# CHAPTER 2

# THE HISTORY AND DEVELOPMENT OF MANAGEMENT ACCOUNTING

## 2.1 INTRODUCTION

The previous chapter defined the research problem and stated the main hypothesis for the study, namely that management accountants may not be able to contribute fully to the strategic management process in the future, as the skills required and displayed by management accountants do not meet the needs of the changing business environment. This hypothesis also indicates a growing gap between current tertiary management accounting education and the future requirements of management accounting practice. A thorough understanding of the history and development of management accounting is required before the gap between education and practice can be investigated. Moreover, knowledge of the history of management accounting will facilitate an understanding of the future of this profession. As Plato said in 370 AD:

> *… and thus, the tale* (history) *was preserved, and did not perish; and it may also preserve us, if we will listen to its warnings; in which case we shall pass prosperously across the river … and during the journey of a thousand years which we have described we may never cease to prosper*
> *(Plato 370AD)*

This chapter firstly highlights the difference as well as the interdependence between management accounting and financial accounting. The focus then shifts to historical developments in both these fields. Thirdly, the professional status of the management accountant is addressed as the study is relevant to practising management accountants. Finally, as the research for this study revolves around the current status of management accounting in South Africa, its history and development -- although limited -- will be investigated.

## 2.2 INTERDEPENDENCE BETWEEN FINANCIAL ACCOUNTING AND MANAGEMENT ACCOUNTING

Although financial accounting and management accounting constitute two different fields of study, the one cannot exist without the other. In order to understand this interdependence, the fields are defined and the relevant functions of each in the day-to-day business activities of an entity are described.

The Oxford References online (2005:*I*) defines an accountant as *a person who keeps or inspects financial accounts.* The Oxford Business Dictionary (Isaacs & Martin 1993:89) adds a further dimension by defining accounting as *to keep the books of account of an organisation and to provide advice on tax and other financial matters*. Wyatt (2002:3) describes accounting as *a discipline that seeks to provide information about a business entity*. Another recent definition of accounting is that of a [p]*rocess of recording, measuring, interpreting and communicating financial data* (Siegel & Shim 2005:6). Siegel and Shim (2005:6) also define accounting as an umbrella term which encompasses *the multitude of disciplines including …financial statement analyses and managerial accounting.***

Accounting information is therefore of crucial importance and financial managers in particular rely on this information to make decisions that will affect the entity or relationships within the entity.

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** Thus in line with the Siegel and Shim (2005:6) definition of accounting where the word accounting is used throughout the text it is used interchangeably between financial and management accounting

Hansen and Mowen (1994:8) state that it is virtually impossible for managers to function without accounting information; managers need accounting information and need to know how to interpret and use it. Moreover, they need a sound understanding of accounting in order to fulfil certain organisational roles and responsibilities (i.e. plan, organise, lead and control) (De Wit & Hammersma 1992:5).

Harrison and Hongren (2001:4) agrees with Hansen and Mowen (2005:4), and describes accounting as an information system that measures business activities, processes information into reports, and communicates the results to decision makers.

Accounting information is diverse, is used by both internal and external parties, and has therefore been classified into two subfields, namely financial accounting and management accounting (Harrison & Hongren 2001:6). Marshall, McManus and Fiele (2004:6) describe financial accounting as primarily *externally oriented,* management accounting as *having a primarily internal orientation.* Financial accounting therefore provides information to parties outside the organisation (e.g. creditors, investors, government agencies and the general public), whereas management accounting generates confidential information for use by an entity's management. Diagram 2.1 below illustrates this distinction.

**Diagram 2.1: Comparison of financial and management accounting**

| Financial accounting | Management accounting |
|---|---|
| Reports to:<br><br>• investors<br>• employees<br>• lenders<br>• suppliers and other creditors/ customers<br>• government agencies<br>• the public | Reports to management for purposes of:<br><br>• planning<br>• directing and motivating<br>• controlling<br>• performance assessment and evaluation |
| Emphasis on summaries of financial consequences of past activities and decisions | Emphasis on decisions and activities affecting the future |
| Emphasis on objectivity and verifiability of data | Emphasis on relevance of data |
| Precise information is required | Timeous information is required |
| Summarised data are prepared for the entire organisation | Detailed segment reports are prepared on departments, products, customers and employees |
| Must adhere to international financial reporting standards | Need not adhere to international financial reporting standards |
| Mandatory for external reports of companies | Not mandatory for company reports |

*Source: Garrison & Noreen 2006:7*

It is evident from Diagram 2.1 that although financial accounting and management accounting are closely linked, financial accounting primarily provides summaries of **past** financial transactions whereas management accounting shows a strong **future** orientation.

Management accounting is not bound by externally imposed reporting rules (e.g. international financial reporting standards). It provides more detailed business information than financial accounting, and is more multidisciplinary than pure financial accounting.

The Oxford References online (2005:2) defines management accounting as *the provision of financial data and advice to a company for use in the organisation and development of its business.*

This definition highlights a fact that is clearly illustrated in Diagram 2.1, namely that the targeted users represent the essential difference between a management accountant (who utilises management accounting information) and a financial accountant (who focuses on external reporting). Both fields provide information, and both management accounting and financial accounting are part of the overall accounting information system (Hansen & Mowen 2005: 5).

The reports submitted by these two accounting fields often derive information from the same database that was originally established to meet financial reporting requirements. The fact that the information comes from the same database creates interdependence between the two fields. Gitman (2000:11) confirms that it is sometimes difficult to distinguish between management accounting and financial accounting.

The interdependence between these two fields necessitates a study of the history of management accounting and its common roots within the discipline of financial accounting.

## 2.3 HISTORY OF ACCOUNTING

In its official journal, the Association of Chartered Certified Accountants (ACAUS 2000:*I*) emphasises the importance of a study of the history of accounting:

> *The history of accounting throws light on economic and business history generally, and may help us better predict what is on the horizon as the pace of global business evolution escalates*

Lloyd (2002:1) elaborates on the importance of historical information when he states:

> *In addition to providing detailed knowledge of accounting and commercial practice, further review of early accounting texts can offer insight into the level of theoretical awareness at the time of their publication.*

The statements by the ACAUS and Lloyd stress that any attempt to understand the future developmental requirements of accountants necessitates a study of the history of accounting. However, in view of the interdependence between financial accounting and management accounting, a discussion of the history of management accounting has to begin with an analysis of the history of financial accounting.

Accounting encompasses a diverse and growing body of research and its history is known for two divergent schools of thought, namely the traditional school on the one hand, and the critical accounting historians on the other (Fleischman & Radcliffe 2003:3). Substantial disagreement exists over issues such as objectivity, historical fact, and the significance of primary source material.

The traditionalists regard themselves as neutral reporters of information gleaned from meticulous archival investigations and they believe that the archives reflect historical reality (Fleischman & Radcliffe 2003:13). The critical accounting historians, also referred to as the “new accounting historians”, analyse the relationship between accounting and society to understand how accounting developed in practice (Miller, Hopper & Laughlin 1991:396).

The critical school became prominent in the 1980s. Its main criticism against the traditionalists was that archived documents did not guarantee neutrality or objective reality. Another point of criticism stems from the fact that access to historical archives is limited and that the archived sources of information would therefore also be limited (Fleischman & Radcliffe 2003:15). This research nevertheless focuses on the traditionalist approach to accounting history as it is deemed to be more objective and factual (Fleischman & Radcliffe 2003:13).

The roots of accounting practice go back many centuries and can be summarised with reference to specific events in different parts of the world. The accounting profession's history is largely based on the introduction of the double entry bookkeeping principle (ACAUS 2000:1). Diagram 2.2 relates the most important historic events before and after the advent of the double entry system.

**Diagram 2.2: Summary of important historical events before and after the advent of the double entry system**

| Year | Period | Event |
|---|---|---|
| 3500 BC –2000 BC | Mesopotamia | Code of Hammurabi<br>Price quotes to merchants |
| 3000 BC –1100 AD | Ancient Egypt<br><br>China<br><br>Greece<br><br>Rome | Taxes to the king<br>Use of papyrus<br><br>Evaluation of efficiency of government programmes<br><br>Introduction of coined money<br><br>Cash book for household expenses |
| 1130 AD –1485 AD | Medieval England | Feudal system (real estate, and taxes on real estate)<br>“The Domesday Book”<br>“ The Great Role of the Exchequer” |
| 1494 AD –1700 AD | The Renaissance | Pacioli’s double entry system<br>Littelton's seven factors |
| 1700 AD –1950 AD | Before the First Management Accounting Revolution | No new contributions to double entry accounting<br>Particularly barren period for contributions to management accounting |
| 1950 AD –1980 AD | First Management Accounting Revolution | Direct costing<br>Mathematics |
| 1980 AD –1999 AD | Second Management Accounting Revolution | Measurement<br>Control |

*Source: Own diagram*

If Diagram 2.2 is used to approximate dates and places, the section below explores events in accounting history in terms of the periods before and after the introduction of the double entry system.

### 2.3.1 Accounting before the double entry system

In ancient times, when most people were illiterate, writing materials were costly, numeracy was rare and monetary systems inconsistent, a transaction had to be extremely important to justify an accounting record. However, there is evidence that accounting records existed in ancient times (Taylor, Kritzinger & Puttick 1983:1).

#### *2.3.1.1 Accounting in Mesopotamia (3500 BC – 2000 BC)*

Five thousand years before the appearance of the double entry system, some of the oldest known commercial records were kept in the Mesopotamian valley in present-day Iraq. Prosperous farmers for example supported small industries and the evidence points to the existence of more than one banking establishment in Mesopotamia. These banks used standard value measures of gold and silver and extended credit for certain transactions.

Record keeping became important during this era. The Code of Hammurabi, a legal code which originated between 2285 and 2242 BC, required agents who sold goods on behalf of merchants, to hand a price quotation under seal to the merchant. It is believed that most transactions during this period were recorded (ACAUS 2000:*l*).

Mesopotamia's equivalent of what we know as an accountant was called a "scribe". The scribe recorded transactions and ensured that all agreements complied with the detailed requirements of the Code of Hammurabi for commercial transactions. The scribes recorded these transactions on specially prepared clay, as this was more plentiful and less expensive than papyrus (ACAUS 2000:*I*).

*2.3.1.2 Accounting in Ancient Egypt, China, Greece and Rome (3000 BC – 1100 AD)*

Mesopotamia is not the only place where evidence of early accounting has been found. Clay tablets were for example unearthed from the tomb of King Scorpion I of Egypt and are among the oldest written tax accounting records. These records are believed to date back to 3000 BC, and represent accounts of linen and oil paid to the king for tax purposes (Johnson & Kaplan 1987:6).

When the clay tablets were replaced by papyrus, more detailed records could be kept. Ancient Egyptian bookkeepers were attached to storehouses and they kept meticulous records that were verified by elaborate internal control systems. Although these records are important, the ancient Egyptian accountants never progressed beyond simple lists of warehouse items (ACAUS 2000:*I*).

In China accounting was used as a means of evaluating the efficiency of government programmes. A reasonable level of sophistication was achieved during the Chao Dynasty (1122 –256 BC) and this was only improved upon after the introduction of the double entry system (ACAUS 2000:*I*).

Public accountants were used in Greece in the 5$^{th}$ century BC to allow the citizenry to monitor government finances. The most important Greek contribution to accountancy is the introduction of coined money in 600 BC and monetary unit measurement is still considered a major principle of accounting (Marshall, McManus & Fiele 2004:5). During this period bankers kept accounting records, they changed and lent money, and even arranged cash transfers (ACAUS 2000:*I*).

As in Greece, finances were legislated in Rome and accounting evolved from the traditional records kept by the heads of families. Cash books known as *codex accepti et expensi* were used for household expenses. These household expenses were important as the citizens had to submit regular statements of assets and liabilities for the determination of taxation. Elaborate systems of checks and balances were maintained for government receipts and disbursements. Among Roman innovations was the government's use of annual budgets to curb uncontrolled expenditure (ACAUS 2000:*l*).

*2.3.1.3 Accounting during the medieval period (1130 AD – 1485 AD)*

After the fall of the Roman Empire, the field of accounting stagnated. However, the doctrines of stewardship and conservatism known in modern accounting practice were founded during this period. Accounting in medieval times was localised and centred on the feudal manor.

The feudal system was economic, political and social in nature. Medieval governments applied a financial system in terms of which land was held in return for specific services to be rendered by the occupier of the land. The services rendered were paid for by grants of land that could be held for life or in perpetuity. This was one of the first known forms of tax collection. The task of accountants during this period was to monitor the services rendered on behalf of the government (Lamonte 1949:165).

An accounting manuscript that survived from the period 1130 AD to 1485 AD is the *Domesday Book*, a record of all real estate and taxes due on real estate at the time (Lamonte 1949:168).

The oldest accounting record in English from the period 1130 to 1830 AD is the *Great Role of the Exchequer* which provides annual descriptions of rents, fines and taxes due to the King of England (Henderson 1965:*l*).

The medieval period provided little in terms of accounting manuscripts, and was followed by the Italian Renaissance period.

### 2.3.2 Accounting after the double entry system (1494 to date)

It is generally believed that 1494 saw the beginning of modern accounting. The Renaissance (from the fourteenth to the sixteenth centuries) gave rise to the double entry system and consequently to accounting as it is known today (Wolk, Francis & Tearney 1989:6).

Many historians believe that accounting practice developed mainly because improved trade required better ways of determining profits. One such historian was AC Littleton, an accounting scholar who described seven key factors to improve the calculation of profits:

- **Private property rights**. The fact that private property rights were reorganised necessitated records on entitlement to such properties. Accountants recorded the facts about property rights.
- **Capital**. Capital meant that wealth had to be used productively. Accounting revolves around the concept of capital.
- **Increased commerce**. The widespread exchange of goods required more formal record keeping than mere local trading.
- **The availability of credit**. Credit transactions had to be recorded. Cash transactions were completed on the spot and required no record keeping.
- **The ability to write**. Writing became a prevalent skill to create permanent records in a common language.
- **Money**. A common denominator was necessary to record the value of transactions.
- **Arithmetic**. The monetary details of transactions had to be computed (ACAUS 2000:1).

Although some of these factors existed during the Middle Ages, it was only during the Renaissance that they emerged in a form that made the double entry bookkeeping system possible. Johnson and Kaplan (1987:6) emphasise that it was the very existence of these factors that led the Italians to search for better methods of computing profits.

Brother Luca Bartolomes Pacioli, born in 1445 and a learned man in his time, is generally regarded as the father of the double entry accounting system. However, some critical accounting historians do not agree (Buzadzic, Habek & Stipetic 1997:27). A new dimension was added to the debate about the origin of the double entry accounting system when manuscripts written by Benedetto Cotrugli were found in Dubrovnik, a town on the east coast of the Adriatic Sea. Cotrugli wrote about the requirements, principles and methods of double entry accounting in a manuscript, *The book on the art of trading,* as early as 1458. Pacioli never claimed to have developed the double entry accounting system, and in the *Summa*, he acknowledges the role Cotrugli played in the development of the double entry accounting system (Buzadzic et al 1997:2). However, Cotrugli's works were published a century after Pacioli's *Summa,* and this explains why Pacioli is still cited as the father of the double entry accounting system.

The *Summa,* printed in 1494, consists of thirty-six short chapters on accounting. The first 16 chapters of the *Summa,* also known as the *De computes et scriptus,* describe the basic system of books and accounts, and the last 20 chapters focus on specialised accounting for merchants, including a trial balance at the end of Pacioli's accounting cycle (ACAUS 2000:*I*). The *Summa* was translated into five languages within the first century after its publication. Word of this Italian method of accounting, the so-called "Method of Venice", soon spread and it became widely used.

The basic recording of accounting information has deviated little from Pacioli's original writings. In fact, the primary differences between current accounting practice and the "Method of Venice" are additions and refinements brought about by the needs of large-scale business operations (ACAUS 2000:*I*).

Wolk, Francis and Teareney (1989:6) made the following comment about the double entry accounting system*:*

> *What is surprising, however, is the durability of the double entry approach during a period in which man's technology and social institutions – including business itself – have become increasingly complex.*

## 2.4 DEVELOPMENT OF MANAGEMENT ACCOUNTING

Very little has been written on the usage history of accounting data for decision-making purposes (i.e. managerial accounting). It was this decision-making aspect that eventually led to the development of management accounting.

Volmers (1998:12) states that knowledge of history would help to guide decision making for the future. Focusing on the history of management accounting is important in exploring the current and future states of management accounting. Research into the history of accounting (and management accounting) has for some time been considered either of little value (because it is not perceived to be done "scientifically") or as a means of finding answers to current practical problems. This debate has enhanced the overall validity and sophistication of the research that is undertaken (Parker 1999:12).

Two basic views of the history of management accounting exist, namely that of the economic rationalists and that of the Foucauldians. The economic rationalists view accounting as a functional account of technical responses to changing economic demands (eg after the Industrial Revolution). In an attempt to understand modern management accounting, some historians have adopted a so-called Foucauldian approach. This implies that the history of key developments in this field has been rewritten as a result of new evidence, new interpretations, and refocusing on familiar events (Hoskin & Macve 2000:91).

The Foucauldians focus on historical developments since the 18th century, mainly because of links to changes in economic society during that period. The proponents of this point of view attempt to portray management accounting as a social theory and to examine it in terms of social, economic and cultural conditions at the time (Murai 1999:170).

Both these approaches will be utilised to contribute to a better understanding of the historical development of management accounting. An economic rationalist approach will be followed to focus on developments through the years, and a Foucauldian approach will be pursued to focus on another key historical event, namely the recognition of management accounting as a profession.

It is appropriate at this point to distinguish between cost accounting and management accounting. Drury (2004:20) acknowledges that these terms are vague and frequently used synonymously, but nevertheless defines them as follows:

> *Cost accounting is concerned with cost accumulation for inventory valuation … whereas management accounting relates to the provision of appropriate information for decision making, planning, control and performance evaluation.*

### 2.4.1 Historical development

Maher (2000:2) states that management accounting has a short but exciting history:

> *While management accounting concepts can be traced back at least to the beginning of the Industrial Revolution, management accounting as a teaching discipline appears to have got off the ground in the late1940's.*

Parker (2002:1) concurs:

> *Management accounting has historical antecedents that stretch back longer than we might expect and certainly accounting historians have not yet concluded their investigations of its earliest genesis.*

Cunagin and Stancil (2002:*I*) believes that management accounting with its lack of generally accepted accounting practice has not yet had the exposure afforded to financial accounting. The history of management accounting is one of innovation based on necessity. Innovation therefore continues without constraints imposed by preconceived ideas of what constitutes "proper" accounting.

The historical development of management accounting is of particular importance in answering relevancy questions in a rapidly developing technological environment.

Diagram 2.2 illustrates that the development of management accounting can be placed in the historical contexts of two revolutions: the first from 1950 to 1980 and the second from 1980 to 1999. Note that these revolutions are described in terms of approximate eras during which major strategic changes occurred in the field of management accounting (Epstein & Lee 1999:2).

### 2.4.2 Management accounting before the First Management Accounting Revolution (1700 – 1950s)

According to the International Federation of Accountants (IFAC) (2002a:8), the period before the First Management Accounting Revolution is known as the "classical period" and ended in the late 1950s. Robles and Robles (2000:4) state that contributions to cost accounting during this period (especially from 1820 to 1885) were particularly barren.

After years of merely recording financial information, Johnson and Kaplan (1987:7) mention the emergence of hierarchical organisations (e.g. the textile mills in the first half of the 19$^{th}$ century, the railroads that were established in the middle of the 19$^{th}$ century and the steel companies that emerged during the second half of the century) that all created a new demand for accounting information. The Industrial Revolution during the 18$^{th}$ and 19$^{th}$ centuries presented new challenges to accountants. Business operations became more complex and information was needed to facilitate those operations. Manufacturing activities multiplied, and according to Wyatt (2002:4), accountants were expected to provide information to control expenditure and to price manufactured products.

The label "management accounting" was not used in the Anglo-Saxon world prior to the First Management Accounting Revolution. The term "cost accounting" was used to define processes for the computation of costs and for financial control. Although management accounting was not recognised before the 19$^{th}$ century when masses of financial information had to be recorded, it is quite possible that businessmen were already using management accounting concepts at the time.

In Parker's (2002:1) address to the Chartered Institute of Management Accounting (CIMA) in March of 2002, he stated that there was strong evidence of *a full range of cost management practices … in the British extractive, iron and* *textile industries* before the 1900s. Yamey, for example, stated that the records of Robert Loders' farm accounts (1610-1620) showed evidence of calculations for business decision making (Parker 1969:15). Another example is found in the French mathematician, Augustin Cournot's, records for 1838 in which he pointed out that a monopolist would always stop production when the increase in expenses exceeded the increase in receipts (Parker 1969:17). During this period cost accounting was evidently considered a necessary technical activity to pursue organisational objectives. Associations that were established during this period to disseminate the work performed by accountants emphasised the use of cost accounting (IFAC 2002:8).

The first North American organisations that developed cost or management accounting systems were the integrated cotton textile factories that were established after 1812. They used cost accounts to ascertain the direct labour and overhead costs of converting raw material into yarn and fabric (Johnson & Kaplan 1987:21).

One of the first publications on the principles of cost accounting, namely *Factory accounts,* written by the electrical engineer Emile Garcke and the accountant John Manger Fells, appeared in 1887. These two writers would later be recognised as the founders of marginal costing (Parker 1969:20). Another contribution to cost accounting during the period was that of Friederich von Wieser who first formulated the concept of opportunity cost in a paper entitled *On the relation of cost to value* (written in 1889, but published in 1929) (Parker 1969:18).

Among the earliest manufacturing cost records found by American historians were those of the Boston Manufacturing Company. Company records dated as early as 1815 reveal that remarkably sophisticated sets of cost accounts were used (Johnson & Kaplan 1987:24).

Accounting records of Lyman Mills dating from the early 1850s indicate that not only were double entry financial ledgers and financial subledgers kept, but so were double entry factory ledgers with related inventory, payroll and production subledgers. According to these records, factory overheads and items such as fuel, starch and repairs were appropriated to different mill accounts by referring to criteria such as floor space or number of looms (Johnson & Kaplan 1987:25).

Robles and Robles (2000:5, 8) state that the years between 1880 and 1889 may be considered the starting point of management accounting:

> *By this time there was remarkable progress in Management Accounting, mainly related to burden / overhead concepts, emphasising the need of accounting by functions.*

With the costing renaissance well established, publications of great importance to the management accounting period began to emerge. A book by Neuner, *Accounting principles and practice,* was published between 1880 and 1889. A notable viewpoint expressed in this book was that cost accounting should be re-examined from a managerial point of view. Similar ideas were put forward by Edwards and Coase in 1938 when they focused on departmentalised costing (Loft 1990:8)

One of the best examples of early management accounting records is that of the Dennison Manufacturing Company. This small family business started in 1844 and initially produced hand-constructed paper boxes for jewellery makers. In 1896 the company expanded and Dennison eventually had a factory in Marlboro, Massachusetts, and subsidiaries in Canada and England. Henry Dennison, the president of this company and a prolific writer and historian, ensured that from 1917 onwards, the entire history of the company, including all accounting transactions, were recorded. Dennison had a philosophy:

> *If the Dennison Manufacturing Company can from past and present performance discover principles for future guidance, then continued success seems so much more certain* (Vollmers 1998:11).

The Dennison accounting records provide valuable insights into management accounting practices during the period, especially as Dennison was represented in different countries (Vollmers 1998:12).

Dennison's documents contain a chronological sketch of the history of business, with excellent references to cost management accounting practices at the time. Factory cost reports for at least two decades (1910–1930) were found, containing the first evidence of a management accounting system run separately from the financial system. The information does not, however, indicate how differences between the factory cost accounting system and its financial accounting system were reconciled (Vollmers 1998:12).

Other publications were found in the form of reports and letters written to the National Association of Cost Accountants (Vollmers 1998:40):

- *Sales cost accounting* (1928). This document elaborated on the costs associated with sales.

- *Distribution cost analysis and its influence on pricing policy* (1933). This publication went to great lengths to use cost as the basis for price determination.

- *Distribution costing in the Dennison Manufacturing Company* (1936). Ways were described of dealing with the costs associated with the distribution of products.

- *Standards and wage incentives for office activities* (1936). This document represents the earliest proof of the existence of standard costing systems.

- *Cost accounting as evidence in cases arising under the Robinson-Patman Act* (1938). This publication helped employers to provide evidence on how costs were determined.

- *Budgetary and financial policies for industrial corporations* (1944). These policies were among the first to set guidelines for budgets.

The aforementioned documents provide conclusive proof that, although not officially documented, management accounting was very much in existence at the beginning of the 20$^{th}$ century. The last three decades of the 19$^{th}$ century have even been referred to as a “costing renaissance” (Parker 1969:19).

During the Industrial Revolution people were so in awe of the capacity of power-driven machinery that they did not devote much effort to seeking answers to industrial accounting questions. Loft (1990:145) concurs when she says that costing systems were largely used for pricing purposes and that cost accountants were not involved in the management of factory operations. As profits started to decline and business became more complex, more attention had to be devoted to accounting issues. Finding answers to questions that arose during the “costing renaissance” eventually initiated the First Management Accounting Revolution.

Several management accounting practices developed as a result of the pioneering work done by Du Pont (1903) and General Motors (1920). By this time, cost accounts for labour, material and overheads as well as budgets for cash and income, flexible budgeting, standard costs, variance analysis, transfer prices and divisional performance measures had appeared (Jones 1995:139). As managers were constantly seeking information to improve efficiency and profitability, management accounting procedures were developed. According to

Johnson and Kaplan (1987:125), developing the bulk of these procedures took about a hundred years.

A number of contributions to the field of management accounting came from disciplines such as economics and engineering. One such contribution was that of Henry Hess, a mechanical engineer, who developed the first breakeven chart (Parker 1969:62). However, Johnson and Kaplan (1987:153) point out that Hess's contribution would be the last for some time as cost accounting after 1920 became increasingly dominated by the financial accounting mentality and organisations were increasingly run by "numbers". Johnson and Kaplan (1987:12) emphasise that nearly all management accounting practices that are still in use had been developed by 1925.

### 2.4.3 The First Management Accounting Revolution (late 1950s – 1980)

Epstein and Lee (1999:2) stated that the First Management Accounting Revolution, which became known as the "modern" management accounting period, started in the late 1950s and ended in the early 1980s. This period was characterised by new research as a result of which academic accountants provided new decision-making tools for managers.

According to Epstein and Lee (1999:4), the management accounting tools that were developed during this period reflected economic theory and were based on the following assumptions:

- Tasks are routinised at the managerial and operational levels.
- The external environment (in which the company operates) is stable with few price or demand fluctuations.
- The sole purpose of management accounting is to aid decision making.

This “modern” management accounting period was deeply rooted in the Ford Foundation’s initiative to restructure management accounting education in the United States (Maher 2000:3). Maher (2000:2) mentions that management accounting education was formalised during the First Management Accounting Revolution when management accounting was introduced into the curriculum of Master of Business Administration (MBA) students at both Harvard University and MIT directly after World War II.

During the post-World War II period, new techniques evolved from the need for decision-making tools to solve the traditional problems of improved profit and efficiency. These techniques were based on developments in economics and decision theory. However, according to Epstein and Lee (1999:2), these new decision-making tools did not take external forces such as technological change, changes in product demand, or initiatives by competitors into account. Epstein and Lee (1999:4) concludes that the new decision-making tools in management accounting *assumed unbounded rationality, unlimited data and that the costs of these analyses generally were less than the benefits*.

The first textbook on management accounting appeared during the First Management Accounting Revolution. It was written by Robert Anthony in 1956 and focused on the following questions:

- how to formulate or analyse new problems
- appropriate measures of cost

This book by Anthony, together with a textbook published by Horngren in 1962, differed significantly from prior cost accounting textbooks in that it placed much greater emphasis on the decision-making role of cost management than on techniques to determine costs. Both books had a significant influence on management accounting educators (Maher 2000:2).

The new approach to management accounting information for decision making gave rise to two major issues during this First Management Accounting Revolution, namely the direct costing controversy in the 1950s and the mathematics of management accounting in the 1960s.

*2.4.3.1 The direct costing controversy*

The main difference between direct and absorption costing lies in the recovery of fixed costs. In terms of direct costing, fixed costs are allocated to units actually sold, but when absorption costing is used, fixed overheads are allocated to all manufactured units (Faul, Du Plessis & Van Vuuren 2001:118). Boer (2000:5) states that the supporters of direct costing cite many examples to prove that net profits in terms of absorption costing produce illogical results whereas financial accountants use the matching concept to defend using absorption costing.

Parker (1969:33) introduced a solution when he emphasised the importance of decision making and using different costs for different purposes. Maher (2000:2) subsequently proposed a three-way classification of costs, namely differential costs, full costs, and responsibility costs. This classification still forms the cornerstone of management accounting courses. The contributions by Epstein, Horngren, Anthony, Maher and others have become an integral part of the practice and theory of management accounting.

*2.4.3.2 The mathematics of management accounting*

The increased focus on mathematics in management accounting was a second key issue to emerge during the First Management Accounting Revolution. Mathematics as the language of science was emphasised, and if the education provided by business schools were to be scientific, management accountants had to increase their knowledge of mathematics (Boer 2000:6).

Concepts such as marginal costing, discounted cash flows and statistical cost estimations subsequently became integral parts of management accounting training. The new approach, with its focus on decision making, overshadowed interest in traditional topics such as product costing. The First Management Accounting Revolution was characterised by the introduction of economic concepts which supplemented the traditional management accounting principles and emphasised the notion that management accounting was capable of providing models and measures that could enhance management decision making (Robles & Robles 2000:12).

### 2.4.4 The Second Management Accounting Revolution (1980 – 1999)

The influence of mathematical modelling on the development of management accounting caused a division between management accounting educators and researchers (Maher 2000:3). At the beginning of the 1980s, accounting researchers and practitioners recognised that the management accounting curriculum was no longer appropriate to the problems facing managers (Epstein & Lee 1999:6).

Leading management accounting researchers like Johnson and Kaplan (1987:47) called for:

- extending management accounting into nonfinancial areas
- a better understanding of contemporary problems and the information needs of managers
- innovative practices

The period between 1980 and 1999 became known as the “post-modern period “ or the “new wave” of management accounting. According to Birnberg (2000:717), this period was characterised by a shift from the mechanistic view of organisations to acknowledging a complex set of organisational interdependencies.

*2.4.4.1 Measurement and control issues*

Epstein and Lee (1999:7) classified the changes during this post-modern period into two broad categories, namely a category for measurement issues and a category for control issues.

Management accounting researchers began to recognise that the production function had undergone drastic changes but that management accounting had failed to address these changes. These changes in production technology required according to Epstein and Lee (1999:7):

- new costing models to describe the production processes
- recognition that investment in new accounting systems should be cost-effective

This new development took cognisance of the extent to which management accounting researchers were out of touch with the problems of practitioners, and the extent to which accounting practitioners were out of touch with their own organisations (Robles & Robles 2000:13).

Management accounting systems had to focus on the attainment of organisational goals (Boer 2000:321). Answers were sought to questions such as how employees could be motivated to pursue identified organisational goals. The introduction of the balanced scorecard (which is discussed in more detail in paragraph 5.4) is crucial to the development of measurement and control issues.

Seeking to provide solutions to the problems management accountants faced, new management accounting textbooks became more management-oriented during this Second Management Accounting Revolution (Maher 2000:4). Some of these textbooks suggested alternative organisational structures for modern organisations (Selto, Renner & Young 1995:667), and others changed their titles from “cost accounting” to “cost management” (Hansen & Mowen 2000:1).

The Second Management Accounting Revolution focused on extending the management accountant’s ability to measure newer and more complex business situations and consequently affected practice as well as research issues (Epstein & Lee 1999:15).

History has shown that changes in business will continue to shape the nature of management accounting. Robles and Robles (2000:14) identified 1999 as a crucial year during which management accountants yet again had to adapt themselves and their practices to supply appropriate information for decision-making purposes. (Also see chapter 5 on adaptation to circumstances.)

## 2.5 MANAGEMENT ACCOUNTING AS A PROFESSION

An understanding of the professional status of the management accountant will clarify the ongoing need to re-evaluate the important role that management accountants fulfil in business (McMillan 1998:14).

The professional status of the management accountant has always been in dispute. Understanding the different approaches to the study of professionalism and professions would help to determine whether management accounting is a profession or not. According to McMillan (1998:18), professions survive through the ages despite changes in the environment whereas skills do not. Chapters 3 and 4 will indicate that management accountants face extensive change in their working environment. In terms of the statement by McMillan (1998:18) above, it is evident that if management accountants enjoyed professional status, they would have a better chance of survival in the long term.

Studies on professionalism utilise a number of theoretical and sociological perspectives, and the Marxist, Weberian and Trait approaches are the most prominent. The above approaches endeavour to understand the notion of professionalism within a specific frame of reference (Flint 1988; Robson & Cooper 1990; Sacks 1983).

### 2.5.1 The Marxist approach to professionalism

The Marxist approach to professionalism prioritises professional positions within the class structure under conditions of monopoly and capitalism. Cooper and Robson (1990:368) define a profession in terms of particular attributes. The Marxist approach concedes that management accounting may be regarded as a profession because management accountants possess such attributes as specialist knowledge and adherence to a code of ethics.

Fleischman and Radcliffe (2003:28), in turn, emphasises the relationship between the community at large and the occupational group's functional relevance to the social system as a prerequisite for professionalism. In light of the fact that management accountants are connected to and interact with society and the community at large, management accountants meet this requirement as well. Poulantz (1975:38) concludes that professionals occupy middle-class positions. However, they are involved in the management and supervision of the working class in capitalist societies and management accountants would therefore qualify as professionals.

If management accounting is conceptualised in the above manner, management accountants clearly play a prominent role in society and should therefore be granted professional status.

### 2.5.2 The Weberian approach to professionalism

The Weberian approach to the study of professions in society focuses on the Weberian concept of social closure.

According to Sacks (1983:5), this approach is based on the desire of occupational groups to:

> *regulate market conditions in their favour … by restricting access to specific opportunities to a limited group of eligibles*

Sacks's statement implies that inclusion or exclusion is enhanced by certification, qualifications, training and credentials.

According to the Weberian approach, professionalism depends on the notion of social closure as only those who meet the criteria for entry are allowed into the occupation and allowed to undergo training. Furthermore, only those who have undergone the professional training and acquired the qualification can seek membership of and entry into the profession. Such entry entitles them to the badge of ability and the prestige associated with affiliation to a particular body (Sennet & Cobb 1972:38).

The Weberian approach holds that management accounting may be considered a profession as only individuals who meet the criteria for entry are allowed to participate in activities such as training with a view to seeking membership (Garrison, Noreen & Brewer 2006:27).

### 2.5.3. The Trait approach to professionalism

According to the Trait approach, an occupational group may be considered professional if it possesses attributes such as knowledge and adherence to a particular set of ethical standards. However, access to knowledge is restricted and regulated through social closure so that only those who possess the credentials are allowed to obtain the badge of ability.

The management accounting profession is one of many in society that are competing for resources to participate in control activities. If the Trait approach is applied, management accounting may be considered a profession as management accountants possess specific knowledge and adhere to an ethical code, and only those who possess such knowledge and adhere to this code are accredited with a particular badge of ability (Sennet & Cobb 1972:56).

In terms of the above three approaches, management accounting may clearly be regarded as a profession. Indeed, the Institute of Management Accountants (formerly known as the National Association of Cost Accountants) confers professional status on management accountants (Banyard 1985:18).

In conclusion it may be stated that the professional status of management accounting is affirmed by the fact that management accountants undergo a rigorous examination to qualify as certified management accountants (CMA). Considerable prestige is attached to the professional designation of CMA, and incumbents carry great responsibility in the business environment (Garrison, Noreen & Brewer 2006:27).

The history of the Chartered Institute of Management Accountants (CIMA) and its development in South Africa are discussed here after.

## 2.6 DEVELOPMENT OF THE MANAGEMENT ACCOUNTING PROFESSION IN SOUTH AFRICA

Loft (1995:6) highlights the dearth of information on the history of management accounting and attributes this shortcoming to the lack of interest among management accountants in the origin of their profession. Knowledge of the different professional bodies is important to an understanding of the history of management accounting.

Management accountants are usually affiliated to three professional associations:

- The Institute of Management Accountants (IMA) (USA and Canada)
- The Chartered Institute of Management Accountants (CIMA) (UK)
- The International Federation of Accountants (IFAC)

Management accounting in South Africa has largely been influenced by the UK's CIMA. Developments in the UK should therefore be analysed before we consider the history of management accounting in South Africa.

### 2.6.1 History of the Chartered Institute Management Accountants (CIMA) in the UK

Major cities in the UK listed only a handful of accountants in the late 18th century. The Industrial Revolution brought about prosperous times and the UK became the centre of the financial world (IFAC 2001:129). According to the International Federation of Accountants (IFAC) (2001:129), many companies were established during these prosperous times and consequently more companies failed – which increased the need for audit services.

During the second half of the 19th century, British accountants became determined to acquire professional status and in 1853 the Edinburgh Society and the Glasgow Institute of Accountants were formed. Several professional accounting bodies were subsequently founded on the model of the Scottish institutes.

These newly formed accounting bodies looked down on ”cost accounting” (IFAC 2001:129) and it was only in 1919 that the Institute of Cost and Works Accountants (ICWA), the forerunner of CIMA, was founded. The purpose of the ICWA was to take “costing” as understood and add “engineering” and “management” in order to increase industrial efficiency (Banyard 1985:83).

Banyard (1985:85) states that another major reason that drove the formation of the ICWA was that cost accountancy was considered a new profession whose members required special qualities and qualifications. Banyard’s views of the ICWA are confirmed by Loft (1990:145) who states that:

> *…this was a time period when qualifications were beginning to matter … it was necessary to show that you were keener and better equipped for the job than your colleagues – educational qualifications were a good way to do this*

World War I stimulated development of the cost accounting profession. The IFAC (2001:129) mentions that while the pre-World War I years had been marked by an emphasis on controlling waste and improving efficiency, it was during wartime that *the government discovered cost accounting and that it could be used as a basis for agreeing prices for war material.*

Banyard (1985:84) firmly believes that the war completed the consolidation of the ICWA and *provided a springboard for later developments.* Loft (1990:113) reports that during the post war period members of the ICWA held a wide variety of jobs, mostly in industry as detailed in Annexure 1. The ICWA established itself as an examining body after World War I, published a professional journal and established branch societies to promote cost accounting. (Loft 1990:79)

The ICWA became the Chartered Institute of Management Accountants (CIMA), effected major changes to its examination procedures, introduced new subjects appropriate to the more extensive use of computers, and obtained professional status in 1972.

The CIMA has remained at the forefront of world developments in management accounting (Banyard 1985:88). Banyard's opinion is echoed by the IFAC (2001:130): *The CIMA qualification has gained wide recognition as the leading management accounting award*

In January 2005 CIMA has 120 000 member made up of 50 000 full members and 70 000 registered students of whom almost a third reside outside the UK (Cimaglobal home page 2005). CIMA has members and students in Ireland, Hong Kong, Malaysia, South Africa and Sri Lanka, and has since 2001 also acquired new members in the former communist countries (IFAC 2001:131).

### 2.6.2 The CIMA in South Africa

A branch association (referred to as a centre) of the ICWA was established in Cape Town in 1953 (Kriel 2005), and another centre was opened in Johannesburg in the early 1960s. The Johannesburg centre of CIMA soon required a full-time CIMA official. Today there is only one CIMA center in Gauteng, boasting 1200 practising members.

The CIMA office in Johannesburg could not provide, or was not aware of, published research on the history of management accounting in South Africa. Information could only be obtained through personal interviews with long-standing members of CIMA South Africa and copies of correspondence kept by some of these members (see annexure 2). Correspondence dated 28 January 1972 (see annexure 2) points to the higher status of the South African centre compared to that of the centres established in Brussels, Hong Kong and Toronto.

## 2.7 CONCLUSION

Chapter 2 examined the importance of the historical context in which the development of management accounting took place. The concepts of financial accounting and management accounting were explored. This research was deemed necessary in order to place management accounting within the broad field of accounting and thus clearly define management accounting as a specialised area within the accounting field.

Management accounting has historical antecedents that stretch over many years and historians have not yet determined an exact starting point. In providing a sound theoretical background to this study and in order to learn from history, the development of both accounting and management accounting was traced.

During the past 50 years, two management accounting revolutions were experienced, indicating that changes in the business environment placed new or different demands on management accountants.

The historical investigation proved that the notion of proving professionalism was important. This chapter also touched on the assumed professional status of the management accounting by reviewing the origins of the professional association for management accountants (CIMA) in South Africa. A marked feature of this part of the investigation was that no written information was available on the history of the CIMA in South Africa.

In chapter 2 it was discovered that both financial accountants and management accountants faced numerous challenges through the ages. It is also well known that “history repeats itself“ and chapter 3 investigates whether management accountants are yet again challenged by change.