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THE BACK-AND-FORTH OF CONCEPTIONS OF ACCOUNTING AND KNACKS OF THOUGHT IN DOUBLE ENTRY BOOK KEEPING SYSTEM (DEBS)

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ABSTRACT: *This study is aimed at examining the evolution and development of accounting as well as double entry Bookkeeping system (DEBS) of accounting by reviewing what past scholars and researchers have done in relation to the subject matter, and also look at the relevance of DEBS from Pacioli's era to the modern business world. Double-entry accounting is based on the accounting equation that was developed around 1494 by Luca Pacioli. The equation is profound in its simplicity: Assets = Liabilities + Equity. Double-entry. Accounting practitioners puts this equation to use by making sure that every financial transaction is recorded with an entry that utilizes at least two accounts and where the total amount of money on the left, the debit side, equals the total amount of money on the right, the credit side. Additionally, it was gathered that evidenced DEBS can be found in the Holy Bible when God created the heavens and the earth, man and woman (Gen 1:1-22) and God commanded Noah to pick all creatures into his ark, male and female" (Gen 6:17-22). However, it was also gathered that DEBS existed amongst the early Italian merchants before Pacioli came into the scene. But the practice prior to the fourteenth and fifteenth centuries was rather crude because there were no formal documented principles to be followed. Hence, the outburst of Pacioli in the fifteenth century recorded a landmark publicity in the development of this all-embracing accounting system. The first ever published treatise about DEBS was the work of Luca Pacioli in his book titled "Summa de Arithmetica, Geometria, Proportioni et Proportionalita". Pacioli's work became the road map for the development of DEBS of accounting. Therefore, as a departure from majority of scholars and researches in accounting literature who clinched that Luca Pacioli is the father of accounting. This study is conducted to likeness Pacioli to the father of modern accounting, having laid the milestone for the codification, development, preservation, and sustenance of DEBS of accounting.*

KEYWORDS: Double Entry Bookkeeping, Accounting Principles, Accounting System, Accounting development, and Modern Accounting.

INTRODUCTION

Since the inception of trade and business, civilization understood the need for accurate record. Accounting, as it is practice today, evolved gradually over the years, and no one can claim to know the time of the first accounting system. Accounting arose to satisfy people's needs for information, and its origin pre dates recorded and history. However, members of ancient tribes undoubtedly used some rudimentary ruling house and to maintain social order by means of accounting to trivial chiefs, kings and their period, dynasty and their reigns. In addition, accounting system was also needed to keep track of trading activities between tribes. It was such a perfect fit for a long unfulfilled business need that it was like giving water to the thirsty. Never in history has one particular contribution served to shape and mode business in the way that accounting has done. The historical concept of accounting provides clues and explanations

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for most of the important events that shape the development of modern accounting. The main objective of this study is to critically review the evolution of accounting, DEBS and its benefits. The study will discuss the differences between the complex capitalistic structures that is operated in today business settings with that of the world of Luca Pacioli, the person who is celebrated with disseminating information regarding the practical use of the DEBS. The study will find out the relevance of the DEBS described by Luca Pacioli in today's world of modern accounting.

Justification for the Study

The introduction of double entry is therefore an important event that marked a turning point in the history of accounting, this deserves a significant position in the annals of accounting history. However, as a result of the dynamism of accounting, being mostly influenced by the volatility of its environment, socio-cultural, political actions, accounting history is a continuous exercise that seems to have no foreseeable end. The objective of the paper is to assess to what extent this is true regarding the origin and development of the double entry bookkeeping and the relevance of double entry bookkeeping to development of Accounting and modern business book keeping. The focus of the study has been to raise the awareness on the importance, existence, and origin of double entry bookkeeping in the Holy Bible from the creation of Heaven and earth to the creation of man and woman. These facts are often ignored or evaded in much of the previous and current discussion in the literature of origin of accounting. It is believed that all of these issues are concomitant, and that some, at least, are urgent and warrant immediate attention. Additionally, it has been noted that these fact are controversial and in some respects antagonistic to the current conventional wisdom, but worth considering in that the prior researcher do not have sufficient reason for not mentioning them. The study aim at providing some constructive suggestions arising from this research. The study provide a suggestive pointers of direction of improvement rather than as complete solutions to problems.

This study also seeks to further advance on knowledge of history of accounting and double entry bookkeeping in the periods before, during, and after Luca Pacioli till the modern era. Before Pacioli, there seems to have been no really efficient method of accounting, by double or even single entry, before the thirteenth century. Analysis of medieval bookkeeping systems in ancient society throws doubt on this assertion. The historical accounting periods in different regions of the world were critically reviewed and with particular attention to recent developments in accounting theory. The study however reviewed the achievements made in accounting theory; and precisely in Europe, Asia, Athens, Mesopotamia, Great Britain and Africa. The review period is between 12th - 21st centuries. Emphasis was on evolution of accounting and double entry system.

Evolution of accounting thought

Accounting's history can be traced back to thousands of years to the cradle of civilisation in Mesopotamia and is said to have developed alongside writing, counting and money which is before Luca Pacioli Era. The early Egyptians and Babylonians created auditing systems, while the Romans collated detailed financial information. The evidence of accounting's existence was supported by archaeologists and historians who discovered the oldest city of Jericho as a trade center for salt. It was evidenced in this city that no complete accounting was there but the artefacts revealed remains of a temple priest taking inventory of the village livestock using tokens to keep track of the herd size and count the grain harvest (Mattessich, 1989). Through

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fossils and records discovered not only in Jericho but other parts of the world, it can be concluded that before men knew the concept of money, the process of stewardship was known.

According to accounting antique, accounting brought about the concept of writing. As such, Salisu (2011) opined that writing developed over 5,000 years ago and archaeological findings revealed that writing was in fact developed by accountants. It is hypothesized that the primary reason for the development of writing systems came out of a need to record trade and business transactions. For as long as civilizations have been engaging in trade or an organized system of government, methods of record keeping, accounting and accounting tools have been in use. Some of the earliest known writing discovered by archaeologists are accounts of ancient tax records on clay tablets from Egypt and Mesopotamia dating back as early as 2,000 to 3,300 B.C. According to a New York Times article titled "New Light Shed upon Ancient Bookkeeping; Clay Tablets, Used for Contracts, Discovered in Assyria Relics of Centuries Ago Dug Up in Asian Explorations," archeological findings have unearthed contract tablets found in Babylon and Assyria. These clay tablets date back to 4000 B.C. The tablets recorded business and communal contracts such as borrowing and lending, wills, lawsuits and marriage dowries. As time progressed and trading systems evolved, merchant and other trading industries fueled the desire for more complex record keeping.

Previous works suggests that accounting processes (AP) are reactive, that AP develop mainly in response to business needs at a given time, and that the growth of accounting is relative to economic progress (Chatfield, 1977). Therefore, the evolution and development of accounting system was traceable to the most ancient cities, in Mesopotamia, a home of number between 450 and 500 BC (Keistar, 1965). Greece and Rome were cities where coinage was invented in about 630 BC (Chatfield, 1977) and China was where accounting systems were concerned with the recoding of merchants, temples, and estates (FU, 1971). Keister (1965) further described the use of clay tablets impressed with the markings of the Cuneiform script by the Scribe, a forerunner of the present day accountant. The system though relatively simple by modern standards; the Mesopotamia economy did not require more advanced system to record its transactions and property among parties. Goldberg (1949) also recognized the recording of complex transactions of grain involving several individuals, a system of record-keeping (accounting) which is a clear demonstration that accounting is socially constructed. Chatfield (1977) saw the systems of estate records in part of Athenian Empire, by Zenon in terms of data collection, recording and analysis by several individual as responsibility accounting. This system employed by Zenon Papyri with respect to data generation, recording and analysis, (though elaborate and meticulous) were sufficient to detect error, fraud and inefficiency in the system. The Zenon Papyri approach had little concern for decision making, efficiency or profitability, and perhaps this feature might invalidate lots of works that went into the operating system (Glautier & Underdown, 2001). The Zenon system was developed in the 5th Century BC and later modified by the Romans. Goldberg (1949) saw the modification of Zenon in ancient Rome as the memorandum book (adversaria' in Greek) and the monthly transfer of entries to the ledgers ('codex tabulae' in Greek), from which today's ledger has derived its name 'codex'. This system of recording in ancient Greece and Rome according to Goldberg (1949) and Chatfield (1977) indicated that the accounting systems were mainly concerned with recording and exposing losses due to theft, fraud, inefficiency, and corruption. It was not for decision making and assets protection. Gulman (1939) added that the accounting system at that time avoided financial reports to outsiders or determination of income or tax due to government and allied parties. The system still reveals that the accounting system at that period was of course fulfilling the societal needs and expectations of the users of financial statements.

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Additionally, Fu (1971) opined that the accounting systems that were mostly used by feudal and expansionist for merchants and estates in China, under Chou dynasty (1122-1256) allowed for large physical distances and several layers or hierarchies. Officials who were needed to collect taxes in the form of goods for use by the imperial government did so to ensure compliance. The surplus products however were collected for export and were used outside China (Yameh, 1940). The system, though in details, covers several officials and large distances to ensure good administrative control through the appointment of higher-level officials as auditors who report at periodic intervals of ten days, thirty days and yearly as the case may be. The Chou system may presumably have stringent and appropriate penalties for non-compliance by defaulters (Yameh, 1980). In a similar vein, Nwoko (1990) observed that the earliest records known, which pre-dates monetary economy, were all accounting records, and were of ancient Middle Eastern Civilization of Egypt, Mesopotamia, Crete, and Mycenae. These were mainly records of physical quantities of goods.

The difficulties experienced in maintaining the records and other inherent factors associated with barter system led to the invention of coinage probably in Lydia at about 700BC (Perara & Mathew, 1966). The early accounting records were inscribed on stones and marble tablets in the Parthenon building accounts in Athens and Acropolis. Nwoko (1990) and Perara (1966) observed that the Zenon Papyri which was discovered in 1915 contains information in business, agriculture, and construction projects of the private estate of Apollonius kept under the accounting system. These records were kept in surprising and elaborate system that had been in Greece since the fifth century BC. The Zenon accounting system had provisions for responsibility accounting; written records of all transactions, personal account for wages paid to employees, inventory records, and records for assets acquisitions and disposals. Also, it contains evidence of auditing of all accounts, American Institute of Certified Public Accountants (AICPA, 2006).

The philosophy of charge and discharge

The medieval system of record keeping used in England during the middle ages had many features of ancient accounting system and remained in use until the nineteenth century as "charge" and "discharge" (James, 1955; Nwoko, 1990). Similarly, the early Greeks and Roman accounts were kept under "charge" and "discharge" principle, comparable to modern day receipt and payment account or cash book (James 1955). These were presented in the form of:

Charge and Discharge account

Arrears	**$**	**Expenses**	**$**
Rent and farms	X	Money delivered (Total discharge)	X
Other receipts	X	The balance (remainder)	X
Total (charge)	**x**	Total (discharge)	**x**

The socio-economic in the feudal system requires that surplus be generated but does not have any perceived need to measure the efficiency by which the surplus was generated. Moreover,

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no notion of income or return on capital employed was in practice at that time. The seignorial system focuses primarily on the honesty of different levels of officials in a stratified and regulated society, (American Accounting Association, 1964). The charge and discharge syndrome was surprisingly durable, lasting from twelfth to nineteenth centuries, (James 1955). The merchant's book keeping system was however in single entry form, rather than by charge, prior to the arrival of an Italian Monk-Luca Pacioli in England, the acclaimed father of double entry bookkeeping system, (Litleton, 1966).

The genesis of double entry book keeping

Double-entry bookkeeping is a system of bookkeeping so named because every entry to an account requires a corresponding and opposite entry to a different account. The double entry has two equal and corresponding sides and is known as debit and credit. The first documented evidence of double entry can be found in the Holy Bible, when God Almighty created the heaven and the earth, light and darkness, man and woman (Gen:1:1-31) to ensure equality and balance. Further evidence can be seen when God commanded Noah to construct an ark and said" And of every living thing of all flesh, two of every sorts shall thou bring into the ark, they shall be male and female" (Gen 6:17-22). It is generally conceptualized that natural occurrences are dualised. For example, there are good or bad, positive or negative, yes or no, hot or cold, night or day, raining season or dry season. We can go extra mile presenting this natural concept with various examples. However, it is also applicable to accounting. For a perfect and effective transaction, which is to be recognized in the records, it must oblige to the dual concept. For a complete transaction, there must be a willing giver and a willing receiver. If there is a willing giver without a willing receiver, there is no transaction.

Various factors have influenced the evolution of the discipline of accounting. Many civilizations developed accounting theories based on the specific needs in their societies. One of those developments was the DEBS. Some of the factors that contributed to the creation of DEBS included techniques in math, the invention of coins and money as a medium of exchange, the introduction of paper, the development of a banking system, and various economic conditions that required a system of proper recording. One of the great evolutionary advances in the history of accounting was the conceptualization of "double-entry" and its subsequent manifestation in form and substance.

The history of DEBS can trace its origins as far back as the merchants of Renaissance Italy and to lesser degree as far back as the early 13th Century. Peter (2004) said that the modern system of accounting, the double entry principle or duality concept developed after about AD 1200 in the Roman Empire. Its origins can be traced back to bankers and businessmen of the time in the commercial sectors of Florence, Genoa and particularly Venice. Fragments of a Florentine banker's account book, dated to 1211, are considered to be the earliest evidence of use of the DEBS. DEBS came into being with the rise of Mediterranean commerce during and just after the crusades (1096-1291). Besides requiring ships and provisions, the crusaders brought back silks, spices, and other Eastern products, stimulating demand for such items and for the production of European exchange goods" (Chatfield, 1977) "Genoa and Venice quickly established themselves as intermediaries in trade relations between Europe and the Near East" (Chatfield, 1977). "Italians not only became the leading merchants of the Middle Ages, but nearly monopolized international banking. They regularly put trade competitors out of business and limited others, such as the English, to a local sphere of influence (Chatfield, 1977). Italians had formed superior business organizations operating on a scale never before known, they found that bookkeeping methods which worked in a small company broke down when a

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merchant began trading through a network of factors and international partnerships (Chatfield, 1977).Through their North African trade contacts the Italians became the first Europeans to acquire Arabic numerals which, within a generation after their exposition by Leonardo of Pisa (1202) were widely used by Italian Merchants. The existence of a sophisticated money economy and the most stable coinage since Roman times allowed transactions to be reduced to the common denominator necessary for double entry bookkeeping.(Chatfield, 1977).

It is important to emphasize the introduction of Arabic numerals as a major occurrence in the facilitation of DEBS. As stated above, Leonardo of Pisa, known later by his nickname of Fibonacci, introduced Arabic numerals to Europe after studying with Arabs while residing in North Africa. He wrote Liber Abaci, which described Arabic numerals and addressed merchants (not academics) about the superiority of this new system. The Liber Abaci presented examples from commerce, such as profit calculations and currency conversions. The Italians also relied heavily on credit when conducting business, which required written records of amounts owed and owing. All these factors required an involved accounting system. The Italian system was quite different from any system before it. "Each transaction was recorded twice, once as a debit and once a credit, so that total debits had to equal total credits. All accounts were kept in the same monetary unit, and the integration of real and nominal accounts allowed profit and equity figures to emerge as remainders" (Chatfield, 1977). Real accounts are those accounts that exist from one period to the next, whereas nominal accounts are closed at the end of a specific period. The occurrence of a transaction, which creates revenue or expense, will affect a real and nominal account. These nominal accounts accumulate profits and losses and are closed at the end of the period to reflect the profit or loss for the individual or entity.

Various Italian cities, including Genoa, Venice, and Florence, adopted variations of double entry bookkeeping. Yet it was from Venice that double entry bookkeeping went out to the world, and the Venetian style had at least three advantages. (1) Venice was a center of the book trade, the first books on double entry were published there, and the invention of movable type roughly coincided with the perfecting of bilateral accounts. (2) Venetian teachers of bookkeeping had refined the arrangement and wording of entries in ways conducive to clarity, cross reference, and easy arithmetic calculation. (3) Though designed for the overseas merchant, venture double entry was extremely flexible and could easily be adapted to show annual operating results for a whole business and even to include a manufacturer's cost accounts." (Chatfield, 1977).

In Florence, extensive trade had created 80 banks by 1338 and by the end of that century; the number had grown to over a hundred. These banks needed to keep detailed records of the debts owed to them as their business depended on the accuracy of their records. "Three of the most powerful Florentine merchant-banking houses were the Bardi, the Peruzzi, and the Accianinoli" (Chatfield, 1977). The Peruzzi, for instance, had ledger entries, yet the debits and credits were not yet placed next to each other. "Instead, debits were entered in the front half of a ledger and credits in the rear half" (Chatfield, 1977). Something may have been inherently wrong with this system, as all three banks went out of business in the 1340s due to default on loans and over reliance on credit. The Medici Bank, founded in 1397, was quite powerful even though it never reached the size of the Bardi or Peruzzi. The Medici accounts are interesting because of their use of double entry technique for essentially modern purposes-management and control, audit, and even income tax calculation" (Chatfield, 1977).

The DEBS was developed and functional even before Luca Pacioli's Summa was published in 1494. However, before Luca Pacioli, double entry was not being used to its full potential. For

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instance, not so many merchants relied on their regular accounts, maintain double entry bookkeeping and also accurate track of their capital and profits. It can be argued that perhaps double entry bookkeeping was much too sophisticated for that time. Its comprehensiveness and its focus on the sources of profits and capital made it the first bookkeeping methodology with theoretical potential. The integration of expense and equity accounts provided a means of quantifying the distinction between capital and income. Double entry also promoted the concept of the business firm as a separate entity whose purpose was profit maximization. Finally, it contributed to the doctrine of objectivity by restricting account data to the transactions of the firm and by expressing all transactions in terms of a single monetary unit.

Accounting historians agree that Paciolo's famous treatise of 1494 represents the first complete synthesis of DEBS in published form. The worldwide use of double entry however, owes lots to the work of an Italian Monk, and a Franciscan friar. It was not until 1494 that Luca Pacioli first printed work or treatise on algebra, titled: "Summa de Arithmatica, Geometrica, Proportioni et proportionalita (for example, everything about Mathematics, geometry, and proportions)"became available. Double-entry accounting is based on the accounting equation and was developed to ensure that every transaction has equal and opposite reaction, (Mike & Fred, 1983). The book was a monumental work that covered five main topics of which double entry book keeping was just one. The treatise contained a section on book keeping entitled "De computis or Scripturis (computations and records), which was separately published in 1504 and translated into many languages. Pacoili still devoted 36 small chapters to the one subject.

Long and Kazeem (2008) said that "Lucça Paciolo" introduced the double entry system to replace single entry system described as "Italian Method". The double entry system sensitized merchants to distinguish between positive (+) and negative (-) entries or increases in assets and decreases in liabilities, (Paul, 1985). Nwoko (1990) emphasizes that those positive entries that increased assets or reduced liabilities are: cash receipts, sales to customers, payment to creditors, discount received. While negative entries that increase, liabilities and reduces assets are cash payment, purchases, discount allowed, and payment by debtors. The Latin words dare (to give) and Avere (to receive) were given in English as Credit (Cr) and Debit (Dr) respectively, and were employed only on the completion of the venture.

Though Luca Pacoili is often credited with having invented the DEBS however, did not lay claims as the originator of double entry as he was only describing what Italian Merchants were using for over 200 years, (Paton & Littleton, 1940). Nwoko (1990) recognized Grammateus of Schreiber, (1518) as mathematician of no mean repute who wrote a book on algebra and bookkeeping. Jerome Cardam, an astrologer, physician, scientist, mathematician, and professor of medicine, like Simon Stevin, a Dutch Mathematician with various claims to fame, wrote also on DEBS in 1602 Institute of Chartered Accountants in England and Wales (ICAEW, 1975). It was widely accepted that it was in fact Benedetto Cotrugli (also known Benedikt Kotruljevic) as the principal proponent behind invention of DEBS. In fact, even at the time of writing his work in 1494 Pacoili was aware of Cotrugli's efforts and credited Cortrugli with the origination of the double DEBS. However, it was Pacioli who is often credited with codifying and writing the book on the accounting process. With DEBS, all transactions are recorded in a minimum of two accounts. In addition, each transaction has two columns. One benefit of using the double entry is that it allows for more accurate record keeping in large organizations. Today, there are entire organizations that devote themselves to providing double entry accounting services.

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Luca Pacioli was born around 1445 in Borgo San Sapulcro, Tuscany. At the age of twenty Pacioli traveled to Venice and became a tutor for three sons of a rich merchant. For six years, while teaching mathematics to them, he gained an understanding and appreciation for commerce and bookkeeping. Perhaps it is this experience that influenced the publication of Pacioli's fifth book in 1494. Undoubtedly, Pacioli's belief in disciplines that exhibited natural harmony and balance influenced his work. He was a true Renaissance man in that not only had he learned bookkeeping in the merchant's house while tutoring his children, he was also a "friar and courtier, administrator and student of military science, the author of mathematics texts and of a book on games. The interests of the commercial man were blended with the talents of a mathematician and a scholar" (Chatfield, 1977). It is this ability to look at matters from various perspectives that enabled him to write the Summa, a book that could be easily read, understood, and applied by an inexperienced merchant and a beginner to the double entry bookkeeping system. In his book, Pacioli begins by saying that the successful merchant needs three things: sufficient cash or credit, good bookkeepers, and an accounting system which allows him to view his affairs at a glance. Before starting a business the trader should prepare an inventory comprising all his business and personal assets and debts. That items should be arranged according to their mobility and value, with cash and valuables listed first because they are most easily lost. The inventory must be completed in one day and assets should be valued at current market prices (Chatfield, 1977).

As Pacioli catered to the merchant in his book, he stressed the importance of proper recording. This system was based on three books, which are the memorandum, journal, and ledger. "The memorandum is the book of original entry and as transactions occur they are recorded chronologically with complete details" (Chatfield, 1977). Journal entries consist of a narrative debit (debitore), credit (creditore), and explanation in one continuous paragraph. The date appears at the center of the page above each entry; a debit follows preceded by the word per'; then two diagonal lines separating debit and credit; then the credit denoted by the word 'a'; finally the explanation, which summarizes the memorandum entry. The amount of each transaction is recorded once on the right side of the page. (Chatfield, 1977). "Pacioli's reasoning was to the effect that equilibrium was created (Chatfield, 1977). Pacioli states that for maintaining equilibrium one must never post an item in the credit unless there is a debit posting in the same amount". While discussing the journalizing process, Pacioli also makes a point to note that the balance of cash should never be negative. The most modern of the three books mentioned by Pacioli is the ledger. Pacioli's accounting cycle ends with the trial balance (summa mummarium).The bookkeeper lists all debit amounts from the old ledger on the left side of a sheet of paper and all credits on the right. If their two 'Grand Totals' are equal, the old ledger is finally considered correct. If they fail to balance 'that would indicate a mistake in your Ledger, which mistake you will have to look for it diligently.

Prior to Pacioli's work, Cotrugli or Kotruljevic as he was known, wrote "Of Trading and the Perfect Trader." Cotrugli a native of Dubrovnik, in what is now part of modern Croatia. The city at the time of Cotrugli's life was a thriving commercial center, its merchants skilled in the art of commerce and business. It was from Dubrovnik that Cortrugli left for the Kingdom of Naples where he developed his ideas further. His efforts in the field of record keeping and the origins of accounts and ledgers, cumulated in the writing of the manuscript "Della Mercatura e del mercante perfetto" (Of Trade and the Perfect Trader) in 1458. However, Cortrugli's manuscript on DEBS was not published until 1573, first, it was published in Italian with a later translation into French some forty years later. Early copies of the manuscript still exist till date

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with the earliest known copy located in the National Library of Malta. Other early copy of the historic DEBS manuscript can be found in the National Library of St Mark in Venice Italy.

Benefits of the Double Entry Bookkeeping System

The benefits of the DEBS cannot be over emphasized because of its error-catching feature. When there is income manipulation on the financial statements, an auditor can detect the fraud by examining whether the entry is credible. For instance, if a company decides to inflate the cash on its books or if there is simply an error, due to the matching principle of accounting that is inherent in double entry bookkeeping, there is another account, such as Accounts Receivable, that needs to be adjusted. Therefore, there is a greater chance of finding the fraud/error because there is more than one account that is affected by this false/erroneous entry.

Double-entry accounting allows users to take advantage of the matching principle because two entries are made for each financial transaction. The matching principle requires that for every revenue transaction recorded; a corresponding expense is recorded in the same period. The matching principle allows companies to accurately assess their profits and losses. Users can also calculate net income or net loss by subtracting your expenses from your revenue. This information is important to external users, such as government agencies, lenders and investors.

Additionally, DEBS helps to improve the financial performance of an organization. In this system, one can ascertain the impact of business administration and management on its profitability expressed in numerical values. It presents a clear statement of profit or loss as well as assets and liabilities held by the business at the end of each year. With availability of this information, it becomes easier to take proper actions and plan strategies to increase the profits and decrease the losses.

Another benefit is that the DEBS leaves an audit trail. It is an organized process since first an entry is posted to the journal, which then transfers to the ledger, as well as the use of reference numbers in all books, allows for a tracing function. DEBS also facilitates Accuracy in Accounting. Due to double entry of each transaction, the accountant can easily run a mathematical check ensuring that every transaction has been recorded correctly under the right head of account. The trial balance with an entry of each account ensures this accuracy. All the financial accounts are correctly listed in this sheet and tallied with the transactions. If difference between the total of each side comes to zero, the entries are treated as accurate.

Furthermore, another benefit is its income and capital focus. When the DEBS came about, it was geared toward the merchant who was evaluating his financial position by the amount of income and capital he had. This is still the focus of DEBS. The system integrates real and nominal accounts, which allows transactions to be expressed as the balance of a single profit or loss account. In addition, while there is still subjectivity in accounting when it comes to estimation of certain accounts like bad debt expense, DEBS provides a systematic calculation for income. Although the books of a business have become much more complex with new accounts added as well, this aspect of uniformity still applies today. The system is also enhanced when there is a separation of duties. In addition to the advantage of splitting the work, thus allowing more work to get done, different people can also keep different journals, thus allowing for separation of labor and mitigating the possibility of fraud.

An important element within financial accounting is the ability to prepare financial statements and reports. Double-entry accounting allows accounting departments to prepare financial

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statements easily. Most accounting software programs utilize double-entry accounting so that you receive an accurate report of accounts on the income statement, balance sheet, cash flow statement and other financial statements and reports. Financial statements allow you to assess the financial health of your company and compute financial ratios for further analysis.

The Relevance of Double Entry Book keeping in today's Business World.

Today's business world is quite different from the world in which Luca Pacioli lived many centuries ago. The role of the government has changed as well as taxes on income of businesses. Depending on whether you are a sole proprietor, partnership, or a corporation, different taxes apply. The government also exerts control over investor protection through agencies such as the Securities and Exchange Commission(SEC), Nigerian Stock Exchange (NSE), Nigeria Investment Promotion Council(NIPC) just to mention a few. The size and complexity of enterprises has also increased. Accounting books become difficult and time consuming to keep by hand in an enormous corporation. The transactions that we deal with in today's business environment are more complicated. Mergers and consolidations are just a few of those transactions. Another element of the business environment we operate in today is the continuing nature of enterprises. This has brought on the need for periodic reporting, which involves periodic closing of accounts and accountings, something that Pacioli did not consider during his time.

Another issue that arises is the valuing of assets. The question of valuing at cost, historic value, or market value. Because business entities exist for long periods of time, the value of their assets can change over years, thus requiring the need to value at cost, rather than at market value as Pacioli did. We also have long term international investments. This requires complicated rules on currency conversion. In addition, complex investments by companies such as the use of derivatives in hedging transactions make the accounts that flow into the financial statements more obscure. We now have the corporate form of ownership. In addition, in order to support the capitalistic markets that foster the corporate form, disclosure is required. Since there is widespread ownership of shares of various corporations, the public is now interested in a company's performance. With this, in addition to the government's role for both tax and regulatory purposes, there is greater need and pressure for companies to account accurately.

The principal user of DEBS today is different from the principal user of DEBS during Pacioli's time. Pacioli geared his theory of DEBS toward the merchant's need to evaluate his own financial position. In his time, it was sufficient for the merchant to understand his own finances through his records. Today, stakeholders need to not only understand financial information presented by companies, but also be able to compare that information with other companies. So the main difference arises from the fact that the merchant is no longer looking at his own financials to note what he does and does not own. Instead, in today's corporate environment the public and other stakeholders evaluate a corporation's books. Another difference is the advances in technology we have made. As we became more technologically advanced, we now have other forms of recordkeeping, such as databases. Computer languages such as XBRL (EXtensible Business Reporting Language) are making it easier to publish financial information and exchange financial statements between companies.

Furthermore, the use of databases provides companies with detailed information about the type of transaction, the time it took place, and other specifics that would have been impossible to record by hand with the volume of transactions that occur on a daily basis in those companies.

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Then the question becomes, since the world we live in has changed significantly, does the double entry bookkeeping system still bear relevance today? I believe that the system is still quite useful in today's business environment. The way Pacioli explained the form of double entry bookkeeping system is approximately that of its final development today. The theory underlying Pacioli's work is even more contemporary. Though his purpose was practical, he constantly emphasized the proprietor and proprietorship, and the advantages of bilateral accounts, particularly in gathering profit or loss totals. In making explicit the mathematical logic underlying double entry, he touched the roots of modern accounting theory" (Chatfield, 1977).

Also, in addition to the fact that it was a prerequisite for later developments in accounting and allowed for much flexibility in terms of valuation and the creation of new nontraditional accounts, such as wages payable and marketable securities, the DEBS is a subset of a larger information system. Many modern programs such as Peachtree allow for the journal and ledgers to be kept on the computer and be referenced easily, when needed, through simple data queries. Moreover, algebra which contributed to the creation of double entry bookkeeping does not go out of date and is still the underlying basis for why the system works so well.

The focus of the system is still on capital and income, especially in major corporations. Because of the ability of the system to derive the income of a company through the various real and nominal accounts, it is still a powerful tool for any business. The system also ensures that accounting is complete because of its complete set of accounts and the dual nature of the transactions and entries. Also, double entry bookkeeping allows the user to understand the relationships between accounts as posting is done. According to Yuji (1989) "under a double entry system, an increase in cash cannot be recorded without first identifying a credit account. This search for a proper account leads the accountant, as well as the manager, to a 'reason' for the increase in cash". Finally, as mentioned above, DEBS is still an antifraud tool today since one account cannot be altered without affecting another. We live in an age where all transactions are supported by paperwork or some form of data support such as invoices, sales orders, purchase orders, and authorizations. Strong internal controls and auditing practices are needed in order to detect and prevent fraudulent entries and financial statements from going out to the public. Thus placing emphasis on auditing procedures and the testing of internal controls can greatly increase the efficiency and effectiveness of the capital markets and the corporate environment. This is exactly what the Sarbanes Oxley Act of 2002 has set out to do. The logical recording system and inherent error-checking features of double entry bookkeeping are valuable as part of a strong internal control system.

Even though, the world that Pacioli lived in was quite different from the complex capitalistic structure that exist today. However, based on the information presented in this study, it is indisputable that the DEBS is still relevant today. While, as times change and the world around us becomes more complicated and sophisticated, DEBS may need some tweaking and building upon, for now the system works quite well in assisting with the record keeping and auditing functions, the latter being at the center of keeping the integrity of capitalistic markets active.

SUMMARY AND CONCLUSION

The study examined the evolution and the development of accounting and DEBS, Luca Pacioli's contribution towards the development and spread of double entry system, Pacioli's

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impact on the accounting practice of his time, benefits of double entry as well as the relevance of double entry system in this modern world of business. The historical evolution of DEBS system of accounting provides an explanation to most of the important events that characterized the rise of double entry bookkeeping and the development of modern accounting. It was gathered that evidenced of double entry bookkeeping can be found in the Holy Bible when God created the heavens and the earth, man and woman as seen in Gen 1:1-22 and when God commanded Noah to pick all creatures into his ark, they shall be male and female" (Gen 6:17-22).

The evolution of DEBS will increase the ability of potential accountants and others who are interested in the accounting discipline to make their judgments on a broader and more informed basis. It enables us to establish a relationship between past accounting practices, what the practice is now, and what it ought to be. The rapid growth in business that culminated into industrial revolution was what compelled accounting to move to another stage of development often referred to as the 'charge' and 'discharge' system of bookkeeping. The DEBS however, did not facilitate the determination of profit because it lacked the method of inventory valuation, cost ascertainment, and provision for depreciation. The emergence of DEBS was among other things, to minimize fraud, errors, misappropriation and pilfering of assets. It also built enormous confidence on equity owners on the works and reports of management upon whom the capital assets of the owners are entrusted.

Accounting like any other social science discipline has gone through changes, modifications, updates and improvement in recent years. The situation is however, better off now than before because of the introduction of regional grouping, professional accounting bodies, international and local accounting standard committee, exposure draft and statement of intent, including the availability of research institutes. The beauty of accounting today would not have been what it is but for the wonderful work of Luca Pacioli. As a matter of fact, the principles and practice of DEBS were documented, preserved and 'transported' to our time through Pacioli. Though he never laid claim to the invention of the all-embracing double entry system of accounting, researches have shown that he laid the stepping stone hence, his recognition as the father of modern bookkeeping.

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