

# **Accounting in Ancient Times: A Review of Classic References (\*)**

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## **Abstract**

European accounting scholars have made significant contributions to the history of accounting. Some of these contributions were not translated into English and as such were not integrated in the evolving comprehensive coverage of the evolution of the accounting function. The purpose of this research is to review the works of those scholars in the context of the ancient history of civilizations. The research starts with the oldest texts known which are dated to the end of the fourth millennium BC (3200-3100).

These were sequences of pictographic signs, which represent the antecedents of the direct cuneiform writing, engraved on clay tablets found in the monumental temple district dell'Eanna of the city of Uruk, in southern Iraq. The content of these texts are of a primarily administrative: lists of goods in and out of rations distributed to employees, etc.. The writing is in response to the demands of an administrative system, developed in a centralized economy with strong redistributive character. It was governed by an elite priesthood,

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which was formed in southern Mesopotamia as a result of the so-called “urban revolution”. The system of signs engraved on the tablets (about 1200) was already fully formed, and, as such, has no direct antecedents. In a broader sense, however, it represents the end of a long process of developing accounting systems and management of their services, the beginnings of which date back to Neolithic period and there for at the time of the first agricultural villages. This accounting systems prehistoric were based essentially on two instruments: accounting tokens and theseals.

The paper traces the history of accounting over four thousands years describing, illustrating and analyzing how records were kept and used and the various differences between different accounting practices. Special focus is made on the development of accounting under the Egyptian and Roman Empires. The contributions of the European scholars : “-B. Siboni- and Angeli“ F. Melis- and Zuffi“ are highlighted throughout the paper.

**Key words:** Accounting in Ancient Times, Greek Accounting

**Jel Classification:** M40, M41

## **1. Introduction**

European accounting scholars have made significant contributions to the history of accounting. Some of these contributions were not translated into English and as such were not integrated in the evolving comprehensive coverage of the evolution of the accounting function. The purpose of this paper is to review the evolution of accounting under different civilizations based on the writings of various European scholars. The paper, divided into four sections corresponding to the known civilizations the Sumerian, Egyptian, Greek and Roman, traces the history of accounting over four thousand years describing, illustrating and analyzing how records were kept and used and the various differences between different accounting practices. Special focus is made on the development of accounting under the Egyptian and Roman Empires. In particular, some scholars have supported the hypothesis that the double entry bookkeeping could have been invented even during the Roman

Empire.

To this end, the paper incorporates the contributions of some scholars in particular of F. Melis<sup>1</sup>, G. Rossi<sup>2</sup>, P. Bariola<sup>3</sup>, D'Errico<sup>4</sup>, H. G. Amedee<sup>5</sup>.

## 2. Sumerian Accounting

The oldest texts known date back to the end of the fourth millennium BC (3200-3100 B.C.). They are sequences of pictographic signs, which represent the antecedents of the direct cuneiform writing, engraved on clay tablets found in the monumental temple district of Eanna of the city of Uruk, in southern Iraq. The content of these texts is primarily administrative: lists of goods in and out of rations distributed to employees, among others. The writing is in response to the new demands of an administrative complex society, characterized by a centralized economy with strong redistributive character. It was governed by an elite priesthood, which is formed in southern Mesopotamia during the fourth millennium, as a result of the so-called "urban revolution".

The system of signs engraved on the tablets (about 1200 BC) is already fully formed. These prehistoric accounting systems were based essentially on two instruments: accounting tokens (tokens or calculi) and the seals. The tokens are small clay objects, shaped by hand, generally of geometric form

1 F. Melis, *Storia della Ragioneria*, Zuffi Edizione, Bologna, 1950

2 G. Rossi, *La computistica dei romani e l'invenzione della scrittura doppia*. A proposito di una opinione dello storico G.B. Niebuhr con una lettera a sua eccellenza Gaspare Finali Senatore, già Ministro del Regno d'Italia, Società Editrice Dante Alighieri, Roma, 1896.

3 P. Bariola, *Storia della Ragioneria italiana premiata al Concorso della Società storica Lombarda*, Tipografia ambrosiana, Milano 1897

4 E. D'Errico, *Saggio sulle finanze e sulla contabilità pubblica presso i Romani*, Vol. V, Biblioteca di Storia Economica diretta dal Prof. Vilfredo Pareto, Società Editrice Libreria, Milano, 1910

5 H.G.Amedee, *Des Origines de la comptabilité che les romains*, Imprimerie Nationale, Paris, 1880,

representing different types and quantity of goods such as cereals, livestock, etc. The tokens and seals first appeared in the Near East during the Neolithic Aceramic (X-VIII BC). The need to store food for long periods required a form, at least rudimentary, of accounting. The Neolithic tokens (certificates from the tenth millennium B.C.) had a variety of forms according to a system in which each corresponds to a different type of product, and each token corresponds to a unit of that product. During the fourth millennium BC, the first urban centers appeared in Southern Mesopotamia. In addition to the concentration of population, the first cities (including Uruk, with its 100 hectares) are characterized by the presence of unprecedented monumental architecture, by the multiplication of specialized activities and craft, and the development of long distance trade. The political-economic system was characterized by centralization of resources and their redistribution in the form of food rations by “large organizations” (Temple, Palace). The increased administrative needs of the new urban centers led to the search for new form of accounting: the accounting records. In public companies, where most of the population worked, there was a need for control. Therefore, each event was entered, accompanied by receipts. These documents were issued in two or three copies. The first one confirmed that the service had taken place so. The second formed the basis of accounting. From this collection is passed to the classification of the documents summarized up to the monthly statements and annual individual branches of the economy (cereals, livestock, wages, etc.). The classification could take place already in the first records, for example the wages, were classified according to the different categories of workers. Then they preceded to periodic other classification and correlative recordings according to goods distributed in payment: barley, other cereals, dates, beer, textiles. Therefore, the system came to combine the double set of accounts: accounts of wages and accounts related outputs warehouse. Thus, these corporate events were reproduced in two aspects: on the one hand, the cost incurred for goods and services produced and, second, the decrease in specific balance sheet items. This finding is important because it outlines the principle of duality: one to register the reduction of goods of the Temple provided to

pay wages or other expenses and another to record changes in increase of goods produced by the agriculture, livestock, fishing and tributes.

**Table n. 1 Sumerian Accounting: Principle of duality**

<b>Principle of duality</b>		
Cost of production of goods and services	<b>Equals</b>	Variation of the equity component (inventory of the temple)

Very important to know the Sumerian accounting is also the rules contained in the Code of Hammurabi, he was the king of Babylon in the second millennium B.C., an able administrator and warrior reigned from 1792 to 1750 BC.

The code of Hammurabi, remains the only comprehensive document which has come down from ancient times, it consists of 282 individual items without systematic order, relating to criminal, civil, commercial rules and does not contain provisions on religion. Paragraphs ranging from 88 to 108 deal with the credit operations of exchanges, traders and agents. It can be noted that some mechanisms and economic instruments that might at first sight seem typical of most modern and advanced practices, actually date back to some millennia ago. One of the most extraordinary was the development of a complex trading and systems.

When merchants transferred their cargo of goods in a certain city, they were selling their products receiving in payment “Check” consists of a clay tablet on which was engraved the price of goods contracted by weight of copper or silver. The same tablet could be turned and then served to buy other goods and so on. Of course, these “checks” should have a coverage guaranteed.

### **3. The Egyptian Accounting**

On African soil, the sacred river Nile, gave life to the country, making it a huge oasis in the desert. Consequently, the first and most conspicuous wealth was made up of agricultural products, especially wheat. Apart from agriculture, the other branches of the economy also flourished. The river offered wide possibilities for fishing and hunting nearby desert. The missing materials were imported through trade with surrounding countries. The subjects gave local and external fervor development industry and the arts. The conditions of the country were singularly favorable to the centralization of power and the concentrations of land in the hands of a few owners. This situation, together with the well-known inclination of the Egyptians to writing gave importance to the accounts keeping.

The Old Kingdom was semi-decentralized. The individual districts had their own administration and its stores. The Central fiscal authority had its properties in all provinces which were subjected to the supervision the governor of the area.

In addition to provincial treasuries, there was a central government finances. Moreover, the clothes and jewelry of the king and was located at his residence. These centers absorbed a mass of staff, including several scribes. The tax administration also had the task of collect, through trade, tribute and military conquests of war, many goods as metals, building stone, incense, perfumes. Finally, the same system was adopted for the land cultivated, whose holdings required, because of the floods, a single management and the respective officials covered the title of “head of the field” and “head of the scribes agrarian.” In all these warehouses, offices and treasuries kept accurate accounting.

The centralized management of state assets in the Old Kingdom was the same in the Middle Empire, perhaps it had been strengthened. It was noted that there were a number of “houses” with their heads of various offices, such as accounting offices, stationery and other branches of the administration. The responsibility of these offices was to work and record. The importance of accounting is reflected in the names that are given in the Middle Kingdom to

the grain stores (“house the counting of grain”) and the company of animals (“house of the count of cattle”). Fragments of an account book of the royal court written in Thebes by Neferhotep. It contains analytical lists of inputs and outputs as well as a daily summary, which had overlapping sections. In the first section were recorded the entries and in the second section the exits. At the end of the day on the balance that was resumed the next day. With the New Kingdom will have important social and political changes: the ancient nobility succeeded Royal Officials.

The administration of grain stores and livestock kept its importance and their leaders are high dignitaries (the grain is always the main wealth of the country). The Treasury Department, which is governed by high officials, including the administration of the finances, it always was entitled custody and production of jewelry and precious of the king, having employed their artisans and their superiors. A leading position was held by the “keepers of the balance of the treasury” and “Leaders archive” from surviving documents we can deduce the manner in which the calculations were carried out in the treasury. Despite this, they are still able to say that each entry was recorded with great precision, in every detail, and also for the outputs, regardless of the amount. For each output required a payment order: even though it is a simple ration of wood or coal payable to an employee, he was obliged to produce the document endorsed by the Treasurer-chief.

Upon delivery to the worker of his ration of grain was issued a report, on which the scribe took into the notation “to copy” or “will remain on file.” Such records are to indicate that, in the first case, or they had to make a copy destined to another office, or you had to make adjustments of the higher grade in the second case, the expression suggests that there had another copy, addressed to a person outside or reconditioned. The documents, once exploited, were delivered to the head of the archive of the respective administration, making them locked up in vessels, forming a list.

The various operations gave rise to provisional entries (the first note) according to which proceeded at a later time, the scriptures definitive, chronological and systematic. The records were made at the very moment of

occurrence of the facts and, therefore, we can say have two kinds of sources that complement and explain each other: the papyrus, covered with writing of this class, and the tomb sources; subsequent recordings were made instead in offices, away from operational centers.

In a notebook were written not only the facts economic, but all the major events the scribe, if he hung on other responsibility. An example of these memorials is papyrus offered by the Museum of Antiquities Leida : The exploitation of a target sheet previously different (if very common) and the current type of writing emphasize the character of rough draft. Employees who, in charge of some mission made trips were required to record the expenses incurred during the mission, as we learn from another papyrus in Leiden period.

In the last centuries before the Common Era, Egypt suffered the same fate as the other countries of the Near East: the proud legacy of the pharaohs was first absorbed by the great Persian empire, and destroyed by the weapons of Alexander the Great, succumbed to the Hellenic domination, and finally was part of the Roman expansion and, therefore, ruled by the Byzantine.

The Greek period and the next, the Hellenic supremacy, they left great wealth of texts accounting policies that are of special importance because, in addition to being applied in Egypt, thus Egyptian land shed a good light on the laws of Greece and accounting in Rome. Among the most salient features of Ptolemaic deserve attention centralization of administrative system, the bureaucracy (associated with it), the rule of taxation, the great state property and the temple, the monopolistic systems.

Very important was the accounts of the banks as result from the research of Preisigke (German Egyptologist 1856-1924), based on the Fayum papyrus. This papyrus contains account statements in a newspaper of cash in a bank and it is assumed that the tax collectors and contractors had their bank accounts and that performed the tax payments of the amounts due withrecognized in these accounts. The money left in the bank account of the debt collector or particularcontractor, as long as they did not give the order to credit the amount in the account on the treasury of the state. The bank recorded

the spending of taxpayers in the chronological order in the newspaper. At the end of a given period, they proceeded to the systematic recording: the scribe drew accounting from newspaper before the data concerning the client A, then the customer B, and so on, in order to complete a statement. As they apply to each taxpayer payments appear under dates and different rates, it is apparent that they did payments to their liking, the final sum, however, is the same in all cases. The number of pages of the papyrus (123), the German scholar argues that it must be a special newspaper for taxes, because that number would have been too low for a general journal.

The process seems most likely to be the first: it is natural that tax collectors were make detailed account their heads and keep a journal in which to compare the tax entered in the register with the results obtained, notwithstanding the fact that the taxpayer did payments directly to the bank, because it is obvious that they would have to pass the received to the debt collectors, who used it to compose their writings. Not be ruled out that the analytical accounts were sent by both practori both banks, for better control having regard to the deep bureaucracy of the period.

Other documents relating to the banking attest to the remarkable development of the system bank: it was practiced also the transfer of funds from one account to another, the so-called "Transfer-account". Payments could be established with the assistance of two banks, which were in relationships between them and in this case it was not a physical transfer of money: the banks in fact limited accreditation and debiting of such amounts.

Regarding the records in the temples should begin by saying that they were subjected to a close control and to some interference by the public authorities (a portion of their assets was directly administered by the state). Activity on the part of the heritage management of the temples themselves were compiled monthly and annual statements, which were submitted to the authority, which has known examples of such reports, some of which (such as the account of the temple of Zeus in Greece, II-III century AD) are closer to the newspaper, because it is observed almost exclusively chronological order, but others (such as the account of the temple of Soknopaios, also in

Greece) comply with the requirement systematic, as can be seen for the costs: that of the same motive are registered under a common title, so it appears as an aggregate of accounts. The system itself was certainly adopted for revenue in the example cited accounts of referring to both at the checkout, as to the warehouse, for an interval of one year. In the final bill (which is the synthesis of above) shows the entry and exit of smaller temples, dependent to Soknopaios.

In addition to Greek temples, there were in Egypt, of course, the Egyptian temples, whose accounts were held in demotic. A wise it is offered by a text of the Archaeological Museum of Florence, the papyrus dates from the third century BC and content for distribution to the priests and scribes of a hin of wine, deben kite and silver.

The most imposing of accounting records accumulated by the Egyptians to date discoveries are the Papyri of Zeno, written in 260-240 BC, known through publications particular, between which a dedicated specifically to the accounts that they have is widely documented. Zeno was a man who reached Egypt, where it was already in relationship with dioiceta Apollonius era, which soon made him Oikonomos: then begins the ascent of Zeno in the field of administration revenue, in agriculture and trade in private to which his friend and boss was addicted for a long time, as did all the rest of the high state officials. That's why in the archive of Zenon has gathered great quantities of documents of both operating segment, with the explanation that Apollonius and accessory Zenoneeded, for the affairs of their trade, accounting, and personnel in general and archives State.

#### **4. Accounting in Greece**

The Greeks were in possession of alphabetic writing no later than the tenth century BC and that, therefore, it is be assumed that since they had to use those remote times in their accounts of new alphabetic system. Unfortunately, the lack of documentation does not allow us to reconstruct theaccounting developed its first steps, but it can be said that in this field the

Greeks derived from the Egyptians, for they are the records of Egypt, which the Greeks throw much light on the premises of accounts in use of the mother country. The ancient texts, which date back to the fifth century BC, consist of 49 marble fragments: on them are engraved with long lists of citizens of the empire who were required to pay one-sixth State taxes to the temple of Athena.

More and more significant are the terse accounts of Delos. The marble used for the recording of statements (the draft was spread on papyrus) involved huge expenditure (identified in the financial statements), but the significance of the act, the need to publicly display documents and keep them long required a strong material resistance. While the accounts of Athena it is explicated the importance of preventive account, in the case inscriptions of Delos it denotes the statement of cash advertising, just for the fact that the documents were public and had to be exposed in places accessible to all, and this custom was purely of a Greek fact, in the Near East, where the people were subjected to a power ever, the accounts were an internal affair of the temples or palaces.

The recovered documents to Delos include a period of almost four centuries: 454 to 90 BC; they, however, are not proportionally distributed. Due to the political events, the regime of temples changed three times: from 476 until the end of the fourth century, they were administered by Athenians, 315 to 166 by the citizens of Delos, and then, again, by the Athenians. These texts provide a set of information on the life of the island, on prices, wages, the average cost of living, purchasing power of money. Through these texts it is possible to establish the hierarchy of the company and the various functions that individual subjects covered: the board, the stewards, agents, scribes, accountants, architects, entrepreneurs, workers, suppliers, the commissioners, the bankers or public contractors waiting to tax collection and payment in cash sacred (as it already in Egypt). Logicians occurred accounts and finally the people's courts decided on any disputes arising between the tax authorities and individuals.

Similar accounts, engraved on slabs of marble or limestone, were found at Delphi, at the foot of Parnassus, however, is very incomplete. However, the remains were offering copious information of various kinds,

especially with regard to the administration of the finances of the temple.

These accounts are the fourth century BC, specifically refers to the period in which the treasure of Godflocked extraordinary income: it had to rebuild the temple, which was destroyed in 373. The documents include accounts of naopi, the treasurers, the accounts of the Board, the accounts of payments of the Phoenicians, lists of signatures of town for the big reconstruction. In the accounts is Identify the usual elements: lots of revenue, i.e. the sums made available, then items of expenditure, combined into a total and made a comparison with the sums which they drew.

Also the accounts of bank were known in Greece, the bankers were called trapeziti. They took care of exchange office, granted loans, receiving deposits, carried out operations correspondence and, often they held the service tax collection of taxes, taken in procurement by the government. The bankers were required to write the memories of the money provided and the people who received them, in order to make reason of what was received and was deposited. The bankers made use of the work of employees, who took care of the service and the cash keeping the records of the payments they performed verbal order of the master.

## **5. Accounting in the Roman Empire**

There are many studies<sup>6</sup> that underline the importance of accounting for the Romans and how they acquired much knowledge by Greeks<sup>7</sup>. Even Varro (116-27 BC) in the book *Rerum Rusticarum*, and L. Junius Moderat Columella (first century AD) in *De rustica*, makes frequent allusions to accounting which is shown in the large farm. Cicero in the *Verrine* (106-43 BC) reports of the

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6 V. Masi, *La ragioneria nella presistoria e nell'antichità*, Tamari, Bologna, 1963; A. Castagnoli, *La ragioneria nel mondo romano*, in *La Ragioneria*, fascicolo n.9, settembre 1940.

7 Catone (234-149 BC) in *De Rustica*, a sort of farmer's manual details the farm administration; Marco Terenzio Varrone (116-27 BC) in the *Rerum Rustica* in several parts the rules for the keeping of accounts.

importance of accounting for the Romans the same Cicero in Pro Oratio. Q. Roscio Comoedo says that proper accounting can't consist only of the memorial to the clipboard (the Adversaria) but it is essential the Codex Accepti et Expensi.

The main books of account used by the Romans were

1) The Adversaria, used for simple accounting records, i.e. the first note or memorial. According to some scholars, the name is due to the fact that it was written on both side of the tablets (i.e. adversarie) on the "aversa" and "adversa" while on sheets of papyrus or parchment was written on one side only. They up the collections, the set, the sequence of the writings of the events, as they were detected. Recordings in Adversaria were absolutely free (not bound by the rules of the system and method) periodically, they drew from the date that is elaborated and transferred to replenish the accounts of the Codex Rationum.

2) The Codex Rationum, in which were classified and systematized the simple accounting. The Codex Rationum (book of accounts) was the real main book, which defined the accounting system. The accounts were accounts were twofold and their sections, the carried out on separate pages, were marked by phrases Accepti page and Expensi page: the first was the section signals with the "to give", as well as the second, with the "to have" reported to the holder of the account.

Pseudo Asconio reports every detail to compile this register: the amount, the date, the motivation of the transaction, the movements were recorded in assets, expenses, losses, income and profits so to have a brief overview of the accounts that gave the general situation of the company.

If it had really been could certainly prioritize the creation of double-entry method to the Romans, but the information provided by the step are not fully reliable, the doubts arise from the accounts defined in revenues and profits, expenses and losses. Scholars use "expense accounts" and "accounts losses" and "accounts of income" and "accounts of profits", "and do not care whether these accounts show evidence of the above factors the economic aspects, or if the accounts are the same only shows the changes (in money,

other assets, receivables and payables) measuring expenses, losses, income, profits. They, for example, define an output of spending cash, while the accounting set only the change in the diminutive money; define profit credit for accrued interest, while the accounting is directed only to the change in augmentative in the credits, etc.

The recording in the Codex Rationum is indicated by the word “nomen”, meaning according to technical to “match” or “item of the book, so credit and debt, while recording it was stated with “scribere” or “perscribere” and, in technical language, depending on the Codex Accepti et Expensi, with “acceptum ferre” or “expensum ferre”, depending on the sign of the items, that is, depending on the section of the account in which to operate. With “rescribere”, or, technically, “referre”, was intended to reverse recording.

In addition to this there were other minor books including: the Codex Accepti et Expensi, the Kalendarium, the Libellus Familiae or Liber Patrimoni, cash book.

For both historians and accountants The Codex Accepti et Expensi, was a kind of “cash book”. The codex it was divided into two distinct tabulae: “Accepti” and “Expensi”. It contains records of certain legal transactions required and simply those acts for which registration in this codex produces a special legal status of the convention, as it would be the dissolution of contracts: the “litteris contrahere” and “litteris tollere obligationem”. This book, therefore, all the elements of the combined fixed debt literal. It does not have an exact equivalent in modern books (which, however, have the Adversaria and the Codex Rationum): it can see a certain analogy with the book of bills, with the difference, however, that while the record of this matter only as a means to report, items the other had legal significance. Later this register also welcomed the appointment “arcaria” (the loan and deposit annotative), but the book never became a ledger, always remained an auxiliary book.

The Kalendarium is a register that has the exact same today. It was the book of interest loans, in which, therefore, were noted transferred to the funds provided, the period of repayment and the date of the payment interest (which

were always attached to the Kalendae), and the capital repaid and interest received.

The Libellus Familiae or “Liber Patrimoni” appeared as a result of the tax reform year 67 a.c., which settled to tax, in addition to real estate, all personal property, which should be declared under oath in the census, it was specified categories of balance sheet items, such as “praetia”, “supellex”, “aurum” “argentum”, “factum”, etc.

## **6. About the existence of the accounting system of double entry bookkeeping in ancient Rome<sup>8</sup>**

Many scholars have investigated the origin of double entry bookkeeping and they have made several contributions all adequately argued that it is difficult to comment on. Particularly towards the end of the 18th century some scholars have even suggested the creation of double entry bookkeeping already at the time of the Romans. The dispute among scholars on the existence of double-entry method in Roman times dates from the contents of a publication made by the historian B. G. Niebuhr<sup>9</sup> who in a footnote to Cicero’s comment for a Fontejo’s oration<sup>10</sup> affirms the existence of double entry already in Roman Times. Although Niebuhr doesn’t include adequate evidence to support the thesis of existence of double entry, its fame and estimate as a historical have convinced many scholars to consider the hypothesis very truthful. There are many scholars who accepted this hypothesis especially Italians and French

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8 S. Coronella, Sull’esistenza della scrittura doppia in epoca romana: una disputa dottrinale sul finire dell’ottocento, in *Contabilità e Cultura aziendale*, n. 2, 2006, pp. 63-88

9 Berthod Geog Niebuhr was a historian, born in Copenhagen in 1775, from 1815 remained seven years at the Vatican to research in the archives where he also found fragments of writings by Cicerone, Tito Livio e Seneca.

10 Manio Fontejo has held many public works in Rome and in areas of the Roman Empire. He was accused of embezzling unduly during his Office as public Treasures money for which he was tried. Cicero made two speeches in his defence that Niebuhr has found the fragments where in some notes he describes rules for keeping of accounting books.

including Cantù<sup>11</sup>, Rossi, Bariola, Irson, Garnier, Le Gendre.

Especially the dispute in Italy has had between Giovanni Rossi<sup>12</sup> that with many arguments claims that double entry could not exist at the Romans' time and Plinio Bariola<sup>13</sup> that conversely argues the opposite thesis.

Rossi explains and demonstrates how in Romans times there were no conditions for existence of double entry. He analyzes all major books of Romans to prove they have not precise information on how to count with Roman figures and because of complicated numbering system they should use the abacus. Rossi also highlights that the Romans were not good mathematicians that it is difficult to believe that they could devise a complex and structured accounting system. As regards the position of Niebuhr, Rossi after carefully reading the oration of Cicero states that Treasures had to record the amount of money given to the loan and the ones collected to keep memory according the methodology of the round of matches but this is not sufficient to create the double-entry system. Rossi concludes that for the origin of double entry are needed some concomitant which the invention of the paper, the use of Arabic numerals the development of trade and new accounting rules that occurred only between the 13<sup>th</sup> and 14<sup>th</sup> century period in which the double-entry accounting was born.

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11 C. Cantù, *Storia degli Italiani*, 4<sup>o</sup> ed., Unione Tipografico- Editrice, Torino, 1893, pag. 273. Where in the Note n. 39, proof that according Niebuhr the Romans kept double-entry bookkeeping so it has't been invented by Lombardi

12 Giovanni Rossi was a well-known scholar and the author of numerous publications on the history of accounting. In particular the work that contains insight on the unfounded assumptions of Niebuhr are contained in *La computisteriadeiromani e l'invenzionedellascritturadoppia*. A proposito di una opinione dello storico G.B. Niebuhr con una lettera a Sua eccellenza Gaspare Finali Senatore, già Ministro del Regno d'Italia, Società Editrice Dante Alighieri, Roma, 1896.

13 Author known for publication on the history of Italian Accountancy and his stance in defence of the possible existence of double entry already at Romans'times argued in *I Romani e la Scritturadoppia*. Confutazioni dell'opuscolo del Prof. Giovanni Rossi- *La computisteria dei romani e l'invenzione della scrittura doppia*. A proposito di un opinione dello storico G.B. Niebuhr, Cavalli e Salmi, Milano, 1897.

The approach of Rossi was promptly refuted by the scholar Plinio Bariola<sup>14</sup> stating that existed at the time's Roman the right conditions for the emergence of double entry. He says more precisely that the flourishing of trade, knowledge of arithmetic established by the practice of business and the need to keep adequately controlled by appropriate records indicating the essential conditions for the emergence of double-entry bookkeeping. Bariola states in contrast to Rossi that the Romans were good and knowledgeable users of mathematics; this is demonstrated by their ability to synthesize statistical data in the *Breviarium* and by the presence of special schools in arithmetic. Bariola stated in his article that the Romans were very fast in performing the calculations for both the mnemonic exercise and for the use of the abacus. Rossi and Bariola with appropriate arguments come to the opposite conclusion leaving the current scholars reasonable doubts about the existence of double entry at the time of the Romans. Admittedly, this controversy has contributed to enrich the study of the history of accounting.

## **6. Conclusion**

This paper has attempted to reconstruct the history of accounting that always been identified with the history of the account and often also with the history of writing. It is observed as the evolution of accounting disclosures has gone at the same time with economic, political and social development of various populations for which over time has perfected. Environmental conditions, the type of economic organization were found to be factors that have most contributed to the development of knowledge accounts. We have investigated how different people kept account of what had to pay and how much to charge.

The Sumerians for the simplicity of their economy and corporate structure had a rudimentary accounting, Egyptians are characterized by a wider economic system and diversified have developed a more complex system included the figure of the scribe and a pyramid organization of society,

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14 P. Bariola, *I romani e la Scrittura doppia. Confutazione dell'opuscolo del prof. Giovanni Rossi*, Cavalli e Salmini, Milano 1897.

the Greeks, despite the few historical documents had developed a transparent and popular accounting system with the public exposure of accounting documents because the power belonged to the people.

The Romans taking the knowledge of conquered peoples gave a strong innovative contribution to accounting measurements by introducing many tools used today. They have introduced the *Adeversaria* that corresponds to the current Prime Note book and the *Codex Accepti ed expensi* the current Cash Book. In this regard some scholars have hypothesized the existence of double entry-bookkeeping system already in Romans time arguing that the terms “accepti” and “expensi” are equivalent to the current “input” and “output” due to the literal meaning of the verbs “to give” and “to have”. Undoubtedly the balancing accounts principle which represents the cornerstone of the double-entry accounting system was already present at the time of the Sumerians but not enough to structure a complex accounting system.

In recent years the scientific debate about the origin of a double-entry accounting system has focused mainly on the analysis of the existence of a similar or even the same accounting system in ancient China. The recent economic growth of the Chinese economy, the opportunity to examine accounting documents found in archives that after many years of closure were reopened have access to the debate about the existence of a wide range of accounting knowledge already during the Zhou dynasty ( 1100-771 BC). We have evidence of the existence of records specifically the *Cao Liu* and the *Qing Zong* in which the accounts were structured according to the form of opposite sections, were used the symbols *Ru* and *Chu* to detect the increments and decrements of possessions of the Empire. Many recent studies<sup>15</sup> are

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15 R. H. Macve, *Insights to be Gained from the Study of Ancient Accounting History, Some Reflections on the New Edition on Finley's The Ancient Economy*, *European Accounting Review*, n.11, 2002, pp. 453-471; R. H. Macve, *Some glosses on Greek and Roman Accounting*, *history of political Thought*, Vol. 6 reprinted in Parker and Yamey, 1994, pp. 57-87; K. Hoskin, R.H. Macve, *Contesting the Indigenous Development of Chinese Double-Entry Bookkeeping and its Significance in China's Economy before c. 1850*, 23<sup>rd</sup> Accounting History Review Conference, 12-13 September Cardiff University, 2011; G. Menzies, *The Year a Magnificent Chinese Fleet Sailed to Italy and Ignited the Renaissance*, Herper Collins, 2008, pp. 81

investigating the existence in ancient China by a constellation of knowledge and possibility to develop an accounting system as the one originating in Europe in 13<sup>th</sup>.

The same can be said also regarding the Persian civilization and those which existed in South America. The global picture would then emerge as a more holistic view of the evolution of accounting and its practices.

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#### **KIBRIS'TA TÜRK MUHASEBE DÜŞÜNCESİNDE İLKLER - IV**

Kıbrıs'taki Osmanlı vakıflarının Türk muhasebe düşüncesindeki bir başka öncülüğü mali tabloların denetlenmesi ve denetlenen mali tabloların Official Journal'de denetçilerin adları yazılı olarak yayınlanmasıdır. Bu işlem, Türk işletmelerinde ilk bağımsız denetleme işlevidir. Türk muhasebecilerinin tuttıkları vakıf defterlerindeki kayıtlar, bir İngiliz ve bir Türk denetçi tarafından denetlenmekte ve denetleme raporunu ikisi de imzalamaktadır. Bu denetleme raporu konsolide mali tablo ile birlikte Official Journal'de yayınlanmaktadır.

Böylece Kıbrıs'taki Türk muhasebecileri, hem çift yanlı kayıt yöntemi, hem konsolide mali tablo kavramı ve hem de bağımsız denetleme ile Türkiye'deki meslektaşlarından önce tanışmışlardır. Bu bilgi birikimi ise, Osmanlı vakıfları sayesinde gerçekleşmiştir.