27.6 | 1.3 | 5.1 | 17.0 | 2.2 | 11.9 | 23.3 | 1.3 |
| SC | 3.8 | 29.7 | 1.1 | 4.8 | 30.9 | 1.8 | 2.5 | 30.9 | 1.1 | 7.2 | 28.6 | 1.8 |
| ST | 3.3 | 32.2 | 1.6 | 0.9 | 15.8 | 2.4 | 4.9 | 30.6 | 1.6 | 1.9 | 14.4 | 2.7 |
| OBC | 0.4 | 3.6 | - | 1.5 | 5.3 | - | 0.4 | 3.6 | - | 1.9 | 4.8 | - |
| Male | - | - | - | 0.8 | 2.2 | - | - | - | - | 0.3 | 2.3 | - |
| Female | 10.6 | 84.5 | 4.9 | 14.1 | 77.4 | 5.5 | 12.9 | 82.2 | 4.9 | 22.6 | 69.0 | 5.8 |
| Total | 10.6 | 84.5 | 4.9 | 14.9 | 79.6 | 5.5 | 12.9 | 82.2 | 4.9 | 22.9 | 71.3 | 5.8 |

***Source :*** *Field Survey (2011-12)*

But this situation has changed after group formation. Out of the total members in non-drought prone areas, about 23 per cent members of general category, 28.6 per cent of SC category and 14.7 per cent of ST category members fall under BPL group in non-drought prone areas.

Therefore, the incidence of poverty among the members of SHGs in the non-drought prone areas has reduced from 79.5 percent to 71.4 per cent after group formation. However, percentage of extremely poor members remained same as before even after group formation. Therefore, it appears that the participation in SHGs had some positive impacts in terms of a reduction in the incidence of poverty, particularly among socially backward and economically poor people, in non-drought prone areas compared to that in drought prone areas.

### 6.3 Income and Savings of the members of SHGs

The percentage distribution of the members according to the percentage of SHG income to total household income is shown in Table 5.In the drought-prone areasthe percentageof SHG

**Table 5 Percentage distribution of members of SHGs by percentage of contribution SHGs income to household income**

| Contribution of SHG income to | Percentage of member in | Percentage of member in |
|---|---|---|

| total household income (%) | drought-prone areas | non-drought-prone areas |
|---|---|---|
| 0.9- 10.9 | 26.0 | 48.1 |
| 10.9-20.9 | 41.8 | 28.9 |
| 20.9-30.9 | 16.3 | 13.0 |
| 30.9-40.9 | 7.4 | 5.9 |
| 40.9 and above | 8.5 | 4.0 |
| Total | 100 | 100 |

Source*: Field Survey (2011-12)*

income to total family income was 13.9 while it was 15.0 in non-drought-prone areas. So far as the income from SHG activities and its share in household income are concerned, it is observed that about 68 per cent members in drought-prone areas and about 77 per cent in non-drought-prone areashave contributed only about 21 per cent to their household income.

Monthly per capita income of the SHG households varied widely in the drought-prone areas. For the sample SHG households of the drought-prone areas overall mean monthly Per Capita Income was estimated to be Rs 798.5 while it was Rs 873.2 for SHGs households the non-drought-prone areas. Percentage distribution of member households of sample SHGs by monthly Per Capita Income class in drought-prone areasand non-drought-prone areas is shown in table 6.

**Table 6 Percentage distribution of member households of sample SHGs by monthly per capita income class in drought-prone areas and non-drought-prone areas**

| Monthly per capita Income(Rs) | Percentage of member households of SHGs in drought-prone areas | Percentage of member households of SHGs in non- drought-prone areas |
|---|---|---|
| 175 - 783 | 85.2 | 75.0 |
| 784 - 1383 | 8.4 | 13.6 |
| 1384 - 1983 | 3.2 | 3.3 |
| 1984 - 3583 | 2.5 | 7.6 |
| 3584 and above | 0.7 | 0.5 |
| Total | 100 | 100 |

*Source: Field Survey (2011-12).*

It is revealed that in respect of monthly per capita income distribution SHG households were better than non-SHG households in the drought-prone areas but in the non-drought-prone areas SHGs member households were better than those in the drought-prone areas. This is explained

by the fact that the opportunity of non-agriculture income earning (from MGNREGS, brick clines,etc.) was higher in non-drought-prone areas along with substantial income from landed proper.

Monthly per capita saving of the SHG households varied widely in the drought-prone areas. For the sample SHG households of the drought-prone areas overall mean monthly per capita saving was estimated to be Rs 157.4 while it was Rs 239.1 for SHGs households in the non-drought-prone areas. Over all saving ratio in the drought-prone areas was estimated at 19.7 per cent while it was 27.4 per cent in non-drought-prone areas. Percentage distribution of member households of sample SHGs by saving ratio in drought-prone areas and non-drought-prone areas is shown in Table 7. It is revealed that in respect of saving ratio SHGs member households were better in the non-drought-prone areas than that in the drought-prone areas.

**Table 7 Percentage distribution of members by saving ratio in drought-prone and non-drought-prone areas**

| Saving ratio (%) | Percentage of member in drought-prone areas | Percentage of member in non-drought-prone areas |
|---|---|---|
| Below 5 | 24.8 | 11.9 |
| 5 – 9.9 | 21.8 | 11.9 |
| 10 – 19.9 | 28.1 | 25.9 |
| 20 – 29.9 | 20.4 | 26.6 |
| 30 and above | 5.7 | 23.7 |
| Total | 100 | 100 |

*Source: Field Survey (2011-12).*

We calculated the mean difference of Per Capita Income, Per Capita Saving, Per Capita Income from SHG activities in drought-prone areas and non- drought-prone areas. The difference in respect of Per Capita income and per capita savingbetween drought-prone areas and non-drought-prone areas was statistically significant at 1% level. However, Per Capita Income from SHG activities in drought-prone areas and non- drought-prone areas is not insignificant.

**Table 8 Mean and variance values of PCMY, PCS, PCY from SHGs activities, 2001-2002 to 2011-12**

| | Mean drought-prone area | Variance drought-prone area | Mean non-drought-prone area | Variance non-drought-prone area | t-value |
|---|---|---|---|---|---|
| PCMY | 778.489 | 305834.6 | 866.183 | 378073.3 | -2.3432** |
| PCS | 131.706 | 37782.9 | 76.088 | 7077.17 | 6.069** |
| PCY from SHG activities | 135.26 | 25660.9 | 129.39 | 15119.35 | .65635 |

***Source:*** *Field Survey (20011-12);*

### 6.4 Decision making roles

The decision making role of the members of SHGs is an important criterion for women empowerment. The SHG is considered as a forum for imparting solidarity and empowerment of women, providing them the space and voice to negotiate and participate as equals both within the family and in the society in general (Thirlwall, 2003). The SHG approach aims at building self-confidence among the poor through community action, interaction in group meetings and collective decision making. This enables them to identify their needs and resources properly which will ultimately lead to strengthen the socio-economic power of the rural poor as well as improve their collective bargaining power.

**Table9 Distribution of the Members of SHG by decision making role in drought prone areas and non- drought prone areas**

| Pattern of Decision making in a SHG | Percentage of member in | |
|---|---|---|
| | drought-prone areas | Non-drought-prone areas |
| Individual | 42.4 | 44.0 |
| Husband | 43.1 | 45.3 |
| Jointly | 3.8 | 7.0 |
| Uncertain | 1.3 | 3.7 |
| Does not arise | 9.4 | - |
| Total | 100 | 100 |

***Source:****Field Survey (2011-12)*

This study wants to show whether the members of SHGs are taking decision individually, jointly with their husband, or whether they are not in a position to take crucial decisions. The distribution of the women members of sample SHGs by their decision making role in drought prone areas and non-drought prone area of PaschimMedinipur and Bankura districts is shown in Table 9.

In drought prone areas, about 43 per cent members have taken decisions individually, about 43 per cent members have taken decisions as directed by their husbands, 3.8 per cent members have taken decisions jointly with their respective husbands, about 1.3 per cent are not certain whether the decision would be taken by the husband or the wife, and about 9.4 per cent of members did not take any decision because they could not pass Grade-I which is crucial for the initiation of economic activities. Again, in non-drought prone areas, about 44 per cent members have taken decision individually, about 45 per cent members have taken decisions based on the directions of their husbands, about 7 per cent of members have taken decisions jointly, and about 3.7 per cent members are not certain on this issue (Table9). Therefore, more than 42 percent of members in both drought prone areas and non-drought prone areas have taken group-based productive decisions independently. But in non-drought prone area, relative higher percentages of members are dependent on their husbands for taking part in the various activities of SHGs. It is important to note in this connection that before group formation, the male-dominated family heads seldom discussed with their wives while taking any crucial decision, say, regarding the education of their children, participation in any income-generating activities, purchase of lands and so on. Hence, this nature of undermining the opinions of adult female members in family decisions has changed after the participation of the female members in different SHGs.

## 7. Conclusion

This study clearly shows that the percentage of illiterate members in both drought-prone areas and non-drought-prone areaswas seen to have decreased after the formation of SHGs. A sizeable percentage of women members have learnedhow to sign or how to read and write only after joining their respective SHGs. In the drought-prone areas the percentage of SHG income to total family income was substantial though it was higher in the non-drought-prone areas. The overall mean monthly per capita income for the SHGs households the non-drought-prone areas was also higher than that in the drought-prone areas. In respect of saving ratio SHGs member households

were better in the non-drought-prone areas than that in the drought-prone areas. Again, the formation of SHGs has surely helped in checking the attrition of the women of the poor and backward communities in both the drought prone areas and non-drought prone areas through their participation in group-based activities. This seems to have opened a new dimension in the development process of the backward and drought-prone regions of West Bengal. We feel that proper support activities on the part of the government can further this development dynamics in right direction.

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# RESEARCH PERSPECTIVES ON CORPORATE SOCIAL RESPONSIBILITY - A REVIEW OF LITERATURE

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**Abstract**

Corporate Social Responsibility (CSR) has gained prominence among corporates and has delved interest among academicians in the recent times. CSR can be defined as the "economic, legal, ethical, and discretionary expectations that society has of organizations at a given point of time". In the scenario of growing business and competitive environment, corporates in India have started understanding the importance of the concept of CSR in building trust and sustainable relationship with customers, employees, shareholders, communities, environment and society at large and as a result, companies now have started behaving ethically and responsibly towards the holistic welfare of the society.

The present paper is based on the in-depth review of some literatures on CSR so as to understand the research gap i.e. the scope for future research area.

***Keywords:*** *Corporate Social Responsibility, Companies Act 2013, Environment, Guidelines.*

## I. Theoretical Background

The 21st century is featured by unparalleled opportunities and challenges due to globalization, global warming and need for inclusive growth and development. Businesses play a vital role in the society. It is their responsibility to uphold the imperatives of ethical practices and good governance and create healthy environment, all-round growth and development of the society. In recent times, it is also found that companies are not only being judged on the basis of their economic success but also on non-economic criteria.(Carroll, 1979). This change in people's perspectives was first mentioned in Howard Rothmann Bowen's book "Social Responsibilities of the Businessman" (1953). Since then, there have been lots of views and arguments on the concept and its implementation. Although the idea of social responsibility has been around more than half a century, there is still no consensus over its definition. To some, the term Corporate

Social Responsibility (CSR) conveys the idea of legal responsibilities and liability towards the society; to others it means socially responsible behaviour in an ethical sense, to some others, it refers to that of 'responsible for' in the causal mode; many simply equate it with charitable contribution (Votaw, 1973). Though, over some decades, the perception about CSR has changed a lot. It has gone much beyond charity and philanthropy and is viewed as an avenue for helping in sustainable development of business of corporates. [Dari, 2012]. CSR has been perceived as "A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis"[1]. According to Carroll and Buchholtz (2003), the stakeholders can be sub-categorized into primary stakeholders, consisting of shareholders(owners),employees, customers, business partners, communities, future generations and the natural environment; and secondary stakeholders, made up of the local, state and federal government, regulatory bodies, civic institutions and groups, special interest groups, trade and industry groups, media and competitors. However, in 2011, the European Commission changed the definition of CSR to have parity with internationally recognized CSR principles and guidelines and stated CSR as "the responsibility of enterprises for their impacts on society and outlines what an enterprise should do to meet that responsibility."In other words, CSR is the responsibility of corporate citizens towards holistically addressing the various issues of "People and Planet" besides taking care of the "profit" element for sustainable development of business as well as for the better future of all living beings. In 2009, the Ministry of Corporate Affairs prepared a set of voluntary guidelines- "Corporate Social Responsibility Voluntary Guidelines 2009" which stated about formulation of CSR policy, proper planning of CSR initiatives involving various levels of executives and with proper approval of the Board. In the scenario of growing business and competitive environment, corporates in India have started understanding the importance of the concept of CSR in building trust and sustainable relationship with customers, employees, communities, stakeholders and society at large and as a result, companies now have started behaving ethically and responsibly towards the holistic welfare of the society. In view of the changing environment and to address India's various social issues more seriously, Companies Bill, 2012 was passed and on 29th August, 2013 the Companies Act,2013 was enacted which incorporated mandate provision for CSR under Sec 135. Against this backdrop,

[1] As cited by The European Commission(2006)

the main focus of this study is to undergo an in-depth analysis of some notable literatures on corporate social responsibility across the globe. Moreover, through this comprehensive analysis, an attempt has also been made to identify the area or areas for further analysis.

**II. Objectives of the Study**

To conduct an in-depth analysis of some notable literatures on corporate social responsibility across the globe and to identify the scope for future research.

**III. Methodology**

This is a descriptive study based on the secondary data obtained from various books, journals, articles, websites, magazines and newspapers.

**IV. Review of Previous Studies**

The available literature on different concepts of CSR and studies relating to varied approaches towards CSR has been reviewed. The essence of such literature reviewed is given below.

**Different types of perception regarding the basic concept of CSR**

Farache et al. (2009) rightly have pointed out that corporate social responsibility is a form of management that is defined by the ethical relationship and transparency of the company with all the stakeholders with whom it has a relationship as well as with the establishment of corporate goals that are compatible with the sustainable development of society, preserving environmental and cultural resources for future generations, respecting diversity and promoting the reduction of social problems.

CSR acts as a conflict-resolution device between stakeholders and shareholders (Jo H. et al., 2012).

**Importance of CSR in business**

Kiran and Sharma (2011) while trying to act as a messenger about the importance of CSR have opined that the main motivating factors behind taking up CSR initiatives are new business opportunities, enhanced brand image in society, more association with business partners and stakeholders, enhanced consumer satisfaction, reduction of costs and risks and lastly, minimized regulatory interventions. On the basis of case study of Nestle, the authors recommended CSR as a new avenue for businesses to sustain in society.

Another point to note that, if the CSR interventions of a company are not aligned to its business goals or not related to particular traits the company has, then such initiatives provide corporate

with lesser competitive advantage since those initiatives are not unique and can be practiced by other corporates too. The competitiveness enjoyed by corporates through social responsibility helps them to build image and reputation, to come up with unconventional projects, to motivate employees thereby retaining efficient resources, leading to improved social, economic and environmental performance and better corporate governance(Farache F. et al., 2009).On the basis of literature survey and a case study of Carrefour – a supermarket company, the authors have also opined that there is a strong bonding between social responsibility, corporate strategy and competitive advantage.

**Linkages between CSR and varied concepts**

Gill (2008) has observed that both corporate governance and corporate social responsibility is evolving together hand on hand since on one side, while CSR initiatives are emphasizing more on corporate governance principles i.e. transparency, accountability, by trying to align the social strategy with business strategy and on the other side, corporate governance is focusing more on stakeholder-friendly business practices.

Another literature at later stage, while talking of the emerging practices of CSR and green marketing, have stated that there is a new approach among the stakeholders and the society as a whole, of accepting those companies which behave ethically and more responsibly towards the society. (John et al., 2013)

While trying to analyse any relationship between CSR and the elements of business growth, Ghose(2012) have observed that a significant positive correlation exists between CSR investment and annual sales while surveying companies from different sectors over the period ranging from 2007-2010.

Another similar type of study has been found in international perspective where in pursuit of getting an answer to a question - Can CSR have influence on the business performance of an organization - Kaufmann M. n et al. (2012) employs EFQM (European Foundation of Quality Management) model and, on the basis of a questionnaire survey among different groups of stakeholders, opined that CSR do influence business performance.

**Varied areas of study related to CSR**

Arevalo and Aravind (2011) have stated that among the four well-known approaches to CSR, stakeholder approach or Freeman model has been the most approved one among corporates on

the basis of their survey of top management of leading Indian firms from various industries and of varied sizes participating in the UN Global Compact (GC). It has also been found that the liberal approach i.e. the Friedman Model, which states that corporate responsibilities are only towards private owners, is the least favoured one by corporations. The analysis also finds that the most important motivators behind CSR are related to ethical, moral values. However, Indian managers also think that profit enhancing factors also work behind CSR initiatives undertaken by corporates. Further, the analysed results indicate that the most significant obstacles that Indian firms face when implementing CSR are those related to lack of sufficient resources – training-related, financial-related i.e., lack of sufficient financial resources for CSR implementation ,lack of knowledge about how to implement CSR and difficulty in obtaining information about CSR practices and implementation, followed by those hindrances related to the complexity and difficulty of implementing CSR initiatives highlighting factors like time-consuming, costly, unproductive initiative. However, management support at both top and middle levels is found to be the least significant hindrance towards initiating CSR practice.

In an endeavor to explore the contribution of corporates towards the socio-economic developments of rural India, Mal D. and Chauhan K.(2014) have surveyed ten public and private companies and have stated that education sector for rural development gets the top attention of these corporates followed by health and livelihood. In infrastructure and environment areas, 30% and 40% of the sampled organizations took initiatives for progress of the rural areas.

In an analysis about examining the understanding, awareness and support of Millennials about CSR activities implemented by FMCG companies of Pune city, Singh & Vanarse (2014) have observed that most of the Millennials seem to be well aware of what CSR is and have opined that CSR is a mixture of all the responsibilities pointed out by Carroll (1979). The study also finds that the Millennials are positive about the role of CSR activities by FMCG companies to play a filliping factor in the inclusive development of the society. They also feel that FMCG companies must put more emphasis on philanthropic responsibilities than economic responsibilities because of so many existing social issues in India and urge that the Government should help the FMCGs in solving such issues. It is also observed that there is no gender-wise difference in the insight, awareness and support among millennials about FMCG Companies' CSR interventions. At the end, the authors, while assessing the practical implications of CSR interventions made by FMCG

companies in developing countries, have opined that in developing countries since most people struggle to get the basic necessities, they are more concerned with the affordability of products than the involvement of companies in societal obligations. So there is a huge responsibility on the FMCG companies to communicate their CSR activities to the masses.

On international frontiers, special emphasis can be made on observation made by Adeyeye (2012) where she has mainly placed much importance on anti-corruption as a CSR issue to be practiced by MNCs in developing countries since such issue has rarely been considered as CSR obligation. While analyzing the effect of companies' CSR scores on the preferences of the investors investing in different companies and analysts, Ioannou I. and Serafeim G.(2014), have found that during early 1990s investment analysts prefer firms with low CSR ratings hoping that high CSR costs slow down revenue growth of the business. However, in subsequent years till 2007, there was an optimistic change in those perceptions in assessing the CSR ratings of companies while investing in them and favoured the companies with high CSR ratings. Also, experience and status do play a role in the preference of analysts analyzing the firms on the basis of their CSR scores and more experience and higher status do help to adapt quickly to the change in assessment of firms on basis of CSR ratings. The authors have also explored the factors behind the shift of the preference which includes mandatory and voluntary reporting, NGO activity, academic research, increasing consumer awareness, proactive corporate leadership, and socially responsible investments. On basis of empirical data, the authors have found that there is no significant relationship between the investors' forecast errors and the CSR scores of companies thus obviating the fact that this is not accounting for the observed shifts in recommendation on investment.

While studying the varied studies on CSR, some studies have been found to be discussing some negative aspects of such CSR investment as depicted below.

On the basis of content analysis of sustainability reports of the largest 50 companies as classified by Global Fortune (2009) and usage of statistical tools, Lunga C. n et al.(2009) have posited that for large companies already known for their goodwill, added disclosures like socio-environmental reporting may not have much impact on their already possessed credibility, thereby proving the fact that there is no relationship between the characteristics of the surveyed companies in terms of size and revenue and their socio-environmental reporting. However,

remarkably, there is negative correlation between their corporate social responsibility reporting and profitability in terms of return on assets (ROA) and return on equity (ROE). Thus, it may so happen that companies with higher change in ROA or higher ROE in a particular year may give less importance to add-on disclosure like CSR reporting. Heugens P. & Dentchev N.(2006) have also analysed the negativities posed by social responsibility related activities of the corporates besides increasing the competitiveness of the corporates. They have stated that the CSR activities act as Trojan horses and put corporates into different types of risks. The authors have suggested that before reaping any benefits of investment, managers need to harness such risks and should keep in mind that experimenting with CSR activities hoping to contribute something positive to the society or to gain can pose serious threat to the competitive and strategic position of the organizations.

In an unique bid to identify evolution of universal standards in CSR, Adeyeye A. (2011), have analysed selected non-binding non-mandatory legal initiatives like Shell Group's General Business Principles, Voluntary Principles on Security and Human Rights, Equator Principles (EP), Transparency International Business Principles (TI Principles), the Basel Institute on Governance, the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises and the UN Global Compact. The author is of the opinion that though the "soft law initiatives" are important CSR tools for creating awareness of different CSR issues, these lack adequate transparency, monitoring and compliance mechanisms. Mandate "hard" law initiatives like Partnering Against Corruption Initiative (PACI) do play important roles for spreading CSR awareness along with discretionary initiatives for effective implementation and compliance of CSR related issues. Also, NGOs and society as a whole have an indispensable role in this aspect. It has also been posited that CSR standards across the globe are evolving in areas like sustainable development, human rights, environment and anti-bribery, anti-corruption issues.

In relation to the mandate clauses in Companies Act, 2013 there have been few studies which have been illustrated below.

While analysing the environmental disasters made by industries i.e. corporates and their responsibilities towards the environment and society as a whole, Dari (2012) has suggested making CSR compulsory in India through legal norms like in Saudi Arabia, to incorporate

environment-friendly techniques in product and services offered by corporates, to continuously work towards increased satisfaction of stakeholders , to ensure that while satisfying the present generation, resources for future are not at all hampered. As a whole, the government and the whole society-- people, NGOs, etc. all should have a hand-in-hand motive to spread awareness about CSR, its new aspects about environment—the most popular are Design For Environment (DFE) and Green Engineering.

Athma P. and Yarragorla N. (2014) have stated that Section 135 of new Companies Act, 2013 provides much flexibility than the pre-2013 Guidelines on Corporate Social Responsibility and Sustainability for Central Public Sector Enterprises issued by the Department of Public Enterprises under the Ministry of Heavy Industries and Public Enterprises, which CPSEs used to follow since 2010. The reason for such statement is due to the finding that this new regulation defers the 'to be spent' CSR amount for those companies who have high profits during the immediately preceding financial year and losses or less profits during the other two preceding financial years since the regulation states CSR 'must spent' to be calculated as 2% of the average profits of the immediately preceding three financial years' profits which results in nullifying the impact of the corporates' high or low profit of the immediately preceding year. Also, considering previous three financial years' average profits will give a true picture of the profitability of a Company. Likewise, the CSR liability of those companies has been found to be more under Section 135 of Companies Act, 2013, which have low profits during the immediately preceding financial year and high profits in the other two preceding years. However, it has been observed through the study both theoretically and statistically, that if all the surveyed companies are taken together, then the difference between the CSR liability for CPSEs as per pre-2013 CPSE guidelines and Section 135 of Companies Act 2013 is not at all significant. Gupta & Arora(2014) have reviewed the CSR activities of four Maharatna companies(BHEL,ONGC,SAIL and NTPC) and three Navratna companies(Oil India Ltd., Rashtriya Ispat Nigam Limited, Power Grid Corporation of India) and points out that all companies participated in promoting education as CSR initiative. Out of the seven surveyed Companies, 16% were found to be taking environment sustainability and employment generation as CSR core thrust areas whereas 14% were engaged in women empowerment and healthcare. The least initiative has been taken in child welfare.

In the pursuit of examining the various methods of implementation of CSR initiatives by corporates in India, Bala M. (2015) have observed that implementation of CSR activities through formation of "Separate CSR Project Management Department" i.e. CSR committee as mandated by Companies Act 2013, is the most proposed and popular method among Private Indian Companies (PICs), Multinational Companies (MNCs) and Public Sector Companies (PSCs) which have been comparatively surveyed for the said purpose. This may be due to compliance to the mandate CSR clause as per the new Companies Act 2013 and preference of companies towards effective control and monitoring of activities under direct supervision of companies' own personnel. The CSR implementation method through "Partner NGOs" is found to be the preferred method among MNCs followed by PSCs and PICs. The reason behind this may be cited that MNCs prefer to use expertise of NGOs for a specific social cause in order to save time and resources of company. The method of executing CSR interventions through setting up "Trust/Foundation/Society" is seen to be practiced more by PICs followed by PSCs and MNCs.

The method "Through collaboration with other companies" has been found to be mostly used for execution of bigger projects like construction of orphanage, schools, hospitals, etc. so that potential financial benefits are achieved and cost is minimized. It is observed that MNCs mostly use this method for CSR implementation for some initiatives followed by PSCs and PICs.

While analyzing the last method as formulated by the author as "Funding to Government", the author have pointed out that this method comprising of initiatives like "Contribution to PM's national relief funds and such other funds established by central or state government for socio-economic development and relief and welfare of scheduled castes and scheduled tribes and other backwards classes, minorities and women" is implemented more by MNCs than PICs. However, as per norms, PSCs cannot contribute to Prime Minister's National Relief Fund.

It has also been concluded that there is no difference in choice of selection of method of implementation; however the involvement in a particular method varies among groups of companies and within the group also.

While analysing the pros and cons of the CSR mandate, Jain (2014), have observed that the opinion against the CSR mandate came from the viewpoint framed by Milton Friedman or the classical or shareholder's perspective. According to this, CSR is just wastage of resources and does not benefit the society at all; instead it diverts the business from its profit-making motive to

society welfare that, doing good for the society is beneficial for the business which is a deceptive concept and thereby decreases the efficiency of the business to make profit. On the other hand, there are also opinions favouring the CSR mandate saying that, contributing positively to the society will result in effective utilisation of resources, enhancing the brand image of the corporates thereby benefitting them in the long run and it is an appropriate step towards removing all the issues in the Indian economy like poverty, illiteracy, lack of awareness about hygiene and sanitation, health-related problems, pollution, environment degradation, etc.

**V. Epilogue**

From the above literature review, it has been found that studies have been made on varied views regarding concepts of CSR, its importance, different approaches to CSR, motivators and obstacles behind CSR implementation, various methods of implementing CSR initiatives, relationship between social responsibility, corporate strategy and governance and competitive advantage, relationship between CSR and the elements of business growth or business performance, millennials' awareness and understanding about CSR activities, change in investors' preference towards CSR over years, risks that may stem out of CSR initiatives taken, comparison between the CSR liability for CPSEs as per pre-2013 CPSE guidelines and Section 135 of Companies Act 2013 and lastly pros and cons of the CSR mandate.

It is a known fact that CPSEs are established for serving the society, specifically if history is delved into, we will find those were set up with the main objective to accelerate the growth of core sectors of the economy; to serve the equipment needs of strategically important sectors, and to generate employment and income. However, in view of the mandate clause and revised DPE guidelines, they are provided with a framework of serving the society in a more holistic way. However, it has been observed that the area on comparative study of corporate social responsibility practices and compliances by CPSEs pre and post Companies Act 2013 with reference to the revised DPE guidelines is yet to be studied.

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