CHAPTER 2

REVIEW OF LITERATURE

2.1 Introduction

This chapter has been designed to give a short account of the theoretical background and highlights of some worthwhile studies relating to banking in general and Cooperative Banking and PACS in particular concerning Productivity. Brief descriptions of those literatures were given here:

Horst Brand and John Duke\(^1\) (1982) pointed out that the computer was among the major forces that spurred labour productivity advance in commercial banking in 1967-80. The computer also facilitated great increase in banking output. The spread of branch banking, while enhancing access to banking services, somewhat retarded productivity improvement, partly because scale economies became less favourable.

Ojha\(^2\) (1987) in his study attempts to measure the productivity of public sector commercial banks in India. After identifying various measures of productivity like total assets per employee, total credit per employee, total deposits per employee, pre-tax profits per employee, net profit per employee, working funds per employee, ratio of establishment expenses to working funds and net interest per employee, comparison is made with the banks at the international level. The study concludes that the Indian banks have very less productivity ratio compared with western countries due to its social functions unlike western commercial banks.

Mohanan\(^3\) (1991) in his doctoral thesis made an attempt to examine the constitution, function and responsibilities of PACS and also to assess the performance of PACS in the disbursement of agricultural credit in the State. The study clearly indicated that the working of PACS in Kerala has been remarkable in terms of total membership, deposit and loan disbursement. In his study, he recommended that the limit of credit finance for various crops should be revised by considering the price level changes of agricultural products and the requirements of the farmers.
A.R. Kanthale⁴ (1992) pointed out that the existing productivity norms in terms of per employee deposits or business is basically a volume based productivity measurement which gives only an approximate idea of productivity. It relates to value only indirectly, as higher per employee deposits/business is expected to earn higher income to compensate higher staff cost, fully or partially. In fact the difference is termed as the rise in the so called productivity in banks, especially of employees. In fact the actual position may be quite different. Even at macro level, unless incremental rise in staff expenses are at least equal to or less than actual rise in deposits/working funds, it is very difficult to say whether the actual productivity has improved. But in cases where staff expenses rise remains below business/deposits/working funds growth rate, it can be definitely said that staff expenses or existing efficiency/productivity has not adversely affected the profitability of the bank. The cost structure of personnel, their efficiency and productivity is a very important factor affecting the levels of profitability of banks and a number of high profit earning banks have shown a distinct advantage over other banks in the form of lower cost of personnel either in terms of per employee expenses or higher working funds per rupee of expenses on personnel. The author required that: a) Per employee expense in a particular bank is a fair indicator of personnel cost and an inter bank comparison makes sense. b) Another important parameter, which has a direct bearing on the profitability of a bank is the ratio of staff expenses to total working funds.

V.B. Jugale⁵ (1992) articulate that the cooperatives have not even reached a stage, where they can make a break-through in the traditional system of credit allotment despite the fact that it has a long history of more than 80 years. We once again would like to revive the concept of cooperative village bank (CVB) in place of PACS. At present PACS are only the disbursing agents of DCCBs. They only disburse the funds from DCCBs as agricultural loans. Their work is merely to collect the loan applications and disburse the sanctioned loans. If they are converted into CVBs, deposits could be mobilized; the money accumulated through such local savings may be used for development of the same village, which would incidentally avoid the problem of regionally imbalanced allocation of funds.
Rajagopalan Nair (1994) in his doctoral thesis has made an attempt to evaluate the services offered by banks in rural areas. The study recommends that rural branches should pay attention to popularize ancillary banking services in the rural areas of Kerala State.

P.Subha Rao (1994) suggest that the productivity of the banks is measured by taking the three important services banks render to their customers viz., deposits, loans and agency services. There has been much controversy over the years as to the appropriate measure of output of banking. Some analyses have advocated “liquidity” approach, other, a “transactions” approach. Under Liquidity approach, banks are viewed as holders of money, and their output is measured in terms of the net interest they receive on the volume of deposits held. The net interest is the difference between the income depositors are willing to forego to maintain deposits and the value to customers of the liquidity they enjoy from bank services. The Transactions approach views banking output in terms of services of transactions. The volume of bank’s output is proportional to the volume of the transactions held. The final output of banks is the total number of transactions of all accounts (deposits and loans) handled in a year.

Prof. N.Mohendro Singh and Kh. Somorendro Singh (1997) studied 133 primary level agricultural credit societies out of the 194 affiliated to the Manipur State Cooperative Bank and stresses on the need for proper identification of Government involvement, intensification of Human Resource Development, banking services, timely credit delivery, consultancy services and the preparation of a detailed District Credit Plan. The methodology consist of field survey (random survey), discussion with members of PACS, interaction with Government officials and retired officers and interaction with social workers who take initiative in the cooperative movement. In a nutshell, while the importance of the PACS had been taken note of, much remains to be done so that the performance of the PACS may impress.
M.V. Narayana Swamy\(^9\) (1997) emphasized the importance of Management of working capital in PACS, because current assets account for a large portion of the total investments; its optimum use has to be ensured. Moreover proper management of working capital is important, as short-term solvency of business is a prerequisite for long-term success. For the purpose of this study, two of the eight taluks of Dakshina Kannada District (Karnataka) were selected. Out of the 18 societies working in Kundapura Taluk and 19 societies working in Puttur Taluk, seven each were selected on the basis of a rational scheme. These 14 sample units constitute 8.5% of the total number of societies working in the district. The crux of the problem of working capital management of primary agricultural credit societies is the balancing of liquidity and profitability. The analysis of the management of working capital reveals that the sample units are placed favourably as far as liquidity is concerned. But they suffer with regard to profitability due to heavy interest burden because the sample units finance their entire net working capital from borrowings in the form of deposits. Therefore the primary agricultural credit societies need to improve their equity base on priority basis so that they can meet their working capital needs out of the owned funds.

K. Srinivasa Rao\(^10\) (1997) viewed that the approach of the Narasimham Committee to financial sector reforms was intended to enhance the efficiency, productivity and profitability of financial intermediaries. The changed market dynamics have created a systemic pressure on banks to cut costs, improve productivity and record better profitability.

Dr. P. Puyalvannan\(^11\) (1997) emphasized that for a given level of cost of manpower input, the output should increase year after year. Productivity can be measured in terms of quantitative and qualitative aspects. In terms of quantity it can be gauged wherever routine work is involved like the number of pending items or in terms of turnover made, balancing of all books in time, submitting returns before scheduled dates, keeping cash balances below average, collection of over dues, showing increase in deposits/advances and in profit. Ratios like Net profit to working capital, cost of management to total working capital, average return of funds, amount of overdue advances, deposit per employee and advances per employee etc., may be considered for banks. Qualitative
concept of productivity can be decided in terms of efficient and personalized customer service. While analyzing the performance of DCCBs in Tamilnadu, they are functioning effectively by keeping cost of management lower. Most of the DCCBs have kept the cost of loaning operations much less enabling them to have high margin of profit. Productivity of DCCBs is much higher and profitability ratios depict favourable position.

A.K.Asthana\textsuperscript{12} (1997) observed that in any competitive environment, banks have no option but to accept the heat of competition and prepare to meet any challenge for existence. According to him, marketing of banking services is generally mistaken for deposit mobilization only. But it includes prudent lending, customers’ research and tapping of potential customers. Thus adopting marketing strategy gives the banks a competitive edge over their competitors and also forces them to think for the future.

K.R.Ramamoorthy\textsuperscript{13} (1997) pointed out factors which affect productivity in banks viz., incentive plans, motivation of employees, training, leadership and technology. Technology absorption rate should be improved so as to enhance productivity and return from technology. The technology has to evolve as a platform for product innovation, decision support system and expert systems, rather than being an aid to transaction processing.

Allen N.Berger and Loretta J.Mester\textsuperscript{14} (1997) while investigating the efficiency and productivity growth of U.S. banking industry, observed that the increase in service quality decreased the productivity of the banks. Further, the changing business conditions led to small declines in profits. According to them, the total change in industry cost or profits over time may be decomposed into two elements: 1) productivity growth, which is the proportional change in cost or profit for a given set of business conditions and 2) the change in costs or profits due to the business conditions themselves. Productivity growth may be further decomposed into two parts: 1) the movement of the best-practice efficient frontier, and 2) the change in the average degree of efficiency or the dispersion of firms away from this frontier. A product mix that generates higher revenue will not be measured as an increase in productivity growth, because the output measures not regressed on prices, etc., or other control variables.
R.M. Mohan Rao\textsuperscript{15} (1997) pointed profitability as a key parameter in assessing the performance of any business firm. Reducing operating expenses through pruning wastages and avoidable expenses is another option left to banks to improve profitability. The positive signs in widening the interest spread, arresting further rise or decreasing dependence on term-deposits and bringing down cost of deposits containing priority sector advances are all pointers to concerned efforts and zeal to enliven the reform process and show signs of improvement, though not radical, in performance and profitability, despite unenviable environs within and outside the banking system.

S.R. Subba Rao\textsuperscript{16} (1997) stressed that it is utmost important to consider the nature of banking function while measuring the productivity of banks. Only such measures will truly reflect the position of productivity of banks. The ratio of savings bank deposits to total deposits is taken as a broad indicator of the efficiency of customer service. He indicated eight parameters to measure productivity viz., Business (deposits + advances) per employee, Ratio of net income (interest spread + other income) to establishment cost, Total income per employee, Ratio of operating expenses to establishment cost, Net income per employee, Ratio of average working funds to establishment expenses, Business per Rs. 100 of staff cost and Ratio of savings bank deposits to total deposits.

S. Neelakantaiah\textsuperscript{17} (1997) considers that there is no agreement upon the appropriate methodology for measuring the efficiency of banks. This is mainly because of the fact that commercial banks offer variety of different services. He aims to arrive at ranking of Indian banks with the help of multivariate techniques through his study of 46 banks consisting of public sector, private sector and foreign banks operating in India. The study demonstrates the utility of using principal component analysis to develop an index of performance of commercial banks based on wide range of performance ratios. The results of the study are consistent with the expectations and hence it is used in the area of performance ranking.

Dr. B. Niranjan Raj Urs\textsuperscript{18} (1998) viewed that the success of a cooperative is dependent on sub factors such as self-reliance, optimal deployment of available funds, extent of member satisfaction and patronage and economic viability. Important among
these is the extent of satisfaction. Hence planning in a cooperative has to always focus upon the ways and means by which it can increase members satisfaction. The ratio useful in measuring the extent of members participation and involvement is: Ratio of borrowing members to total members. The author provides handy scientific instruments to measure the performance of PACS. The performance of cooperatives have to be not only evaluated in terms of economic results but in terms of member participation and their need satisfaction. PACS should exercise strict control over their running expenses which should ideally be limited to 3 to 4% out of the expected gross margins of 5 to 6%. This would leave a net margins of 2 to 3% for the society for taking care of the needs of capital forming, creation of reserves for covering business risk and for providing a reasonable rate of dividend on members share capital.

V.B.Jugale and M.D.Dodkey\(^\text{19}\) (1998) highlighted that the PACS in Kerala have turned a new leaf in the annals of the cooperative movement in India by registering phenomenal growth in terms of performance indicators during the past 25 years. They have turned into veritable gold mines, which have gained the trust and confidence of the rural population, which cater to their credit needs of different kinds. The Kerala experience regarding the cooperative credit is reported to have shown as to how cooperative societies at the primary level in the rural areas of our country could function successfully and establish intimate support with the local population for raising deposit which resulted to top among other States in terms of mobilization of deposit.

V.S.P.Rao\(^\text{20}\) (1999) measures the productivity based on both Quantitative and Qualitative measures. Using per employee ratios can make the quantitative measurements: deposits, advances, income, profits, etc. From the qualitative angle, the improvement in customer service, morale and motivation of employees, etc., would serve as indicators of productivity. Productivity may be measured through the following measures: rate of branch expansion, growth rate of deposits, growth rate of advances to priority sectors, trends in recovery and trends in profits. The data pertaining to profitability of Indian scheduled commercial banks indicate that a rise or fall in the productivity level is more or less followed by a rise or fall in the profitability. In respect of expenses, banks do not have much control over establishment expenses, as there are
governed by tribunals, labour awards, opening of branches in remote areas with little business potential, etc. The data also reveal that the percentage share of other operating expenses in the total expenses of all Indian commercial banks at about more than one fourth – which is considerably large. The data indicate the output growth lagging behind the input growth during the period 1961 – 1992. In order to tackle the problems of low productivity and profitability, a two-prolonged strategy was suggested: viz. cost control (input) and improvement in earnings (output).

Paul W. Bauer\(^{21}\) (1999) viewed that if a higher quality service were offered that required more labour, then labour productivity would appear to fall. This phenomenon is mitigated in practice, because output is usually measured by the value of goods and services produced, particularly when multiple goods and services are involved. Higher-quality output is likely to command a premium price, so the bias due to changes in output quality would be mitigated. Alternatively, improvements in labour quality do not have this off-setting characteristic; rather, higher-quality labour (for example, additional education or training) will likely to boost labour productivity, but economists usually want to examine the source of any productivity gains for policy implications. If the gains stem from higher labour quality, then devoting additional resources to training and education may further improve gains.

Dr. M.R. Shollapur\(^{22}\) (1999) while analyzing the profitability of branches of Belgaum DCCB in Karnataka, revealed that the majority of the branches are loss-leaders, most of which are in rural areas. The exact reasons for operational deficiencies are to be traced so that operational viability and financial soundness would be ensured. As most of the key operational activities of the banks are carried on at the branch level, major contributions to the profit-pool emanates from the branches. “In a banking system, the success of a bank depends largely upon the effective performance of its network of branches” (Kamal Nayan: "Commercial Banks in India: Performance Evaluation", Deep & Deep Publication, New Delhi, 1985, p.156) In this context, Spread-Burden Approach which is a two-edged tool is used to testify the profitability of credit and the operating cost effectiveness as well. Profit is the simplest and the most convenient measuring rod for appraising the performance and efficiency of banks as service value being often
intangible. In order to improve bank’s overall profitability, the potentially non-viable branches may be discontinued. A potentially viable branch needs a perfect balance between the internal factors like financial resources, desired skills for mobilizing the deposits from different people, ability to recover credit, etc., and external factors such as scope for agricultural credit business on account of increase in agricultural facilities, competition from other banks, etc.

K. Meetei\textsuperscript{23} (2000) outlined the development strategies of PACS in Manipur. Lack of members’ participation, business opportunity identification, human resource development, support from government agencies and meticulous project planning have been identified as the major reasons for weak and defused cooperatives. As much as 94.05% of PACS have become operational defunct since 1992-93. Based on feasibility study potential, integrated projects should be formulated. Proper monitoring of all activities undertaken by PACS is to be ensured. For this, Monitoring Committees at various levels—State, District and Block may be constituted. For effective delivery of credit, decentralization of credit cooperative organization is called for.

Emili Tortosa-Ausina\textsuperscript{24} (2000) analyzed the sensitivity of bank cost efficiency scores according to different output measures throughout the 1985-97 periods. Nonparametric efficiency scores yield by two output measures are compared, one of them mostly identified with the asset approach and the other one considering also deposits as output. The asset approach shows a steady increase of simple mean efficiency over the 1985-95 period, although the tendency was completely reversed in the last two sample years. In addition, there has been a convergence process among type of firm’s efficiency, as savings banks departed from much lower efficiency scores and now are much the same as commercial banks. However, if savings deposits are considered, the tendency is far more stable. Results show that distributions of efficiency scores, estimated non-parametrically by means of kernel smoothing, vary much. Estimating non-parametrically –by means of kernel smoothing – the density functions of efficiency scores provided a more accurate view of such distributions.
Samwel Kakuko Lopoyetum\textsuperscript{25} (2000) states that the loan portfolio in the PACBs play a pivotal role for its long-term survival and profitability. It is imperative to improve its efficiency to credit administration and management. Recovery management and administration is one of the key areas of credit dispensation. The NPA poses a significant threat to the rural financial institutions, whereas the effectiveness and efficiency of credit management largely hinges on prompt repayment of loans. The overall recovery status of the rural financing banks are therefore far from satisfactory. Out of 261 defaulters of Gandhigram PACB, 26 defaulters were selected randomly by applying simple random techniques i.e. lottery method. Pre-tested interview schedules were administered for data collection, averages, percentages and correlation techniques were applied in this study. The optimum size of the working funds and its efficient management have long-term telling effects on the volume of business transactions, profitability and viability of the PACBs. The bank’s investment strategies should be streamlined to facilitate the bank augmenting its income towards diversification. The PACBs incurs expenses in terms of notice serving charges, arbitration registration and execution petition. There is a direct and positive relationship between period of default and cost of default by the defaulters.

C.Sarkar and P.K.Sahu\textsuperscript{26} (2000) made a micro study at Nadia district of West Bengal to visualize the functioning of PACS. The study indicates that for the proper functioning of a PACS, caste, education, etc., are least important factors and understanding the requirement of members considered to be much vital. An efficient management having utmost sincerity, can improve its functioning by not only providing credit to its members but also through enhanced business in those commodities viz., seed, fertilizer, etc., for which the members are taking loans. Number of studies have been undertaken by several authors, of which the study of Rao (1987), Swaminanthan (1980), Sarkar (2000) are important in the present context. But most of the studies are macro level in nature. Most of these have examined the functioning and business position of PACS at different situations. In order to visualize the actual nature and extent of malfunctioning (if any) of cooperatives, one has to study a PACS indepth. PACS wise indepth study related to its nature of fund mobilization, fund utilization, patterns of business, toe of membership, etc., may lead to a valid action plan for the development of PACS in future. In this context, the work of Das, Gangopadhay and Mitra (1990) is
worth mentioning. The study leads to the ultimate conclusion that a PACS, if managed with utmost sincerity can not only provide credit to its members but it can also encourage people to be active participants in the society and thereby act as a socio-economic transforming agent.

D Ghosh Roy\textsuperscript{27} (2000-01), stresses that Profitability of a bank would depend upon the operating performance of individual branches. He pointed out a four-pronged strategy framework for developing bank branches viz., augmenting interest income, augment non-interest income, reduce interest expenditure and reduce non-interest expenditure. He developed a 10 steps solution to work out the said four-pronged strategy one among them is improving both quantitative and qualitative employee productivity.

Bhagwati Prasad and Dr.P.S.Sharma\textsuperscript{28} (2001) referred the Agriculture Credit Review Committee appointed by RBI in 1986 which recognized that PACS formed the very foundation stone on which the super-structure of cooperative credit system is based. This Committee pointed out that a sizeable number of PACS were running in losses. In order to improve the viability of PACS, this Committee recommended introduction of Business Development Plans for making PACS viable and profitable over a period of years. They also referred the Financial sector and Banking Reforms extended to the cooperative banking sector in terms of deregulation of interest rates along with application of prudential norms to the cooperative banks were meant to improve the efficiency, competitiveness, transparency and productivity of the financial sector including cooperative banking sector. They pointed out that the financial health of rural cooperative banks is far from satisfactory. High level of loan overdues and non-performing assets in the cooperative banking sector is a cause of serious concern. The cooperative have to counter the challenges from the market forces and develop their competitive edge through enhancing professional competence; emphasis on total quality management; operational efficiency; adoption of modern management practices and state of art technology including information technology.
Anil Kumar Tiwary29 (2001) pinpointed that the problem of survival is high, as success has not to be achieved on economic front, unlike the purely economic business organizations. Cooperative entities must be properly organized and managed so as to be viable in economic terms. According to him, the policy relating to productivity culture may have the major thrust areas like Enterprise dimensions, Service dimension and Ethical dimension. Productivity consideration should be made an integral part of an organization with constant attention and support being made available from the highest level. To encourage and direct each enterprise, “Productivity Offer” should be appointed to give attention to the subject.

V. Mariappan30 (2001) needs cooperative banks to have effective management of funds which is a serious concern for cooperative banks in Kerala. A careful funds management programme combined with intelligent and courageous business decision will help the cooperative banks to overcome crisis. Gold loan is the only popular loans of many cooperative banks in Kerala. However, the cooperative banks must focus in increasing other non-agriculture loans also.

Janki Ballabh31 (2001) remarked that with large manpower and widely dispersed branches, the biggest challenge before banks is to raise profitability and increase earnings by harnessing the productive potential of their workforce. The role of human resources is critical for sustained high performance in the face of ever-increasing pressure and rapid change for which merging e-contact and eye-contact is essential. Past efforts to measure employee productivity have focused on business narrowly by defining as deposits plus advances. However, the parameters need to be expanded to reflect the contribution of non-fund based activities also. But ultimately, employee motivation is critical because a committed employee is a productive employee. Therefore, motivation and attitudinal change in employees of banks is the key unleashing their productivity.

Charles Steindel and Kevin J. Stiroh32 (2001) presented a broad overview of productivity—both labour and total factor—and discuss why it is such an important topic. As firms invest and purchase new equipment and structures, the workforce becomes better equipped and is able to produce more output; hence, productivity growth rises
proportionally with capital deepening. As the workforce evolves and workers with different skills and marginal products are employed at different rates, this change in composition directly affects how much output can be produced from a given quantity of worker hours. Productivity growth is disproportionately rapid in manufacturing and in the non-financial corporate sector, which suggests that productivity growth is disproportionately slow in the service sector.

A.K.Zakir Hussain\textsuperscript{33} (2002) remarked that cooperatives should strengthen their management by effectively utilizing the capabilities of its work forces in order to continue to withstand as powerful tool in socio-economic development of the country. An efficient management should make their employees productivity conscious. Therefore, different ways by which employee productivity can be improved upon, should be rightly identified and then scientifically applied in different activities of cooperatives.

Cheema and Aggarwal\textsuperscript{34} (2002) have examined the productivity in commercial banks. They consider that productivity is a measure to know whether the resources or inputs have been used efficiently or not. Their study shows that the commercial banks operating in India are below the average level of efficiency.

Indu Bhargava and Dinesh Nagar\textsuperscript{35} (2002) stressed that the type of organizational climate and the management style prevailing in the organization assumes importance for increasing the productivity. The study concluded that there is relationship between the productivity and components of motivational climate. It is found that the branches where employees perceive the climate as that of achievement are more productivity in nature. In contrast, the branch where dependency and control are promoted exhibits low productivity. Improvement of productivity in banks require developmental climate characterized by presence of values of openness confrontation, trust, authenticity, proactivity and collaboration. Giving more autonomy and freedom to act with less monitoring and surveillance will prove to be helpful in enhancing the contributions of employees and in increasing productivity.
B.L.Javeri\textsuperscript{36} (2003) contended that though many sophisticated approaches like the Data Envelopment Analysis and Stochastic Frontier Analysis have emerged to study efficiency in the capital and temporal dimension, the ‘so to say’ rudimentary approaches like the ratio analysis is most popular. Ratio analyses are the often-used ones primarily for three reasons. First, they are easy to understand and simple to calculate. Secondly, the ratio analysis gives a feel of the situation and act as good signals and lastly they are a pre-requisite for any advanced analysis on efficiency.

Ketkar, Noulas and Aggarwal\textsuperscript{37} (2003) in their paper had analyzed the efficiency and productivity growth of the India state-controlled, nationalized, private and foreign banks. They concluded that the Indian domestic banks need to greatly improve their efficiency through introduction of computer technology, improved management skills and through consolidation and mergers of banks.

Ruchi Trehan and Niti Soni\textsuperscript{38} (2003) stressed that the significance of appraising the efficiency of banking industry has become more of a necessity than a luxury in the modern world of financial services as it makes it possible to separate those banks that performed well from those that performed poorly. The results enable bank managers to improve managerial performance by identifying ‘best practice’ and ‘worst practice’ associated with high and low efficiency respectively. The accent of the reform process was to improve productivity and efficiency and financial sector in general and the banking sector in particular.

A.V.Raikar\textsuperscript{39} (2003) used statistical device of Chain Index Number to examine the year wise changes in the selected variables of an Urban Cooperative Bank. The formula of Chain index used is: Current year link relative $\times$ Preceding Years chain index / 100. According to him, the profitability of the banks depends on the cost effective mobilization of deposits.

T.T.Ram Mohan and Subhash C.Ray\textsuperscript{40} (2004) attempted to measure the productivity that use quantities of outputs and inputs. There are two reasons why such an exercise would be meaningful. One, it helps validate results obtained through financial analysis. Two, given that accounting norms may vary across firms and over time within a
firm, measures of productivity based on output–input quantities may be more reliable. Tornqvist and Malmquist total factor productivity growth measures were used to compute the productivity. The authors pointed out that in the Indian context, using deposits and loans as outputs would be appropriate.

G.P.Kapoor\textsuperscript{41} (2004) took into account thirty indicators to study the performance of the PSBs. The analysis of performance of the domestic private sector banks revealed, that there is ample evidence that both their branch and employee efficiency and profitability score improved during the post-reform period. In case of the foreign banks the results are not the conclusive in the sense that on the one hand, in absolute terms they have been making huge gains, whereas in relative terms their growth with respect to most of the banking indicators has come down in the post-reform period. In fact the foreign banks are making huge operating expenses on technology and upgradation, which may have affected their short-term efficiency, but it will definitely lead to increase their long-term gains. The analysis of growth rates registered by the PSBs and domestic private sector banks suggested that as compared to the former, the latter group of banks recorded higher rates of growth with respect to all the branch-based indicators in both the periods under study. As far as employee based indicators are concerned, here too the PSBs enjoyed an edge over the domestic private sectors in the pre-reform period. It was only in the case of profit per employee that the domestic private sector banks continued to register higher mean values than the PSBs.

S.Dharmarajan\textsuperscript{42} (2004-05) stresses the need for cooperative banks to take an extra effort than other banks so as to make themselves operationally more efficient and to protect their identity due to the changes taken place in the operational side of banking in the form of diversification of products/services, free to choose product/market segments, emphasis on customer service, adoption of sophisticated technology, etc. The banks are moving towards designing new and innovative financial products/services to attract more and more customers and moving into new directions along with their conventional banking. He cautions the cooperative banks with the impact of liquidity risk and interest risk in the forthcoming days due to diversified lending and investment portfolio in a big way.
A.K. Zakir Hussain\textsuperscript{43} (2005) highlighted the performance of SCBs of Kerala in areas like members per bank, deposits mobilized, loans disbursed, number of borrowers and working capital occupying first position when compared to other PACS in India. The cause of concern for SCBs are existence of surplus funds, high establishment cost, mounting of overdues, etc., which resulted in viability problem for many SCBs in Kerala. The legal system in Kerala which empowers the State to decide the staff strength and the emoluments has worked more for the benefits of the employees. The profit and loss accounts prepared for SCBs reveals only profit or loss for the whole concern and not specifically for every activity they undertake. This needs for preparation of separate profit and loss account for every activity.

Pradip Sinha and Sadhu Ramakrishna\textsuperscript{44} (2005) says business is where things change in the blink of an eye. Today’s right strategy may not be right tomorrow. So the adage, “old is gold”, does not hold true at least in business. According to them, the productivity plays the role of a sheet anchor for today’s companies by giving them the much needed edge in the market. They further add that it is the employees who have to perform; if they are confused and not clear of what exactly they have to do, they will not be able to give their 100\% to the job. One should encourage suggestions from the bottom line of the workforce. One need not be amused by this idea, for the quality of their suggestions can improve the firm’s productivity. Openness can go a long way in improving productivity and the most productive companies have this distinct competitive advantage from their rivals. Becoming productive is a difficult task and difficult still is sustaining the position. But in this overcrowded business world, the only option left for firms is to become as productive as they can.

Punam\textsuperscript{45} (2005) while examining the working of grass root cooperative credit societies i.e., PACS in Bihar, stressed the need for efficient working of PACS for the effective solution of their varied problems. The problems are multifold which includes the lack of viability on the part of PACS, mounting of overdue, lack of professional management, uncertainties arising out of dilatoriness of land reform measures, lack of proper infrastructure in the rural areas, lack of farm guidance arrangements and other measures for improving credit absorbing capacity of the farms and encouraging adequate
investment coupled with improvement in technology and too much political and bureaucratic interference in the day-to-day functioning of cooperatives. The study was felt necessary as there is absence of an in-depth analysis of grass root cooperative credit societies, i.e., PACS particularly in case of Bihar.

Biswa Swarup Misra\textsuperscript{46} (2006) articulate that the cooperatives dominate in their reach to the rural hinterland both in terms of the number of clients and accessibility to the small and marginal farmers and other poorer segments of the population. In terms of number of agricultural credit accounts, the short term cooperative credit system (STCCS) has 50\% more accounts than the commercial banks and RRBs put together. This study was an attempt to decipher the factors, which contribute to the financial health of the PACS, which form the base of the STCCS prevalent in India. The study considered recovery performance as the most suitable indicator of their performance.

Fulbag Singh and Balwinder Singh\textsuperscript{47} (2006) uses different ratios viz., the ratio of own funds to working funds, the ratio of low cost deposit to total deposits, the ratio of overdues to total loans, the ratio of recovery to demand, the ratio of agriculture loan to total loan and the credit to deposit ratio to study the management of funds of DCCBs of Punjab. The ratio of own funds to working funds and the ratio of recovery to demand are observed to be having a significant influence on financial margin, whereas the ratio for overdues to total loans is having a negative one.

A.K.Zakir Hussain\textsuperscript{48} (2007) stress the need for planning funds of PACS efficiently and effectively utilize their work force to the maximum in order to get a reasonable profit and survive in the competitive environment. The PACS in Kerala has made a greater impact on the needy and downtrodden population of the state. They occupy first position in majority of the performance indicators like membership, share capital, deposits, loans, reserves, working capital etc. However, the profit making PACS are less in Kerala. Therefore, steps should be taken in this direction to increase the profitability of PACS in Kerala.
Dr. S.V. Reddy et al.\textsuperscript{49} (2007) indicates that the profit of a bank is measured as the difference between interest Spread and Burden. The interrelationship among Spread, Burden, Profit is known by the Spread – Burden – Profit Analysis. The profit of the banks is recorded more whenever the spread increases more and simultaneously the Burden decreases or otherwise the percentage of increase in Spread is more than the percentage of increase in Burden. According to the authors, every bank should diversify their operations and concentrate on innovative products such as, merchant banking, leasing, factoring, insurance, credit cards, etc. Asset liability management, risk management, man power planning, diversification, adoption of information technology are the key areas which should be concentrated to improve productivity and profitability in PSBs.

Muhammad Sadiq Ansari\textsuperscript{50} (2007) used the Distribution Free Approach (DFA) by applying it on trans log model for the unbalanced panel data of 37 scheduled banks operating in Pakistan from 1991 to 2002, to estimate levels of cost efficiency of individuals banks operating in Pakistan. These levels of efficiency are also analyzed under CAMELS indicators to provide micro insights of their financial standings to justify their prevailing positions. The results show that banks are significantly distinct at different efficiency levels ranging from 87\% to 49\%. Technology has played a significant role in reducing the cost of banking industry. However, the banking industry is still operating under diseconomies of scale. Moreover, NPAs have adversely impacted the cost structure of banking industry. Overall, there is scope for cost saving in the banking industry of Pakistan that can be achieved through adopting corrective measures in administrative management, optimal diversification of asset portfolio, technological progress and reducing the amount of NPAs.

Usha Arora and Richa Verma\textsuperscript{51} (2007) studied the relative efficiency of public sector banks from 1991-92 to 2003-04 using the Average Compounding Growth Rate (ACGR) method. The study takes into account the growth of the banks on the basis of the operational and productivity parameters. The study proves that Corporation Bank ranks higher in operational and productivity parameters and results in higher efficiency. Indian Bank in operational parameters and United Commercial Bank in case of
productivity parameters ranks lower, hence, inefficient. To improve their position further, it was suggested that the PSBs need to greatly improve efficiency through introduction of computer i.e. electronic banking technology and improved management.

V.Sujatha (2007) viewed that the post financial sector reforms made cooperative banks to compete with commercial banks and RRBs and forced them to become more efficient, vibrant and cost effective leveraging technology to invent themselves. There is an imperative need to diversify the loan portfolio by progressively involving more resources in the non-agricultural sector.

Dr.C.Lakshmanan and A.Dharmendran (2007) made an attempt to study the performance of all DCCBs in Tamilnadu taking into account some selected financial indicators viz., deposits, loans and advances and overdues of DCCBs in Tamilnadu. The financial performance has been analyzed with the help of the exponential equation of trend and growth; this has been analyzed district-wise during the study period by using annual and compound rate worked out of base data. While observing that the mounting of overdues and lack of deposits are the major problems for the DCCBs, the researcher suggested for special drive to mobilize more deposits from untapped sources and proper recovery proceedings to reduce the overdues.

Sharad Kumar and M.Sreeramulu (2007) compares the employees’ productivity and employee cost ratios between the traditional banks and modern banks from 1997 to 2008. Policy makers have clearly recognized that inefficiency is the main factor contributing to the high cost of banking services in India. The present study therefore compares the parameters of employees’ productivity viz. Business per employee and Profit per employee between the traditional banks and modern banks. It also compares the parameters measuring employees cost viz. Employee cost to operating expenses, employee cost to total business and employee cost to total assets. The gap indexes have been worked as the percentage of difference of the value of variables between modern banks and traditional banks as a ratio of their aggregate value. The purpose of Gap Index construction was to see whether or not the gap between modern and traditional banks are reduced after several initiatives taken by the traditional banks to meet the challenges and
competition from modern banks. It was concluded that the performance of the modern banks (foreign and new private sector banks) was much superior than the traditional banks (public sector and old private sector banks).

Brian King\textsuperscript{55} (2007) viewed that the banks can adjust by making changes in their investment strategies, offering new products, generating more fee income, and by improving productivity. The traditional bank productivity measure is the efficiency ratio, which is what it costs the bank to generate revenue. The efficiency ratio is computed by dividing non-interest expenses with the sum of net interest income and non-interest income. Non-interest expense and non-interest income are more controllable than net interest income. Generally if a bank’s efficiency ratio is 50\% or below, all is well; if the ratio is 70\% or more, all could be better. Every associate in the bank should know the bank’s efficiency ratio – both current and target, they should understand how they contribute to it, and they should understand the impact it can have on them.

S. Thyagarajan and Jayaram Venkatesan\textsuperscript{56} (2008) presented an overall position of the financial inclusion project in Cuddalore district after one year of its implementation. There were 25.3\% of the households left outside the banking net even after the completion of the project. The study showed that only 15\% of the customers were operating the accounts and bulk of the accounts hadn’t even operated once, one year after the completion of the drive. The study also highlighted that one of the main reasons behind the non-operative accounts was the lack of financial literacy apart from other reasons such as distance from branches, etc. The cost of opening a no frill account and its maintenance cost was estimated to be Rs.50.45 and Rs.13.40 respectively. The average number of transactions in an account at 13 per annum would entail breakeven for the branches. Sustained financial literacy campaign, technology leverage, allowing the bank to amortize the onetime cost of opening of accounts over a period of 3-5 years and devising incentive scheme to motivate the staff to involve themselves seriously in socially responsible scheme are some of the recommendations.
Dr.N.Ramu\textsuperscript{57} (2008) describes that the human resources have a significant bearing on the overall organizational effectiveness. In the competitive environment, employees of any business organization are the key factor for deciding the success of the firm in general, and cooperatives in particular. The increasing competitive pressure in cooperative banking led to greater attention to control labour cost and increase labour productivity. In the service organizations human capital makes the difference between success and failure. In cooperative banks, probationer’s performance has been monitored and appraised informally. Clerical employees’ diaries, entries to the service register and review of work done periodically are the methods used for appraisal of probationers. However, appraisal is not implemented seriously for permanent employees. All the employees are in favour of introduction of performance appraisal though there is no systematic appraisal followed, right now. The pay and other reward strategies including promotion should be based on performance of employees rather than mere seniority.

Dr.K.Surya Rao\textsuperscript{58} (2008) points out that the productivity aspect of banking organizations can be studied by examining the efficiency of employees in mobilizing deposits, issuing loans, gearing up the total business, etc. Similarly, productivity of the bank can also be examined by considering the efficiency of branches.

Andreas Burger and Juergen Moormann\textsuperscript{59} (2008) pointed out that the main indicators for evaluating service capability are productivity and efficiency. Studies of efficiency show that there are large differences between different banks’ service capabilities. A bank is more productive than its competitors if, transaction is settled and cleared with few resources, i.e. either fewer working hours or lower costs. The traditional Cost Income Ratio (CIR) is a popular and critical measure for a bank’s productivity. In scholarly journals and business practice, including evaluations of rating companies, the discussion about productivity and efficiency in banks is mostly based on the CIR, which is also known as Efficiency Ratio. Even though the predication power of the CIR is not clear at all, this ratio is widely regarded as a yardstick when comparing productivity and efficiency of banks.
Vijay Singh Hooda and Dr. S.S. Chahal (2010) attempted to appraise the performance of PACS in India. Some suggestions have emerged viz., i) for viability of societies, close inspection and regular audit should be done ii) There should be sufficient infrastructure facilities for the proper functioning of PACS iii) Loan policy should be framed as per the requirements and conditions of the beneficiaries.

H.S.K. Tangirala (2011) emphasis the need for profit in cooperative banks in order to stay on top of the competition. The capital ratio, loan-loss provisions and expenses control are important factors in achieving high profitability. The profit of a cooperative bank depends on loans. The productivity of any organization, besides adopting technology and modern automation, is mainly depend upon the number of employees, their age, knowledge level in the operational areas, their commitment towards work etc. For better profitability, the bank has to follow the norms such as, careful use of financial leverage, command over the operating expenses, use of technology to save costs, careful management of asset portfolio to meet liquidity and return needs, control of exposure to risk to maintain profitability, etc.

Duvvuri Subbarao (2011) pointed out that the incremental growth of banks will depend increasingly on productivity growth. More effective and enlightened corporate governance of Indian banks can be a vital avenue for improving banking productivity. Boards and senior managements of banks have to be sensitive to the interests of the depositors, be aware of the potentially destructive consequences of excessive risk taking, be alert to warning signals and be wise enough to contain irrational exuberance.

M.R. Das (2011) remarked that the technological capabilities have enhanced the speed of transactions, lessened the cost of handling, multiplied the number of products and services offered and thereby increased the turnover and productivity, besides imparting comfort to employees. A three-pronged strategy is suggested to make manpower productive by increasing the employees’ willingness to work, ability and capability to work and not only work but work innovatively.
S.S.Rajan et.al\textsuperscript{64} (2011) made an attempt to examine technical efficiency and productivity performance of Indian scheduled commercial banks, for the period 1979 to 2008. A multiple output/multiple input technology production frontier using semi-parametric estimation methods was used. The endogeneity of multiple outputs is addressed by semi-parametric estimates in part by introducing multivariate kernel estimators for the joint distribution of the multiple output and correlated random effects. Output is measured as the rupee value of total loans and total investments at the end of the year. The estimates provide robust inferences of the productivity and efficiency gains due to economic reforms. It was found that foreign banks are considerably less efficient than PSBs possibly because of their relatively smaller scale.

Avinash V.Raikar\textsuperscript{65} (2011) used Data Envelopment Analysis (DEA) to study comparative state level performance of DCCBs to identify whether the decision making units in the sample are efficient and which are not. The study also uses input minimization model and considers five inputs and four outputs. Inputs considered are: no of branches, capital that includes share capital plus statutory reserves and agricultural credit stabilization fund, borrowing from other financial institutions including state governments, labour and institutional membership. The outputs considered are : loans and advances, investments, deposits and percentage of recovery to demand.

Dr.P.Kannapiran\textsuperscript{66} (2011) while analyzing the deposit mobilization pattern of a urban cooperative bank, identified that the bank had mobilized large amount of deposits through paying higher interest rates. He suggested reducing the fixed deposits and increasing the current and savings deposits for the purpose of reducing its interest expenses.

Rasidah Mohd Said and Mohd. Hanafi Tumin\textsuperscript{67} (2011) investigated the impact of bank-specific factors which include the liquidity, credit, capital, operating expenses and the size of commercial banks on their performance, which is measured by Return on Average Assets (ROAA) and Return on Average Equity (ROAE). The results imply that ratios employed in this study have different effects on the performance of banks in both countries, except credit and capital ratios.
Karan Walia (2012) analyzed the impact of banking sector reforms on the efficiency of banks in five different bank ownership groups in India during the post-third banking sector reforms period i.e. from 2005 to 2010. The analysis is based on ratio analysis like profit per employee, profit per branch, expenses per employee, expenses per branch, business per employee, business per bank, etc.

Versha Mohindra and Dr. Gian Kaur (2012) empirically examined the total factor productivity changes of RRBs using a balanced panel dataset of 50 observations. A non-parametric Malmquist Productivity Index was applied to calculate productivity. Total factor productivity was decomposed into technical efficiency and technological change and technical efficiency change was further decomposed into pure efficiency change and scale efficiency change. Total factor productivity change (TFPCH) in performance of Regional Rural Banks averaged at 1.3 percent during 1991-92 to 2006-07. The decomposition of TFPCH showed that the mean technical progress increased at .9 percent whereas mean technical efficiency has shown a marginal increase 0.1 percent during that period.

These literatures were grouped as follows:

- With respect to geographical area: National 55, International 9 and Kerala 5
- With respect to various aspects: Productivity in banks 27, Productivity in Cooperative banks 13, SCBs 14 and Others 15

2.2 Research Gap

Eventhough there are many reasons for viability of SCBs, no studies conducted to understand the reason for viability of SCBs in India as general or specific to SCBs in Kerala. Further, there are studies accommodating various mathematical tools for measuring the productivity and operational parameters of the commercial banks and other banks. Whereas no such studies available for cooperative banks especially the SCBs. The present study is a move in this direction. Thus the present research work has being carried out to examine the productivity in banking operations with reference to SCBs in Kerala, to find out the lapses in the productivity side of SCBs (if any) in Kerala resulting in their poor viability.
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