CHAPTER: 3

REVIEW OF LITERATURE AND RATIONALE OF THE STUDY

3.1 REVIEW OF LITERATURE

Literature review is indispensable part of a thesis because it represents the whole range of research in the past on the topic selected by the researcher on the basis of which research design of a study is formulated. Literature review gives better insight and helps bridge gap for the research to be undertaken.

Efforts have been made to present a common scheme of various facets and issues relating to this empirical studies carried out in past at the national and international stage in different companies. Some important conclusions and research gap have been drawn from the review of some research papers, articles, theses and textbooks available in the accessible libraries and internet sources. Different researchers have done studies in the field of management of working capital which have been summarized into following three parts:-

3.1.1 Efficiency in management of working capital

Verma (1989) examined working capital management in Tata Iron and Steel Company Ltd. (TISCO), Steel Authority of India Ltd. (SAIL) and Indian Iron and Steel Company(IISCO) during the period from 1978-79 to 1985-86 by using the financial tools and statistical techniques. The study revealed that Tata Iron and Steel Company Limited had better working capital management in comparison to Steel Authority of India Limited and Indian Iron and Steel Company. Results also revealed that all the three firms under study had made excessive use of bank borrowings to finance the working capital requirements.
Majumdar (1992),\(^4\) in order to know the pattern of financing the corporate working capital in India, has analysed balance sheets of 20 companies- 10 from private sector and 10 from public sector for the period from 1981 to 1990. For the purpose of analysis researcher has used statistical techniques and financial tools. Study indicates that major share of working capital finance is from borrowings and effect of cost on the selection of sources of working capital is not at all significant.

Mills (1996)\(^5\) has explored the question of the impact of inflation on the capital budgeting process. The study reveals that it is reasonable to expect that the cost of capital will increase at the same rate as the rate of inflation on an ex-ante basis, and that this increase will be a multiplicative relationship. It also reveals that the higher the net working capital the greater is the impact of inflation on capital spending.

Vijaykumar and Venkatachalam (1996)\(^6\) have made efforts to do in depth study of Tamilnadu Sugar Corporation for the period of 1985-86 to 1993-94. Results indicate that the corporation has maintained moderate level of working capital, less amount from long term-funds has been used for meeting short term liabilities and due to excess liquidity, profitability was affected during the period of study.

Bansal (2001)\(^7\) has studied working capital management in Himachal Pradesh Agro Industries Corporation Limited for the period from 1985-86 to 1994-95 with the help of financial tools. The study reveals that the corporation under study has adopted conservative policy of financing current assets which resulted in inadequate working capital. Cash, Inventory, receivable and production capacity have not been managed properly by the company under study.

Batra and Sharma (2001)\(^8\) have studied working capital management practices in Goetze India Limited for the period from 1989-90 to 1993-94 with the help of financial tools. The
study reveals that overall position of working capital management was satisfactory but there were some gaps in management of inventory, receivable and payable which require some improvement.

Filbeck (2001) in his study, analyzed the performance of the firms using the CFO magazine’s annual working capital management Survey. The researcher discovered that significant difference existed between industries in working capital measures across time and also found that these measures for working capital changed significantly within industries across time.

Garg (2001) studied working capital trend and liquidity of 8 Haryana Government owned industrial enterprises in Haryana during the period from 1978-79 to 1987-88 with the help of accounting tools and statistical techniques. The study reveals that due to high investments in current assets most of the enterprises had experienced shortage of funds for buying raw material and paying other liabilities. Blockage of fund in current assets has also adversely affected the operating efficiency of the enterprises under study.

Pathania (2001) studied working capital management in Himachal Pradesh State Cooperative Agricultural and Rural Development Bank for the period starting from 1990-91 to 1994-95 with the help of ratio analysis. The study reveals that the Bank under study has not used cash efficiently and effectively which resulted in decrease in profitability.

Tewolde (2002) attempted to study the working capital management practices of Government owned, transitional and privatized manufacturing firms in Eritrea. The results show that though the managers of the Government and transitional firms are efficient but they are not empowered to manage the working capital effectively due to imposition of Government regulations. Managers of the private firms have also not done well in managing working capital efficiently due to lack of managerial empowerment, lack of
clarity of objective and lack of availability of skilled personnel.

Ghosh and Maji (2003) examined the efficiency of working capital management of the Indian cement companies during the period from 1992-93 to 2001-02. For analyzing the efficiency of working capital management three indices were calculated. Using industry norm as target-efficiency level of the individual firm, researcher also tested the speed of achieving that target level of efficiency by an individual firm during the period of study. Findings of the study reveal that the Indian Cement Industry as a whole did not perform remarkably well during the study period.

Ghebreghiorgis (2004) analyzed the working capital practices and efficiency in managing the same in Keren Metal, Wood and Cement Works, a manufacturing firm operating under joint venture in Eritrea. The study reveals that the firm only managed the working capital to ensure that the internal control of the firm is maintained and not to create value by optimal utilization of the working capital.

Mohanlal (2004) studied the working capital management in five non-profit organizations from Durban South Area-Chatsworth with the help of case study methodology. The researcher found that financial managers of the non-profit organizations under study were inadequately trained to manage the working capital due to which they did not implement the policies of the management to achieve the goals of the organizations.

Aggarwal and Bansal (2006) made comparative analysis of working capital practices of the large manufacturing firms in India and their joint ventures/wholly owned subsidiaries abroad. The study reveals that the basic concept of working capital management remained same irrespective of the location of the firms; however, some differences appear due to distinct size, environment and goodwill of overseas ventures in their respective markets that makes the working capital management of these units more complex.
Chiou and Cheng (2006) investigated the determinants of management of working capital in 19180 firms. They found that when working capital is managed improperly, allocating funds more than required on one hand, will render management non-efficient and reduce the benefits of short-term investment and on the other hand, if working capital is too low, the company may miss profitable investment opportunities or suffer short-term liquidity crises, leading to degradation of company credit, as it cannot respond effectively to temporary capital requirements.

Jafar and Sur (2006) studied the efficiency in management of working capital in National Thermal Power Corporation Ltd. during the period from 1983-81 to 2002-03. The researchers have applied financial tools and statistical techniques and revealed that the company has managed its working capital efficiently during the post-liberalization era by adapting itself to the new environment resulting from liberalization, globalization and competitiveness.

Meszek and Polewski (2006) analyzed the profiles of the selected construction companies from the viewpoint of working capital formation and their management strategies applied to working capital. Financial tools were applied. Researcher revealed that construction companies under studies differ in their level of working capital and the same is influenced by the formation of partial elements. They suggested that construction companies require the development of methodology of working capital control on the formation of desired parameters using the knowledge of organization of investment processed.

Padachi (2006) has examined the trend in working capital management and its impact on performance of 58 Mauritian small manufacturing firms. For purpose of analysis, financial tools and statistical techniques have been used. Researcher revealed that there is a strong
significant relationship between working capital management and profitability. The findings also reveal an increasing trend in the short-term component of working capital financing.

Sayaduzzaman (2006) investigates the efficiency in management of working capital in British American Tobacco Bangladesh Company Limited. The study covers a five year period from 1999-2000 to 2003-04. The researcher has analyzed the case with the help of financial tools and statistical techniques and has found that working capital management of British American Tobacco Bangladesh Company Limited is highly effective.

Zingwiro (2006) tried to study the impact of hyperinflationary environment on management of working capital in Zimbabwe. The finding reveals that cash and receivable were not kept at optimal level and funds were borrowed at higher rate of interest which resulted in poor management of working capital during hyperinflationary environment.

Beydokhti (2007) studied to know the system, concept, process and efficiency in management of working capital in 60 firms of small-scale industry in and around Pune. Findings reveal that motivation of manpower can increase efficiency of the organization, proper management and coordination of operations can decrease the cost, efficient management and administration of liquidity can determine efficient management of working capital, small-scale firms should improve their overall efficiency by applying modern management techniques in production, marketing and finance. Efforts should be made to improve the profitability of the firms by effective management of working capital.

Bhunia (2007) made an assessment of management of working capital of Steel Authority of India Limited and Indian Iron and Steel Company Limited from 1991-92 to 2002-03 with the help of financial tools and statistical techniques. Finding reveals that both the companies have maintained inadequate working capital, poor liquidity, and managed
inventory & receivables inefficiently during the period of study.

Ganesan (2007) has tried to analyze the working capital management efficiency of firms from telecommunication equipment industry. Researcher has examined the efficiency of working capital management with the help of correlation, regression analysis and ANOVA analysis. For the study purpose, data of a sample of 349 firms from telecommunication equipment industry were collected for the period 2001-07. The study found that even though “day’s working capital” is negatively related to the profitability, it is not significantly impacting the profitability of firms in telecommunication equipment industry.

Menon (2007) studied the working capital management during the period from 2001-02 to 2005-06 in Kirloskar Pneumatics Co. Limited, Hadapsar. Results show that company did not keep components of working capital at optimal level and working capital turnover ratio shows a continuously decreasing trend during the period of study.

Pandey and Upadhyay (2007) had undertaken the study to evaluate the efficiency of management of working capital in Bokaro Steel Plant during the period from 1999 to 2005. Results show that position of payment of liability was satisfactory but the management of inventory and receivable was good.

Paul (2007) undertook a comprehensive study of working capital management in Motor Industries Company Limited during the period from 2001 to 2005 by applying ratio analysis. Results show that working capital of the company under study has not been managed efficiently and effectively.

3.1.2 Working capital management and profitability

Vijaykumar and Venkatachalam (1995) studied the impact of working capital on profitability in sugar industry in Tamil Nadu by selecting a sample of 13 companies over the period 1982-83 to 1991-92 by applying simple correlation and multiple regression
analysis on working capital and profitability ratios. The study concluded that liquid ratio inventory turnover ratio, receivables turnover ratio and cash turnover ratio affected the profitability of companies under study. The study also revealed that sales and interest rate also affected working capital and its components.

Shin and Soenen (1998) investigated the relation between the firm’s net trade cycle and its profitability by using correlation and regression analysis. They used a composite sample of 58985 firms covering the period from 1975-1994. The researchers found that there is a strong negative relation between the length of the firm’s net-trade cycle and its profitability. They also found that shorter net-trade cycles are associated with higher risk-adjusted stock returns.

Deloof (2003) investigated to know the relation between working capital management and corporate profitability in a sample of 1009 Belgian non-financial firms for the period from 1992 to 1996. Researcher used descriptive statistics and financial tools for analysis. The results show that managers can increase corporate profitability by reducing the number of days, accounts receivable and inventories. The negative relationship between accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills.

Bhyani (2004) made efforts to study the impact of working capital management on the profitability of Gujarat Ambuja Cements Ltd during the period from 1993-94 to 2002-03 by applying statistical techniques and financial tools. Out of nine ratios analysed, seven ratios show negative correlation between working capital management and profitability while remaining two ratios show positive relationship.

Lazaridis and Tryfonidis (2006) investigated the relationship between profitability and working capital management of 131 companies listed with Athens Stock Exchange for the
period of 2001-04. The results reveal that there is statistical significance between profitability, measured through gross operating profit, and the cash conversion cycle. They further reveal that manager can generate profits for their companies by keeping the components of working capital at an optimal level.

**Shah and Sana** (2006) analyzed the effect of working capital management on the profitability of 7 oil and gas companies listed with Karachi Stock Exchange for the period from 2001 to 2005 with the help of ratio analysis and statistical techniques. Results show a negative relationship between gross profit margin and number of days inventory and number of days accounts receivable, cash conversion cycle and sales growth whereas there is a positive relation between gross profit margin and number of days accounts payables.

**Raheman and Nasr** (2007) have studied the effect of different variables of working capital management on the profitability of Pakistani firms. Researchers have used Pearson’s correlation and regression analysis for study. The results show that there is a strong negative relationship between variables of the working capital management and profitability of the firm. They also found that there is a significant negative relationship between liquidity and profitability and debt used by the firm and its profitability. Also positive relationship was found between size of the firm and its profitability.

**Teruel and Solano** (2007) tried to measure the effect of working capital management on profitability of 8872 Spanish SME firms covering the period 1996-2002 using panel data method. The results show that managers can create value by reducing their inventory and the number of days for which their accounts are outstanding and firm’s profitability can be improved by shortening the cash conversion cycle.
3.1.3 Working capital management practices

Ricci and Morrison (1996) prepared a report on the results of a survey of the international working capital management practices of the Fortune 200 companies in the U.S.A. The purpose of the survey was to obtain information on some international aspects of working capital management in major U.S.A firms. Study indicates that the Fortune 200 companies are fairly advanced and practical in their international working capital management activities, particularly in using those methods which impact sales increase.

Weinraub and Visscher (1998) examined the relationship between aggressive and conservative working capital practices in ten diverse industry groups from 1984 to 1993. The study reveals that there is high and significant negative correlation between industry assets and liability policies during the period 1996-2002 using panel data method. The results show that managers can create value by reducing their inventory and the number of days for which their accounts are outstanding and firm’s profitability can be improved by shortening the cash conversion cycle.

Ricci and Vito (2000) investigated the results of a survey on the international working capital management practices of the top 200 companies in the U.K. The purpose of the survey was to obtain information on some international aspects of working capital management in major British firms. Study indicates that decision regarding working capital is typically made at corporate level. Majority of the firms are not using value dating, factoring and consignment. Top U.K companies continue to rely on simple, low cost, low risk methods of managing their foreign exchange activities.

Parsuraman (2004) made efforts to study the relationship between credit policy and profitability of fifty pharmaceutical companies during the year 2001 and 2002. The results show that increase in profits leads to increase in requirement of working capital. The
leading pharmaceutical companies strategically employed greater working capital for enhancing profitability. 

Chaudhry and Amin (2007) have critically examined the policies and practices during the year from 2000 to 2005 relating to management of working capital in eight pharmaceutical companies listed with Dhaka Stock Exchange. The study reveals that companies under study have managed their working capital management efficiently and the impact of overall working capital policy on profitability in the companies is proved to be significant. Further it has also been found that there is positive correlation between current assets management and financial performance.

Sajid and Afza (2007) examined the relationship between the aggressive/conservative working capital policies and profitability as well as risk of firms for 208 public limited companies listed with Karachi Stock Exchange for the period from 1998-99 to 2004-05. The researcher revealed that there is negative relationship between working capital policies and profitability and there is no relationship between the level of current assets and liabilities and risk of the firms.

The above summarized review of studies in India and abroad reveals that a large number of studies have been undertaken on national and international level on the topic of efficiency in working capital management, working capital management & profitability and working capital management practices. Though some studies have been undertaken on fertilizer industry of India but no appropriate study has been conducted to evaluate the efficiency and effectiveness of management of working capital. Though working capital is a significant constituent in the efficient functioning of the organization, it has not attracted much attention and consideration of management. Aforementioned studies which have been undertaken, so far, have exercised philosophical influence on the understanding of
working capital management. Hence, there exists some definite research gap and this study approximately titled, “Management of Working Capital in Fertilizer Industry: A Comparative Study” is an endeavour which will help to plug this gap up to some extent.

3.2 Rationale of the study

Working capital may be considered as the life blood of a business concern. Its capable management leads to the achievement of objectives of a business, whereas its unproductive management can result not only in loss of returns but also in final collapse of what otherwise might be considered as a profitable concern. Its significance can be highlighted from the fact that a substantial segment of the assets is blocked up in the current assets which requires lot of hard work, a lot of time and scarce resources to manage.

Suitable working capital management helps in maintaining the solvency, goodwill, liquidity and profitability. It also facilitates availing cash discounts, loans and advances on favourable terms, regular payment of salaries, wages and other day to day liabilities, creating the capability to encounter crisis, environment of safety, self-assurance, high spirits and improves the overall effectiveness of the company. As a result, proper management of working capital is decisive for the accomplishment of the goal of an organisation.

Significance of fertilizer industry to the agriculture dominated economy of the nation in no manner can be underestimated or uncared for. With the gigantic growth in the domestic manufacturing competence, India has come out as the third biggest producer of Nitrogenous and Phosphoric Fertilizers in the world, next only to China and USA. The fertiliser industry, with its concerted hard work, has emerged as a world class industry in expressions of its enhanced achievements, decrease in energy utilization, water utilization, etc. Fertilizer industry done marvellous hard works to make the country self- dependent in fertilizer manufacturing and has succeeded to a great extent in bringing down the import of
The development of an essential and core industry leads to the expansion of a sequence of other related and dependent industries. The fertilizer industry is no exception to this fact. Spurt of fertilizer industry has facilitated the growth and/or amplified the earnings of so many other industries and such as crude petroleum and natural gas, coal and lignite, coal tar products, inorganic heavy chemicals, iron and steel foundries, hand tool and hardware, railways and other services like transport, communication, banking and insurance. In other words, an efficient organization of fertilizer industry has a multiplier effect on the national economy consequential in considerable increase of GDP and national income for years and years which otherwise would have been missing had India depended on import of fertilisers.

Despite enormous contribution made by the fertilizer industry over the past few decades to national financial system, impetus of augmentation has slowed down in current years due to undecided policies of Indian government. Also the requirement of fertilizers is continuously rising due to speedy increase in the population and decrease in the area of cultivated land, putting forward an extra endeavour in meeting the demand. In addition to this, central government has already announced the termination of subsidy, in a phased manner. The liberalisation and globalisation of business atmosphere, heavy investment involved in setting up of fertilizer plants and blockage of subsidy funds have posed additional challenges to the industry.

Hence, in the light of the significance of the fertilizer industry and the challenges faced by it and the importance of working capital management it can be rightly concluded that sound management of working capital would go a long way in serving the fertiliser industry by turning the challenges into opportunities and face uncertainties with confidence.
Owing to the enormous magnitude of the challenges described in the aforesaid paragraphs and of the reality that a sizable amount of the time of the finance managers, in the majority of the companies, is dedicated towards the management of the different components of the working capital, with a view to maximise their profitability, prospects and prosperity therewith. Hence, it can be rightly concluded that a study “Management of Working Capital in Fertilizer Industry: A Comparative Study” is very well justified and has rightly been undertaken as an earnest endeavour.