CHAPTER 2

REVIEW OF LITERATURE

2.1 Introduction:

The objective of this chapter is to review the literature on computerization of accounting system related to globe and domestic level. In order to review the literature on CAS, the present chapter is organized as under.

2.1 Introduction

2.2 General studies on computerization of accounting system

2.3 Studies on extent of computerization of accounting system

2.4 Studies on factors influencing CAS adoption

2.5 Studies related to accounting theories and computerization of accounting systems

2.6 Research Gap

2.2 General studies on Computerization of accounting system:

A great deal of research has already be completed in the area of computer-based information system and computer based accounting information system as computerization of accounting system is an important topic for businesses and the information management system/ profession. During 1970-85 CAS was studied as IT and accounting part, during 1985-2000 computer application in accounting system and information technology and during 2000 onwards factors affecting the implementation of computer (i.e. IT) or information system (IS) in accounting system. These research or studies are referred here as CAS related general studies. Studies are covered from 1970-2015.

Gorton,(1999)\(^1\), found that the need to facilitate financial management is another motivational factor for adopting accounting software in the small businesses. Some of the researchers also have found a link between the use of CAS and enhanced business performance.
McMahon (2001), found that growing small and medium enterprises face increased challenges and consequently there is a greater need for careful attention to financial management and financial reporting. He pointed out that weaknesses and careless in financial management lead to business failure.

Burgess (1997), in his study of IT adoption by Australian small businesses concluded that implementing of a CAS in an organization helps to increase efficiency in business and provide timely information. He also concluded that the main software application package used was accounting.

Report of Yellow pages (1997) on technology in the small business sector of Australia says that 76% of the small businesses surveyed had at least one computer and 75% of these used accounting software.

Porter and Millar (1985), mentioned that with the introduction of information technology and more user friendly software, computerized accounting system appears to reduce the problem in book keeping practice. New and rapid financial information, new updates and changes will be available for others in making decisions. To survive and grow, SMEs need more non-financial information like customer behavior, market needs, price changes, besides the fundamental of financial reports. Changes in information are constant and therefore the use of technology (CAS) is required in small businesses.

Longenecker (2006), noted that a good accounting should give accurate and comprehensive results of operations, which allow quick comparison between current and previous data also data of different companies and offer the transparent and true financial statements which can be used by their stakeholders like creditors, customers, investors, bankers, government. He also found many entrepreneurs do not keep proper records and they do not benefit the use of their financial statements. According to him small and medium enterprise business owners are not expert in accounting but they know the process including the financial statements and identify the best methods that can be applied to its business.

Akande, (2011), investigated how accounting skill of entrepreneur is necessary for the success of small businesses of Nigeria based on survey research design. A simple random sampling technique used, total 140 small business owners from Ogun state
were selected. They concluded that owner entrepreneurs should focus on improving accounting skill in financial management and record keeping for better results. Also they suggested that the government of Nigeria should make it compulsory to prepare financial statement of small businesses to evaluate their performances in their business.

Mahmoud and Dalia(2013), conducted a study in Jordon to examine the impact of IT sophistication on perceived usefulness of accounting information. This study focuses on four dimensions of IT sophistication, i.e. technological, informational, functional and managerial to examine the impact on accounting information. To achieve this objective they studied 174 companies listed in Jordan Stock Exchange. From this study they revealed a significant and positive relationship between four dimensions of IT sophistication and accounting information characteristics. Their study also suggests managerial, informational and functional IT sophistication are more important than the technological aspect in influencing the perceived usefulness of accounting information characteristics. In this study they have given research model showing the relationship between Information technology and perceived usefulness accounting information characteristics as follows.

**Chart 2.1**

*Research Model showing relationship between IT and perceived usefulness accounting information characteristics:*

| Technological Sophistication | Information Sophistication | Functional Sophistication | Managerial Sophistication | Perceived usefulness of accounting information characteristics |

Clark, et.al, (1985), found that the use of computer-based AIS has become widespread in all organization including SMEs. According to them the use of IT at that time was limited only to transactional system. They also suggested that IT knowledge and skills are important for accountants, together with their business skill,
for successful implementation of computerization of accounting in their business entity.

Whereas King, et.al,(1991)^10, found that the use of IT was limited to support decision making in the early days. They also suggested that for interpreting the financial position of the business, the use of IT is necessary as giving timely information.

McCosh,(1986)^11, Concluded that the automation of accounting process has greatly saved time, made accounting more comprehensive, perfect and fast, but it does not help to produce more focused information on managerial accounting information.

Brigham and Smith (1967)^12,concluded that Small businesses are considered as more risky, and have higher failure rates than large firms. Computerized system can help to solve problems of small businesses and improve prospectus for success. Collections from debtors, stock control are the major problems for the success of small businesses. Dun and Bradstreet (1981)^13, in the business failure record of New York they stated that, an inadequate sale is involved in 59% of business failures. Small business computerization can help to increase the sales of the firms and improve service. Therefore small business computers have the potential to make important contributions for thousands of small firms.

Charlesworth (1972)^14,observed that lack of computer knowledge on the part of owner manager and lack of computer experience can make mistakes in electronic data processing which will be expensive for financial weak small businesses. Therefore computers, if managed properly, can contribute to the success of small business operations, but to avoid risk, proper guidelines are required for the application of computers in the business.

William (1988)^15,conducted field study to investigate the factors affecting the successful use of computer – based – information system (CBIS) by small business. He surveyed 93 manufacturing firms had lesser than 300 employees, less than $30 million annual sales, and had been using computers for at least three months. In this study he identified the factors associated with computer success in small firms of Washington. His main finding from this study was chief executive knowledge of computers and his involvement in computerization leads to more successful computer use in small firms. External computer expertise is no substitute for chief executive
knowledge and involvement because the CEO understands the factors which are critical to the business success. In small business, CEO is the main information user as he is involved in many operational decisions due to lack of staff. Therefore their involvement in the decisions like which system should be computerized and how it should be computerized is important. Effectively, they are also important for ongoing computer decisions because it is a continuous and evolving process. This study has shown that low cost computers are no substitute for executive knowledge of computers. Small businesses do not have to be concerned about developing an in-house programming staff, since such expertise is available externally.

Yap, and Thong (1999)\textsuperscript{16}, conducted a survey in Singapore to examine the impact of government incentive programme on small business computerization. In this study they differentiate 40 small businesses which have computerized programme with those of 40 small businesses which have computerized without government incentives. And their main finding is that participation in a government computerization programme does not result in more effective information system. However there is evidence to show that government incentives, in the form of subsidies, low-interest loans and technical expertise lower the barriers to computerization and make computerization more attractive to small businesses which lack financial resources and technical expertise to computerize their operations.

A study done by Mohammed Amidu, et.al. (2011)\textsuperscript{17}, in their research study they explained the role of electronic – accounting (e-accounting) among SMEs of Ghana country. The study based on survey methodology using sample of systematically selected SMEs in the country. They collected data from 50 SMEs out of 200 sample size, which shows less response percentage (29%). The sample includes both users and non-users of electronic accounting. They concluded in their study that almost all the SMEs give lot of importance to financial information and employing chartered accountants to handle their accounting information. Majority of SMEs use the software for accounts receivables, accounts payables, inventory management, payroll, fixed assets management, bank reconciliation and cash management. They generally face the problem in supply of electricity. Most of them are happy with the performance of their accounting software. They further suggested that SMEs in Ghana adhere to good and standard accounting principles in their adoptions. The adoption of
e-accounting would ensure proper accounting practices. SMEs with proper books of accounts are often capable of attracting external financing easily than those with no good records. Thus SMEs that maintain good accounting and management information tend to be viewed favorably by finance providers.

Doost, (1999)\(^{18}\), in the article he stated that accounting was one of the first functional areas to benefit from computerization when computers were initially introduced to organizations.

Hotch (1992)\(^{19}\), in his article on accounting financial software he stated that though computerized accounting systems handle financial data efficiently, they should generate immediate accounting reports related to the organization.

According to Taragola, et.al., (2001)\(^{20}\), the willingness to adopt accounting software is positively co related to a favorable attitude towards accountancy and ‘intrinsic objectives’. He further stated that adoption of computerization is based on the business size, computer training of the firm manager, creativity, growth.

Padachi(2012)\(^{21}\), conducted comprehensive survey in Mauritius of the financial and working capital management practices of 141 small medium enterprises and 12 mini case studies. Data was collected from small to medium –sized manufacturing firms of different eight industry groups like chemical and rubber and plastics, metal products, paper products, jewellery, leather and garments, pottery and ceramics, wood and furniture and food and beverages. He focused on the importance of formal accounting system among 141 small and medium businesses. Small firms are run by one person who controls all different functions of business. Due to his multi- tasking role in his business he gets less time for the main function of the business that is finance and accounting. The research says that most of the time micro firms lack systematic accounting system. And the main reasons for this are less time, lack of resources and lack of skill, lack of ability. Legal structure of the firm is also important when analyzing the accounting services undertaken by the accounting department. The firms which are private limited company are maintaining adequate accounting system to comply statutory financial report requirements, while minimal accounting records keep by the sole proprietors. Closeness of family involvement is expected to influence the extent of accounting tasks. After using regression analysis the study says that firms with more non- family members or other family members keep formal accounts,
whereas firms with more close family members’ involvement do not require keeping formal accounts. Also as business grows the requirement of separate formal accounting has increased. The researcher also elaborate the impact of life cycle of the business affects the adoption of formal accounting system by the small businesses. At the beginning stage the firms may have very basic accounting system whereas at growth, expansion, matured stages they have more attention on formal accounting system of the firms. Thus this study has given an insight into the conditions which support the adoption of formal accounting system among the small and medium enterprises.

Further he argued that for the adoption of Formal Accounting System, entity concept is important. First the businesses should be get separated from family involvement. Further for the failure of SMEs not only external factors are liable but internal factors like owner manager skills in handling accounting routines of their business also liable. Thus empirical evidences of this study are to provide an insight into the internal problems of SMEs.

Eman Al Hamini et.al.; (2014)\textsuperscript{22}, identified accounting status in small and medium enterprises of Jordan area on the basis of analysis of 80 responses and they concluded that good accounting system is not exists in small and medium enterprises of Jordan area. These enterprises are not appointed full time accountants for accounting purpose but they have outsourced these activities. They even don’t have proper records of accounts documents and have not adopted computerized accounting system in their enterprises.

A study on ‘The perception of small and medium sized enterprises on the importance of a proper accounting system’ undertaken by Zulkiflee (2013)\textsuperscript{23}, examined the relationship between SMEs’ entrepreneurs’ perceptions towards a proper accounting system with the level of accounting staff recruited, preparation of final account, meeting with accounting staff and entrepreneurs’ ranking of accounting according to his priority. He found that there was an insignificant relationship between SMEs entrepreneurs’ perceptions on the importance of a good accounting system and preparation of final accounts of the company and frequency of meeting with accounting staff.
Bergsman (1992), stated that many small business owners fail to hire an accountant, which resulted in a deficient business structure. Some of them think that they will get less benefit as compared to cost they will incur. They also think that some problems are unique in nature which they only can solve and not others. He also added that owners-managers have to keep all documents, vouchers, invoices in a systematic manner which have direct impact on journals, ledgers, and other financial statements. Thus there would not be any problem in filing systems. He pointed out that proper accounting system is often the last thing that small business enterprises consider while it should be the first. Business owners of small business enterprises are more interested in payroll, acquiring products, and selling products rather than accounting. Others such as Wichmann (1983), studied that accounting problems are in record keeping, use of accounting information, cash control, cost control, which are more compared to marketing problems. Therefore all businessmen have to give priority to accounting compared to other business functions otherwise it leads to business failure. Prajapati and Bhatt (2015), studied accounting practices of wholesale and retail business organization in Gujarat, having five objectives: to know (i) business structure, (ii) knowledge of accounting, (iii) adopted accounting system, (iv) budget and (v) audit and accounts of wholesale and retail organization. The result shows more than 50 percent have knowledge of accounting and majority respondents maintain their account through computer and depends on professional for accounting their business transactions. In this case wholesalers are ahead of retailers. More than 50 percent not prepare budget, and audit their accounts.

Deshmukh (2006), in his book on Digital accounting, stated that due to special information needs, industry segments such as insurance, construction, property management, and Law and accounting practices require specialized accounting packages. There are accounting packages for non-profit organizations which require different reporting and analysis. Thus accounting software gets increasingly integrated, a trend fueled by SAP, the majority of adds-on-product vendors get acquired or develop alliances. As business demands on accounting software grow, new functionalities are continuously added in accounting software. The vendors cannot survive unless they offer a reasonably integrated package to their core constituency of customers. The development of E-commerce, web, internet, whatsapp
in computer and networks have added new capabilities to existing software and now affected virtually every area in accounting systems to computerized.

Berry et.al. (2002)\textsuperscript{28}, examined the extent to which owners – managers uses external advisors and how useful they find external advisors’ contribution in their business. From the study they concluded that managers may be working with accounting idea in their mind instead of accounting data in the books. Cost information may be difficult for owner to obtain, SME manages are a rather independent group of business people, but they have external advise from accountant and their network of contacts. They further reported that 70 percentages of the respondents tend to use external accountants for compulsory advice and a less than half this percentage sees external advisor role as business management advice. Same percentage of respondents engages their external accountant in financial management support work. They took external advisors help as value addition.

Kale,Banwait, and Larioyia (2000)\textsuperscript{29},in their study they focused on benefits, challenges of ERP in Indian SMEs with the help of interviews with ERP vendors and few case studies. They concluded that In India SMEs are the backbone of Indian economy. But because of globalization they are facing more problems in the market. Therefore it is important to improve SMEs to respond dynamic market. Vendors should understand the problems of SMEs. They also found some factors to be considered before starting ERP system implementations like infrastructure resource planning, education about ERP, Human resource planning, top management commitment, and training to release right people for the implementation

Jaiswal (1999)\textsuperscript{30},stated in his study the importance of ICT in SMEs for maintaining a network which can easily adjust with upcoming different interorganizational arrangements like partnerships, joint venture, technology licensing and different marketing agreements. Enterprise Resource Planning (ERP), supply chain management system, Customer relationship management (CRM), e- business are being used for better business performance. But in India SMEs are lack of such system and therefore facing the problems in better business performance.

Mihai and Constantin (2011)\textsuperscript{31}, defined Web based accounting in their paper on the topic of Using web technology to improve the accounting of small and medium
enterprises. They also explained the importance of accounting, using web services will allow implementation of International Financial Reporting Standards (IFRS) for SMEs, which will be beneficial to SMEs and the overall economy of the country. According to them major problems in SMEs are implementation of accounting standards and revolution in IT technology. Web Accounting will develop business intelligence in particular by accessing timely accounting information by management and efficiency of employees. To support the accounting standard – setting process and to facilitate the access to those standards is through the implementation of modern accounting reporting methods using web accounting.

Briciu S., Ganfaleanu I., Groza C(2010) concluded that Standardization of accounting and financial information get an important support from academic researchers and developers of accounting software.

Paul Cragg and Malcolm King (1993), they studied six small manufacturing firms to examine the growth of information system in them. By this study they identified many motivators and inhibitors for the growth of computing in small firms of England. Among the barriers of IT growth identified were inadequate resources, lack of skills, lack of management time, inadequate software support, high costs, absence of appropriate packaged solution and limited education about information systems.

Nolan (1979), after the adventure of microcomputers the development of computing of large firms has been studied properly rather than the development of information system in small firms. On the basis of such study several models of development has been created. Nolan’s growth stages model is one of them. In which six stages are include: initiation, contagion, control, integration, data administration and maturity. He looked at Data Processing expenditure as well as certain processes. These processes include: technology, applications portfolio, DP organizations, and DP planning and control, and user awareness. Studies of small firms MIS success have referred to many of Nolan’s variables.

Kanter (1983), concluded that many firms avoid computerization in small firms. Many small firms choose to remain small. Krish and Bernard (1986), in their article reveals the importance and usefulness to the audit process of internal control in a computer based system. They concluded that internal controls are important for the process of auditing and small businesses have unsatisfactory internal controls. They
tried to find out the answer of can the auditing profession, after the introduction of microcomputer, be offered a degree of control where none was possible. They believed that by adopting new techniques like use of passwords, security copying, and performances of specific operations in systematic order, the problem of internal control of auditing can be solved.

Linda and Martin (2006)\textsuperscript{37}, found in their study that the satisfaction level of small entrepreneurs with the current software. They concluded that small business owners don’t base their accounting information system software choices entirely on cost and satisfaction with accounting software does not depend on brand. Mostly entrepreneurs like to prefer software packages that they found use friendly. Also they were heavily influenced by consultants and business counselors. They also agreed that most of the time their software packages don’t completely meet their accounting needs. Small business owners may lack confidence in the packages by using more than one accounting software packages. They were more concerned with strong accounting software skills and only required a basic understanding of accounting.

2.3 **Studies on extent of computerization of accounting system:**

Gelinas et. al., (2005)\textsuperscript{38}, defined Computerized accounting system as a computer based system, which combines accounting principles as well as the concept of information system to record, process, analyze and produce financial information to its users and to make economic decisions. The process and model of Computerized accounting system is proposed by them for understanding the CAS in the terms of input-processing-output along with storage and users feedback. Hence this model can be referred as input-processing-output (IPO) model.

When accounts are written with the help of computers, it is known as computerized accounting or mechanized accounting. The basic concept of manual and computer accounting system is perfectly observed by Sehgal and Sehgal (2012)\textsuperscript{39}, they illustrated in model format, linking manual and computerized accounting system which is as under.
MohdFazilMohd Sam et. al, (2012) while studying adoption of CAS and its implementation in Malaysian SMEs, they observed that as many as 80 percent SMEs adopted CAS. They conducted a study of 134 SMEs of Melaka for finding SME practice of Computerized Accounting System and to identify the factors affecting the adoption among them. The sample selected comprised of CEOs of SMEs in three districts of Melaka. They collected data from 85 (65%) manufacturing companies and 49 (36.6%) companies from service sector. The study reveals that CAS adoption in SMEs in Melaka is very high. The findings from this study shows that CEO innovativeness, perceive ease of use and business competitiveness negatively correlated to the adoption of CAS. Whereas perceive usefulness are positively correlated to CAS adoption. They concluded the adoption of CAS in business also depend upon the type of business and business location. CEO knowledge on ICT, accounting and CAS has influenced the responded CEOs to adopt CAS in their business. But according to their study the company which responded does not have
experienced staff to operate CAS effectively. They further recommended that the government of Malaysia should offer tax relief to small medium enterprises for purchasing integrated accounting software, which is costly. It will help to reduce financial burden on them and to encourage computerized accounting system (CAS). The lack of knowledge among small businesses about this software is also one of the big hurdles in implementation of CAS and therefore government of Malaysia should take initiative to start training organizations which will offer CAS development programme especially for small businesses. They also concluded that benefits by using the accounting system software were not fully utilized by CAS adopter.

Josept and Janggu (2003) has done a survey on the computerized based accounting system used in manufacturing companies at Kuching, found that the rate of adoption of computerized accounting system is minimal 52%.

Delone (1988) reported that there is no relationship between the duration of usage of Computer Based Information System (CBIS) and its success. He also reported that in developing countries SMEs are typically owner –controlled, lack in – house technological experience, are relatively low in CEO and end-use IT literacy, and generally adopt a more ad- hoc approach to systems development and acquisition.

Scovia et.al, (2015), focused in his study on the impact of computerized accounting system on financial reporting in the Ministry of local government in Rwanda city. They explained in it the nature of computerized accounting system followed by the Ministry and how computerized accounting system has affected the generation of financial reports. This study helps to understand the importance of CAS in quality and reliable reports. The researcher has selected a sample of 65 respondents randomly from a population of 110. They concluded that out of total respondents 38% respondents agreed that the CAS improves accountability, while 31% of the respondents maintain that the system provides financial reports on time. At the end of study they have also given suggestion of continuous and constant training is required for the finance and accounting staff by authorized dealers of the software packages.

According to Imeokparia, (2013), financial outcome of a firm will always depend on how much one invest and improves the accounting information system being used.
Whereas Kharuddin et.al., (2010)\textsuperscript{45},studied that in the area of accounts and finance, the use of hand in financial reporting is replaced by the use of computer software to enable quick reporting and easy storage and processing of financial data of the company. This accounting software helps in preparation and access of financial statements and use of accounting procedures easily. Oladipupo and Ajape (2013)\textsuperscript{46},studied the degree of computer- based accounting systems adopted by SMEs in Nigeria, by conducting structured survey and respondents were obtained from manufacturing, agriculture, construction and mining, hotel and hospitals. It services, medical services, wholesale and retail trade and general services industries. In this study the researchers tried to find out the degree of computer based accounting system adoption in SMEs. They have also tried to assess the factors inducing the extent of computer based accounting system. They found that overhead cost reduction, business process effectiveness, and efficiency, the need to store large amount of data and provision of qualitative information for management decision are the main factors inducing CBAS adoption. Their study also showed that the use of CBAS by Nigerian SMEs is highly significant as all companies are using one type of accounting software. They also suggested that professional accountant’s role is very important in CBAS adoption; they have to continuously improve their skills for survival of their profession. This study also identified the factors inducing the extent of CAS adoption. They found that the use of CAS is highly prominent in Nigeria SMEs.

Breen, et.al., (2003)\textsuperscript{47}, in their study of computerized accounting systems in Australia, found that about 96 percent of the SMEs, install and use generalized packages ranging from mind- your- own- business, Quick books, cash – flow manager and attaché. The main objective of this study was to find out barriers which prevent small businesses from accepting computerized accounting system. To achieve this objective they surveyed two groups of small businesses. They compared between the users of CAS and non- users of CAS. After the collection of data from 122 firms that use a CAS and further 99 firms that did not, their study revealed the reason CAS non- users are not using the accounting software. The main reason is that,

1. A CAS was not needed and would not add value to their business.
2. The second reason was that the owner manager lacked IT skills and knowledge.
They found the major influences in the decision to use or not to use accounting software in the businesses. This study also revealed major motivators for implementation of CAS like

1. Introduction of GST (Goods and Service Tax) influenced on small business owner-manager’s decision and advice from their accountant to adopt a CAS.
2. Some non environmental factors like the computer self- efficiency of the owner- manager,
3. Cost and perceived benefits of the innovation,
4. Organizational factors such as the ability to pay for the innovation,
5. Having the time to implement the CAS and possessing the staff capable of using the system.
6. Operator’s ability to absorb innovation, their capacity to understand the need for the innovations
7. Availability of resources

Above few major factors which are affecting adoption of CAS in business. They also tried to find out the role of an accountant in the decision making.

Clark, et.al., (2015) 48, study conducted in Lipa city for 128 small and medium business enterprises to find out the level of performance of these enterprises in using computerized and non- computerized accounting system. They compared computerized and non- computerized accounting system users. They also tried to find out problems involved in using the system and suggested a plan of actions for both systems. From the study they concluded that most of the SMEs their accounting system from last six years and through computerized accounting system they are able to finish jobs more efficiently. They observed that CAS requires higher cost but as compare to manual accounting system, computerized accounting is easy to set. Human error is the common factor in both systems. To minimize the problems occurring in both systems, they have given proposed plan as under.
Chart 2.3

Plan for minimizing human errors:

<table>
<thead>
<tr>
<th>Accounting system</th>
<th>Key result area</th>
<th>Activities</th>
<th>Person involved</th>
</tr>
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<tbody>
<tr>
<td>Manual accounting</td>
<td>Time consuming</td>
<td>Avoid repetition of work.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Consume small space in storing the filed papers.</td>
<td>Book keeper</td>
</tr>
<tr>
<td></td>
<td>Security and confidentiality</td>
<td>Monitor authorization of transaction.</td>
<td>Head of business</td>
</tr>
<tr>
<td>Computerised Accounting system</td>
<td>Higher cost</td>
<td>Find out lower cost alternative accounting system which will give same quality and accuracy with currently used accounting system</td>
<td>Owner of the business and Software provider/vendor</td>
</tr>
<tr>
<td></td>
<td>Prone to error</td>
<td>Provide more accurate records to minimize errors.</td>
<td>Book keeper and owner</td>
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<td></td>
<td></td>
<td>Give training to staff for enhancing their performances on accounting.</td>
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</table>

They tested the significant difference on the performance and problems encountered in using computerized and non-computerized accounting system.
Chandler and Holzer (1985) explained different types of personnel needed to operate effective Computer Based Accounting System. They have a hierarchy of personnel in the common input-process-output paradigm of general system. In input phase many individuals with various abilities, skills are required like support personnel (document handlers, data entry processors, data librarians). In process phase, computer programs are designed, tested and implemented for which technical personnel is required. At the third output phase which refers to the use of information output by management for decision making purpose Therefore computer based accounting system can achieve its goal only if the users of information output have ability to apply this information, otherwise it would be a wasted resources. At the end last Fourth phase which involve control of computer based accounting system for which the auditors are required. They have to evaluate the system and operations of computer based accounting system time to time to get quality output. According to them resources must be available for the success of computer based accounting system (CBAS). Their proposed model is as under.

**Chart 2.4**

**Personnel Resources**

- **Input** (Support personnel)
- **Process** (Technical)
- **Output** (Decision makers)
- **Control** (Auditors)

Quang and Lin (2013) examined the mediating effect of the adoption of CAS on the relationship between environmental uncertainty and organizational performance. They also examined the impact of external environmental uncertainties and organizational characteristics on the adoption of the system and the organizational performance in the Vietnamese economy. A simple CAS model is proposed by them to know the extent of CAS.
Sayel et.al., (2003)51, conducted study in Bahrain to understand the perceptions of internal control problems related to CAS and provide solutions for the same. They studied total 100 companies of Bahrain for this purpose. They concluded that according to Bahrain Accountants there is a problem of internal control exists in CAS adoption like mostly information can be changed without physical traces. For which they also have given solution like computers and records should be controlled and accessed by authorized person and also there should be separation in the duties within data processing. According to them, there are 4 types of internal control problems in CAS. They are as under (Chart 2.5).

Chart 2.5

<table>
<thead>
<tr>
<th>Internal Control Problem</th>
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<tbody>
<tr>
<td><strong>Input Problems</strong></td>
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<tr>
<td><strong>Processing Problems</strong></td>
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<tr>
<td><strong>Storage Problems</strong></td>
</tr>
<tr>
<td><strong>Output Problems</strong></td>
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</table>

Nofan, et.al. (2014)52, assessed the impact of CAS in increasing the efficiency of human capital on the basis of knowledge, creativity, skills in the financial departments and they concluded that the impact of CAS on human capital is positive.

Noor Azizi I., et.al. (2003)53, examined the extent of Computer Based Accounting System adoption in small and medium manufacturing firms of Northern Region of Peninsular Malaysia. They found that over ninety percent of total firms have adopted CBAS. Out of these firms majority of firms adopted CBAS from last 6 years and therefore it is still at initial stage. The result of this study shows that years of adoption are positively correlated with the quality of CBAS adopted.

The research by Khen, (2000)54, attempts to study the usage of computerized accounting system with focus on accounting software usage in small and medium companies with sample size of 250. It was collected by using 3 page reply mail survey questionnaire on a sample of 250 companies. The result of this study shows that 97.7
percent of small and medium companies use computerized accounting system. 88 percent of them use standard software while 12 percent use customized software. There is no significant preference on any one particular type of software and ease of use of the software is the main selection criteria for software.

Kulkarni, (2013)\textsuperscript{55}, traced 3 dimensional accounting system need for sustainable development. He pointed out that Double entry accounting system records all category I and monetary effective transactions of category II but category III transactions are omitted from being recorded. His survey result shows that there should be new accounting system which will record all types of business transactions that affect profitability directly and indirectly and researcher offers ‘3D’ accounting system.

Daru, (2015)\textsuperscript{56}, has focused role of computerized accounting in banking sector based on secondary data. Problems of manual accounting system, and importance or advantages as well as disadvantages of computerized accounting system and types of accounting software are highlighted by him.

Khar (2014)\textsuperscript{57} stated in his study that a computerized accounting system has a great potential to increase productivity, streamline workflow, reduce data redundancy and error reconciliation, and help with financial management for large and small businesses.

Lauder and Westhall (1997)\textsuperscript{58} ; Iacovou, Benbara and Dexter (1995)\textsuperscript{59}; Blackburn and Athayde (2000)\textsuperscript{60}, according to them, the diversity between SMEs prevents the construction of an “omnivalid” strategy to optimize the return from increasing computerization or participation in a network. Factors such as size, sector, level of internationalization, type of export, understanding opportunities within the company, type of customers, and dependence on larger partners or suppliers influence the level of computerization increase.'

Alison and Jeff (1999)\textsuperscript{61}, focused on the importance of the security for database of the computer. They viewed that data security is always important, but with a computer system it is even more so. More dependency on computer requires taking data
security more seriously. Data with the data on the hard disk the backup can be used to restore data to the position represented by the date of the backup.

Eman, (2015)\textsuperscript{62}, evaluated the reliability of the internal control methods on the computerised information system in banks of Jordan. The study was based on 50 respondents of the managers, employees of computer units and branches’ managers of these banks. He concluded that the banks of Jordan adopted policies and precautionary procedures to decrease the system’s downtime as possible. They followed the security principle of the system by protecting personal computers against physical and logical access and the networks. They also maintaining system and evaluate the system time to time. The banks also adopted control on information, input, output, transfer operations. He further recommended for developing and adjusting accounting information system, awareness among the employees has to be raised with proper training and appreciation. Al- kri, (2005)\textsuperscript{63}, stated that computerized accounting information system organize banks’ work in a proper manner by achieving competitive benefits through reducing its mistakes and implement its affairs, improving control and planning, and financial performances of these banks of Jordan.

Wan and Azwadi (2013)\textsuperscript{64}, discussed the conceptual model for investigating the factors influence on computerized accounting information system (CAIS) adoption in Malaysian SMEs. In this study researcher studied various existing studies in information technology and information system adoption. He examined that TOE theory (Technological- Organizational- Environmental) has been widely used in examining the factors influence IT adoption. But studies attempted to use this framework are limited to measure CAIS adoption. This theory includes technological as well as organizational and environmental aspects. He also included DOI (Diffusion of Innovation) and Thong’s SME model to prepare a complete framework to use them to measure CAIS adoption. Thus researcher tried to create a model to investigate influencing factors on CAIS adoption. Tornatzky and Fleischer (1990)\textsuperscript{65}, have first developed the TOE framework to study adoption of technological innovations. They believed that the adoption of new technologies in an organization were under the influence of three major dimensions like,
1. Technological - it describes both existing technologies in use and new technologies relevant to the organization

2. Organizational – characteristics of organization

3. Environmental- area in which a firm conducts its business (industry, competitors, government)

According to Ven and Verelst (2011), however TOE model is not a concrete model describing the factors that influence the adoption process. The main contribution of this theory is to motivate the researchers to take into account the broader context in which adoption takes place.

Diffusion of Innovation (DOI) theory by Rogers (1995), is the theory of how, why, and at what rate new ideas and technology spread through cultures, operating at the individual and firm level. Originally, an innovation characteristic in DOI was presented in the context of the innovation adoption at the individual level, but Rogers argued that characteristics of innovation could also be applied to the innovation models at the organizational level. In his study he explained innovations attributes includes relative advantage, compatibility, complexity, trialability and observability. He also included internal as well as external characteristics of organization in this theory.

Wan with TOE supplemented with DOI theory tried to develop a framework in his study. CAIS factors influencing model was developed which is as under.
2.4 Studies on factors influencing on CAS adoption:

In Global Perspectives (1999)\textsuperscript{68}, have examined the influence of the end-user’s personal characteristics on CBIS (Computer Based Information System) success in the small business. In the study conducted in Malaysia on the basis of 49 SMEs. Systems success is measured by three indices, namely user satisfaction, systems usage and perceived systems effectiveness in goal achievement. In this study user satisfaction was represented by the user’s total satisfaction on various aspects like speed of the systems, ease of use, level of internal control, flexibility, types of reports
generated by system. And the personal attributes of the end-users are age, IT literacy, job responsibility and education. They concluded that systems usage was not affected by any personal characteristics of the end-user. It means personal characteristics are not associated with the success of system. They further recommended a need of communication between users and IT vendors for the success of CBIS.

Lee (1987) explained several factors associated with the success of information system in small businesses. According to him there are various factors associated with higher level of user satisfaction like formal future information needs analysis, a high level of user involvement, the availability of in-house IT expertise, good relationship with computer vendor, extensive computerization experience, larger firm size and firms operating in a less competitive environment.

Yap, et. al. (1992), divided the factors which are affecting CBIS success in small businesses into four major categories like (1) Organizational characteristics, (2) Organization action, (3) Systems' characteristics and (4) Internal expertise. Further they added two more factors like External expertise (vendor’s support) and consultant effectiveness, according to them these factors have significant impact on success of CBIS in small businesses.

Raymond (1985), found in his study that there is a negative association between the duration of CBIS experience and end users satisfaction

Ushakiran and Karunasri (2007), conducted a study based on primary data collected from 61 shops at Koti, Hyderabad, which differ in type of business, size, accounting system and type of control. They conducted a study to know about the decisions are required in computerized accounting system. They concluded that most of the business entities realized the importance of computerization of accounting system to solve difficult financial records and reports. While automating the accounting system, organizations have to understand the informational needs of the management and then decide on the type of software useful for their business. The owner has to take proper decisions on training for himself and his staff, amount to be of invested in hardware and software, type of security care to face the problem of loss of data for the successful implementation of computerized accounting system in business. According
to them size of the firm also matters when it comes to the establishment of accounting system.

Noor et.al., (2009)\textsuperscript{73}, investigated usage of accounting information and computerized accounting information system among non-manufacturing 136 small and medium enterprises of Malaysia. They found that usage of computerized AIS (Accounting information System) is minimal in all these firms. From the study they found factors which influencing decisions not using accounting software, they are as follows:

1. Lack of financial resources
2. Lack of IT knowledge
3. Lack of accounting knowledge
4. Costs of accounting software exceed the benefits
5. Manual system is already sufficient
6. Have yet find a suitable software

And also factors that can influence decisions to use accounting software as follow:

1. Government incentive in form of tax reduction
2. Financial subsidy from the government
3. Free advice from relevant government agency
4. Free training from relevant government agency
5. Increase in business competition
6. Advice from company’s accountant

Ilias, et.al., (2013)\textsuperscript{74}, examined the significant factors of Technology Acceptance Model (TAM) like perceived ease of use, perceived usefulness, behavioral intention, actual use, and attitude towards using and Psychological attachment like compliance, identification, and internalization towards CAS in Malaysian Accountant General Department (MAGD). With the help of analysis of 99 respondents’ responses the model was tested in this study. At the end of the study researcher suggested that to improve the attitude of users in using CAS, the emphasize need to give more attention toward social influences including compliance, internalization and identification in improving user’s attitude, intention, and continuing their usage behavior in order to prepare employees for CAS adoption.
Gwangwava et al. (2012)\textsuperscript{75}, study selected sample size of 72 SMEs out of 100 SMEs using stratified sampling followed by random sampling. In this descriptive study they describe factors which are influencing non adoption of CAS in business, they are as (1) Cost benefit analysis, (2) lack of government support, (3) Financial constraints, (4) complexity of AIS. They further added that ignorance about AIS is also responsible for non adoption of AIS in SMEs.

Amankwa, (2013)\textsuperscript{76}, focused on critical factors affecting security control of computerized accounting system. This study also provided a framework of effective implementation of security control in computerized accounting system. He found 10 critical factors affecting security control of CAS as follows:

1. Executive support
2. Standardized IT infrastructure
3. Experienced project manager
4. Security awareness
5. Clear security objectives
6. Trained human resources
7. Organizational culture
8. Total cost of ownership
9. Cryptographic mechanism
10. User involvement

According to Hayale and Khandra (2006)\textsuperscript{77}, computerized accounting information system (CAIS) faces problem of security control due to weakness of their security controls or from the nature of competitive environment as the need for information is higher. Therefore nowadays protecting CAIS through security control is very essential for the assurance of confidentiality, integrity and continuous information availability for running business, Abu-Musa, (2006)\textsuperscript{78}.

On the basis of study of 261 US companies, Henry (1997)\textsuperscript{79}, suggested seven methods for security control such as encryption, password access, back up of the data, viruses’ protection, authorization for system changes, physical system security, and periodic audit.
Munasinghe, P., et al., (2015)\textsuperscript{80}, tried to identify the factors that influence on usage of computerized accounting system on small and medium enterprises. On the basis of analysis of 100 respondents of North Central they found that cost, business size, infrastructure, government support, management support, external environment, and perceived ease of use. They further stated that there is no significant influence from demographic variables on usage of CAS and only business size, business cost, and external environment have significant influence on CAS. They also suggested that software development cost can be reduced by development companies by giving more options to SMEs. Otieno and Oima (2013)\textsuperscript{81}, have stated that development of information technology has great influence on use of accounting system. As computers become smaller in size, faster, easier to use, and less costly the computerization of accounting system concept followed by the entire service industry. The same idea is given by Tijani and Mohammed, (2013)\textsuperscript{82}, that the innovation in ICT has offered significant improvement in financial transactions in business are processed by professional accountants. Therefore most of the developed and developing countries, it is essential now that an accountant should have proper ICT skills.

The business enterprises started rapidly using ICT and one of the most important applications Use of CAS. The business enterprises which accept technology use CASs and other ICT applications. Koch et al., (2011)\textsuperscript{83}, stated regarding this that technology accepted model is one of the widely used approaches for modeling adoption behavior and it shows that acceptance and adoption behavior of users is not only shaped by the perceived usefulness and ease of use, but also by perceived community characteristics. Alone perceived community size is not the main impact but perceived community structure including lead users characteristics has impact on CAS adoption. Wen et al., (2012)\textsuperscript{84}, describes in their study variables influencing accounting software adoption and among the characteristics of manager and accountant. They found that,

1. Variable like managers’ age is negatively associated to accounting software adoption,
2. Accountant’s education and number of accountants of enterprises positively influenced the level of adoption.
3. Software characteristics such as software adequacy positively influenced the adoption.

4. Whereas software security negatively influenced the level of adoption.

They have classified the characteristics into two parts namely, Personal characteristics and Software characteristics as follows.

**Chart 2.7**

**Variable influencing accounting software adoption**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Adoption</td>
<td>Business adopt accounting software to manage accounting</td>
</tr>
<tr>
<td><strong>Manager characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Age (in years)</td>
<td>Business managers’ age</td>
</tr>
<tr>
<td>Education (in years)</td>
<td>Business managers’ education</td>
</tr>
<tr>
<td><strong>Accountant Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>The number of accountants work for business</td>
</tr>
<tr>
<td>Education (in years)</td>
<td>The average education of all accountants in a business</td>
</tr>
<tr>
<td><strong>Software Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Adequacy</td>
<td>The software meet the business’s needs</td>
</tr>
<tr>
<td>Support</td>
<td>There is help from the vendors in case of software error</td>
</tr>
<tr>
<td>Function</td>
<td>The software have various function models</td>
</tr>
<tr>
<td>Price</td>
<td>The software’s price</td>
</tr>
<tr>
<td>Security</td>
<td>The software guarantee the accounting data’s safety</td>
</tr>
<tr>
<td>Timeliness</td>
<td>The software’s function is updated in time</td>
</tr>
</tbody>
</table>

Sam et.al., (2012)\(^85\), examined the extent of and factors influence CAS adoption. They found that the factors CEO innovativeness; perceive ease of use and business competitiveness negatively correlated to adoption of CAS, whereas only perceive usefulness is positively correlated to adoption of CAS. They also found that type of business and business location influence the CAS adoption. However size (paid up capital, sales turnover, number of employees) do not influence CAS adoption. They further added that CEO literacy in ICT, accounting, and CAS has influence the responded CEO to adopt CAS in their businesses. Finally they observed that as many
as 80 percent SMEs adopted CAS in Malaysia; while studying adoption of CAS and its implementation in Malaysian SMEs.

Ismail and Kundari, (2012)\textsuperscript{86}, investigated the factors affecting end users satisfaction and job performance of employees by using EUCS model, in MARA, Malaysia. Five factors namely content, accuracy, format, ease to use, and timeliness are considered researcher to measure satisfaction of using CAS. Study shows that the end users are moderately satisfied with MARA CAS and accuracy factor has a significant effect on end users’ CAS satisfaction, whereas ease of use the CAS has a positive relationship to individual job performance. The study concludes that the difference in the accounting system within agency adopted from the public sector practices coupled with different performance measurement system in the public sector may adjust the importance of factors previously found in the study of private sector and overall CAS improve operational efficiency of the organization.

Christopher, et.al., (2014)\textsuperscript{87}, based on 82 managers from coffee factories, examined that coffee societies have not fully adopted CAS. Cost, human resource proficiency, availability of related infrastructure are the most important variables affecting adoption of CAS and user’s perception on CAS is insignificant in respect of CAS adoption. Donaldkiso, (2009)\textsuperscript{88}, further added that the lower cost of adoption the higher the new innovation such as CAS will be adopted by small enterprises and vice versa. When initial set up cost is high, organizations are less likely to adopt CAS in their businesses. He stated in this study that equipment cost includes equipment delivery, office equipment, machinery and equipment, such asset includes purchase price, transport cost, insurance of equipment, cost of assembly, installation, and cost of testing startup. Computer package also required specialized staff to operate it properly. Therefore huge training cost is also involved to understand software and hardware involved in system on continuous basis as it is new hardware and software coming in the market.

Deng et al. (2008)\textsuperscript{89}, tested the End-user computing satisfaction (EUCS) model across cultures using samples from the United States, Western Europe, Saudi Arabia, India and Taiwan. For all the cultures that they examined, they found that all five factors were equivalent. There were no significant differences for content, format,
accuracy and timeliness; however there was a difference for ease of use. The finding suggests that the meaning of user satisfaction is not uniform between cultures.

The influence of computerized accounting system on processing of financial statement has been linked to the benefits of applying computer systems while generating financial statements and the influence of CAS depends on the end users satisfaction was studied by Mahir (2002)\textsuperscript{90}, Higher end user satisfaction leads to a positive attitude towards using the satisfaction and in turn increases the voluntary usage of the system observed by Mahir, whereas Nash (2003)\textsuperscript{91}, noted that the quality of accounting information and financial performance of accounting systems is a great concern for management. A computerized accounting system is a delivery system of accounting information for purposes such as providing reliable accounting system information to users, protecting the organization from possible risks arising from abuse of accounting data and system among others.

2.5 Studies related to accounting theories and computerization of accounting system:

Kieso and Weygandt,(2012)\textsuperscript{92}, stated that as a service activity, accounting provides interested parties with quantitative financial information that helps them to make decisions about the deployment and use of resources in business and non-business entities and in the economy. As an Information system, it collects and communicates economic information about a business enterprise or other entity to a wide variety of persons whose decision and actions are related to the activity. Whereas Glautier and Underdown, (1976)\textsuperscript{93}, argued that Accounting is what accountants do, therefore, a theory of accounting may be extracted from the practices of accountants. They are of the view that the roots of accounting theory are decision theory, measurement theory and information theory. According to them the theoretical foundations of accounting theory can be discussed from two angles:

1. Nature of theory (which was discussed above)
2. Roots of the accounting theory. Roots of the theory can be found in:
   a. Decision theory
   b. Measurement theory
   c. Information Theory.
Further they stated that as the environment changes, accounting structure, systems and processes also change.

According to Most (1982) 94, Accounting theory is that branch of accounting which consists of the systematic statement of principles and methodology, as distinct from practice.

Porwal (1985) 95, studied various accounting theories and approaches along with history of accounting thought. He state that the theoretical concepts of accounting are statements of axioms that portray the nature of entities operated in a free economy. The nature of the entity and the interests in the entity may be classified according to the proprietary theory, the entity theory, the residual equity theory, the enterprise theory and the fund theory.

Hendriksen 96, highlighted the importance of predictive ability of accounting data in decision making. He stated that, if accounting data are relevant for the making of decisions by investors, they must provide input into the decision models of the investors. And since only expectations of future objects and events are relevant for these decision models. It follows that if accounting data are to be relevant, they must provide or permit predictions of future objects or events. Thus according to him, there are 3 main levels of accounting theory; namely (1) structured or syntactical theories, (2) interpretational or semantical theories, and (3) Behavioral or Pragmatic theories.

He further observed that, a useful frame of reference is to classify theories according to prediction levels. According to him these levels are structural, interpretational and behavioral. These theories attempts to explain current accounting practices and predict how accountants react to certain situations or how they would report specific events. These theories relate to structure of the data collection process and financial reporting. He further concluded that great care should be taken to make sure that the interpretations of concepts by accountants are the same interpretations made by the accounting statements and reports. The behavioral approach to accounting theory is still in its infancy but there are a great scope and need for the development of theories that have a decision usefulness orientation. These theories attempt to measure and evaluate the economic, psychological and sociological effects of alternative accounting procedures and reporting media. As it is important to understand that who
are the users of published financial statements? What is the type of the specific information wanted by the several user groups? Is there a need for different financial statements for different types of users?

Accounting is not only the oldest but also the stable of the management and commerce as well as economic disciplines. In spite of its stability and continuity, accounting has seen major changes during the past century. The modern accounting is based on the system adopted by an Italian Monk Fra Luca Pacilio, who developed this system over 500 years ago (Asaba, 2013)\(^9\). It would be surprising if a century from now, accounting from now, accounting is the same as today in relation to its basic principles and rules.

Accounting can be divided into two basic categories: those which apply manual accounting and those which prefer computerized accounting system observed by Webser (2010) and quoted by Asaba (2013)\(^8\).

Gelinas et al., (2005)\(^9\), looks towards accounting system as an information system to management and from this angle they defined accounting system as an ‘information system is a man-made system that generally consists of an integrated set of computer-based and manual components establish to collect, store, and manage data and to provide output information to users. On the other hands, Waterfield and Ram sing (1998)\(^10\), highlighted that accounting system can be a simple manual one based on the general Journal (where transactions are recorded chronological as debits and credits), general ledger (where the activity from the general journal is summarized by account number), and other journals required to manage the business, such as purchase, payment, sales, receipts, and payroll journals (because of the expense of maintaining multiple manual journals , institutions typically do not prepare all of these other journals).

These are two approaches followed in formulating accounting theory -traditional approaches and new approaches. In traditional approaches to accounting theory construction, accounting practice and verification are considered synonymous, while in the new approaches to accounting theory construction, attempts are made to logically or empirically verify the theory (Belkaoui, 1981)\(^1\). According to new approach Marivic (2009)\(^2\), describe a computerized accounting system (CAS) as a
method or scheme by which financial information on business transactions are recorded, organized, summarized, analyzed, interpreted and communicated to stakeholders through the use of computers and computer based systems such as accounting packages. Grande et.al. (2011) tested the relationship between SMEs productivity and the use of CBAS taking samples from Spain and found that there is no significant relationship between CAS adoption and SMEs productivity.

The role of theories that emphasize interpretation is to find way to improve the ability of accounting information to be interpreted in terms of human observation and experience which directly affect the extent of CAS adoption or not adoption. It is realized that accounting is useful not merely to assess the results of trading, profit and loss and balance sheet or financial statement regarding past performance but also that it can be more useful in decision making by the management, shareholders, creditors, present and potential investors, government and others. The objective of accounting now is not only to provide information to management for decision making. Outside interested individuals and groups of individuals are also supplied necessary and timely information for making rational decisions. Therefore the focus of study on extent of CAS is to communicate properly to decision makers what is their behavior towards SMEs CAS adoption.

Most of research studies in behavioral accounting have generally focused on the behavioral effects of accounting information. Such studies have broadly been divided into the following five classes (Belkaoui, 1981).

1. The adequacy of disclosure,
2. The usefulness of financial statement data,
3. Attitude about reporting practices
4. Materiality judgment and
5. The decision effects of alternative accounting procedures.

How individuals make decisions on CAS and what are characteristics of manager/CEO in respect of CAS adoption are studied by Thong (1999).

A meaningful review on CAS models, barriers to CAS adoption, relationship between firm demographical CAS adoptions etc. was undertaken by Gutierrez et.al. (2014), on theoretical framework with reference to (1) accounting reports and decision
making, (2) accounting system, (3) information system, (4) accounting information system, (5) automated accounting information systems, (6) automated accounting information system and SMEs, (7) technology innovation, (8) innovation adoption, (9) characteristics of the organizational decision maker, organization, environment and technological innovation. Their study is based on Thong model. They studied (1) decision influences by users of CAS, (2) impact of CAS on the business, (3) training of CAS for its usage, (4) relationship of users of CAS with their accountants, capacity and owner/CEO/manager. They found out that age and educational attainment of the CEO/manager/owner of SMEs do not affect the SMEs’ decision to adopt CAS. Instead, the role of accountants, accounting professionals and industry associations is encouraging SMEs to adopt CAS.

A comprehensive review of literature on IT adoption in SMEs with special reference to internal and external factors (about 175 references) is undertaken by Morteza et. al., (2011) for all assets including conceptual framework. The IS adoption model provided by Thong (1999) for understanding factors influencing IS adoption in small business is very useful which is based on 3 stage sequence of initiation, adoption and implementation—characteristics of CEO, IS organizational environment. It is based on diffusion of complex technological innovation.

The study of Munashinghe et.al., (2013) uses a quantitative approach to find out the extent and factors of CAS adoption by taken 100 SMEs from North Central Province of Sri Lanka. A research model for usage on CAS on SMEs was explored based on 5 point Likert Scale. Another useful conceptual model on factors influencing CAS and computerization success impact (extent of CAS) was initiated by Yap and Thong (1997) and applied small enterprise computerization programme (SECP) and Non-SECP.

2.6 Research Gap:

The reviewed literature revealed the following broad conclusions.

1. Going through available literature on the various aspects of the topic, it shows that there is some gap in the study on the computerization of accounting system in small and medium business enterprises of India. Many studies are available on CAS in abroad countries’ on SMEs. The CAS process of these
countries on SMEs is different as compared to Indian CAS adoption. The books reviewed provided a theoretical standard towards application of computerization of accounting system.

2. It is also observed that in India hardly research done on this topic; though SMEs are the backbones of Indian economy. It is essential to throw light on CAS adoption in India and particularly Mumbai. It is essential to find out the current status of CAS adoption which will help to know What are the problems and difficulties of SMEs in introducing the computerized accounting system? What could be possible solutions to overcome them? To what extent this system is applied by the SMEs? How operation and control of computerized accounting system is adopted in these industries?

3. Most of the literature reviewed here shows that most of studies are related to Information technology adoption by Indian small and medium business enterprises. These literatures discussed what problems SMEs of India face to adopt new innovations in information technology, very few are discussing extent and factors of CAS and problems faced by Indian SMEs in adoption of computerized accounting system in their business.

4. In all, 110 studies are reviewed, consisting of 37 general studies on CAS, 30 studies on extent of CAS, 24 studies on factors influencing CAS, and 19 studies on accounting theories and CAS. Majority studies are on cross-borders (globalised studies) and review of literature show that the majority domestic studies fail to capture the CAS in SMEs in Maharashtra and particularly in Mumbai. Therefore for filling up, some research gap in existing studies, the present study is needed and hence undertaken.

5. In India, studies on CAS, its usage, extent, factor affecting, pattern and practices level and performance among SMEs have received little attention as compared to large-scale industries and multinational industries. The present study is an attempt to understand and examine (i) the perceptions of SMEs on accounting system and computerized accounting system (ii) the extent of CAS adopted based on various dimensions. This aspect with reference to SME in North-East Mumbai zone is remained unaddressed.
6. Even Mumbai University and SNDT Women’s University and to some extent all other university in Maharashtra experts have not addressed CAS extensively. There exists many studies on implementation/ adoption of computer and IT in SMEs business but very few studies almost negligible on computerization of accounting system. In general even few studies are found on manual accounting system and very few on CAS. Empirical studies on CAS are non- exist in studied area. Therefore present study is very much necessary. Hence in the present study an attempt is made by researcher to fill up some of the gap in earlier studies.
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