Chapter II

Introduction

Among all the problems of financial management, the problem of working capital management has probably been recognized as the most crucial one. It is because of the fact that working capital always helps business concern to gain vitality and life strength.

Working capital management may be defined as the management of a firm’s liquid assets viz cash, marketable securities account receivable, inventories, and account payables. It has been widely accepted that the profitability of a business concern mostly depends upon the manner in which its working capital is managed. Inefficient management of working capital not only reduces profitability but ultimately leads a concern to financial crisis. On the other hand, proper management of working capital results in material saving and ensures financial returns at the optimum level even on the minimum of capital employed. Both excessive and inadequate working capitals are harmful for a firm. Excessive working capital leads to underutilization of scarce funds. On the other hand, inadequate working capital usually interrupts the normal operations of a business and impairs profitability.

In this chapter, it is proposed to review existing literature in the field of working capital management. Many researchers have analyzed working capital management in different ways. Review of this analysis is important in order to decide a method of analysis that can be employed in the context of software companies in India. For this purpose, relevant studies in foreign countries as well as studies in India are reviewed and presented.
Studies on Working Capital Trend:

Trend analysis shows bright spot in the business and helps with asset allocation. It may be used to identify and project up showing in the performance. It is possible to the process of trend analysis to project future worth and adjust the components of the current assets portfolio accordingly. Many researchers have made an attempt to study the working capital trends. Size and adequacy of working capital have their impact on the trend of working capital. Hence the studies relating to these aspects are also reviewed and presented.

Nunn (1981)\(^2\) used the CMIEs database to examine why some product lines have low working capital requirements, while other product lines have high working capital requirements. Using factor analysis, he identified that factors associated with production, sales, competitive position and industry reinforcing the role of industry practices on firm practices were influenced.

Srivastar & Yadav (1986)\(^3\) developed a multiple discriminate model in determining the effectiveness of working capital management using four ratios and a sample test of 40 textile companies, of which 20 were “not effective”(sick) and 20 were “effective”(healthy). They empirically found that their model correctly classified 95 percent of the companies in the sample.


\(^3\)Srivastar S.S Yadav Ra (1986)”Management and Monitoring of Industrial Sickness”, New Delhi Concept Publishing Company.
Sarker and Saha (1987) have examined the working capital management of Cement Corporation of India Ltd. The data have been collected from annual reports covering a period of 10 years from 1973-74 to 1982-83. They have found an increase in investment in current assets, fixed assets, as well as net working capital. Inventory control is not satisfactory whereas debtors' collection is very prompt. The maximum investments in current assets in the form of loans and advances. Further, the analysis reveals that for financing working capital needs, current liabilities, and equity/long term loans are widely used.

Bhavathiprasath and Eresi (1990) made an attempt to study the management of working capital management in small-scale industries (SSI) of the state of Karnataka. Both primary and secondary data have been collected for a period of three years, from 1986-87 to 1988-89. The study reveals that the liquidity position is not satisfactory. More than 50 percent of total assets are in the form of current assets. Inventory and receivables constitute major part of current assets due to inefficient control of inventory and debt collection policies.

Panda and Panda (1990) have examined current assets management in 12 states public sector undertakings at all India covering a period from 1974-75 to 1984-85. Working capital trend is examined by fitting a non-linear trend equation for the ratio of current assets to total net assets, current assets to gross fixed assets and current...

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assets to net sales. For analysis, the state public sector undertakings were further classified into service and manufacturing sectors. The analysis reveals that there is an accelerated trend in the state public sector units of Orissa in comparison with central public sector units. Further it is found that within the state public sector undertaking the manufacturing sector shows an accelerated trend in current assets to total net assets and current assets to gross fixed assets, which the service sector shows an accelerated trend in current assets to net sales only.

Soenen (1993)\textsuperscript{7} says that he investigated the relationship between the net trade cycle as a measure of working capital and return on investment in US firms. The result of chi-square test indicated a negative relationship between the net trade cycle and return on asset was found to be different across industries depending on the type of industry. In order to validate the result found by Soenen on large sample and with longer time period, Jose et al examined the relationship between aggressive working capital management and profitable of US firms using Cash Conversion Cycle (CCC) as a measure of working capital management. The result indicated a significant negative relationship between the cushion conversion cycle and profitability indicating that more aggressive working capital management is associated with higher profitability.

Lamberson (1995)\textsuperscript{8} studied how the working capital position of small firms responded to changes in the level of economic activity. Fifty small firms were studied for the time period 1980-1991. The finding from this study showed that liquidity increased slightly for these firms for economic slowdowns. Their investment in working capital

measured by the inventory to total assets and ratios, were relatively stable over the time period of this study. He suggested that working capital management practices of small firms in response to changes in economic activity did not follow commonly helped expectations.

**Verma and Garg (1995)** attempted to identify the emerging guidelines in managing working capital in an industry on the basis of their investigation in iron and steel industry in India. The study includes public sector as well as private sector units. To evaluate the management in the area of working capital in the selected units; both primary and secondary data are used. It has been observed that inventory and receivables jointly account for 95 percent of total current assets. The secondary data reveals that the banks.

**Peel and Wilson (1996)** in their study on working capital and financial performance practices in the small firm sector concluded efficient working capital management influenced both profitability and liquidity. They suggested that smaller firms should adopt formal working capital management routines in order to reduce the profitability of business closure, as well as to enhance business performance.

**Pandey and Parera (1997)** provided an empirical evidence of working capital management policies and practices of the private sector manufacturing companies in Sri Lanka. The information and the data for the study were gathered through questionnaires.

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and interviews with chief final officers of a sample of manufacturing lists of the Colombo stock exchange. They found that most companies in Sri Lanka have informal working policy and the company size has on influence the overall capital policy (formal or informal) and approach (conservative, moderate, or aggressive). Moreover, the company profitability has influenced on the methods of working capital planning and control.

Shin and Soenen(1998)\textsuperscript{12} highlighted that efficient working capital management was very important for creating value for the shareholders. The way of working was managed, had a significant impact on both profitability and liquidity. They found strong negative relationship between length of the firm’s net trade cycle and its profitability. In addition, shorter net trade cycles associated with higher risk adjusted returns.

Narashiman and Murthy (2001)\textsuperscript{13} stressed on the need of many to improve their Return On Capital Employed (ROCE) focusing on some critical areas such as cost containment, reducing investment in working capital and improving working capital efficiency.

Saravanan (2001)\textsuperscript{14} made a study on working capital management in ten non-banking financial companies. For this study he employed several statistical tools on different ratios to examine the effective management of working capital. He concluded that the sample firms had placed more importance upon the liquidity aspect compared to that of the profitability.

Prasad (2001)\textsuperscript{15} conducted that a research studies on the working capital management in paper industry. His sample consisted of 21 paper mills from large, medium, and small-scale for a period of 10 years. He reported that the chief executive properly recognized the role of efficient use of working capital on liquidity and profitability, but in practice they could not achieve it. The study also revealed that fifty percent of the executives followed budgetary method in planning working capital and working capital management was inefficient due to sub-optimum utilization of working capital.

Dulta (2001)\textsuperscript{16} observed in his study that the various components of working capital position had worsened continuously during the period of study (1991-1998). In the same years (Deloof 2001) discussed that most firms had a large amount of cash invested in working capital. It could therefore expected that the way in which working capital was managed would have a significant impact on profitability on those firms. Using correlation and regression tests he found that a significant negative relationship between gross operating income and the number of days account receivable, inventories and account payable of Belgian firms. On the basis of these results, he suggested that managers could create value for their shareholders by reducing the number of days account receivable and inventories to a reasonable minimum. The negative relationship between account payable and profitability was consistent with the view that less profitability firms waited longer to pay their bills.

Manoj Anand (2001)\textsuperscript{17} conducted a study to identify some quantitative working capital benchmarks in order to help corporate India to manage its working capital more efficiently. Four hundred and sixty companies are selected in respect of which data are available for three years from 1997-98 to 1999-2000. The analysis reveals that companies with high cash conversion efficiency adopt aggressive financing strategy of having negative days of working capital.

Bernard Jaquier (2003)\textsuperscript{18} has explained the SSG (self-sustainable growth) with an example. He has brought out the fact that SSG can be increased by acting on 2 parameters, i.e 1) Improving ROE and, 2) Increasing the profit retention ratio (which means decreasing the dividend payout ratio)

Dr. Sanjay and Bhayani, J (2004)\textsuperscript{19} examined the relationship between working capital and profitability of Gujarat Ambuja Cements Ltd during the period 1993-94 to 2002-2003. Objectives of the study were to examine the impact of working capital on profitability by computing simple correlation co-efficient between return on investment, to assess the joint effects of the important ratios relating to working capital management with the help of multiple correlation, multiple regression and to ascertain the working capital leverage by examining the sensitivity of return on investment. They concluded that the interrelation between the selected ratios in the area of working capital management and profitability of the company revealed both negative and positive

associations. There was no association between inventory turnover ratios to return on investment.

Reddy, Y.V. and Patkar, S.B (2004) presented a comparative study on working capital and liquidity management of SBI and Canara Bank during 1991-92 to 2000-01. The researchers observed that debtors and creditors were major components of current assets and current liabilities while determining the size of working capital. The working capital ratios of Canara Bank factors were higher than that of SBI factors. It implied that the ability of Canara bank factors to settle the liabilities was comparatively higher than SBI factors. A negative rank correlation between liquidity and profitability implied that there was a negative relationship exists and it was concluded that the Canara Bank factors rank correlation was stronger than SBI factors.

Ragunatha Reddy and Kamaleswari (2004) have undertaken a study on the working capital management practices in Cipla Ltd, covering a period of 5 years from 1997-2002 by collecting necessary data from prowess database study reveals that liquidity ratio and working capital turnover ratio are in conformity with the Indian pharmaceutical industry performance standards implying, that the working capital appears to be efficiently utilized for generating fund from sales.

Eljelly, A(2004) elucidated that efficient liquidity management involves planning and controlling current assets and current liabilities in such a manner that eliminated and the risk of inability to meet short-term obligations and avoid excessive

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investments in the assets. The relation between profitability and liquidity was examined. He found that the cash conversion cycle was of more importance as a measure of liquidity than the current ratio that affected profitability. The size variable was found to have significant effect on profitability at the industry level. The result was stable and had implications for liquidity management in various Saudi companies. First, it was clear that there was a negative relationship between profitability and liquidity indicator such as current ratio and cash gap in the Saudi sample examined. Secondly the study also revealed that there was great variation among industries with respect to the significant measure of liquidity.

Narware P.C (2004) conducted empirical a study of NFL (National Fertilizer Limited) a fertilizer producing company for assessing the impact of working capital on its profitability during the period 1990-91 to 1999-2000. Simple mathematical tools like correlation regression have been used for the analysis. He has found that the impact of working capital ratios on profitability had both negative and positive impacts. He also found the impact of working capital leverage revealed in all the years. Under the study period, the rate of return on investment was less than proportionate to decrease in working capital investment.

Amit K Mallik, Debasish Sur and Debdas Rakshit (2005), in their study, “working capital and profitability: A study on their relationship with reference to selected companies in Indian pharmaceutical industry” have assessed the influence of working

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capital of profitability in Indian pharmaceutical industry by computing Karl Pearson’s simple correlation coefficient between return on capital employed and each of some selected important ratios relating to working capital management for each of the companies selected for the study. The data of the 17 companies for period from 1990-91 to 2001-02 have been analyzed using relevant statistical techniques and ratios relation to working capital management. The Return on the Capital Employed (ROCE) has been taken as the profitability measure. They have found that the joint influence of the liquidity, inventory management and credit management on the profitability were very significant in nine out of seventeen companies selected for the study.

**Bardia (2006)**

presented a comparative study liquidity trend of SAIL and TISCO. The statistical methods such as index numbers, time series analysis, regression and chi-square tests had been employed in this study to examine the liquidity position of both the companies. He analyzed the working capital and sales relationship based on working capital turnover ratio using regression.

**Rehman (2006)**

investigated the impact of working capital management on the profitability of 94 Pakistani firms listed at 1st Ahmadabad Stock Exchange (ASE) during the period 1999-2004. He studied the impact of the different variables of working capital management including average collection period, inventory turnover in day, and average payment period and cash conversion cycle on the net operating profitability of firms. He

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concluded that there was a strong negative relationship between working capital ratios and profitability of firms.

Afza and Nazir (2007) investigated the relationship between the aggressive conservative working capital policies for industrial groups with a large sample of 263 public limited companies listed at Karachi Bombay stock exchange during the period of 1998-2003. Using ANOVA and LSD test, the study found significant differences among their working capital investment and financing policies across different industries. They found negative relationship between the profitability measures of firms and degree of aggressiveness of working capital investment and financing policies using regression. They further investigated the impact of the degree of aggressiveness of working capital policies on profitability.

Terual and Solano (2007) studied the effects of working capital management on the profitability of a sample of small and medium-sized Spanish firms. They collected data of 8,872 small to medium-sized enterprises (SMEs) covering the period 1996-2002. They tested the effects of working capital management on the profitability. They concluded that the profitability of firms will be improved by reducing inventories by decreasing the collection period shortening the cash conversion cycle.

Manoj Anand and Kesav Malhotra (2007) in their study “working capital performance of corporate India. An empirical study” has investigated the association

between working capital management and firms profitability to infer how working capital is being managed by corporate India and what impact it has on the profitability of firms. This paper has attempted to develop quantitative benchmarks at the firms and industry level by evaluating the working capital management performance of corporate India. In this study, a substantial improvement is observed in the management of working capital of corporate India as evidenced by key performance indicators. On assessing the relation between working capital management and firms profitability on an aggregate basis, they have identified that there existed a significant negative relationship between working capital management and firms profitability. This study has captured the dynamics of risk return tradeoff between profitability and risk in financing and helping the performance of corporate India thereby creating shareholders value on sustainable basis.

Singh and Shirshir Pandey (2008)\textsuperscript{30} attempted to study the working capital components and the impact of working capital management profitability of Hidalgo Industries Ltd. They made an attempt to study the relationship between, liquidity, profitability, and profit before tax (PBT) of Hidalgo. The study was based on secondary data collected from annual reports of Hidalgo for the period of study 1990 to 2007. The accounting ratio, percentage and coefficient of correlation and regression were used to analyze the data.

Pradeepsingh (2008)\textsuperscript{31} argued that a firm which neglected the management of inventories would have to face serious problems relation to long-term profitability and may fail to survive with the help of better inventory management. A firm could reduce levels of inventories to a considerable degree without any adverse effect on production and sales. He evaluated the impact of the size of inventory on working capital through inventory turnover ratio and working capital turnover ratios. By using the data of Indian Farmer’s Fertilizers cooperative Ltd (IFFCO) and National Fertilizer ltd (NFL), he concluded that the size of inventory directly affected the working capital of the firms under his study.

Kessavanpadachi, Narashimam, Durbarry and Howort (2008)\textsuperscript{32} have made an attempt to investigate the structural changes of working capital in 58 small manufacturing companies from 5 industry groups Food and Beverages (FB), Leather and Garments (LG) Paper Products and Printing (PPP), Wood Furniture (WF). The data for analysis have been collected from annual reports of the sample units. The study covers six years from 1998-2003. The result shows that above 80 percent of investment in current assets are in the form of inventory and receivables which adversely affect the cash flow and leads to disproportionate increase in current assets investment in relation to sales resulting in sharp decline in working capital turnover. Further the overall liquidity of the sample firms in the later years better than easier years of the study and there is no core association among the liquidity of various components of working capital. It is also


observed from the study that there is a negative relationship between liquidity and profitability.

**Studies on Profitability Trend**

Profit is a very important aspect of business. Most business enterprises exist with the object of earning profits. Profit is the engine that drives the business enterprises. It is indeed a magic eye that mirrors all aspect of entire business operations including the quality of output”. The task of management is therefore maximization of profits.

The efficiency of business is measured by the amount of profit earned. The greater the profit the more efficient the business is considered to be.” The principal motivating force behind conducting business is profit. Perhaps the most important reason for keeping accounts, so far as the management of a business is concerned is that the information contained in them provides the means of measuring the progress of the business of testing its pulse and indicating when and where remedial action, if necessary, shall be taken”. Profit is the signal for the allocation of resources and a yardstick for judging managerial investment to earn a return from its use. Profitability is one of the main criteria to judge the extent to which management has been successful in maximizing its profit or minimizing its losses, if any, efficiently. No company can survive long without profit.

**Singh, Ajith and Whittington (1968)** in “Growth profitability and valuation” conducted an empirical study of relationship between the growth, size and profitability of the firm, growth being the main dependent variable, for 450 UK public quoted

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companies, existing over the period 1948-60. The book value of the “net assets were used as a measure of size of the firm. The result exhibited that average growth rate measured in terms of net assets was independent of the opening size of the firm. The same was also true of profitability. But the variability of the growth rates and the profit rates as between firms did change with the size of a significant extent. In both cases it tended to decrease as size increased. Large firms had a more predictable rate of profits, but not a higher one.

Subramanian and Papola (1971)\textsuperscript{34} in “Profitability and growth of firm: The case of Indian chemical industry”, expressed that there is a number of determinants of profitability in India. They studied the relationship between profitability growth of firms in Indian chemical industry during the period 1962-1969 with the data of 27 companies quoted in stock exchange. They found that most of the firms want to grow with differing intensities and those of profitable firm continue to grow faster.

Roger Cossaboom (1971)\textsuperscript{35} in his study “Lets Reassess the profitability – liquidity trade off”, has found out the significant relationship in the profitability – liquidity trade off. To reduce the firms vulnerability to further liquidity squeeze, he has stated that the liquidity, flexibility, sensitivity, innovation and segmental financing should be examined by the firm. For further liquidity management, he has identified financial flexibility and innovation as the best approach.

Barthwal (1076)\textsuperscript{36} in his study on “The determinants of profitability in Indian textile industry” had identified the factors that cause variation in the profitability. The

\textsuperscript{34}Subramanian K.K And Papola T.S.” Profitability and growth of Firms. The Case of Indian Chemical Industries”.Anvesak 1971.


\textsuperscript{36}Barthwal, R.R (1976),”The Determinants of Profitability in Indian Textile Industry: Economica, Vol.43, pp267-274.
explanatory variables used by him were profitability, size of the firm, age of the firm, past growth, capital-output ratio and change in average cost of production. Among them, past profitability and changes in the average cost of production over the previous years had been found to be significant determinants of profitability of the firms in the industry, in different regions of the country.

Rajamani (1979)\textsuperscript{37} in his study on "Behavioural pattern of financial ratios of textile mills in Tamilnadu," analysed liquidity, profitability, turnover, investment and structural position for a period of ten years from 1965-66 to 1975-1976. The study indicated that the management with rare exception has been showing little concern about long-term sources and their uses in Cotton industry.

Whittington (1980)\textsuperscript{38} in his study, "The profitability and size of United Kingdom companies: 1960-1964" extended his investigation further covering the period from 1960-1974 was found that average profitability largely independent of firm size. The relationship between inner company dispersion of profitability and variability of profits through time tended to decline with firm size. He also found that the average profitability margins and sales/assets ratio did not vary systematically with firm size and also profitability margins of firms tended to be relatively stable through time whereas their sales/assets ratio did not. Thus the relative stability through time of the rates of return of large firms was due to relative stability of their profits, rather than the stability of their capacity utilization. Profitability was not an incentive and it was large firms to grow at a relatively rate.

Bhabatosh Banerjee (1982)\textsuperscript{39} examined the relationship between liquidity and profitability of medium and large public limited companies from the year 1971-1978. He observed that the industries of ferrous, non-ferrous metal products and shipbuilding had a good liquidity and profitability and other industries like tobacco, silk, rayon and textiles had a declining trend of profitability due to low liquidity.

Vishnu Kanta Purohit (1982)\textsuperscript{40} estimated the analyzing trends of profitability of the manufacturing industries in the corporate sector during 1950-51 to 1970-71. The analysis relied upon the ratios. Variation in profitability had been analyzed with the help of co-efficient of variation calculated over the period of time. The profitability had recorded an upward trend in most of the industries over the period.

Kumar (1985)\textsuperscript{41} in his study on “Corporate growth and profitability in the large Indian companies “has examined the relationship profitability and growth in 83 large companies in Indian corporate sector during 1969-79. The study revealed a significant inter-industry differences in the growth of firms under study. The study showed that the growth only of a few firms in Indian corporate sector has been influenced by profitability.

Gopalakrishnan Pillai (1986)\textsuperscript{42} in his study “Growth and profitability of diversified companies “has found that the growth rates and profitability of diversified group of companies were higher, compared to non-diversified group. The study

\textsuperscript{40}Vishnu Kanta Purohit,” Profitability in Corporate Sector” Artha Vijnana, Vol.24, No.1 March 1982, Pp.50-66.
\textsuperscript{42}Gopalakrishnan Pillai S.’Growth and Profitability of Diversified Companies”, Ph.D. Theses, University of Bombay, 1986
concluded that the diversification strategy helps a company to attain its goals of profitability and is a recommendable policy for growth strategy.

Nagarajan and Burthwal (1990) in their research work entitled "Profitability and structure: A firm level study of Indian pharmaceutical industry" intensively examined the relationship between profitability and structure, using a sample of thirty-eight pharmaceutical firms in India for the period 1970-1982. The analysis demonstrated that under the condition of price controls the most significant determinant of the profitability of the firms in this study was vertical integration. Size and advertising intensity did not appear to be major determinants. This was perhaps due to the inability of firms to translate their market power into prices, because of controls. The coefficient of growth rate of sales was positive and significant, suggesting that factors on the demand side of a firm had a greater impact on profitability than on the supply side.

Kumar and Nagesh (1990) examined the determinants of profit margins in the case of affiliates of multinational enterprises and local firm and in forty-three Indian manufacturing industries to seek explanations of the superior performance of the former. The empirical analysis found support for the proposition that multinational enterprises and local firms constituted different strategic groups in an industry and that the former as a group enjoyed greater protection from mobility barriers. Multinational enterprises appeared to enjoy persistent advantage over their counterparts especially in knowledge both technology and human skill intensive industries.

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43Nagarajan And Burthwal (1990) in their Research Work Entitled “Profitability And Structure. A Firm Level Study of Indian Pharmacetical Industry, Intensively Examined
Chandrasekaran (1993)\textsuperscript{45} in his study entitled “Determinants of profitability in cement industry” studied the determinants of profitability in cement industry. The study aims at drawing inference on impact of policy measures which led to change in price and distribution policies relevant for cement industry. Determinants of profitability are analyzed using the techniques of ordinary least squares. Based on existing theories and relevant econometric empirical works, variables are selected. The study concluded that efficiency in inventory management and efficient management of current assets was important to improve profitability.

Mukeshchaudry and Arjun Chatrath (1995)\textsuperscript{46} investigated the determinants of profitability of US commercial banks in the 1970s and 1980s. They examined that the banks, depending on their size need to exercise greater control over a defined set of variables in order to maximize profits and or minimize costs. Further the study provided some indirect evidence of economies of scale /scope in certain aspects of the banks on loan and investment portfolios.

Karrupiah. K (1998)\textsuperscript{47} analyzed the origin, growth, problems and profitability of 15 lease financial companies during 1996. It was found that there was 100 percent variation of share capital and some of the companies had trading on their equity. Out of 12 companies three did not have any reserves and six had reserves less than two percent. Finally they concluded that the leasing industry in India was infancy.

\textsuperscript{45}Chandrasekaran, N (1993), Profitability, Uncertainty and Firm Size, Small Business Economies, Vol.5 pp.87-100.
Sidhu and Gurprest Bhatia (1998)\textsuperscript{48} studied the factors affecting profitability in Indian textile industry. This study attempted to identify the major determinants of profitability in Indian textile industry during 1983 with the help of regression analysis. From the analysis, it was found that there was no relationship between current liability and capital intensity. Further, it was found that the age of the firm generally had negative and statistically insignificant relationship with current profitability which points towards the fact that the firms in Indian textile industry need modernization and technical upgradation.

Mohammed Rafiqual Islam (2000)\textsuperscript{49} has made a study on “profitability of fertilized industry in Bangaladesh” for a period from 1985-1986 to 1994-1995, five out of seven fertilizer enterprises in Bangladesh under the control of Bangladesh chemical industries corporation have been taken for the study and he had examined the earning capacity of the selected enterprises. He has identified the factors which affect the earning power of such units. Ratio analysis has been used and he has found that none of the selected units return was consistent and all the units were affected with declining profits higher cost of production on, poor investment policy, defective capital structure, industrial unrest and frequent disruption of process due to power cuts were found to be some of the reason attributable for the inconsistency.

Edward Nathan Wolff (2000) found that the profitability has been arising during the early 1980s and by 1997 it was at its highest level since its post-war peak in the mid 1960s and the profit share was at its highest point. He examined the role of the change in the profit share on capital intensity as well as structural change on movements in the rate of profit between 1947 and 1997. Its recent recovery was traced to a rise in the profit share in the national income, a slowdown in capital our growth on the industry level, and employment shifts to relatively labour intensive industries.

Ganesan (2001) in his study identified the determinants of profits and profitability in the selected state bank group 8 units and 19 nationalized banks. The empirical examination of profit function shows that interest costs, interest income, other income, deposits per branch, credit to total assets, proportion of priority sector advances and interest income loss are the significant determinants of profits and profitability of Indian public sector banks. The study has found that the banking sector reforms and individual banks policies towards direct investments and direct credit programmers have played a significant role in improving the profits and profitability of the banking sector.

Shanmuganandam and Ratnam (2002) in their study on “Measures for sustaining profitability of spinning Mills,” analysed the financial performance of 140 spinning mills in Tamilnadu during 1994-2000. The mills were classified as high and low profits mills. The financial performance of the spinning mills during six years was found to be poor.


Darko Tipuric (2002)\textsuperscript{53} examined the relationship between firm size and profitability size measured in terms of either total revenue of number of employees. He found that there was strong correlation between profit and size in terms of total revenue. Whereas a weak correlation existed between profit and size in terms of number of employees. He concluded that profit was directly related to the firm size. That is, larger the firm, larger the profit and vice-versa.

Ruchi Trehan and Nitisoni (2003)\textsuperscript{54} found that the significance of appraising the efficiency of banking industry became more of a necessity than a luxury in the modern world of financial services as it made possible to separate those banks performed well from these that performed poorly. They analyzed the operating efficiency and its relationship with profitability in the public sector banking industry in India.

Chirwa (2003)\textsuperscript{55} investigated the relationship between market structure and profitability of commercial banks in Malawi using time services data between 1970 and 1994 in his study. He used time series techniques of co-integration and error correction mechanism to test the conclusion hypothesis and determined whether a long run relationship exists between profits of commercial banks and concentration in the banking industry. He found that positive relationship exists between concentration and performance.

\textsuperscript{53}Durko Tipuric (2002),"Is There Relationship Between Firm, Size and Profitability? Zagreb International Review of Economics and Business, Faculty of Economics and Business University of Zagreb, Vol.5 (Dec) PP 139-154

\textsuperscript{54}Ruchi Trehan And Niti Soni (2003),"Efficiency and Profitability in Indian Public Sector Banks" ICFAI University Journal of Bank Management ICFAI Press, Vol: 11(4) pp73-82.

Chamberlain Trevor (2003) examined the application of long-run survival model of investment to determine whether liquidity variables are important while explaining investment or not. The model was examined by using time series data for each twenty-five large non-financial corporation from 1994 to 1995. The long run survival model performed reasonably well and the constant terms were significant at 5 percent t level. In case of liquidity stock variables had one half of the estimated correct significant co-efficient. Test of goodness of fit of the securities value model on an average was fairly better than that of the neo-classic model. It was suggested that the securities value model was relatively short lag and most appropriate.

Dr.Vijayakumar and Kadirvelu.S (2003) analyzed the profitability of minerals and metals industry from the year 1981 to 2001. They examined the relationship between corporate size and profitability ratios were calculated in two different ways, sales and profit margins. It was evident from the analysis that the size of firms was positively associated with profitability. Larger firms were in position to earn a higher rate of return on its investments through diversification and moving into higher technology.

Dr.Selvam M.et al (2004) examined the financial health of India cements applying z score analysis from 1998 to 2001. They observed that the financial health of India cements was never in too healthy zone during the study period except 2002 and it was recommended that the problem of under-trading should be attended to immediately.

the company should fix achievable sales target and the capital structure should be modified in such a way to have standard debt-equity ratio to avoid future failures.

**John Goddard and Philmolyneux (2005)** in their study on “The profitability of European banks – a cross-section and dynamic panel analysis examined the determinants of profitability using variables such as size, market share, gearing ratio, and liquidity ratio. They concluded that liquidity ratio market share enhanced the profitability, whereas the gearing ratio and size of firm did not enhance the profitability.

**Sum Lather (2007)** in his study made an attempt to study the liquidity, profitability and risk trade-off of Madras Cement Ltd (MCL). The study concluded that there was a linear relationship between liquidity and profitability. The study further revealed that the high degree of aggressive policy adopted by MCL had made a negative impact on its profitability. The study suggested that MCL was to formulate certain policies to control the working capital so as to meet any sort of financial distress that may occur in future.

**Manorselvi and Vijayakumar (2007)** in their study entitled, Structure of profit rates in Indian automobile industries-A comparison” an attempt has been made to examine the trends in rates of profits of selected Indian automobile industries over the period 1991-92 to 2003-04. Further an effort has also been made to capture the industry wise variations in the series of profit rates, which reveals the dispersion of the series for each industry over the study period, finding of the study showed that the declining trend

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of profitability was proof of adverse effect of various control on prices, output, expansion, and investment etc, expected by government on these industries over time.

**Shiva Reddy Kaluru, Sham Bhat.K.(2008)** examined the determination of profitability determinants of Indian commercial banks. They measure bank profitability in terms of Return On Total Assets (ROTA) and Return On Capital Employed (ROCE). They concluded that the profitability of banks was affected not only by bank own characteristics but also by industry structure variables and macroeconomic variables. However the determinants of bank profitability varied significantly across the banks groups.

**Studies on Software Industry Trend:**

The growth of strong software industry is reviewed by many developing country policy makers as an essential element in their road to development. Developing countries and aid agencies have thus invested heavily support of building domestic software industries, particularly by investing in education and technology adoption. India has during the 1990s and until today built a reputation as being one of the world’s strongest software nations. The Indian software sector increasing revenue and profit growth year after year quarter after quarter without fail. This situation cannot continue forever but given the competitive strengths if India, growing outsourcing market and strong position some of the Indian companies have reached in the sector, the outlook for the four to five years remains bullish. With this background this chapter presents a review of theoretical

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and empirical works carried out by various authors relating to software companies in India and interrelated issues relevant for the study.

Lakha Salim (1960)\(^{63}\) has made a study on “The growth of computer software industry in India “in the early 1960s concluded that the commercial computers were largely employed by the big companies as they only could offer the high cost of using such technology. Though the use of computers in the following decade was still limited, a pool of skilled programmers had emerged. By the late 1970s the spread of microcomputers in India created conditions that were conductive for the further growth of computer technology. The growth of computer software in India was the part of the broader process of the development of computer industry. The new computer software policy of 1986 provided encouragement to software exports. Long-term growth and competitive strength of computer software industry will hinge on India’s ability to achieve a rapid rate of technological processes. This will be possible with an adequate supply of scientific experts and sufficient investment of resources into a research and development.

Patibandla et al (2000)\(^{64}\) in their study “Import substitution with free trade: case of India’s software industry; revealed that much of the total revenues was being generated through exports. This made them to characterize this industry as an island of competitiveness in exports. It was able to achieve export competitiveness with little or no


\(^{64}\)Patinbandala, Murali, Deepak Kapur and Bentpeteresen,” Import Substitution with Free Trade; Case of India’s Software Industry”, Economic and Political Weekly, 36(15), April 2000 pp 1263-1270.
domestic market base and with inefficient local support input industries such as hardware industry and telecommunications. Thus, the birth of this industry was a byproduct of import substitution and its growth and its export success were caused by open trade policies targeted specially at this sector. This as a part of the growth dynamics could result in creation of domestic market for higher services through technology and information externalities which could be significant as domestic market grows in response to the general reforms including opening up of the service sector to private capital.

Kaul Reeta (2000) in his study, “Indian software industry,” analysed the growth of Indian software industry, in terms of domestic software market, software export, IT enabled services and government incentives by using secondary data from 1991-91 to 1999-2000. It was pointed out that the industry needed to move further up the value chain and concentrated specifically on IT enabled services, which was poised to grow further. The growth so far achieved was attributed to elimination of import duty in software, increased enforcement anti-privacy laws as well as increased maturity in end-user organizations. Although India has been ranked as number one by US vendors, strategic policy instruments were required to consolidate its leadership in overseas market. The competitive edge which global software companies around the world have obtained by aligning with Indian software companies was increasing the pressure and expectations from India as a software destination. It must be remembered that investment in knowledge–based industries will determine in the next industry.

Syed Zahoor Hassan, (2000)\textsuperscript{66} in his study “software industry evolution in a developing country: An in depth study,” analyzed the evolution of software industry. This kind of analysis can be benefited to researchers and policymakers that are interested in understanding how software industries could be fostered in developing countries. Software industry provides an opportunity to developing countries to improve governance, enhance competitiveness of their industries, create high value jobs, and generate export revenues, given the predominant role of governments in the education and telecommunication sectors in most developing countries government policies, and initiatives play an important role in shaping the evolution of software industry. Hence, governments have the most significant role of performance in development of software industry. Government policies and actions can both help and hinder development. Focus on short-term goals at the expenses of developing institutions for long–term sustained development can adversely affects ability of software industry to grow.

Chowdry and Pareek (2000)\textsuperscript{67} studied the impact of software industry on service sector focused on issues and challenges faced by the service sector. They discussed many key areas like fungibilizing the services and mass customization of services, customer education that help in improving customer satisfaction level in service sector. They studied that every area of service of sector is now providing online services such as online reservation for railway tickets, airway booking, hotels etc. They concluded that IT leveraged services marketing is and will be the order of the day in future.

Rishidave (2000)\textsuperscript{68} says the software industry in India has been growing at phenomena rates over the last ten years. Currently a 17.15 billion rupee ($560 million) industry, it has experienced compound annual growth rates of over 40.50 percent. Traditional comparative advantages modes only provide superficial explanations for understanding the growth of Indian software industry. One must evaluate the industry beyond the basic assertion that western firms and western software firms. They do not sufficiently explain the imperfectly competitive nature of the industry and the rise of some Indian firms and stagnation of others. In order to understand this behavior, one must look at the transaction cost involved in using an Indian software company rather than a local, domestic one potential clients incur an additional search cost in trying to find a company that satisfies their needs and Indian firms must find method to reduce their search effort.

AshishArora and SumaAthrey (2001)\textsuperscript{69} in their study, “The software industry and India’s economic development” assessed the contribution of software to India’s economic development, paying particular attention to the role of software in the absorption of labour and the development of human capital in the economy. They concluded that the two facts: labour intensive nature of the industry and an environment of global excess demand for such labour, which have altered the attitudes towards human capital formation at the firm level and in the national economy. It is in terms of this slow change in attitude towards education, entrepreneurship, and the value of human capital in

\begin{footnotesize}
\textsuperscript{68}“Patterns of Success in The Indian Software Industry”Http://Www.Stanford.Edu/Group/Scip/Avgst/Dave_Thesis.Pdf# Search = Indian Software Including on Overview. 3.1
\end{footnotesize}
the economy where the software industry has made its greatest contribution to India’s
economic development

Deupendra Moitra (2001)\textsuperscript{70} in his article titled “India’s software industry”,
India today has a distinct identity as a software power with the world’s second largest
pool of English. Speaking scientific and technical professionals, India boasts a US$5.7
billion software industry with an annual growth rate of more than 50\%. As the software
industry increasingly becomes a major driver, the nation economy and policy maker
devices ways to fuel its growth Indian software industry is poised for the massive
expansion. As a matter of fact, policy makers and industry leaders envision this industry
growing to more than US$80 billion by 2005(with US $50 billion worth of software
exports). The author considers India’s competitive advantages and software competence.
He gives a financial snapshot of India’s software power homes.

Richard Heeks & Brain Nicholson (2002)\textsuperscript{71} in their study, Software Export
success factors and strategies in developing an transitional economies”, concluded that
the software export success model has proven useful as a way of understanding the
experience of developing and transitional economies. It offers a template to analyze
national strengths and weaknesses. It also offers some more general guidance for
countries seeking to increase their software exports. More important will be investment in
specific locations. Ideally, this should follow the “organic rather than
inorganic model.” That is, governments should seek to strengthen existing clusters rather
than create new, artificial clusters, some of which have a history of costly failure.

\textsuperscript{71}Richard Heeks & Brain Nicholson,“Software Export Success Factors and Strategies in Developing and
Transitional Economies”, Institute for Development Policy and Management, University of Manchester,
Precinct Centre, Manchester, M13 9gh, 2002, Paper No.12
Saxenian, Ana Lee (2002)\textsuperscript{72}, in his article “Bangalore: The silicon valley of Asia”, did an extensive research on the evolution of software industry in India. A detailed analysis was done on the ingredients of IT action plans of India and their vision. Here, through investigation revealed the following: The IT industry has brought a wide range of important and tangible improvements to India. It has provided the confidence that India has future in the new economy. And it has generated jobs, wealth and exports. First; there is a need to be very realistic about the limits of software as a development strategy for India. Bangalore is not Silicon Valley, and IT is not going to solve all of India’s problems. IT is still a very small piece of the Indian output and exports, and even if it grows rapidly it will remain only one among many sectors that contribute to Indian development in coming decades.

Indrajit Basie (2002)\textsuperscript{73} in his study titled “India’s IT sector rides a wave “ says“ the good news we get is that Indian IT, as an outsourcing destination is getting more visibility. More awareness about India is helping big domestic software service renders to get more business”

Chrisanthi Avgerou (2002)\textsuperscript{74} in his study IT as an institutional sector, comprises artifacts and techniques as well as industries, legislation, and is supported by powerful “rational myths “about its value in contemporary society. Moreover it suggests that IT has been gaining strength by its alliance with other powerful institutions. In the advanced industrialized society the most prevalent such alliances “Management “as a way of thinking about organization and organizing as practicing organizational governance, and

\textsuperscript{73}Indrajit Basie, “India it Sector Ride a Wave “Asia Time Online Out 26, 2002.
\textsuperscript{74}It’s An Institutional Actor in Developing Countries “, London School of Economics, London, 2002.
as on industry in its own right. In developing countries IT is often aligned with the powerful institution of “Development” which is seen here as an ideology supported by a network of international organizations professionals and industries.

**National Association of Software and Services companies (2002)**\(^7\) in its study “on NASSCOM-McKinsey report predicts robust growth of IT services and IT enabled Services industry” has forecasted more than US $57 billion in export growth by 2008 for IT services the Indian IT software and services sector would employ 4 million people, accounting for 7 percent of India’s GDP and 30 percent in India’s foreign exchange inflows. NASSCOM has also made a report growth opportunities for Indian IT services companies and IT enabled services companies in the export market as well as Domestic market.

**Ishwar V. Hedge (2003)**\(^6\) in his study on “The changing trends and the pattern of software exports in India“ has made an analysis of software exports by Indian companies for a period of seven years from 1995. According to him the software exports have started declining from the year 2001. Indian software companies have to strive to transform their business to be more competitive and focused. He had also stated that in addition to exports to America, Indian companies are gradually shifting their business towards market like Europe, Singapore Korea Malaysia and south East Asian nations. Moreover, creating more Indian multinationals is a more sustainable way to do software business in future.


\(^6\)Ishwar V.Hedge,“ The Changing Trends and Patterns of Software Exports in India “Journal of Indian Marketing
Ted TShang (2003)\textsuperscript{77} in his study, China’s software industry and its implication for India “examined the broad characteristics of China’s software industry and its implication for India’s growth and strategy in the region. The implication of these Chinese characteristics for can range quite widely. At one level India can see China as a competitor, and at another, as a partner. This is more complicated when it is realized that the relative competitive advantage of the two countries industries may change over time. Thus cooperative or competitive situations may remain as such, or a cooperative situation can turn competitive. The chances are that India will have to partner with Chinese firms in order to get access to the Chinese market. It is clear that the Chinese domestic market (and therefore the industry) has some advantages, such as the large and growing manufacturing, business and consumer markets. The world market orientation of many manufacturing firms makes them demanding users. Domestic market competition is keen, however to the point whereas standards, technologies and markets nature, there is likely to be a major share-out of firms in the coming years.

Su-ying et al., (2003)\textsuperscript{78} in their article “Uncertainty in global software projects: A UK \India –centered case study “, presented a global software project case study in development work that was divided between the UK and India. It focuses on two issues: the uncertainty that arises because of differences between project locations, and the coordination activities that are undertaken in an effort to reduce those uncertainties. Uncertainty is an important problem for software projects, and this case supports the idea that uncertainty creates significant issues for global software development projects. The


\textsuperscript{78}Su-Ying Lai Et Al,”Uncertainty and Coordination in Global Software Projects’ Uk/Indiancentred Case Study: Institute For Development Policy and Management University Of Manchester Precinct Centre Manchester, M13 9QH, UK 2003, Paper No: 17.
project is a remainder of the two-way relationship between uncertainty and coordination. High level uncertainties demand the use of coordination mechanisms. Those mechanisms it effective can reduce uncertainty and improve project performance. Yet those mechanisms are themselves liable to being undermined by uncertainty, as seen in the difficulties and delays encountered in project communication.

Information as per corporate Bureau (2005)\textsuperscript{79}, says Hyderabad IT park ports steady growth in software exports, software technology park of India, Hyderabad (STPI-H) has registered a steady growth in software export touching Rs.8,963 crores till the end of December 2005. Total software export for the year 2005-06 are expected to cross Rs.12,500 crores by the end of this fiscal which will be a 51% increase from last year exports valued at Rs.8,270 crores.

Babu Ghanta (2005)\textsuperscript{80} Remarked that “Indian software companies target products towards Chinese and Indian software companies have faced barrier in entering the western markets with their software products and now they know their software product and now they have started focusing rapidly expanding Chinese and Indian markets.

Prabhakar Deshpande (2005)\textsuperscript{81} in his study titled “IT’s on everyone’s mind “said that IT had moved from automation to delivering business benefits. There is a strong care for IT department being far more closely integrated with business. A strong case for greater involvement of top management marketing and finance in IT could also

\textsuperscript{81}Prabhakar Deshpande, “IT’s on Everyone’s Mind India’s Time’s News Network, Friday September 30, 2005.
be made. The fact that India plans to spend more on IT is certainly good news for renders. But from the point of view of actual usage, companies need to get their E-commerce all together.

Anjana Pasricha (2005)\textsuperscript{82} said “India’s software and services industry grew by nearly 35\% in the financial year that ended in March, helping Indian information technology companies earn $22 billion. But for the time being, the future looks good for both software and service exports. The industry is expected to grow by 30\% this year helping to reach its target of $50 billion by 2009. India’s IT industry now employs more than one billion people in the country and the boom has raised worries about possible shortages of skilled manpower in the coming years

Ratiq Dossani (2005)\textsuperscript{83} says that domestic entrepreneurship emerges as tutor for origination, survival and innovation in a hostile industrial policy environment. The maturing of the industry required a shift supportive government policy: maturation was also criticism enabled by the modalisation of the programming function through new technologies. These changes favored domestic firms that provided programming services. Later, policy and technological changes induced transnational entry and led to higher value added output. The paper shows that technologically sophisticated industries can develop even when many conditions typically present elsewhere are missing. They provide condition under which this may happen and show their effect of subsequent developments.

\textsuperscript{82}Anjana Pasricha Rao, New Delhi 05, June 2005, Http://Www.Was.Org.UK News Archive/2005 / 06.05.2.Htm
Janarthan Rao.N. and Ravi Babu Adusumilli (2005) in their article entitled “Indian IT companies – competing with MNCs have brought out the fact that with declining margins and intensifying competition in the interrelation market, MNC IT services providers are rapidly increasing their presence in India and they already account for around 20-25 percent of the exports from India and this can grow further. It is not attracting MNCs to India but also the immense opportunity for growth that it offers. They also suggest that moving up the value chain by adding new services liner to their portfolio and expanding to new geographical will help Indian companies deal better with competitions. Besides this, Indian companies need to concentrate on selling and marketing overseas.

Sreenivasa Reddy.G and Ravi Dasari (2005) have made a study of the origins, status, opportunity and challenges of Indian IT industry. They have indicated the phenomenal growth of the IT industry over the decade 1992-93 to 2001-2002. According to them, availability of age pool of English speaking manpower willing to work for low wages, tradition of logic and mathematics, part investment by government in building capability in the computing and networking technologies, availability of infrastructure and communications links, favorable policy, regime and the growing scarcity have industry. Despite a very impressive growth profile, the Indian IT industry is taking a number of challengers. The further growth of industry therefore depends on understanding these challenges and tackling them expeditiously.

Hamsalakshmi .R and Manicham.M (2005)\textsuperscript{86} in their study on “financial performance of selected software companies”, have examined the structure of liquidity position, leverage position of selected 34 software companies in India quoted at Bombay Stock Exchange for a period of 5 years (1997-98 to 2001-02). Ratio analysis has been extensively used for the purpose of analyzing liquidity and profitability for comparison of performance of different companies. The study reveals that the liquidity position and working capital is favorable during the period of study. Software had been increasing at a moderate rate. It has been concluded that the developments will create large domestic demand over the next few years.

Bill Gates (2005)\textsuperscript{87} said that the Microsoft Research (MSR) in Bangalore was established in January 2005. He added “There is no dearth of opportunities in the Indian market for growth. What is perhaps needed is the speed at which it can accelerate and meet up the world economy’s demand. Commenting need to help the developers he said “our job in India is to make our best product available to the local developer’s community and support it terms of infrastructure and technology for the development of local applications’.

Tom Glib, (2006)\textsuperscript{88} in his article titled “The pioneer process certification recommends a makeover for the IT industry” has pointed out that “the core of the problem in IT companies tend to hide specific requirements from a contract in Jargon when they deal with their customers. The result: companies find out there isn’t really a


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way to determine if the project has been successful or not. And the companies themselves are sometimes to blame”. One part of Glib recommended Makeover suggests re-examining the yearly system of contacts and breaking deals down into smaller quarterly, monthly, or even weekly deals.

**John Ribeiro, (2006)**\(^{89}\) says India’s export of software and services such as Call Centers and back-office operations totaled $23.6 billion in the year to March 31, up by 33 percent from a year earlier. The National Association of Software Companies in Delhi, the domestic market for software and services is also projected to grow by 20 percent on account of e-governance project, and investments in IT by the health care and detail sectors. The country has emerged as a major lab for offshore software development, call centre, and back office operations, as foreign companies have outsourced to Indian companies or service centers in the country.

**Dinesh C.Sharma (2006)**\(^{90}\) The Indian software services industry has been able to maintain its growth momentum and consolidate its partnership with overseas customers, adding to their competitiveness, so sustain their competitive advantage, the industry must engage closely with academy to create the right talent pool, collaborate with the hardware industry in Micro-electronics and embedded software, maximize employment opportunities and elevate service excellence through quality Bench.

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\(^{89}\)John Ribera, India Offshore Out Sourcing Revenge Grew 33% IDG News Services 06/01/06.Marked Delivery”.

Navin Kaul (2006) observed that these are new technologies that keep on coming and you would like to keep yourself updated through these technologies. The investment in IT industry grows larger the moment you start growing your business. Frankly, nothing more about investing in IT, it makes your life easier.

Equity master.com (2006) has reported that in Indian software industry off-shoring is well established and Indian software and BPO. Exports touched US $17.2 billion in the year 2005 and are estimated to touch could certainly achieve the target provided the risk factors that are likely to impair the industry’s growth, the human resource factor, MNC competition, emergence of other low cost destinations are properly tackled.

Chopra, R.K (2006) highlighted the importance of IT and business re-engineering in achieving the objectives of banks. He observed that PSBs and old private sector banks are slow in imbibing technology in their operations, whereas new private sector banks and foreign banks are early adopters of the technology and increasing the competition. He emphasized that IT along with the business process re-engineering can be helpful in the transformation of Indian banking systems.

Amitavahazara (2006) the study shows that a decentralized and democratic structure could serve customers in a better way. It has been observed that behavior of service providers and professionals especially in respect of health care organizations

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91Navin Kaul, Special Telecom Karnataka A Spicing IT Up In Data Guest, Vol; Xxiv No; 07, April 15, 2006.
92Equity Master.Com, Indian IT Companies –The Opportunity Beckons March21, 2006
highly account for customers dissatisfying and satisfying experiences. Customer loyalty should be the worthwhile goal of an organization, because it results growth and greater profit. By creating the image of the service, that is relevant to the market, the organization acquires the potential to develop a loyal customer base. As customers expectations, specifically in the field of health care, continue to raise, probability of the level of dissatisfaction also rise accordingly. Organizations deserving a long-term future are those that attempt to minimize dissatisfaction at every stage of service administration.

Narayanan & SavitaBhat (2009)\textsuperscript{95} the study analyze the how ownership specific advantages at home, due to differential technological efforts or due to other firm specific characteristics, is important in determining inter-firm differences in the internalization of the firm in the IT industry in India. Both exports and FDI models of internalization have been considered. The study is based on the high-tech IT industry of India, where can be seen to be using both the models of internalization.

Narayana Murthy, N.R. Former CEO, Infosys\textsuperscript{96} The activities are ranked according to increasing value added as well as increasing risk. The next step for the Indian software firms are to move up the value chain and provide total solutions for their clients, namely in terms of concentrating on providing IT and business consulting services to their global clients, going head to head against global giants such as Accenture and EDS. This leap from writing back end code to acquiring domain knowledge, business expertise and developing reusable code is a difficult transition. It requires a step up in gaining mind share of the key decision makers in global corporations. The Indian software companies have to make a large investment in hiring,

\textsuperscript{96}Narayana Murthy, N.R. Former CEO, Infosys Technologies.
training and retraining their employees to compete in a global market. They also have to expand overseas and stabilities subsidiaries in the US and Europe. These entire moves will increase their overall costs: while at the same time tend-off lower costs competitors from Russia, China and Eastern Europe. This scenario was set to change only in the latter part of the last decade. Firms started to differentiate them on domain expertise. Infosys and TCS on financial services and insurance, Wipro in telecom and research and development and Satyam in transport and manufacturing. The period was marked both by Indian firms MNCs in developing a significant process capability and also laying the seeds for extensive off shoring.

**Dr.G.Ganesan and P.Renugadevi (2011)**

“Working capital management and profitability measurement of Two software companies in India “the paper entitled to the role of working capital management policies on profitability of a company normally, it has been seen that if a company desires to take a greater risk for bigger profits and losses, it reduces the size of its working capital in relation to its sales. If it is interested in improving its liquidity, it increases the level of its working capital. Therefore, a company should strike a balance between liquidity and profitability.

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Conclusion

Working Capital Management and profitability have remained a fascinating field of research in the literature of finance. Many researchers have carried out studies on working capital management by focusing on how well constituents of working capitals are effectively managed for the benefits of a firm. The dimension of research has remained wide covering various aspects of working capital. As far as units of study are concerned, mostly manufacturing enterprises have been extensively examined. Service industry are relocated a backseat. Every single study focuses in attention on how effectively working capital is managed as a very vital sector like software industry. Sensing this vacuum, the present study is undertaken. Apart from assessing efficiency; the study also portrays the trends in working capital and evaluate the impact of working capital management efficiency on software profitability.