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CONTEMPORARY ECONOMIC AND ACCOUNTING EVOLUTION

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Abstract: Still can not be said with absolute precision when, how and where the accounting appears. Definitely, one thing is certain that has been necessary passing of several centuries to shape its contemporary appearance. The process runs slowly and cumbersomely, alternating periods of progress and stagnation. The found documents and evidence of archaeologists, anthropologists and historians reveal that the accounting is first formed as a practical activity and much later as scientific knowledge. The purpose of the report is to uncover the relationship between accounting and economics following out the development of the accounting techniques from Antiquity to the present day.
Keywords: accounting history, accounting techniques, accounting methods

INTRODUCTION

The beginning is placed in the primitive society when during the organization of the household starts to mark a consumption of food, clothes, implements, etc. The need to mark facts and events in economic life is realized with the development of the economy and the establishment of exchange /trade/ relations at the advent of the first civilizations along the Tigris, Euphrates and Nile rivers. Then the first accounting records arise, and with them, the ancient record-keeping (elementary, primitive accounting).

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The ancient record-keeping is the accounting of anciant world (from about 4500 B.C. to 500 B.C.). It is characterized by recording of economic life facts in chronological order, applying the naturalistic concept. An object of reporting was originally the property and inventiry (including military prey and harvest), income and expenditure of merchants, landowners and, as well as, the possessers. With the development of the economy and the trade, the volume and type of commercial operations[1] increases, and with them the objects of record-keeping. In separate books begin to describe arised relationships – receives and payables.The system of accounting in ancient world fully matches the level of development of the economy and social relations. It has a limited scope and its main purpose is recording and storing data on the facts of economic life on merchants and owners in the Ancient East. The record-keeping in the hoary Antiquity is a good basis for developing and improving accounting in Ancient Greek and Rome.

The Ancient Greek and Rome creates favorable conditions for the development of bookkeeping. Book-keeping is used as a main accounting system until the 11th–12th centuries. Upgraded it continues to be applied to small and medium-sized enterprises and currently in some countries in Europe and in the world[2].

The book-keeping (eg, simple accounting unigraphy, aplegraphy) is a system of accounting which registeres the transactionsin individual farms and in the state through the use of ledgers (accounting books). The main objects were property, inventory, cash, accounts receiveble and payable.

[1] For example, in Phenicia, landlords are starting to make deals for renting land; In Babylon start the transactions for the purchase and sale of goods for a commission, for money deposits, credit operations. Already during VIII century B.C. in Babylon the first commercial houses were founded. Documents have been found for the record keeping of Negoydin Iggibi's trade house "Sons and grandchildren Iggibi" and those of the Mursh commercial house.

[2] Bulgaria is not among those countries under current accounting legislation.

The shape of book-keeping is gradually being formed in ancient Greece due to the impact of the socio-economic environment on the development of trade and industry; the appearance of coins[3] and the spread of money as a means of payment[4]; the evolution of banking and the enlarge of credit and deposit operations; the impose of commodity-monetary exchange. As a result, are changed: the purpose and tasks of accounting; the objects of accounting sysytem, as well as, the organization and the technique of accounting.

There are a number of key aspects that once and for all change the accounting sysytem:

(a) It has been introduced a special recording system of owners' (bankers, farmers, stock-breeders) and government transactions;

(b) It is established a separate recording and safe-keeping system of money (coins);

(c) Government accounting is becoming public and thus the practice of hoary Antiquity the accounting records to be available to a limited circle of people (possessers, owner, priest and clerks) is stopped;

(d) Is is created the practice of use abacus[5] – in the calculations to use abacus.

The accounting (bookkeeping) in Ancient Greece is characterized by:

- introducing and using money for payment;
- applying of chronological recordings;
- start step-by step using sysytematic records;
- preparation of periodic reports;
- branch specialization of recording;
- the using different books according to type of transactions;
- progress in government reporting (called later – budget accounting);
- laid are the bases of budgeting (clerks, called logists, have been using a special book on forthcoming receivables and payments);
- strengthening the role of control over activities (mainly state spending and money safe-keeping).

It sets the foundations of the bookkeeping, which has been completed in Ancient Rome.

The improving of accounting in Ancient Rome is due to the achievements of Roman law and its influence on all areas of economic life in the Roman Empire. The development of the economy and the trade, the appearance of the first associations and the establishment of an individual farms also advantage its development.

Using the progress of ancient Greeks, the Romans further develop accounting by streamlining techniques of accounting recording, introducing a system of accounting books to reflect business transactions.

The many remaining monuments testify to the fact that accounting in Ancient Rome leaves lasting traces:

- the introduced by Romans accounting terms are still in use – cash, account /ratio/, income (acceptum), expense (expensum), saldo, account book (ledger), open/close account, balance setting, etc.;
- initiate the accounting regulation[6], including the requirement to document the transactions and the use of accounting registers as evidence in litigations;
- rationalize accounting by introducing the system of accounting books.

During the Roman Empire, accounting reaches a peculiar peak in its development – has been set up a unified system for recording and reporting cash, accounts receivable and payables relationships and property with established rules for keeping accounting records and taxation. Even perfect for its time, the book-keeping has flaws. The biggest among them is its inability to trace the nature of the underlying economic transactions by revealing relationships and dependencies between the objects of accounting records. For the imperfection of book-keeping also testifies:

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[3] It is a well-known fact that around 685 BC in the ancient kingdom of Lydia (today's Greece) the first coins were cut. They replace the exchange metallic pieces used until then (https://bg.wikipedia.org). Bank-notes (paper money) appeared in China in the 7th century. In Europe, the first bank-notes were issued in Stockholm in 1660, but became popular only in the 18th century.

[4] Money is known in antiquity, but is used as a means of exchange (goods). As money equivalents before starting a minting of coins, they have used objects, that have been set as valued – grain, salt, metal (gold, silver, bronze), leather, and so on.

[5] The abacus is a board of calculus (ball-frame) where are strung pebbles, which was used in the 5th century BC. in the ancient East, the Arabs carry it to Ancient Greece and Rome. It is supposed that for the first time the ball-frame appears in Babylon, in 3000 BC.

[6] Still in hoary Antiquity there are evidences of regulation of accounting (the laws of Hammurapi in Babylon, the laws of Manu in India), but it concerns rather the need for recording than regulating certain rules for its conducting.

• the descriptive approach to reflecting economic processes and operations in accounting books just were recorded registration of facts and events, connected with economic life in the chronological order;

• the lack of a system for controlling accounting entries and error correction; inability to generaliză information and establish a result of the activity;

• the lack of comprehensiveness of the objects of accounting records – only cash and related acconts receivable and payable are reported and controlled, the recording of material resources is reduced to a presentation of the residuals on accounts for them in the inventory report, etc.

The decline of Rome marks the end of one era. Its consequences are a strongdecentralization of power, which gives rise to the apperiance of new states, the strengthening of the influence of the church and the establishment of a "severe socio-economic system". This has a detrimental effect on trade and banking, and with them also on accounting. For accounting a period of stagnation covering the entire early Middle Ages began almost to the end of the 11th century. In the second half of the 12th century, with the development of the economy, the need for exchange and trade increased, the banking, the craftsmanship are developed. Is created a favorable environment for the revival of accounting. It is a driving factor for this expansion of trade and the formation of a new class - traders - wealthy, educated and enterprising people with the pursuit of new knowledge. With the growth of trade, book-keeping does not meet the needs of traders inrecording. So they gradually perfect the Roman system of accounting books. Double entry appears.

The Double-entry (also called double-entry accounting system, diplography) is a system for recording and reporting business facts and phenomena based on the principle of duality[7]. It is believed that begin to be used first in Italian cities-states with well-developed commercial and banking activities during the late Middle Ages (Florence, Siena, Genoa, Venice). The first fully-kept commercial papers prepared according to Double-entry rules date back to 1340 and are of the city municipality in Genoa. According to the studies of Raymond de Roover, elements of double-entry were found in Florence (Littleton & Yamey, 1956, pp. 116–17) in 1211. Relatively well preserved are the fragments of the commercial papers of the Florentine families Perucci (1286–1380), Fini (1296–1305), Farolfi (1299–1300), Dathini (1335–1410); as well as large trading families from Siena, Genoa and Milan. Among them, "unique in their completeness and fill" are Francesco Dathini's archives, preserved till today, including more than 5000 account-books and more than 10,000 business letters, not to mention several bundles filled with bill of exchange, insuarance polities, early cheques, bills of lading and other documents" (Littleton & Yamey, 1956, p. 140). The greatest achievement of Italian traders in the 13–14 century is "to fuse all heterogeneous elements into an interated system of classification in which the pigeonholes (T-accounts, P.P) were called accounts and which rested on principles of dual enties for all transactions" (Littleton & Yamey, 1956, pp. 117–118). Thanks to the application of this record-keeping approach of account books, accounting is being used as a management and control tool.

The technique of accounting books by Italian merchants (the Venetian method) was first described by Luca Pacioli in his work " ***Summary of arithmetic, geometry, proportions and proportionality***" (Summa de Arithmetica Geometria Proportioni et Propotionita), Treatise IX "For Accounts and Subscriptions" (Traktatus de computis et scipturis), issued in 1494 in Venice[8]. The sequence of actions was including two sets of operations: preparatory and actual. Prior to start keeping of trade books, each merchant had to prapere detailed inventory (non-current assets register). In it, a separate sheet or book is described the movable and immovable property owned by first indicating those that are more valuable; the quantity; the location and date at which that property is available. The actual actions included the sequential completion of three accounting registers: Memorial (Memorial Book); Journal (Journal) and General Ledger (Notebook).

The Venetian method is the first complete sample of double-entry accounting. Undoubtedly for its time, the 12th–15th century is innovative, it is an unique and perfect. Established for bookkeeping of traders, it starts to be applied in agriculture and industry and all other sectors of the economy. For the period from the 15th to the 19th century it conquers Europe and America. New accounting methods, new accounting techniques for keeping Double-entry, such as Italian, French, German, English, Belgian, Dutch, American, Spanish etc., are gradually appear and enforce. The basis of each of them is the Venetian model,specific are the procedures

[7] The principle of duality, also called the principle of dual reflection, means that each business operation is reflected at least twice, causing changes at least in two objects. It is derived from the law of equilibrium (the second law of harmony), according to which everything in the Universe is based on the principle of the two poles, the two antipodes, the two opposites that interact between themselvs and at the same time are in equilibrium (http://wisespace.ru)

[8] In fact, another Italian Benedetto Cotrugli wrote a work titled "For Trade and Perfect Trader" in 1458, in Naples. The fact that it was printed in 1573 is a reason not to be considered the first printed accounting work.

performed, the number and type of accounting registers used, their form and content; their sequence for replenishment. They also differ in "the choice of names of accounts used; ordering accounts in the General Ledger; type and number, transfer of operations from the source books into the General Ledger" (Dobrev, 1922, p. 179).

In fact, all accounting systems (methods) that are in place by the end of the 19th century rationalize the Italian method as:

• Introduce the use of synthetic and analytical accounts and thereby create accounting information in two cuts – total for the accounting reading object and specifying by type;

• Organizing monthly close of accounts and preparing monthly reports;

• Augmentation the role of internal inherent accounting control;

• Facilitating the accountants' work and specifying the accounting technique by reducing the number of accounting operations by transferring amounts under the accounting registers;

• Allocation of accounting work and the forming of the accounting profession.

The improving of Double-entry technique is the result of the changing environment and the increased management information needs. The continuity and transitiveness are two qualities that can characterize this process. Accounting methods appear sequentially, as well as each of which improves its predecessor.

Seen from the standpoint of time from the middle of the XVIII century industrial revolution was the main motive power of change in the economy, management, social and public relations. Each phase of its development has an impact on the modernization of accounting and technique of keeping accounting registers.

The beginning of the Industrial Revolution takes place in the second half of the 18th century in the early 19th century in England. This is a turning point for the development of the economy. Inventions and technical innovations stimulate: the development of industrial production (textile industry, chemical industry, machine building, coal mining); the construction of roads, canals, tunnels and railways; the mechanization of agriculture; opening new places of work.

With the establishment of the industrial relations, the concept of accounting is changed:

– the role of accounting for management is strengthened, with the registration of transactions and the disclosure of their essence is aimed at managing theeconomic processes in the enterprises /factories/, i.e. accounting information is actively used in taking management decisions;

– the primary task of accounting is to establish a financial result (profit or loss);

– introduced are new concepts and categories – costs, current value, long-lasting assets, depreciation, cash flow;

– the scope of accounting is expanded – created is a system for accounting for costs, long-lasting assets and capitals movement.

Gradually, the industrial accounting displaces trade accounting. The Italian method adapts to the new accounting needs in the Great Britain[9], Western Europe, North America and the world.

After the mechanization (first industrial revolution, Industry 1.0) and mass production (the second industrial revolution, Industry 2.0), automation and computerization (the third industrial revolution, Industry 3.0) is marked a new stage in the development of accounting and accounting techniques. Little by little, the manual accounting has been replaced by automated accounting information processing. The appearance of computing machines contributes to a significant extent to the evolution of accounting[10]. Initially, they only used to perform arithmetic actions. With the creation of the first accounting software products (IBM 9Pac, SAP, Vsicalc, Peachtree Software) in the 70s and 80s, there is going on a revolution in accounting. The process of automation is

[9] It should be noted that in 1796 Edward Jones creates an English bookkeeping system known as the "English accounting model". This system, according to Jones, is "compressed; requiring very little work; mistakes are easily noticeable and books can be bringed to a conclusion every month "(McNiel, 1934, p.33). The system uses two accounting registers – Journal and General Ledger. The journal reflects every economic operation at the time of its execution. It consisted of three columns – grounds, debit, and credit. Amounts by the accounts are transferred to the General Ledger, which instead of two has 10 columns. For a short while, Jones' English system has been subject to fierce criticism and challenges the rejection of double-entry accounting. It is not accepted. Even in 1820, Jones renounced it by himself.

[10] In this sense, the transition to automation of the accounting system begins with the invention of the mechanical calculator by Blaz Pascal (1641), through the digital mechanical computer (Gottfried Leibnitz, 1672), the automatic computer (Charles de Colmar, 1820), analytical machine (Charles Babbage, 1822), electromechanical tabular machines (1920), perfocards (1928), the first accounting machine (Dickinson, IBM, 1940). The development of the first computers (in the 1970s).

irreversibly transformed into computerization, and manual book keeping remains in the past. Changed is the model of accounting. The computer accounting is a classical model of accounting that uses the benefits of technologies to lighten and improve the accounting process. In this sense, it retains the logical consistency of manual accounting keeping actions, but the operations carried out by the accountants consist mainly of data inputs, since a large part of the actions of calculating, disseminating, summaring data, preparation statements of accounts, reports, incl. VAT jounals, and ect., are automatically processed.

By computerizing the accounting system:

• The entering data and the carrying about of the information in the accounting registers is much faster and easier;

• The accounting information is:

– systematized, well-arranged and located in one place (hard drive, server)

– accessible and can be provided in different form according to needs;

– if necessary, it can easily recover,

– is updated automatically with the entering of new data,

• the mistakes are reduced as a result of "illegible" handwriting and carrying the amounts on the registers;

• making issuing of inquiries, extracts, reports and statements easier;

• issues related to exchange rate fluctuations of the various currencies are minimized;

• increased is the work efficiency, effected are economies of time and resources.

The undisputed computer accounting systems eliminate many of the imperfections and weaknesses of manual bookkeeping, but they themselves are not devoid of any deficiencies. As more significant can be indicated:

- ✓ the maintenance costs of the accounting department are increased;
- ✓ theinformation can be manipulated;
- ✓ there is a risk of system failure and loss of data;
- ✓ the information security is hard to guarantee;
- ✓ additional qualification is required for accountants to work with accounting software.

Their massive implementation have found solutions to limit their impact. For example, competition has greatly reduced the cost of accounting software and the necessary techniques for its use; programms for virus protection and cyber attacks have been developed; the study of accounting software and information technology became part of the training course of accountants etc.

The development of information technology and the digitization penetration have evolved computerized accounting systems and the accounting has moved to a new stage in its development – digital (electronic, e-) accounting. The digital accounting is an accounting system that "refers to the represention of accounting information in the digital format, which can be then be electronically manipulated and transmitted" **(**Deshmukh, 2006, p.1). It is defined as "accounting that is specific to the digital economy"(Tigui, http://www.irma-international.org).

E-Accounting is a computerized accounting system that **"refers to the formation, representation and transmission of financial data in an electronic format"** (http://www.pcg-services.com)**.** There are three levels of accumulation of information:

– software ensuring for a department (specialized accounting software);

– software ensuring of several departments that are connected in a unified system (integral systems); and

– anunified enterprise resource planning system (ERP – Enterprise Resource Planning).

Each of these is a type of information system that provides data about business processes that are running in the enterprise, the degrees of coverage is different. For example, in case of a separate software ensuring by specialized accounting software, only the accounting reading process is analyzed and controled. ERP systems, on their part, ensure a common database that maintains information on all departments and business processes. It allows to create, analyze, plan and control both the enterprise's overall business and, at the same time, to monitor each process.

Depending on where information is collected and stored, modern accounting systems are based on servers, local area networks (LAN), or wide-area networks (WAN).

Over the past 6-7 years, with the development of information and communication technologies and the apperiance of Software-as-a-service (Saas), personalized platforms (cloud or cloud space) have been created on the Internet to facilitate access to data everywhere, any time and from any kind of devices that support the Internet. Initially, the cloud spaces were used only to store and / or share files, documents, photos, and movies. By extending their scope of application, they are increasingly available as business management solutions, including the accounting process.

From a historical point of view, the automated processing of accounting information is in the process of development and has now gone through three stages: computer accounting, digital(electronic) accounting and meta-digital[11] (cloud) accounting. They run sequentially, each ofthem having intermediate levels that allow the transition from one stage to another. (Figure.1)

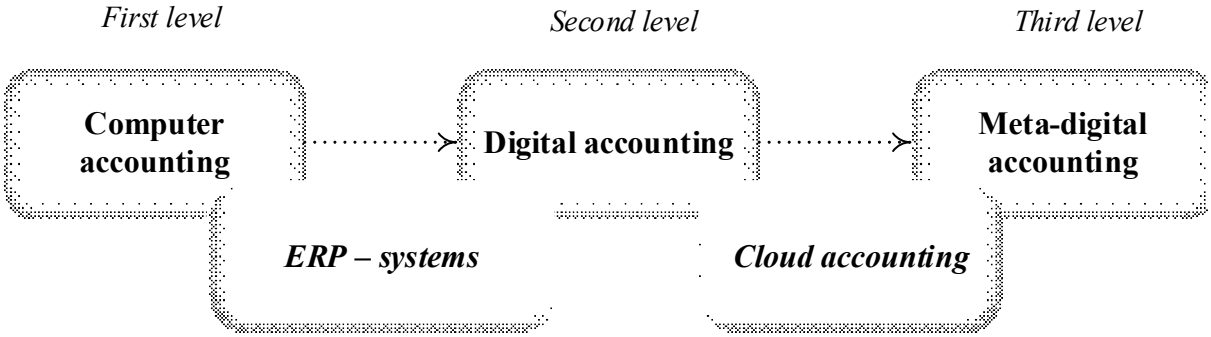

Fig. 1. Accounting automatization level

CONCLUSION

In ***conclusion*,** the historical progress in the development of the economy and society predetermines the appearance and evolution of accounting. Three are the stages of development that go through the accounting techniques: ancient record-keeping (primitive, elementary accounting), bookkeeping, and double entry. Each of them is time-determined, characterized by a definite application specificity, using a typical toolbox (accounting method) and its subject to reporting are definite objects.

The rationalization of the accounting system is dictated by the growing need for information as a result of changes in socio-economic conditions – establishment of trade relations, division of labor, industrial revolution, financial capitalism, automation and data exchange in a virtual environment.

The process runs slowly and consistently. In its development the accounting passes through periods of prosperity, followed by periods of stagnation. In their totality, they outline the history of accounting as a practical activity that continues to develop and improve.

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