https://doi.org/10.26881/sim.2017.4.21

Vita Semanyuk

THE THEORY OF ACCOUNTING IN THE CONTEXT OF MODERN PARADIGM OF SCIENTIFIC KNOWLEDGE

ABSTRACT

Accounting as a practical activity was being developed during millennia but the final forming of accounting science is impossible without the development of its modern theory, which is correspondent to the requirements of scientific doctrines of the 21st century. The existing theory, in many cases, is not good at all and, in general, it is the set of technical approaches of realization of double record. The results of economic investigations of the world level show the impossibility of modern accounting science to fulfill its functions because of its conservative character and it was not changed during many years. All these investigations have a direct impact on economy and show that the understanding of the basic postulates changes and the stress is made on psychological and social aspects and avoiding of material ruling.
Keywords: accounting, scientific knowledge.

Introduction

The problems of accounting can be found at philosophical and sociological level that is connected with the forming and development of "alternative" views of economy, investigation of institutionalism, and study of economy in general and separate enterprises as a system forming, which can be compared with the vivid organism that can develop. In spite of terabytes of information and many investigations, economy is not well understood science and it is complex and not understandable nowadays. It is difficult to say why it is so, maybe, because this science is not exact like natural sciences are. The main role is in behavioral aspects

of human existence and the wish to make a rational choice in economic processes. However, in general, the human behavior is irrational than rational. It is the reason of inaccuracy of neoclassical theory in economy, which is based on the axiom about the rational human choice (the relations between benefits and expenses) and correspondingly for an enterprise, it is increase of production and cutting of prices for the increase of the sales volume.

1. Modern economic investigations and their influence on the theory of accounting

"Dream society", "happiness economics" are terms occurred in investigations and changing the direction of the world development taking into consideration intangible needs and human wishes. Psychology plays the main role in economy and economic relations (Coase transaction cost theory is based on it, if counteragents consider that the agreement is doubtful then the rate will be higher and the agreement will be more expensive, if partners' reputation puts in question then the agreement will be cheaper in its realization). Rationality, which is in base of economic theories is not the postulate, a person does not always behave rationally. The concept "utility" or "marginal utility" are not adequate understandable and theoreticians already pay attention to it.

Kenneth Arrow and John Hicks were awarded Nobel Prize for their contribution into the general economic equilibrium theory and welfare theory in 1972 and Herbert Simon was awarded Nobel Prize for new investigations in the process of taking decisions at economic enterprises 1978. Amartya Sen was awarded for his contribution into welfare economy in 1998 and Angus Deaton was awarded for his investigations in the sphere of consumption, poverty and welfare in 2015 (nobel price).

Taking into consideration these facts we can see that the development of society and correspondingly behavioral sciences (including economy and accounting science) is far from absolute priority of "the theory of rational choice", so far as, human nature is not always rational. The rational choice is impossible because of asymmetric information, differences in motivation stimuli and different psychologically sociological human peculiarities. James Mirrlees and William Vickrey were awarded Nobel Prize for their basic contributions into economic theory of stimuli under the conditions of asymmetric information in 1996, George Akerlof, Michael Spence and Joseph Stiglitz were awarded for their analysis of markets with asymmetric information in 2001. Daniel Kahneman was awarded for his understanding of complex approach to psychological investigations in economy especially those that concern judgments and taking decisions under the conditions of uncertainty in 2002. Friedrich von Hayek developed the theory of information incompleteness, which is inevitable during the description of the complex system without taking into account anthropological, culturological and information and theoretical aspects [Хайек Ф.А., 1945: 519–530].

All these investigations have a direct impact on economy and prove that the understanding of the main basic postulates changes, the stress on psychological and social aspects and deviation from the government of materialism are made. Most services are non-material but they have real price and they exist only as internet resource. Many immaterial resources are used in net forming the intellectual epoch. Most factories and plants are built using cheap labor force and there is a question, "What do big seven countries (G7) built and what does allow them to have a ruling position in the world?" These countries produce intellectual product, ideas and innovations where human capital, knowledge and creativity are the main productive resources. Their GDP is mainly formed using the intellect but not the main means. The same situation is in business. Top richest countries, the budget of which is bigger than the budget of some countries, they do not produce material recourses and, mainly intellectual ones. That is why, those countries having considerable material resources are not leaders in the world. There is a term "resource course", which means that a country becomes less competitive in technological spheres because of its natural resources. The same service can become material and immaterial. That is why, corporations can achieve leader positions using and developing intellectual potential of their employees.

The trends of economic development are in total automation, which can be digitized using algorithmization. In literature, we can find the next thesis, "Ordinary accountants will disappear and they will become managers without data" [Геращенко, 2015: 286]. However, in situations when communication, critical analysis, understanding of emotions and creativity are needed – a computer is powerless.

One of the forms of interdisciplinary synthesis can be a transfer of more realistic human model taken from other sciences into economy, for instance D. Kahneman's and A. Twersky's investigations about "prospect theory". These scholars were awarded Nobel Prize for their contributions. The ideas of social psychology were used in these investigations. People make their choice not using maximum benefit but using already ready heuristics on the base of "psychological logics". Another famous example of cooperation between economy and psychology is the use of "hierarchical model of human needs" presented by A. Maslow [Maslow, 1954].

Danish futurologist Rolf Jensen in his book "The Dream Society: How the Coming Shift from Information to Imagination will Transform your Business" described post-information society where emotions will predominate, attract and motivate. "Imagination is behind each new product. Dreams create real things with labor methods", the scholar described the future economy emphasizing that business will create welfare creating a market with care, love, adventures, spirituality, beliefs etc [Йенсен, 2004]. Consumers, which trust a brand symbolizing for them reliability or other advantages are ready to pay additional costs to have such product. If reputation is lost then the value is decreased. Consumers themselves provide a product with value besides, the analytical approach prevails over the irrational beginning. Trademarks are sold proving that economy and it is very

sensitive to our thoughts, perceptions, wishes, subjectivity and responsibility, if the choice is made under the influence of external circumstances or the human mood. Behavioral economy becomes a modern trend, makes unexpected conclusions, although it is often based on old instruments having not clear theory. Charles Jacobs in his book "Management Rewired" proved that at first, the decision is taken and then its proofs are looked for [Джейкобс, 2010: 208].

"Modern economists are convinced in that fact that there is no ideal system. A human nature is not ideal. Economy as a derivative can not be an ideal one" [Геращенко, 2015: 286]. It sounds Utopian for the readers living in the 21st century but one should not ignore such approach or forecast. The surrounding world is changed, the evolution and progress will ruin it but we only cause damage to the development of economy and society trying to save the world.

Scholars see the causes of catastrophes in the changes of technological structures and that some individuals, enterprises, spheres or countries are not ready to cardinal transformations. Successful enterprises are usually open to society providing clear information; they publish their financial and not financial reports, plans and strategies causing trust to them. Qualitative assessments, motivations, self discipline, ability to be adaptable to surrounding world change material assets expressed in quantitative indications and it is not within the scope of doctrines of the 20th century.

2. Institutional investigations in the theory of accounting

Many academic economists follow the new institutional economy, among which is Ukrainian scholar V. Zhuk, who presented his work "The Principles of Institutional Theory of Accounting" [Жук, 2013: 408]. Institutional approach to the theory of accounting is developed within the statements that institutional economy is interdisciplinary science at the intersection of economics, theory of organics, political studies, sociology and anthropology, genetics and psychology. Adherents of institutional theory criticize the orthodox economy and support the evolutional approach to the development of economy and stress on common actions and institutes, and prefer empiric investigations than deductive ones.

D. North emphasized the importance of non-formal laws in his book, "Formal laws constitute a little part of those factors, which define our choice, and the structures of management depend on the rules of conduct, social norms and traditions" [North, 2005]. That is why institutions, including developing economy as a result of evolution and progress/effectiveness of economic activity depends on the possibility to manage the risks and dangers, what is impossible without creating and using the information. *Arthur Denzau and Douglas North* studied relations between institutes and the process of taking decision under the conditions of uncertainty [Denzau, North, 1994: 3–31].

In accounting terms, a firm is a function of production that transforms expenditures into income, so called "a black box" having entry and exit. New institutional

approach to understanding a firm can be found in *Ronald Coase's* work published in 1937 "The Nature of Firm" [Coase, 1937], where he explained the dependence of an enterprise not only on technology but also on costs for business (transaction costs). *Oliver E. Williamson* [Williamson, 1981: 548–577], *Lawrence R. Klein* [Klein, 1984: 584], *Oliver S. Hart* [Hart, 2011: 101–113] and other scholars showed that managers can decrease "transaction costs" but there will be problems with information, assessment of decisions, motivation etc.

Accounting system should solve problems creating relevant information resources. Besides, in accounting terms, an enterprise should not be considered only as the whole main and current assets, property employees and capital as some managed system limited by some institutional rules. Such approach makes it possible to see the problem in finance, accounting, and management and understand their role for an enterprise to increase the competence of a firm at the market.

Alfred Marshall and Joseph Schumpeter introduced the terms "competence of a firm" or "a firm potential" into scientific circulation. These terms were developed in works *E. Penrose* "The Theory of The Growth of The Firm" [Penrose, 1995] and *Richard R. Nelson and Sidney G. Winter* in their work "An Evolutionary Theory of Economic Change" (1982). In these works, competence or potential were explained not like the whole contracts or rights and mutual control (according to institutional theory) but the centre of knowledge, which depends on the absence of accurate information in a firm. Joseph Eugene Stiglitz investigated markets with asymmetric information (Nobel prize in economy [Stiglitz 2003: 6–26]), proving that information is the biggest value and he suggested new schemes of development of organizational relations.

In strategic management, organizational skills are considered as an important resource of a firm, which is the main reason combining with the information resources that cause the evolution. Such approach to understanding of a firm in accounting is challenging in the sphere of the development of accounting as a science but these investigations are still abstract and need to be investigated empirically. Consequently, accounting science should modernize information about the inner building of an enterprise, its functioning, external surrounding and market relations for economists.

3. Philosophical aspects of the development of accounting theory

Accounting community consciously does not use philosophical knowledge; probably because of absolute priority given to their own method in accounting, (we mean a double record). Altogether, philosophical approach and epistemology can stimulate to renew accounting knowledge, its methodological materials and to change the paradigm and review the basic principles. Some scholars use philosophical knowledge and it influences the accounting knowledge. Scholars, who suggested non-orthodox principles of accounting, seem to be original ones

and other scholars do not understand them, therefore, they are forced to be philosophers themselves and criticize "the mainstream".

Methodological principles in accounting were used within methodological problems of economy as a whole when scientific works written by the following scholars appeared: K. Popper, T. Kuhn, I. Lakatos and P. Feyerabend and the concepts of falsification, "paradigm approach" and "methodology of research programs" were used in economy.

The next economists R. Lipsey, T. Hutchisan, G. Shackle, B. Caldwell L. Bouland, M. Blaug, F. Machlup, and G. Fiby are famous all over the world. Such scholars as A. Riahi-Belkaoui, Harry I. Wolk, James L. Dodd, John J. Rozycki, Morton Backer, R. Mattessich, I.F. Sher, G. Niklish, E. Shmalenbach, A. Hopwood, D. Cooper, T. Hopper, A. Powell, W.A. Paton, M. Moonitz, R. Sprouse, L. Goldberg, M. Wells, E. Flamholtz, R.C. Laughlin, T. Mouck, P. Quattrone, N.J. Foss, R. Watts, R. Sterling, R.J. Chambers, M.H.B. Perera, E.S. Hendriksen, J. Zimmermann, M.J.R. Gaffikin, S. Zeff, R. Caplan, K. Chapman, R. Gray, J.E. Butterworth, H. Falk, B.E. Cushing, R.C. Elliott, B. Lev, V. Kam, D.J. Gouves, A. Rewinkel, M. Glautier, M. Pushkar, S. Holov, S. Lehenchuk and many others enriched accounting by their theoretical works. Having investigated scientific literature, we can make the following conclusions concerning the problems in accounting science, they are the next: intricate modern understanding of the content and form of economic activity, its theoretical discrepancy with real (empirical) facts, modern methods of accounting are impossible to use in explaining a new reality of economy, the imagination about accounting is used as the instrument for solving applied tasks (but not used as the way of thinking and the instrument of creating information), conservative character of accounting theory and the absence of investigations of the development under the conditions of governing of post industrialism.

The value and the assessment in the epoch of "the society of the working people" do not correspond to the assessment in the epoch of "the society of consumption", and in the epoch of "the society of knowledge". Utility gets other forms and factors of prestige, quality, status, trademark etc are in key positions. Accounting science should be formed within social context and it should be built in interdisciplinary paradigm of economic, social, psychological and other sciences studying society.

Deductive, inductive, descriptive, historical and other methods should be used in accounting to show complex factors in production and economic activity.

Philosophical aspects of accounting become interesting in the period of scientific crises, when external scientific conditions are changed and to understand them, epistemological philosophical analysis should be used. Dynamics of theoretical development, its study and analysis allow for revealing the differences in philosophical and valuable understanding of accounting system of the different periods of the development.

Economy depends on society and culture, it is connected with many social and political institutions however, economists have understood it recently because to

understand it, it was necessary to change opinion about ontology of economic science and refuse from the principles of methodological individualism.

New philosophical and methodological accounting research program should be proved on the basic integrated level to understand the relations between economic activity and economy as the whole, its relations with institutional surrounding, society, valuable orientations of public mood etc.

4. Accounting theory through the lens of post-non-classical science

Modern state of the development of a science in the world is followed by desire to renew classical imagination (creating of the theory of the air), attempts to negotiate the theory of relativity and other non-classical concepts and to contradict to them the theories of classical types, for instance air dynamics. Such concepts as virtuality in nature, fractal approach and anthropogenic principle play important role in science. Such research tendencies support science to develop forming the science of post-non-classical or postmodern type. Information component and forming concepts of information type in the spheres of science, humanization of the science is transformation of the scientific centre of attention to an individual including the human nature, complexity, integration of the spheres of scientific knowledge that is the indications of modern scientific investigations in postindustrial periods.

Regardless the revolutionary tendencies of post-non-classical science, many scholars in the sphere of economy and accounting continue to follow the methodological principles of classical and non-classical periods.

Normative and positive theory of accounting and methodology of double record are dominating in accounting. The main elements of normative theory of accounting are standards, norms, instructions concerning collection of some information resources and building the system of accounting.

To reveal the relations between accounting practice and reasons influencing it and to describe the reason of the process of forming in the system of accounting is the task in positive theory of accounting.

No ruling theory in accounting science corresponds to the requirements of post-non-classical science of postindustrial society. We suggest forming information theory of accounting, the main concept of which is information in its broad definition as a product and subject of the science, and accounting should be considered as the component of mental activity in forming and use of information resources in economic human activity.

The concept of information (Latin *Informatio*) has two main meanings, which should be included in scientific circulation of accounting theory they are the following: 1 - representation, symbol, 2 – explanation, interpretation.

Basing on the fact of economic activity as the main element of accounting practice as a science, we can determine accounting as the process of observation

and representation of information about the main facts of economic activity of an enterprise and its explanation or interpretation.

Such definition can be an adequate one for accounting process under the conditions when information becomes necessary element of the activity of an enterprise, moreover, the information becomes an economic product.

Double record as the main method is used in accounting science. Modern theory, which explains the process of generalization and systematization of facts is based on this method. Experts and theorists are satisfied with such situation. However, when new facts (or objects of accounting) appear they may not fit with this theory (nowadays, it can be observed in strategic accounting). In such case, new directions begin to appear in this science and new impulse to study the phenomena from new point of view and in new aspects can be observed (points of bifurcations in the history of science).

Objects are studied using old methods and theories but the science about accounting has extensive type of the development. Therefore, we suggest intensive type of the development of accounting science, which is based on methodological ways proposed by T. Kuhn, I. Lakatos, K. Popper and P. Feyerabend.

Broad methodological and socio-cultural resonance from transformation of accounting makes it very interesting object of general scientific and philosophical analysis.

Conclusions

The problem of the development of accounting science comes to practical local measures, which are important but unable to change a situation qualitatively in the process of the development of the theory of accounting of postindustrial society and reduces the risk of assimilation of accounting science with financial and information management or its takeover by them. In many cases, the changes of the model of accounting are new additions to the existing model. In such case, they need to be reviewed from the new point of view. Scientific works, which put in question the existence of accounting as a science that shows about the necessity of adaptation of accounting realities within modern achievements of economic theory and the development of accounting theory within the context of civilizational changes, which are more complicated and dangerous than economists interpret them can be found.

Business is a victim of traditional methods of accounting and it needs to be reviewed critically within various aspects. Accounting information allows identifying the points of influence, which open the ways to create new values, allow shortening or making information risk and the risk of discrepancy of information more acceptable.

The expanse of modern object field of accounting is from total monitoring of economic activity to its forecasting and adequate influence of information on all levels of management. Situational approach to accounting is the possibility to

realize some accounting technologies from real inquired information and change of the ruling double record as one method. The specifics and level of effective accounting system in this case are defined by the correct and true (adequate) assessment, the right choice of the block of data for processing, the right choice of ways and methods in data processing; professional suggestion of an accountant taking into consideration the whole range of internal and external factors (practical use of the systems theory).

Accounting system should support the business to use new opportunities and save compatibility, remove internal discrepancies of ineffective model of business operation, reduce common indifference and make results more predictable and able to be measured.

References

Хайек Ф.А., 1945, *Использование знания в обществе*, „American Economic Review", Vol. XXXV, No. 4.

Геращенко А., 2015, *Экономика XXI – К.: Фоліо*.

Maslow A., 1954, *Motivation and Personality*, New York.

Йенсен Р., 2004, *Общество мечты. Как грядущий сдвиг от информации к воображению преобразит бизнес*, Ролф Йенсен – Стокгольмская школа экономики в Санкт-Петербурге.

Джейкобс С., 2010, *Чарльз. Нейроменеджмент*, Пер с англ. К.: Companion Group.

Баркер Дж., 2007, *Парадигмы мышления: Как увидеть новое и преуспеть в меняющемся мире/ Джоэл Баркер*, Пер. с англ – М.: Альпина Бизнес Букс,.

Омае К., 2007, *Мышление стратега: Искусство бизнеса по-японски*, Пер. с англ. – М.: Альпина Бизнес Букс.

Жук В.Н., 2013, *Основы институциональной теории бухгалтерского учета*, Аграрная наука.

North D., 2005, *Understanding the Process of Economic Change*, Princeton University Press.

Denzau, A.T., North D.C., 1994, *Shared Mental Models: Ideologies and Institutions*. Kyklos, 47.

Coase R., 1937, *The Nature of the Firm*, "Economica", Vol. 4, No. 16.

Williamson O.E., 1981, *The Economics of Organization: The Transaction Cost Approach*, "American Journal of Sociology", Vol. 87, No. 3.

Klein L.R., 1984, *Economic Theory and Econometrics*, Blackwell.

Oliver H., 2011, *Thinking about the Firm: A Review of Daniel Spulber's 'The Theory of the Firm'*. "Journal of Economic Literature" Vol. 49 (1).

Penrose E., 1995, *The Theory of The Growth of The Firm*, Oxford University Press

An Evolutionary Theory of Economic Change, 1982, Harvard University Press, Harvard.

TEORIA RACHUNKOWOŚCI W KONTEKŚCIE NOWEGO PARADYGMATU BADAŃ NAUKOWYCH

STRESZCZENIE

Rachunkowość jako działalność praktyczna rozwijała się przez tysiąclecia, ale ostateczne ukształtowanie rachunkowości jako dziedziny naukowej jest niemożliwe bez rozwoju jej współczesnej teorii, która odpowiada wymaganiom doktryn naukowych XXI wieku. Istniejąca teoria w wielu przypadkach nie jest właściwa i stanowi ogólny zbiór technicznych podejść do realizacji podwójnego zapisu. Wyniki badań ekonomicznych na poziomie światowym wskazują na niemożność spełnienia przez współczesną naukę rachunkowości jej funkcji ze względu na jej konserwatywny charakter i długoletni brak zmian. Wszystkie te badania mają bezpośredni wpływ na gospodarkę i pokazują, że zmienia się rozumienie podstawowych postulatów, zaś nacisk kładzie się na aspekty psychologiczne i społeczne oraz na unikanie materialnych orzeczeń.

Słowa kluczowe: rachunkowość, wiedza naukowa.