CHAPTER 1

INTRODUCTION

1.1 Introduction:

A proper accounting system has a great impact on the success of any business enterprises, especially small and medium business enterprises ones. Sibley, (1998) has shown that 40 percent of all new companies in USA failed within the first year of operation due to the lack of planning and tracking finances. Information technology has progressed tremendously over time and it has the high potential to revolutionise the way businesses operate. It had already happened in all product and services including accounting. Hence, the implementation and adoption/usage of accounting system, even if it is simple, is crucial for the future success of any industry, irrespective of the industry’s size.

The adoption/usage of such system has enable accountants and owners to spend more time on decision-making as it can automatically handle the tedious sorting of entries (Miller, 1999)\(^2\). The availability of vast amounts of historical data in recent years and the enormous increase in the processing power of computers had made many decision makers to begin to rely on computerised decision support system to help them in complex decision tasks (Sriram, Ram and Jones 1998, abstract)\(^3\).

The increase in business competitiveness in the late 20\(^{th}\) century had forced companies to adopt new technology to redesign business processes, improve products, and support organisational charges for better performance. One area of new technology is computerisation of activities and accounting system. A study showed that information technology had provided competitive intelligence for effectively implementing business charges in American and Japanese companies (Guimavaes, Sato and Kitanaka, 1999)\(^4\) and computerised accounting system is no different in this case as it encompasses automated transaction cycles, internet resources, electronic tax record retention requirements, expanded coverage of data encryption techniques and object-oriented programming, digital signatures, bar coding and automatic identification technology (Bodnar and Hopwool, 1998)\(^5\). In spite of that many SMEs know the importance of computerised accounting to keep up with the information technology age, there is a lack of research in the adoption of computerised accounting
system by SMEs and more research is carried out on large scale organisations (chapter2). Therefore an attempt is made in the present study to assess the computerization of accounting system in SMEs in Mumbai.

The revolution in information technology has changed the nature of business of small and medium business enterprises. The emergence of e-commerce has made possible cross-border transactions being carried out. These developments in business force to change accounting system of the enterprises to fulfil the demands of current global requirements in timely manner. With proper accounting system only the businessmen could be able to take decisions for their business in this changing environment. Accounting system also should provide non-financial information to support financial information for better decision making stated by Brecht, and Martin (1996)⁶. Thus accounting system should be accurate, proper, reliable and timely information to users in this current information age.

The adoption and implementation of computerised accounting system for the any organisation – small or medium or large enable the management / owner to improve decision making, internal controls and financial information as well as enabling the financial reporting and statement being produced on a standardised format and timely basis to the stake holders. As the volume of transactions increase which maybe very difficult to be compiled manually, and hence CAS is unavoidable. Moreover, the accounting systems used also be able to capture the non financial information to support the financial information for better decision making. The modern accounting system should be able to produce relevant, accurate, reliable and timely information to users in the modern innovation age and here CAS plays a decisive role.

SMEs contribute approximately 40 percent of India’s domestic production, almost 50 percent of total exports and 45 percent of industrial employment. More, importantly they are the second largest manpower employer overall after agriculture, employing approximately 19 million people. Various experts, numerous surveys, researchers are investigated various SMEs facets and suggested solution for SME’s development, expansion and overcomes problems faced by SMEs. However they are not addressed problems of CAS in adequate manner. Few are attracted towards CAS problems of SMEs, but lack of information makes this job more difficult (Ghatak, 2011)⁷. This is a study to bridge the gap in it to some extent. The review has been done by going
through various research works that have been done in India as well as abroad with respect to SMEs CAS and its related facets (Chapter 2). It helped researchers to give a proper and systematic direction to the present study. The hypothesis tested by them and the results obtained helped a lot to make a comparison and to address unaddressed areas. Various journals and other sites related to CAS and SMEs were also surfed and magazines related to SMEs and CAS in India and abroad were also referred. Researcher get motivated to take up a study on extent of CAS related to SMEs in the north east zone of Mumbai suburban district as a model study area and further researcher felt that this study is needed because researcher believed that the full and proper adoption of CAS by SMEs provide many benefits for their survival and growth as well as expansion like it gives a clear sense of vision and mission for the time, ease to take a strategic decision, assesses strengths, weaknesses, opportunities and threats (i.e. SWOT analysis). Hence, the highlighted gap in earlier studies (Chapter 2) worked as guide for the present study.

Small and medium business enterprises are highly strive sector in any country including India and they give big contribution for country’s economy and development. Ang and Hussin (2012) observed that SMEs have growth in importance in the global economy especially SMEs contributes to generation of employment, generation of income, contribution for social activities and poverty reducing. This has been confirmed by various research studies (Karunananda and Jayamaha, 2011).

SMEs encourage entrepreneurial development and dispersal of the industries throughout the length and breadth of the country. It also generates a lot of employment opportunities (India’s prime need) and the capital cost per employee is very minimum with the service sector contributing a major share to the GDP and as this sector will relies in future on the more and more FDI inflow towards SMEs, the scope and importance of CAS adoption for SMEs has increased tremendously. The government is also committed to give a fillip to the GDP and SMEs sector through infrastructural development, skill India/ Maharashtra, start India/ Maharashtra, technological upgradation and by expanding the role of the small industries development bank of India (SIDBI). Therefore updating accounting system is the need of the hours and CAS is the new innovative tool or technique to update and
maintain ease way the accounting and accounting system. Hence it is essential to undertake a indepth study on perception of SMEs on CAS adoption.

Accounting may be the key to success of SMEs. The accounting problems are categorised into record keeping, use of accounting information, cash control and cost control. Wichmann (1983)\(^{10}\) reported the results of an analysis of small business institute (SBI) cases. Accounting was found to be the most frequent problem and the number one in this category was record keeping (60 percent). In other words, many of the problems of SMEs are either in the areas of accounting or accounting – related and CAS is the modern innovative technique help to overcome accounting problems. Therefore an attempt is made in the present study to measure, identify and assess the extent of CAS adoption in SMEs based on primary data.

In SMEs studies, CEO and the owner- manager was used interchangeable since in most cases CEOs and Owner- manager is the same person (Hussin and Noor, 2005)\(^{11}\). In SMEs, it firms since all decision from daily functions or activities to future investments are made by them (Thong, 1999)\(^{12}\), Padachi (2012)\(^{13}\) observed that internal factors such as marketing, operation and in particular accounting services may be equally responsible for poor performance of SMEs. Preparing chart of accounts, general ledger, journals and subsidiary journals, maintaining the integrity of an accounting system, types of accounting system, other essential documents and use of software are the elements / components of accounting system and adoption of CAS speeded up preparation of these components of accounting system and through adopting CAS, SMEs certainly approves their development pace to some extent.

SMEs’ owner – manager need a good and double entry record keeping system that allows them to maintain control of their finance and the most important use to aid the owner –managers in making decision about the firms ( Davis et.al.,2009 )\(^{14}\) and CAS serves here as a good record –keeping system tool or technique . Hence CAS adoption may be decisive factor for an organization to be success and also to survive. A CAS has great potential to increase productivity, streamline workflow, reduce data redundancy and error reconciliation, save time and improve utility, do not need a large IT staff to install and maintain, and help with financial management, operation management, production management, human resource management for SMEs.
In this context, an attempt is made by researcher to study and investigate the following questions.

1. What are the owners’ socio-economic characteristics of small and medium business enterprises of North-East Mumbai area?
2. What are the organizational characteristics of small and medium business enterprises?
3. What is the perception of businessmen towards pattern of keeping and maintaining accounting system in SMEs?
4. What is the perception of businessmen towards CAS awareness, initiation and decision-maker?
5. What is the perception of businessmen towards benefits of CAS adoption to SMEs?
6. What is the perception of businessmen towards role played by CAS adoption in enhancing performance of SMEs?
7. What is the perception of businessmen towards role played by CAS adoption in development of SMEs?
8. To what extent computerisation of accounting system adopted for chart of accounts in SMEs?
9. To what extent computerisation of accounting system adopted for journals and subsidiary journals in SMEs?
10. To what extent computerisation of accounting system adopted for preparing ledgers in SMEs?
11. To what extent computerisation of accounting system adopted for maintaining the integrity of an accounting system in SMEs?
12. To what extent computerisation of accounting system adopted for types of accounting system in SMEs?
13. To what extent computerisation of accounting system adopted for other essential documents preparation in SMEs?
14. To what extent computerisation of accounting system adopted based on use of software in SMEs?
15. Whether CAS is adopted for recording with identification number and journalising chart of accounts related transactions?
16. Whether CAS is adopted for journals and subsidiary journals related transactions?
17. Do you agree that CAS is adopted for preparing ledgers?
18. Do you agree that CAS is adopted for maintaining the integrity of accounting system?
19. Whether CAS is adopted for types of accounting system and other essential documents?
20. Is Computerisation related software is purchased?
21. Is basic requirement for computer accounting framework and operating procedure is followed?
22. Is proper software service and maintenance contracted?

Keeping in mind the above cited questions/problems, researcher aim (i) to measure and identify the extent of CAS in SMEs, (ii) to assess the owners’ and organizational characteristics of SMEs, (iii) to understand and access the perception of SMEs towards CAS, (iv) to know the highest and lowest CAS indicator/attribute, and (v) to assess the difference on CAS adoption between small business enterprises and medium business enterprises (SMEs). But before doing so, one has to know and understand conceptual framework of the selected topic. In other words, it is essential to know and understand the following in relation to selected topic (conceptual framework/concept of CAS and SMEs).

1. What is accounting, accounting systems and computerisation of accounting systems?
2. What are the objectives of CAS?
3. What is an importance of CAS?
4. What are the benefits/advantages of CAS?
5. What are the functions of CAS?
6. What are the components/constituents of CAS?
7. What factors are influencing or contributing to a good CAS?
8. What the steps or procedure/process of CAS adoption?
9. What are the measures and indicators/parameters/attributes of CAS adoption?
10. What are the models of CAS adoption?
11. What is SMEs?
12. Why SMEs important?
13. What is present policy of SMEs?
14. What is significance of present study?

15. To what extent CAS practices adopted presently at global level (by abroad countries)?

1.2 Meaning and definitions of accounting, accounting system and computerization of accounting systems:

1.2.1 Accounting:

Accounting is not only the oldest but also stable of the commerce and management disciplines. In spite of its stability and continuity, accounting has been major changes during the past century. It would be surprising if a century from now, accounting from now, accounting is the same as today in relation to its principles, rules and financial processing. Two concept needs to understand first. They are accountancy and accounting.

‘Accountancy’ is concerned with formulation of the principles or rules to be observed in recording the business transactions, whereas 'Accounting' concerns itself with actual recording of business transactions in accordance with the principles of accountancy. Accountancy professes whereas accounting practices. Accountancy relates to the theoretical study, whereas accounting relates to the practical work. Therefore, accountancy is a science on the other hands, accounting is an art. In respect of their relative importance in maintenance of records accountancy can be considered as the father, accounting as the mother and accounts as the children. Therefore, accounting is the art of analysing and recording business transactions, reporting results of business operations through periodic statements and interpreting such results for purposes of effective control of future operations. AICPA, (1972)\(^15\) defined it in a right spirit as accounting is an art of recording, classifying and summarising in a significant manner and in terms of money transactions and events which are, in part at least, of a financial character, and interpreting the result thereof.

Accounting is treated as a service activity by the Accounting Principles Board (APB) of the AICPA in its statement No. 4 (1970)\(^16\). Accounting is defined as a service activity by APB in the following words.

Accounting is a service activity. Its function is to provide quantitative information, primarily financial in nature, about economic activities, that is intended to be useful in
making economic decisions, in making reasoned choices among alternative courses of actions. Accounting includes several branches, for example, financial accounting, managerial accounting, human resource accounting, environmental accounting, social accounting and government accounting.

Anthony and Reece states that accounting is information system whereas Drucker viewed that it is dealing with operations. The view of Anthony and Reece is accepted by Reeve et al. (2011). Accounting can be defined as an information system that provides reports to users about the economic activities and condition of the business (Reeve et.al. 2011)\(^{17}\). In the words of Anthony and Reece, (1991)\(^{18}\) Accounting is not just Book-keeping, which is a simple part of accounting. Book-keeping is mechanical and repetitive while dealing with business transactions. It is concerned with the recording of transactions, whereas accounting is information system which provides information to their users and decision-makers to satisfy their needs.

Peter Drucker(1992)\(^{19}\) a thinker and Philosopher had another approach, so according to him, accounting deals with operations rather than with finance, and for operational accounting, money is simply a notation and the language in which to express non-monetary events. Indeed, accounting is being shaken to its very root by reform movement aimed at moving it away from being financial and toward being operational.

This means that accounting includes a series of different activities, which are linked with each other. Accounting is process, which involves the accumulation, analysis, measurement, interpretation, classification and summarization of the results of each of the transactions of the organisations. Therefore accounting has long been an organisational function especially with the advent of non-owner managers who need update what is happening in the organization. Maintaining, preparation and presentation of accounts (MPPA) is crucial for business success as well as organization for effective decision making whether it is a non-profit making organisation or profit making because they have to report to the stakeholders of the organization through financial reports. It is easy to do accounting functions using computerized accounting systems. Posting transactions to the ledger, the principle of double entry can largely be automated when done through the use of computerized accounting system; observed by Carol (2002)\(^{20}\). In fact the accounting function of an
organization may be regarded as a service department where by the department capture transactions, process same and formulate report to the management team to facilitate the decision-making process. This is often lacking in SMEs; resulting owner-manager is deprived of key performance indicators to take the right decision.

Therefore Accounting can be defined as “Identifying, measuring, recording, analysing, classifying, of quantitative information and provide them to their users for decision making.”

However Hendriksen and Breda (1992)\textsuperscript{21} optly pointed out that Accounting theory had not arrived at a stage where a grand theory could have been formulated. It means experts are differ still today about what is means accounting precisely and debating on concept of accounting issue.

\subsection*{1.2.2 Accounting system:}

The term ‘system’ may be defined as a set of elements which operate together in order to attain a goal. A system does not consist of random sets of elements but elements which may be identified as belonging together because of a common goal. It consists of three activities- input, process and output. Whereas accounting system is a set of principles and methods used by organisations for recording and reporting financial information. It is a particular way in which a company or organisation records and reports its financial information (Cambridge English Dictionary). It is a mechanism within a company that generates its financial position. The system comprises all people and machines that are involved in accounting information. It is a method, procedure and standard followed in accumulating, classifying, recording and reporting business events and transactions. The accounting system includes the formal records and original source data. Thus accounting system is a method followed by an organisation for recording and preparing reports of financial data.

Chambers (1974)\textsuperscript{22} stated that as an information system, accounting links (1) an information source or transmitter (generally the accountant), (2) a channel of communication (financial statements), and (3) a set of receivers (users). When accounting is looked upon as a process of communication, it is defined as the processes of encoding observations in the language of the accounting system, of manipulating the signs and statements of the systems and transmitting the result.
According to Larson and Pyle (1988) an accounting system consists of business papers, records, reports, and procedures that are used by an organization in recording transactions and reporting their efforts.

Collins and Collins (1978), underline that an accounting system is a way of keeping a written record of transactions. Receipts are given for all money that is received by an organization and receipts are asked for every time money is spent.

It is a system which is responsible for recording, analyzing, monitoring and evaluating the financial condition of organisations, preparation of documents necessary for tax purposes, providing information support to many other organizational functions like marketing, planning, human resource management and so on. Without such a system it will be difficult for SMEs to determine performance identify customer and supplier account balances and forecast future performance of the organisation.

Thus an accounting system is comprised of accounting records (check books, journals, ledgers etc) and a series of processes and procedures assigned to staff, volunteers, and/or outside professionals. The goals of the accounting system are to ensure that financial data and economic transactions are properly entered into the accounting records and that financial reports necessary for management are prepared accurately and in timely fashion.

1.2.3 Components of accounting system

There are two types of accounting systems in operation. They are (1) manual accounting system and (2) accounting information system or computerised accounting system. On the basis of above meaning and definitions shows that components of accounting system consists of chart of accounts, journalise and subsidiary journals, general ledger, check book, accounting procedure, manual accounting cycle, maintaining of the integrity of an accounting system and software, computer, registers, infrastructure etc. They are briefly explained as follows:

1. Chart of accounts:

It is a list of each item which the accounting system tracks and each account is assigned an identifying number. Assets, liabilities, net assets, revenues and expenses are sub-components of chart of accounts.
2. **General ledger:**
   The second component of an accounting system is the general ledger. The chart of accounts acts as the table of contents to the general ledger and the general ledger organises information by account.

3. **Journals and subsidiary journals:**
   The cash disbursement, cash receipts, general, payroll, account payable, account receivable etc. is the journals and subsidiary journals. Journals also called books of original entry. They are used to systematically record all accounting transactions before they are entered into general ledger. Journals organise information from the journals to the general ledger is called posting.

4. **Check book:**
   It serves as a combined ledger and journal. Most financial transactions will pass through the check book, where receipts are deposited and from which disbursements are made. Hence check book is an important component of accounting system.

5. **Accounting procedures manual:**
   The next components of accounting system (AS) is the accounting procedures manual which records the policies and procedures for handling financial transactions. The manual can be a simple description of how a financial function is handled and who is responsible for what.

6. **Accounting Cycle:**
   It is one of the important components of accounting system, which is as follow.

   Financial transactions → analyse transaction → record transaction in Journals → post journal information to general ledger → analyse general ledger account and make – connection → prepare financial statements from general ledger information.

7. **Maintaining the integrity of an accounting system:**
   It is one of the important component of accounting system which includes trial balance, bank reconciliation, profit and loss accounts and balance sheet, financial statements and reports, standard and marginal accounting cost accounting, human resource accounting, environmental accounting, etc.

8. Software, computer, infrastructure as well as all required registers, etc. are also components of accounting system.
1.2.4. Manual accounting system (MAS):

Manual accounting system (MAS) implies that employees perform the whole accounting cycle manually on a period basis. They calculate trial balances, journalise transactions and prepare financial statement reports and other routines. Of course it takes much time, resources and effort in large organisations.

According to Waterfield and Ramsing (1998) manual accounting system means a simple manual general journal (where transactions are recorded chronologically as debits and credits), general ledger (where the activity from the general journal is summarised by account number) and other required to manage the business such as purchase, payment, sales, receipts, and payroll journals. Manual accounting system can be called information system and it defined as an organised means of collecting, entering and processing data and storing, managing, controlling and reporting information so that an organisation can achieve its objectives and goals (Romney and Steinbart, 2009). Manual accounting system is observed from information system components’ point of view by Tanis and Dalci (2002). According to them goals and objectives, input, output, data storage, instructions and procedures, users, control and measures are the components of accounting system. They are prepared and recorded manually hence it is referred 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 (Gelinas et. al., 2005). Recently, Clark et.al. (2015) defined manual accounting system as it is implies that employees perform the accounting cycle manually on a periodic basis. They calculate trial balances, journalise transactions, and prepare financial reports and other routines. It is time consuming and needs more efforts and resources.

Thus the above cited meaning and definitions of manual accounting system shows that the concept of manual accounting system is old age system and traditional one, which includes preparation of manually at least, chart of account, general and other ledger, journals and subsidiary journals, trial balance and annual accounts and balance sheet. It is a accounting information system or communication system and it comprised of accounting records, (check books, journals, ledger etc.) and a series of processes and procedures assigned to staff, volunteers and / or outside professionals. It means employees are performing whole accounting cycle manually on a periodic
basis- journalise transactions, ledgers, trial balance, annual accounts, and financial statements, reports as well as other routines.

1.2.5 Computerisation of accounting system:

Computerization of accounting system (CAS) implies that the only thing that employees do is record transactions into the computer which processes the other steps of accounting cycle automatically or by a request (Clark, et.al., 2015)\textsuperscript{30}. But this is a very simplified view on the CAS because transactions is a complex category which includes not only sales or acquisitions, but depreciation, premiums and wages calculation, assets and liabilities recording, dividend etc. Hence concept of CAS cannot be restricted to recording of transactions of business and opening computer for it. It is wider than this. Hence Ury (2011)\textsuperscript{31} defines CAS as accounting done with the aid of a computer that trends to involve dedicated accounting software and digital spread sheets to keep track of a business or client’s financial transactions. A computerised accounting system therefore involves the computerisation of accounting information systems which is established in order to facilitate decision making. These are associated with a number of benefits like speed of carrying out routine transactions, timeliness, quick analysis, accuracy and reporting (Amviko, 2011)\textsuperscript{32}.

Computerised accounting system are software programs that are stored on a company’s computer, network server, or remotely or access via the internet. CAS broadly means a software tool for processing financial information of business. It is a computer based system that processes financial information and supports decision tasks in the context of coordination and control of organisational activities (Nicolaou, 2000)\textsuperscript{33}.

Meigs and Mary (1998)\textsuperscript{34}, defined a CAS system that uses computers to input, process, store and output accounting information of financial reports. He adds that accounting system records all transactions that routinely deal with events that affect the financial position and performance of an entity. According to Munashinge (2015)\textsuperscript{35}, CAS broadly defined as software tool for processing financial information of business. Marivic (2009)\textsuperscript{36}, described CAS as a method or scheme by which information on business transactions are recorded, organised, summarised, analysed, interpreted and presented to stakeholders through the use of computers and computerised accounting systems such as accounting software’s.
Marivic further emphasised that it’s mechanical process of facilitating financial information inflows as well as the automation of accounting tasks such as database recording and report generation. He adds that keeping accurate accounting record is vital part of any organisation. Apart from helping it to keep its flout financially and legal, it is requirement of funding bodies or donors. Gelines et.al. (2005) \(^{37}\), states that CAS is a computer based system which combines accounting principles and concepts as well as concept of information system to record, process, analyse, and produce financial information to its users for making economic decisions.

It means CAS involves the use of computers to handle large volume of data with speed, efficiency and accuracy aimed of overcoming fundamental challenges which do not change the principle. The principle of accounting remains the limitations of many accounting and hence producing quality and reliable work. It is computer-based accounting system employed by the organisation for achieving target goals and objectives. It can also refer to using a computer for a range of accounting tasks of the organisation. Some CAS allows preparing income and expenses accounts (Sales, income, salaries etc.) They also are used to manage bank accounts, pay bills, and budgets, tax documents, payroll and project costing.

McRae (1998)\(^{38}\) adds that computerised accounting systems are advantageous in consolidating information channels meaning that files that were previously been duplicated by several departments will now be consolidated into single file. Computerised accounting system is defined as the application of the computer based software used to input, process, store and output accounting information. This application is in support of the ever advancing technology that enables firms to use computer programme to perform tasks that were previously done manually (Indira, 2008)\(^{39}\). The Institute of Chartered Accountant of India, (2013)\(^{40}\) state that CAS exists when one or more computers of any type or size are involved in the processing of financial information, including quantitative data, of significance to the audit, whether those are operated by the firm or by a third party.

Thus computerisation of accounting system referred to use of computers in chart of accounts, in journals and subsidiary journals, in preparing of ledgers, in maintaining the integrity of accounting system, in types of accounting system and in preparing of other essential documents. It is a vast concept starting from purchasing computer and
software and entering of data in software and ending at getting various reports based on accounting for different users.

CAS is the application of the computer based software used to input, process, store and output accounting information. This application is a support of the ever advancing technology that enables firms to use computer programs to perform tasks that were previously done manually. A CAS therefore involves the computerisation of accounting information systems which is established in order to facilitate decision making. These are associated with a number of benefits like speed of carrying out routine transactions, timeliness, quick analysis, accuracy and reporting.

1.3 Objectives and functions of computerisation of accounting system:

The key objections of the CAS can be stated as under.

1. To bring quality in financial reports and prepare flexible, reliable reports in time.
2. To keep accounting records accurate.
3. To handle large volume of data with speed, efficiency.
4. To reduce paper work and dispense with large volume of books of accounts.
5. To facilitate on line facility to store and process transaction data.

The following are the functions of the CAS:

1. Accounts Payable: it allows businessmen to manage invoices and bills that he must pay.
2. Accounts receivable: It allows businessmen to manage payments, billing, and income.
3. Payroll: It handles payroll of employees within accounting system.
4. Benefits Management: It allows for employee budget management, accrued vacation time reporting, and other budget reporting.
5. Budgeting: It allows businessmen to create and manage budget.
6. Assets: It allows managing fixed and fluctuating assets, calculating depreciation, and performing other assets management.
7. Reporting: It integrates the data with existing reporting standards.
8. Project reporting: it manages assets and workflow for multiple projects at one time.
9. Supply chain management: it allows businessmen to track inventory, suppliers, good pricing, and other supply side services.
10. General ledger: It allows businessmen to prepare and manage general ledger efficiency and speedily.
11. Inventory management: It allows businessmen to manage, control and evaluate inventory.
12. Bank reconciliation and cash management

1.4 Benefits of computerization of accounting system:

When studying extent, factors, satisfaction, comparison and many other aspects of CAS, experts are observed that CAS are very important and benefited to businesses in various ways. The benefits of CAS observed by some of exports are presented here to highlight that how CAS is useful, important and beneficial to businesses.

According to Warrien, et.al., (2003) the benefits of CAS are as follows:

1. CAS simplifies the record keeping process.
2. Transactions are recorded in an electronic form and posted electronically to general and subsidiary general legers at the same time.
3. CAS is more accurate than manual accounting system.
4. It also provides management information to support decision making.

According to Sehgal and Sehgal, CAS has following advantages:

1. The routine accounting functions are completed faster than manual accounting system.
2. The scope of error in CAS is negligible therefore the record of CAS is more accurate. If the quality of input is ensured, the output quality is definitely improved as output of CAS is depends on input.
3. It helps in developing reports in short period of time which work very well in management control system.
4. It also helps in flashing the warning signals. (example debts are ageing, expenses are increasing)
As per Kisakye,(2013)\textsuperscript{43}, the benefits of CAS are as follows:

1. Using of CAS saves time and money of companies. CAS reduces staff time preparing accounts and reduce audit expenses as records are neat, up- to date and accurate. The use of computer makes inputting accounting information simple. The system helps to prepare reports in time to help in taking decisions of external users.

2. Employees can look any information whenever it is needed. Chances of errors are less as only one accounting entry is needed for each transaction. The accounting records are automatically updated.

3. The information is stored indefinitely. Companies have to keep back up of the information to avoid loss of information.

4. Financial statements are printed directly from the system. Reports can be produced which will help management to control their business.

Indira, (2008)\textsuperscript{44}, added that CAS adoption helps in improvement of business performances. This application helps in accounting, inventory control, reporting, and statutory processes. It helps the company to take quicker decision as it also enhances communication.

Other advantages:

1. CAS allows analysis of the stored information. It can work with any type of business whether it is manufacturing products or delivering services.

2. CAS offers a back up mechanism that will enable the user to retrieve the data even if it has been lost.

3. With the help of CAS the businessmen can keep a track on businesses of different locations easily.

4. CAS also eases auditing and has better access to required information such as cheque number, receipts, payments and other transactions which help to reduce the time needed to provide this type of information and documentation during auditing period.

5. CAS helps the organisation access information faster and takes quicker decisions as it also enhances communication or financial reporting.

1. According to McBride (2000), CAS helps to generate all different types of reports which are required by the management for taking decision related to their business. The information provided by CAS is accurate and reliable.
2. These reports helps not only to businessmen but it also helps an auditor for getting information and documents related to cheque numbers, payments, and other transactions for their audit purpose. It helps to reduce time for auditing.
3. Frankwood (1999), agreed that CAS helps to reduce the time to prepare balance sheet and profit and loss account and other statements at any time. It allows manager to identify and solve problems quickly.
4. The principle of double entry and postings from journal book to ledger book can be automatically done through CAS. According to Carol (2002), it helps to do all accounting activity or functions easily.
5. McRae (1998), state that information can be easily generated and updated time to time. Therefore making reports would be easy.
6. Carol (2000), stated that number of transactions increasing day by day and therefore it is required that maintenance of accounting data should be done on real time basis. CAS helps in it to the businessmen. Using CAS in various accounting related tasks (payroll, ledgers, etc.) helps to increase the efficiency of staff.
7. According to Lewis (1999), CAS is popular for its quick process, speed and storage capacity features. Getting up to date, accurate and reliable information helps to improve the quality of reports.
8. Mihir (2002), stated that the end users satisfaction towards increases positive attitude towards usage of CAS. CAS gives more satisfaction to their end users.
9. Nash (2003), noted that the quality of accounting information provided by CAS is reliable which helps to protect the organisation from a risk of giving wrong information to the users of these information.
A Saba (2013) observed 5 benefits of CAS to businessmen as under.

1. Using CAS saves time and energy of companies. It helps to reduce staff time preparing accounts and also helps to reduce audit expenses as records are neat and clean, up to date and accurate.

2. In CAS accounts balances are automatically updated and therefore account balances will always be up – to – date. It helps an organisation to stay organised. Only one accounting entry is required in CAS therefore there are less chances for errors.

3. In business storing of information is very important. By keeping time to time back up of data entered in the system for protecting from loss of data, an organisation able to store information indefinitely.

4. CAS helps an organisation to distribute information easily to their stakeholders. Financial statements can be directly printed from the system. Reports helps management to control and monitor their accounts balances and other statements time to time.

5. CAS helps to satisfy organisation’s various stakeholders like employees, customers, shareholders, vendors, managers, bankers, government, and customers, etc. As they need different types of reports for getting information for their contribution to the organisation.

Above cited experts opinion on benefits of CAS shows that CAS is vital important for any organisation irrespective of scale- large- medium, small or micro as it capable of handling large number of transaction with speed and accuracy, instant and flexible reporting, reducing paper works on line facility, able to solve accounting queries promptly, maintain scalability, accuracy, speed, and security and saves time, money and effort.

1.5 Manual accounting system model and its indicators:

Manual accounting system is the process of performing the whole accounting cycle manually on a periodic basis. The conceptual model of manual accounting system is as follows.
Chart 1.1

Conceptual model of manual accounting system

Source: Gelinas et.al. (2005)

Preparing above cited activities manually is the key indicators of manual accounting system. It is a simple model and in operation since long. It is comparatively cheap by workforce and resources, it is a reliable and independence from machines. But it reduces speed, increases workload of accountants, lower internal control reporting, routine work and time consuming and not useful if volume of transactions is large. To overcome these, computerisation of accounting system is introduced.

1.6 **Computerization of accounting system models and its indicators:**

The system that records all the financial transactions of a business or organisations is known as accounting information system (AIS). The process, models as well as measures and indicators of CAS are briefly presented in this section. Let us first know the process of computerization of accounting system:

Transaction Processing System (TPS) is the first step in CAS. The objective of TPS is to record, process, validate, and store transactions that occur in various functional areas of a business for further uses. TPS involves following steps:

1. Data entry- In some computer system data are entered by a data entry clerk (using keyboard), who copies them from a paper such as sales order or purchase order. And in some other system the computer accepts input data
from equipment located at the point of origin. (Examples factory time records, inventory counts, scanning device used in supermarkets or departmental store) where scanner reads bar codes and the various reports can be used by store manager at any time they desire to access the system.

2. Data validation,
3. Processing- once data are in machine readable form, the chance of book keeping error is less. This data can be used in a number of ways. Computer system may sort data in ways that may be of interest and use of management.
4. Revalidation,
5. Storage,
6. Information
7. Reporting- CAS can prepare reports that include either tables or graphs. These can be generated at regular intervals in a prescribed format.

When transaction processing system contains only human resources it is called manual system. When it uses both human and computer resources it is called computer based system.

Diagramatically the computerised accounting system process can be expressed as under.

**Chart 1.2**

**Computerised accounting system process**

(Source: Gelinaset., al, 2005)

It act as process of CAS adoption as well as computer based model of CAS as it explained procedure of how computer is used for computerisation accounting system. System theory, positive accounting theory, and resource based view theory, are the important theories on accounting.
After understanding the process of CAS, it is appropriate now to know and understand the models and indicators of extent of CAS. There are multiple models are explored by experts from technological information adoption. The process, extent, factors satisfaction, evaluation, feedback etc. are studied based on technology information/adoption models and indicators.

Many researchers agreed that technological – organisational – environmental (TOE) framework provide an excellent conceptual and theoretical foundation for exploring information system (IS) adoption behaviour within small and medium business enterprises. TOE model was explored/developed by Tornatzky and Fleischer (1990)\(^{47}\); and adopted by Mehrtenset.al.,(2001)\(^{48}\), for investigating the adoption of internet in 7 SMEs. By Lertwongsation and Wongpinunwatana(2003)\(^{49}\), the TOE model was used for studying the e-commerce adoption in Thailand SMEs. Ramdani et.al. (2009)\(^{50}\), adopt the TOE model for predicting the potential enterprise system adopters in SMEs in England. The TOE framework was used by Wan and Azwedi (2013)\(^{51}\) for investigating computerized accounting information system (CAIS) adoption in Malaysian SMEs.

With the introduction of new technology and more user friendly software, CAS appears to reduce the problems in book record keeping and maintaining practice. Without the use of technology such as CAS, it will be more difficult for the SMEs to make a good decision. However, there are differences in opinion among the experts regarding introduction of CAS in SMEs. But it is a fact that CAS increases the chances of success in profitability, sales, performance, and productivity. Therefore the management of the SMEs should remembered that extent of CAS is a process and not and event, it demands action and fellow up. The extent of CAS process can be stated as under (chart 1.3)

**Chart 1.3**

**CAS Process**

- CAS formulation
- CAS implementation
- CAS evaluation
After review of literature (chapter 2) at least 8 models of computerisation of accounting system are observed which are useful to understand the extent of CAS. There may be many more models on CAS study and its extent, factors, and satisfactions. The observed 8 models are as under.

1.6.1 Thong CAS model and indicators
1.6.2 Yap-Thong CAS model and indicators
1.6.3 Quang- Lin CAS adoption model and indicators
1.6.4 Wan - Ali CAIS model and indicators
1.6.5 Wen and Others CAS model and indicators
1.6.6 CAS usage model of Munashinghe and Others and indicators
1.6.7 Oladipupo and Ajape's CAS indicators
1.6.8 CAS adoption indicators of Noor and Others

1.6.1 Thong CAS model and indicators:

A theoretical model is developed by Thong (1999)\textsuperscript{52}, based on characteristics of organisational decision-maker, organisation, technological innovation and environment to know external factors. Thong (1999)- theoretical model of CAS is as under.

**Chart 1.4**

**CAS Model of Thong**

<table>
<thead>
<tr>
<th>Characteristics of Organizational decision-maker</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Self-efficiency</td>
</tr>
<tr>
<td>• Educational Qualification</td>
</tr>
<tr>
<td>• Age</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Characteristics of the Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Employee number</td>
</tr>
<tr>
<td>• Sales turnover</td>
</tr>
<tr>
<td>• Company age</td>
</tr>
<tr>
<td>• Duration of CAS usage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Characteristics of technological innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• CAS perception (benefits)</td>
</tr>
<tr>
<td>• CAS perception (disadvantages)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Characteristics of the environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Accountant</td>
</tr>
<tr>
<td>• Suppliers</td>
</tr>
<tr>
<td>• Government</td>
</tr>
</tbody>
</table>

To know extent and factor influences of CAS 3 indicators for characteristics of organisational decision-making namely self efficiency, educational qualification and age; 4 indicators for characteristics of the organisation such as employee number, sales turnover, company age and duration of CAS usage; 2 indicators for characteristics of technological innovation e.g. CAS perception towards benefits and CAS perception towards disadvantages and 3 indicators for characteristics of the environment e.g. accountants, suppliers and government, together 12 indicators and measures are used to measure and identify the extent of CAS and factors influencing CAS, this model is very useful and apply to any organisation.

1.6.2 Yap-Thong CAS model and indicators:

Information Technology investment, hardware type, application type and software complexity are considered as indicators and measured and identified extent of CAS in Yap-Thong (1997) CAS model. This model can be stated as under.

Chart 1.5

Yap-Thong CAS model and indicators

<table>
<thead>
<tr>
<th>Indicators / Variables</th>
<th>No. of indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. IT Investment</td>
<td>6 Scale / Variables</td>
</tr>
<tr>
<td>2. Hardware type usage</td>
<td>3 Variables</td>
</tr>
<tr>
<td>3. Application type</td>
<td>19 variables / Indicators</td>
</tr>
<tr>
<td>(A) Transaction Processing (9)</td>
<td></td>
</tr>
<tr>
<td>(B) Planning and Control (5)</td>
<td></td>
</tr>
<tr>
<td>(C) Specialised Applications (5)</td>
<td></td>
</tr>
<tr>
<td>4. Software Complexity</td>
<td>4 Variables</td>
</tr>
</tbody>
</table>

Thus this is a comprehensive model using 32 indicators divided into 4 categories.

1.6.3 Quang-Lin CAS adoption model and indicators:

According to them adoption of CAS means the usage of (1) computer for accounting practices, (2) accounting software, (3) internet accounting within the company, (4)
internet accounting with other outsiders, and (5) internet accounting for other purposes. A simple CAS model is proposed by Quang-Lin (2013)\textsuperscript{54}, for knowing and understanding extent of CAS, which is as under.

**Chart 1.6**

**Research Model of Quang and Lin on CAS adoption**

<table>
<thead>
<tr>
<th>Factors / Indicators</th>
<th>No. of Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Decision-maker</td>
<td>3</td>
</tr>
<tr>
<td>2. Technological</td>
<td>3</td>
</tr>
<tr>
<td>3. Organisational</td>
<td>3</td>
</tr>
<tr>
<td>4. Environmental</td>
<td>3</td>
</tr>
</tbody>
</table>

Thong model (1999) depends on 4 indicators, whereas this model considers only 2 indicators, namely, environmental uncertainty and organisational performance.

### 1.6.4 Wan - Ali CAIS model and indicators:

Computerised accounting information system (CAIS) adoption level will be higher if decision-maker, technological, organisational and environmental adoption level is higher. A conceptual model is proposed by Wan and Ali (2013)\textsuperscript{55} based on TOE model, adding their one more indicator/ variable that is decision-maker. This model is similar to Thong (1999) model. It can be simplified and a simplified model is presented as under.

**Chart 1.7**

**Wan-Ali CAIS model**

This model considered 3 indicators for decision-maker (e.g. owner's IT knowledge, owner's attitude towards IT and owner's commitment), 3 indicators for technological (e.g. relative advantage, compatibility, complexity), 3 indicators for organizational (e.g. organisational readiness, employee IT level, satisfaction with manual system)
and 3 indicators for environmental (e.g. competition, government influence and vendor support).

Together 12 indicators divided into 4 categories are considered by them to measure and identify the extent of CAS and factors influencing it. The model can be used in Indian SMEs easily.

1.6.5 Wen and Others CAS model and indicators:

The extent of accounting software adoption and its factors influencing are studied by Wen et.al. (2012) and a model is developed considering personal and software characteristics. Manager and accountant characteristics are considered under personal variables whereas under software characteristics - adequacy, support, function, price, security and timeliness are considered and then extent and factors influencing accounting software adoption is assessed. The explored model by them is as under.

Chart 1.8
CAS model of Wen and others

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Indicators / Variables</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal</strong> (2 Indicators)</td>
<td>• Manager (Age and Education)</td>
<td>Adoption of Accounting Software i.e. CAS</td>
</tr>
<tr>
<td></td>
<td>• Accountant (Number and Education)</td>
<td></td>
</tr>
<tr>
<td><strong>Software</strong> (6 Indicators)</td>
<td>• Adequacy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Function</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Price</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Security</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Timeliness</td>
<td></td>
</tr>
</tbody>
</table>

Ten indicators are considered by them while studying accounting software adoption and its extent and factors. Actually two indicators are considered. However under software, 6 sub-indicators are covered in this study.
1.6.6. CAS usage model of Munashinghe and Others and indicators:

A research model for usage of CAS on SMEs was explored based on 5 Likert Scale by Munashinghe et. al., (2013)\(^57\). They considered 7 indicators. Chart 1.9 presents their model.

**Chart 1.9**

Research Model for Usage of CAS on SMEs

```
Cost
Business size
Infrastructure
Government support
Managers’ support
External environment
Ease of use
```

1.6.7 Oladipupo and Ajape’s CAS indicators:

For the purpose of examining extent of adoption of CAS, four categories of indicators were used by Oladipupo and Ajape,(2013)\(^58\), in their study as

1. The level of accounting systems automation
   a. Combination of manual and computerised accounting system
   b. Fully computerised accounting system
   c. Wholly computerised- linked to web-based applications

2. Types of software/ packages
   a. Turnkey systems
   b. Backbone systems
   c. Vendor support system

3. Transaction processing models
   a. Batch
   b. Real time system

4. Networking utilization
   a. Stand – alone system
   b. LAN - based multi – user systems
c. WAN - based multi user systems

1.6.8 CAS adoption indicators of Noor and others:

In the study of Noor et.al (2003), to measure extent of CAS adoption in enterprises following indicators were used.

1. Type of accounting system
   a. Combination of manual and computerised accounting system
   b. Fully computerised accounting system
   c. Wholly computerised- linked to web- based applications

2. Years of adoption (maturity stage of CAS)

3. Type of processing
   a. Batch
   b. On line batch
   c. On line
   d. Real time

4. Number of module
   a. General ledger
   b. Account receivable
   c. Account payable
   d. Inventory management
   e. Payroll

5. Use of network
   a. Multi user systems using wide area network
   b. Multi user system using local area network
   c. Stand alone system

Overall implementation and exercising computerised accounting system in business is CAS adoption. Availability of infrastructure, human resources, user perception and cost of installing are factors that determine the CAS extension pointed by Christopher et al (2014). Use of accounting software and use of computer are the two indicators of CAS adoption according to Rahman and others (2014). Extent of CAS represented the level of computerized tasks in the various functional areas of the firm. This is assumed by many experts also and extent is looked upon this angle.
Thus various above models and indicators as well as measures show that experts are used minimum 1 to maximum 32 indicators and measures to measure and identify the extent of computerization of accounting system. The basic requirement of implementation of CAS is that it must have accounting framework, operative procedure and accounting software.

1.7 Small and medium business enterprises: An Overview:

1.7.1 Meaning and importance of SMEs in global economy:
Small and medium business enterprises are the backbone of an economy as they are a major contributor of job creation and play an important role as efficient providers of intermediate goods and services to large firms. SMEs are recognised as engine of economic growth and employment generation for sustainable industrialisation and globalisation in both developed and developing countries of the world. The term SMEs has been severally defined by institutions, regions and based on number of people employed, sales or assets. In Egypt, they are businesses employing between 5 and less than 50 people. In Vietnam, they are firms employing 10 and 300 employees, according to the World Bank, a venture employing upto 300 people with US $15 million in annual revenue, and US $ 15 million in assets is an SME (Akorsu and Agyapong, 2012)62. But to the Inter- American Development Bank, an SME is a business employing upto 100 employees and earning not more than US $3 million in revenue (Dalberg Global Development Advisors, 2011)63. Furthermore, European union defines SMEs as a venture that employ fewer than 250 persons and which have an annual balance sheet total not exceeding 43 million Euro.

The importance of SMEs is well recognised world over from its significant contribution in gratifying various socio-economic objectives, such as higher growth of employment, output, promotion of exports and fostering entrepreneurship even in liberalisation, privatisation and globalisation era. Developed and emerging economies of the world both recognised the enormous contribution to growth and developments by SME’s studies have shown that SMEs provide the keystone on which most economies of the places reliance. Even the world giant (USA) largely hinge on the contribution of SMEs as the sector contributes greatly to its novelty, output, reduction of unemployment and stability (SBS, 2000)64. Empirically, over 99 percent of U.S. employment is absorbed by about 51 percent of
private sector worker; 38 percent of high-technology occupations; 75 percent of new jobs and over 96 percent of the country’s export (Twist, 2000)\(^65\). The UK’s SMEs had accounted about 99 percent of businesses and 52 percent of the country’s turnover, and 55.6 percent of employment generation (ODPM, 2005)\(^66\). Majority of employees are belong from SMEs in Nigeria (Ariya, 2000)\(^67\).

SMEs of Malaysia show that the contribution of SMEs in the economy are to the extent of 99.2 percent of the total business of GDP and 19 percent of national total exports (Illias and others, 2009)\(^68\).

1.7.2 Meaning and importance of SMEs in Indian Economy:
Section 1.7.1 shows that the importance of SMEs in the world economy is very unique. In context of India, there is no alternative of SMEs for rapid industrialization and national economic growth through start up, smart city, make in India, and other initiatives. By having SMEs, it can be sustain and the balance the economic growth so that there is not too much income from the large scale industries and not too little from SMEs. SMEs contribution approximately 40 percent of India’s domestic production, almost 50 percent of total exports and 45 percent of industrial employment. More importantly, they are the second largest manpower employer overall after agriculture, employing approximately 19 million people.

The current definition of small and medium enterprises in manufacturing and service in India is presented in the following chart. This definition is given by MSME development Act, 2006.

**Chart 1.10**

**Definition of small and medium business enterprises in India**

<table>
<thead>
<tr>
<th>Category</th>
<th>Manufacturing sector</th>
<th>Service sector</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Investment in plant and machinery excluding land and building</td>
<td>Investment in equipment (excluding land and building)</td>
</tr>
<tr>
<td>Small</td>
<td>Above Rs. 25 lakhs upto Rs. 5 Crores</td>
<td>Above Rs. 10 lakhs upto Rs. 2 Crores</td>
</tr>
<tr>
<td>Medium</td>
<td>Above Rs. 5 crores upto Rs. 10 crores</td>
<td>Above Rs. 2 crores and upto 5 crores</td>
</tr>
</tbody>
</table>
(A) Small enterprise is a unit having investment in plant and machinery more than Rs. 25 lakhs and maximum up to Rs. 5 crores whereas medium enterprise is a unit having investment in plant and machinery more than Rs. 5 crore and maximum up to Rs. 10 crores in case of manufacturing sector.

(B) Small enterprise is a unit having investment in equipment more than Rs. 10 lakhs and maximum up to Rs. 2 crores on the other hand, medium enterprise is a unit having investment in equipment more than Rs. 2 crores and maximum up to Rs. 5 crores in case of service sector.

1.7.3 Initiatives for promoting the SMEs sector:

There are some schemes for SMEs including micro industries such as (1) Reimbursement for ISO-900 certification scheme, (2) LaghuUdyami Credit Card Scheme, (3) Swarojgar Credit Card Scheme, (4) Credit guarantee fund trust scheme for micro and small enterprises, (5) Credit linked capital subsidy scheme, (6) Integrated infrastructure development scheme, (7) Integrated infrastructure development scheme, (8) technology development modernisation fund scheme, (9) Strategic rating of SMEs. These schemes are implemented by Government of India to promote SMEs in India. In order to implement these schemes, some of the significant steps/ initiatives taken by the Government of India for promoting the SMEs sector. They can be summarised as given below (Vechalekar, 2010).

1. A single comprehensive legislation for the promotion, development and enhancement of the contribution of the SMEs sector – micro, small and medium enterprises development (MSMED) Act, 2006 come into effect from October 2006.

2. National manufacturing competitiveness council (NMCC) was not up to energize and sustain the growth of the manufacturing industry. New promotional package for MSMEs (Micro, small and medium sector) and focus on accelerating developing of clusters was announced.

3. Revised strategy of lending and introduction of newer measures such as the scheme to establish small enterprises financial centres (SEFC) for strategic alliance between branches of banks and SIDBI located in 388 clusters identified by ministers.
4. SME fund of US $ 2.27 billion was operationalised. Proposal is for doubling the credit flow to SME sector in next 5 years.

5. Promotional and financial support for credit-cum-performance rating in MSME sector in India to facilitate greater and easier flow of credit from the banking sector to SMES.

6. The national commission for enterprise in the unorganised sector has been set up as an advisory body and a watch dog for the informal sector to bring about improvement in the productivity of these enterprises for generation of large scale employment opportunities on a sustainable basis.

7. Credit linked capital subsidy scheme for technological up gradation is launched.

8. New legislation on limited liability partnership is being worked on.

9. The outlay for the SMEs including MSME sector has been enhanced since 2010-11 in upward direction for implementing the recommendations of the prime minister's task force.

10. Proposals such as small scale industry unit can avail of CENVAT credit against purchase of capital goods in full (i.e. 100 percent) in the same financial year of receipt of such capital goods and relief to the SSI unit to pay the duty on the goods cleared by them once in a quarter instead of the monthly basis, were initiated.

All the policy measures mentioned above show clearly the Government's intention to ensure a robust growth of the SMEs (including MSME) sector and thus ensure the growth of the economy. In view of this it is of paramount importance that the Indian SME should adopt CAS strategy 100 percent. Hence it is essential to know current status of CAS adoption which will help to chalk out strategic policy towards 100 percent adoption of CAS in studies SMEs.

**1.7.4 SME's growth pattern in Mumbai:**

The growth of any country / region depends upon the existence of small and medium enterprises (SMEs). The greater the number of SMEs present in any country / region, the economy of the country / region increases in the same proportion. Mumbai suburban district is the study area of the present study. Mumbai city and suburban together is the capital city of Maharashtra. It is the most populous city in India and the
fourth most populous city in the world (Government of India, 2014). It is the commercial and financial capital in India. It is also one of the world's top 10 centres of commerce in terms of global financial flow, generating 5 percent of India's GDP and accounting for 25 percent of industrial output, 70 percent of maritime trade in India, and 70 percent of capital transactions to India's economy (Government of India, 2014).

Mumbai consists of two distinct regions; Mumbai city district and Mumbai suburban district; which form two separate revenue districts of Maharashtra. There were 2943 small and 69 medium, together 3012 SMEs registered units in Mumbai up to March 2012. The number of registered units has increased up to March 2014 to the extent of 5121 small and 129 medium, together 5250 SMEs. It indicates that more than 74 percent SMEs has increased during 2012-14 period. The growth of SMEs between 2012-14 in Mumbai (Mumbai city and Mumbai suburban district) is presented in Table 1.1.

Table 1.1
Growth of SMEs in Mumbai: 2012-14

<table>
<thead>
<tr>
<th>Year</th>
<th>Mumbai City / Greater</th>
<th></th>
<th></th>
<th>Mumbai Suburban</th>
<th></th>
<th></th>
<th>Mumbai (Grand Total)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small</td>
<td>Medium</td>
<td>Total</td>
<td>Small</td>
<td>Medium</td>
<td>Total</td>
<td>Small</td>
<td>Medium</td>
<td>Total</td>
</tr>
<tr>
<td>2012</td>
<td>700</td>
<td>13</td>
<td>713</td>
<td>2243</td>
<td>56</td>
<td>2299</td>
<td>2943</td>
<td>69</td>
<td>3012</td>
</tr>
<tr>
<td>2014</td>
<td>1370</td>
<td>28</td>
<td>1398</td>
<td>3751</td>
<td>101</td>
<td>3852</td>
<td>5121</td>
<td>129</td>
<td>5250</td>
</tr>
<tr>
<td>Growth in 2014 over 2012 in %</td>
<td>95.71</td>
<td>115.38</td>
<td>96.07</td>
<td>67.23</td>
<td>80.36</td>
<td>67.55</td>
<td>74.0</td>
<td>86.96</td>
<td>74.30</td>
</tr>
</tbody>
</table>

Source: District industries centre, Mumbai, 2012-14 reports

Table 1.1 shows that small enterprises in Mumbai have increased in 2014 over 2012 to the extent of 74 percent whereas medium enterprises have increased by 86.96 percent and overall growth in SMEs during 2012-14 period was 74.30 percent respectively. As compared to growth of small enterprises registered in Mumbai, growth of medium enterprises was higher during 2012-14 period.
The growth of SME in Mumbai city shows that the number of small and medium enterprises are increased from 700 to 1370 and 13 to 28 in 2014 over 2012. It has increased by 95.71 and 115.38 percent. SMEs growth is 96.07 percent as number of SMEs has increased to 1398 in 2014 from 713 in 2012 respectively.

Number of small enterprises in Mumbai suburban has increased from 2243 in 2012 to 3751 in 2014. Small enterprises have increased by 67.23 percent in 2014 over 2012. Medium enterprises in Mumbai suburban have increased from 56 to 101 during 2012 – 14 indicating 80.36 percent growth in medium enterprises in 2014 over 2012. Over all SMEs in Mumbai suburban has increased to 3852 in 2014 from 2299 in 2012. It means SMEs in Mumbai suburban has increased in 2014 over 2012 by 67.55 percent respectively.

1.8 The present study:

The researcher has been inspired to conduct this study because of the significance and vitality that lies in the subject matter; especially in discovering the most appropriate accounting system. The researcher believes that the manual system has its own advantages even today so is the CAS also. The researcher aimed to have a broad knowledge about finding out if there are organisations that still use manual accounting and are planning to change it to the CAS. The findings of this study could provide relevant information and insight for SMEs entrepreneurs on the problems encountered by the users. Hence this study measures and indentifies the extent of computerization of accounting system in small and medium business enterprises in the North-East Mumbai zone of Mumbai Suburban District, along with it assesses the owners' and organizational characteristics of small and medium business enterprises (SMEs), perception of businesses towards pattern of keeping and maintaining accounting system and computerization of accounting system (CAS) in SMEs, highest and lowest CAS adoption indicator and difference in CAS adoption between small business enterprises and medium business enterprises by hypothecating that there is no significant difference on CAS adoption between small business enterprises and medium business enterprises. This study is based on primary as well as secondary data. The primary data are collected from Mulund, Bhandup, Vikhroli, Ghatkopar and Mankhurd SME respondants. The questionnaire, observations, personal discussion and interview, mobile, internet, email, whatsapp dialogues, etc. are used for collecting
needed data. To measure and identify the extent of CAS in SMEs 35 indicators are used and they are divided suitably into 7 dimensions. A model that measures the extent of CAS is developed. The data is analysed and interpreted by using frequency, percentage, average, ratio, correlation, tables, charts, graphs, chi-square and comparison. The detail methodology employed for this study purpose is described in chapter 3.

1.9 Significance of present study:

1. This study will help enterprisers to understand the importance of computerization of accounting in their businesses, how it improves decision making, how it makes compliance easier and nourishes overall positive development of the business. If some of them are shying away from CAS, this study will give them confidence to overcome those hurdles and goes for CAS.

2. SMEs provide employment opportunities at deepest levels of nation’s economy. SMEs form important share of nation’s GDP. This study will help the government understand CAS adopting status of SMEs in North- East Mumbai zone and to overcome what action is required to take to march towards make in India and stand up India. Accountants working in SMEs will understand from this study, how important it is to adopt computerization and its overall positive impact on financial health of a business. This may inspire them to put additional efforts to computerized accounting system and functions accordingly.

3. This study helps to find out the CAS practices adopted by SMEs. Differences in CAS adoption between SMEs.

4. It helps to know the organisational as well as entrepreneurs’ behaviour i.e. characteristics and mindset towards adoption of CAS.

5. This study attempt to determine the extent of CAS therefore it help to plan, organise, co-ordinate, and control the selection of right CAS software and appoint professional accordingly; if needed.

6. It helps to initiate strategic CAS model formulation, for manpower planning, selection, training and performance appraisal to match and implement process of CAS effectively.

7. Computerised Accounting system helps to reduce errors and improves quality of information. With the help of this system SMEs can increase their
operational efficiency, productivity, make better informed business decisions, provide better customer service, and improve overall ability to compete and save time, money and effort.

8. Computerization of Accounting provides quick reference to past accounting / business transactions. This quick reference may enable the enterpriser to avoid repetition of costly mistakes done in the past. Instead of wasting time in writing accounts manually enterprisers can utilise their valuable time in other activities of the business. This system also helps to improve managerial performance of the business.

1.10 Chapter plan of study:

The entire study is divided into 9 chapters as under:

1. Introduction
2. Review of Literature
3. Research methodology
4. Owners' and organisational characteristics of the small and medium business enterprises
5. Perception of businessmen towards accounting system and computerization of accounting system in small and medium business enterprises
6. Adoption of computerization of accounting system in preparing chart of accounts, journals and subsidiary journals and ledgers
7. Adoption of computerization of accounting system in maintaining integrity of an accounting system, types of accounting system, preparing other essential documents and use of software
8. Extent of computerisation of accounting system adoption in small and medium business enterprises and testing of hypothesis
9. Summary of findings, conclusion and suggestions

Chapter 1: It deals with CAs concept, models, objectives and functions as well as SMEs meaning, its performance, growth in Mumbai along with present study and its significance and limitations.
Chapter 2: It deals with review of literature by dividing it into 4 categories studies on CAS in respect of (1) General (2) Extent (3) Factors and (4) Accounting theories and CAS

Chapter 3: It presents research methodology of the study in terms of problem statement, need, objectives, hypotheses, research design, area of scope, sample and sample size, sources of data collection, method of data analysis and interpretation. It also presents measures and indicators of CAS and model employed for study purpose.

Chapter 4: It deals with owners' and organisational characteristics of SMEs (i.e sample respondents from SMEs)

Chapter 5: It deals with perception of SMEs businesses towards accounting system and CAS.

Chapter 6: Extent of CAS adoption in preparing chart of accounts, journals and subsidiary journals and ledgers is measured, identified, studied and assessed in this chapter.

Chapter 7: Extent of CAS adoption in preparing and maintaining integrity of an accounting system, types of accounting system, preparing other essential documents and use of software is measured, identified studies and assessed.

Chapter 8: Extent of CAS adoption in SMEs is measured, identified, studied and assessed in this chapter. It also compares extent of CAS adoption between small and medium enterprises and hypotheses are tested with help of chi-square test.

Chapter 9: It deals with summarising findings and conclusions and offering a few suggestions.

1.11 Limitations of the present study:

The present study has the following limitations.

1. The Study based on only 288 small and medium enterprises. The survey was conducted only in the area of North-East zone of Mumbai city. As the study
mainly considers the business establishments located in a particular geographical area, hence the conclusions may be suffered from this constraint. Hence, study may not represent the overall studies of CAS adoption among SMEs even in the whole Mumbai.

2. The study had been conducted only in North East zone of Mumbai in spite of that Mumbai has wide scope for understanding research area and conducting research study. Hence application of studies is limited to North – East zone of Mumbai only. Hence conclusions cannot be generalised.

3. The survey was based on convenience, random sampling. Moreover sample size is comparatively small just 288. Hence the small number of respondents that are categorised as small size limits conclusions to the roles of size on the adoption and extent of CAS.

4. Impact of CAS on job performance, profitability etc. is not assessed.

5. Random error is inevitable while using sampling techniques.

6. Type of industrial sectors is not considered in this study.

7. Exact units registered as SMEs in selected location are not available in Merchant of commerce, Maratha Chamber of Commerce or in DIC and hence universe of study is the whole Mumbai suburban district.
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