



Philosophy of Science in Accounting Aspects and Its Development

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Info Artikel

Diterima 03 Juli
2022

Disetujui 23 Juli
2022

Dipublikasikan 29
Agustus 2022

Keywords:
Accounting
Science;
Accounting
Development;
Philosophy

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Abstract

This study explains the philosophy of science, especially in the field of accounting, scientific methods, and the development of accounting science, both conventional and sharia. Basically, accounting science develops within the framework of the philosophy of science which is the basis and direction, namely through ontology, epistemology and axiology in the concept of the scientific method. The development of accounting science arises because accounting science is a category of social science that moves dynamically following the development of the social environment, where the science is applied. The times have greatly influenced the development of accounting science, so the role of accounting research is needed in answering the phenomena that occur.

1. Introduction

Etymologically, the word philosophy, which in Arabic is known as falsafah, in English it is known as philoshophy, and in Greek it is called philoshophia. the word philos means love (love) and sophia means wisdom or wisdom, so a philosopher is also called a lover or seeker of wisdom. And in terminology, philosophy is a science that investigates everything that exists in depth by using reason to its essence. Philosophy does not question the symptoms or phenomena, but what is sought is the essence of a phenomenon. Philosophy examines something that

exists and that may exist in depth and thoroughly (Surajiyo, 2010). Further Suriasumantri (2001) explains that philosophy is widely used as a foothold to develop science which is part of epistemology (philosophy of knowledge) and specifically examines the nature of science (scientific knowledge). Philosophy is knowledge and inquiry with reason about the nature of everything that exists, its origin and law (Harafah, 2007). Philosophical thinking tools are analysis and synthesis that use thinking tools in the form of logic, deduction, analogy and comparison (Harafah, 2018).

Thus it can be said that philosophy is a science that was born from a love for knowledge, a high and deep curiosity, so that it continues to study theories and phenomena that develop from time to time. In this article the author wants to explain and discuss the philosophy of Accounting Science. The philosophy of accounting science is one of the branches of philosophy that has been widely used by accounting experts to develop accounting theory.

Theoretically, accounting science is a combination of rationalism and empiricism because accounting is a science that uses thinking to analyze accounting transaction data in making financial reports where accounting transaction data is a concrete thing that can be responded to by the five human senses, and financial statements are very important in decision making. For internal and external parties, this is in accordance with aspects of ontology, epistemology and axiology (Yusnaini, 2016).

Likewise in science and knowledge that is currently developing, namely accounting science. Accounting science is divided into three areas of accounting, namely (Yusuf, 2011):

a. Financial Accounting

Financial accounting is an accounting process that produces useful information to meet the needs of external parties from the entity in making decisions.

b. Cost accounting

Cost accounting is an accounting process that produces information about costs to produce the output of a production process that is used by internal parties (management) of the company in making decisions. However, information resulting from the cost accounting process can also be included as part of the financial accounting information to provide information to external parties in decision making.

c. Management Accounting

Management accounting is an accounting process that produces information to meet the needs of the organization's internal parties.

The development of accounting science arises because accounting science is a category of social science that moves dynamically following the development of the social environment, where the science is applied. However, in its development, many have highlighted where the position of the accounting discipline in the structure of science is. This is where the role of accounting research is needed, to answer the phenomena that occur. Through the research carried out, it is hoped

that it can give birth to various new ideas that creatively make accounting science a role in society.

2. Literatur Review

2.1 Philosophy

Philosophy is a rational, systematic and universal thought process towards everything that exists and that may exist. Philosophy can also be influenced by the growth of human civilization in a variety of sciences, so that science separates itself and pursues their respective goals (Maksum, 2011). For this reason, philosophy is the link between science and its application. There are 2 types of philosophy that can be studied based on the object, namely:

- a. Material Objects, i.e. everything that is the problem, or everything that philosophy is concerned with.
- b. Formal object, namely an attempt to find information radically about the material object of philosophy.

The function in studying philosophy is to save people from the misguided life of facing the effects of progress and the materialist lifestyle, as well as releasing the confines of anxiety and meaninglessness.

2.2 Philosophy of Accounting

The development of science and technology is very fast, sometimes it affects the tendency to think that all problems can be solved by the scientific method, namely learning methods that are applied based on certain theories (Gaffikin in Abdullah, 2011). The development of accounting thought and theory (accounting thought) is strongly influenced by the basic assumptions used, or accounting thinking is also influenced by the way the thinkers are classified (Davis et al, in Abdullah, 2011).

The science of philosophy itself reviews the science of accounting as a science that is learned for the purposes of a job in terms of making reports in the financial sector and analyzing transaction data. Data in accounting is concrete data and has proof of payment or receipt that affects a financial report in the company (Abdullah, 2011).

Furthermore, Morgan in Bambang (2014) states that accounting thinking consists of four social reality paradigms, namely functionalist, interpretative, radical humanist and radical structuralist paradigm. functionalist is based on theory for confirmation, objective, what the data says, researcher is considered passive, between theory and practice is considered there is no difference, only as a tool not a goal. Interpretative is based on the subjectivity of the researcher, the researcher is directly involved in reality, there is an understanding of social behavior, the understanding reaches the core. While the radical humanist and radical structuralist emphasize the aspect that the entity is influenced by the surrounding factors.

2.3 Epistemological Aspects in Accounting

Each knowledge has specific characteristics regarding what (ontology), how (epistemology) and for what (axiology) knowledge is structured. These three foundations are interrelated with each other, so the ontology of science is related to

the epistemology of science and the epistemology of science is related to axiology and so on. Suriasumantri (2001:105) further explained that if we want to discuss the epistemology of science, it must be related to the ontology and axiology of science. The core of the epistemological approach is to question the process of the occurrence of science, including scientific means, scientific attitudes, methods, and scientific truth. This thinking is the main basis in carrying out scientific activities that will combine the ability of reason with experience and data obtained during scientific activities.

Rationalism emphasizes the role of reason in acquiring knowledge. This understanding holds that the source of human knowledge is reason or ratio. Knowledge that meets the requirements is that which is obtained through the activities of reason. The main characteristics of rationalism are: (1) the establishment that the essential truth can be directly obtained by using reason as a tool, (2) the existence of a logical explanation or deduction which is intended to provide the most rigorous proof possible regarding all aspects of the field. knowledge based on what is considered to be the essential truths mentioned above (Koento Wibisono and Misnal Munir in Lasiyo, 2007: 2). The idea of rationalism comes from the notion of idealism, this understanding uses deductive methods, reason, a priori and coherence.

Furthermore, the notion that emphasizes experience as a source of human knowledge is called Empiricism. This view holds that human experience includes outward experience concerning the world and inner experience concerning the human person. Empiricalism itself is derived from the notion of realism which uses inductive methods in seeking scientific truth. There are very striking differences between these two ideologies, so that there is an attempt to unite the two views, hence the ideology of Criticism which was pioneered by Immanuel Kant. The critical view is that knowledge is basically the result of collaboration between materials that are sensory experiences which are then processed by reason so that there is a causal relationship.

Based on an epistemological approach, the science of financial accounting has undergone many transformations, so much so that we are in the midst of one of the largest since Pacioli created double-entry in accounting (Ismail & King, 2006). In the aspect of epistemology, accounting science uses various methods according to what is needed. An obvious example is the inductive method used when making decisions. By looking at the report, the authorities will conclude what steps to take. Next is the positivism method used when making a financial report which must use existing data or that has been known explicitly with accurate evidence in the form of notes, etc. The difference between bookkeeping and accounting is that the accounting process includes the functions of bookkeeping whereas bookkeeping only involves recording economic events. So bookkeeping is part of the accounting process.

Further examination of the sources of Islamic teachings reveals that Islam also addresses the science of accounting. Religion has been proven to answer human problems both at the macro and micro levels. Religious teachings must be practiced in all areas of life. Translation and interpretation are needed to carry out religious teachings. In the world, religion needs to be pursued for its relevance so that it can color the cultural, political, and socio-economic life of the community. Therefore, religion is not only at the normative level. Since Islam is a religion of

charity, its interpretation needs to shift from prescriptive scientific theory to fact-based scientific theory.

We can see the existence of accounting in Islam from various historical evidences and from the Qur'an. In Surah Al-Baqarah verse 282, the issue of muamalah is discussed. This includes buying and selling activities, debts and leasing. From that we can conclude that in Islam there has been an order to carry out a recording system whose main emphasis is for the purpose of truth, certainty, openness, and justice between the two parties who have a muamalah relationship. In accounting language, it is better known as accountability.

There is a huge difference in culture and values that developed between Islamic and western societies. In Islamic society there is a value system that underlies every community activity, both personal and communal. This is not found in the life of western society. These differences in culture and value systems result in different forms of society, practices, and patterns of relationships. Meanwhile Triyuwono (2006) explains that the purpose of sharia accounting is the creation of a business civilization with humanist, emancipatory, transcendental, and theological insights. With sharia accounting, the social reality that is built contains the value of monotheism and submission to the provisions of Allah SWT

2.4 Accounting Developments in Indonesia

Before the arrival of the Dutch to the island of Java in 1609, the Indonesians had known a medium of exchange, but did not yet have a universal currency. For that Barter was the dominant trading activity at that time. The Dutch government not only introduced currency, but also introduced a double-entry bookkeeping system to Indonesia in the 17th century. The East Indies Company, a Dutch colonial company that had a very important influence on business regulations in Indonesia at that time, used a double-entry bookkeeping system known as the continental system. At that time there were no accountants from Indonesia, so the books were still handled by foreign accountants. During the Japanese colonial period, the Japanese government did not make any contribution to the accounting system in Indonesia. At the time, Indonesia still uses the continental system originating from the Dutch government. After the independence of Indonesia (1945), the Dutch bookkeeping system was still used until 1960. The development of accounting in Indonesia grew rapidly after 1957, at that time an organization was established that accommodated accountants in Indonesia. The organization was named the Indonesian Accounting Association (IAI). At that time, Indonesia began to adopt the United States accounting system, known as the Anglo Saxon system. In 1960, the State College of Accountancy (STAN) began to change their accounting program from the Dutch system to the United States system, known as the Anglo Saxon system. However, by 1975, all institutions, both private and government, had adopted the Anglo Saxon system. The development of the Anglo Saxon accounting system in Indonesia is due to foreign investment in Indonesia which has a positive impact on the development of accounting, because most foreign investment uses the United States (Anglo Saxon) accounting system. Here is an overview Dutch accounting system versus American system Union.

Table 1. Differences between Dutch and American accounting systems

Object	systemm Continental	systemm Anglo Saxon
1. Diary	1. Debit/credit grouping has not been detailed.	1. Debit/credit grouping is detailed.
2. Ledger Account	2. Using a reserve account and recorded credit.	2. Using a depreciation expense account and recorded on the debit side
a. Shrinkage	3. Using mixed accounts	3. Not using an account
b. Mixed Account	4. There is a private deposit	4. There is no private deposit
c. private	5. The archive is stored as a document consisting of:	5. The archive is not saved because it is only as a tool
3. Work sheet	d. balance	Consists of :
4. Financial statements	e. Profit and loss statement	• balance
	f. Statement of changes in capital	• Profit and loss statement
		• Statement of changes in capital
		• Cash flow statement
		• Notes to financial statements

Source: www.ducanwil.co.uk.objacc.htm

2.5 Development of Accounting Science

Problems in the development of accounting science arise because accounting science is a category of social science that moves dynamically following the development of the social environment, where the science is applied (Bambang, 2014). Skousen (2008) divides accounting research topics into several topics, including financial accounting, managerial accounting, auditing, taxation, governance. A study can be said as accounting research, if the research shows the effect of economic events on the process of summarizing, analyzing, verifying and reporting standardized financial information, as well as the effect of the information presented on economic events (economic events).

Research in the field of accounting science which later became the basis for the development of further research, among others: In 1494 Luca Pacioli in his book entitled "Review of Arithmetic, Geometry, Ratio and Proportion" introduced an accounting recording system with a paired recording system or double-entry system which is still being studied in accounting science, namely bookkeeping and accounting equations or debit system. and credit, where the amount/nominal debit recorded on the left must equal the amount/nominal/nominal with those recorded on the credit/right side (Alexander, 2002).

In 1800 people made the balance sheet and income statement a very important report used in evaluating companies and making decisions. Until 1850 the development of auditing science (accounting checks) is getting faster and audits are carried out on bookkeeping records and financial reports (Harahap, 2013). Around In 1900 the USA began to apply professional certification which was carried out through a national exam. Then in this period accounting is considered to be able to provide a pattern of taxes (Harahap, 2013). In 1925, government accounting and supervision of government funds began to be known, cost analysis techniques were also introduced, financial statements began to be standardized, accounting audit norms began to be formulated, and the manual accounting system switched to the EDP system.(Electronic Data Processing) with the introduction of Punch Card Record (Harahap, 2013). 1950 The accounting process

uses a computer for data processing, Formulation of principles or Financial Accounting Standards (SAK) or GAAP (*Generally Accepted Accounting Principles*) came into effect, Cost Revenue Analysis or Cost Accounting was increasingly recognized, tax services such as Tax Consultants and Tax Planning began to be offered by the Accounting profession, Management accounting as an accounting field especially for management purposes began to be known and developed rapidly (Harahap, 2013).

In 1960 in the United States, which was initiated by the APB (Accounting Principles Board) gave rise to the concept of Full Costing so that many experts then gave their arguments in the measurement system in cost accounting (Bambang, 2014). In 1970 there was a shift in research orientation, namely on the capital market in Capital Market Accounting which studied investment, stocks and securities (Bambang, 2014). In 1980 the degree of Accountant (Ak) for Graduates of PTS (Bachelor of Economics) was opened through the mechanism of the State Accounting Examination (Anisa, 2010). From the beginning of 2000 until now, Islamic Banking has developed and IAI (Indonesian Accountants Association) issued an Exposure Draft PSAK No. 56 concerning the Basis for Compiling Financial Statements for Sharia Banking in 2002 (Fitria, 2016).

Accounting science from the West that developed is conventional accounting science that is capitalist and secular (economic rationalism). Conventional accounting science has not been based on the nature of knowledge that comes from God revealed through revelation (Yusnaini, 2016). The essence of accounting itself is recording, and Allah says in surah al-Baqarah, verse 282 which means: "O you who believe, when you are in debt with an appointed time, you should write it down fairly, and let no one the author is reluctant to write it down as Allah has taught it," (Surah Al-Baqarah: 282). The practice of accounting science has been implemented since the time of the Prophet Muhammad (610 AD) with recording techniques and the concept of justice. The word "justly" or "divine justice" in QS. Al-Baqarah: 282 contains three basic values, namely: monotheism and Islam in the sense of submission and submission to Allah, and justice in the sense of belief that all human actions will be judged by Allah. So, justice cannot be separated from ethical and moral values which are none other than revelation or God's laws (Raharjo in Tryuwono, 2015).

In the context of accounting, an accountant must make the value of "divine justice" as the basis for interacting and constructing social reality. This means that accounting as a discipline and practice cannot stand alone. Accounting is always tied to the social reality in which it is practiced. This is because accounting is interpreted as a mirror used to reflect social reality. It is further explained that the mirror itself is a product of the ideological values in which the mirror is made.

Thus, accounting which is constructed with a different ideological basis will reflect reality in a different form. This situation will become even more crucial, when the results of these reflections (accounting information) are then consumed by others which will eventually form new realities (Morgan, Tricker in Tryuwono, 2015). The ontological consequence that accountants must realize is that they must critically be able to free humans from the bonds of pseudo realities and then provide the reality of "divine justice" that binds humans in everyday life. Thus, it is hoped that it can awaken self-awareness (Self Consciousness) in full of one's obedience and submission to divine power. With this self-awareness, accountants

will always feel the presence of God in the dimensions of time and place wherever he is, this is what is meant by the ontology of monotheism. With the principle of divine justice, the social reality that is constructed contains monotheism and submission to networks of divine power, all of which are carried out with the perspective of khalifatullah fil Ardh, which is a perspective that is aware of future responsibilities before God Almighty (Tryuwono, 2015).

In its development, sharia accounting is one of the breakthroughs that is quite shocking in the economic world in Indonesia. Sharia accounting is a system that regulates the activities of recording, classifying and summarizing, reporting, and analyzing financial data using principles that are in accordance with the values of Islamic teachings. The application of Islamic principles to the economic sector does not only occur in bank products such as sharia savings. Now, sharia accounting is also inseparable from the application of principles that are in accordance with Islamic religious values in it, both in terms of cycles and recording. Therefore, sharia accounting is very demanding of the accountant's accountability to the sharia principles that are applied when working on the presentation of these financial data.

As for the differences between conventional accounting and Sharia accounting are as follows:

Table 2. Differences in Conventional Accounting and Islamic Accounting

No	Criteria	Conventional Accounting	Sharia Accounting
1	Legal basis	Modern Business Law	Ethical law sourced from the Qur'an and Sunnah
2	Basic Action	Economic Rationalism (Secular)	The Existence of God's Law (Religion)
3	Destination	Maximum Profit	Reasonable profit and Blessing
4	Orientation	Individual (Owner)	Society

Source: Nurhayati, 2013

2.6 Scientific Method

Accounting science is included in the social sciences group, the objects studied by social sciences have different characteristics compared to natural sciences. Therefore the method used will be associated with philosophy. According to Mantra (2004) research methodology is a science about the framework of carrying out systematic research. Method is a systematic way of working, in order to find scientific truth. While the function of philosophy is to test the methods used to produce valid knowledge. Procedures taken from philosophical arguments are based on knowledge obtained from philosophy, while philosophical knowledge is generated from ontology, epistemology and axiology (Abdullah, 2011).

Ontology is the concept of the subsystem of existence. The methodology derived from the ontology relates to the nature of "being" which is the object of investigation, thus answering the "what" question. So there is an assumption that ontology and epistemology are the determinants of methodology. Epistemology is the determination of criteria to get real knowledge about something real with the compatibility between real knowledge and concepts. In the scientific method, it begins with the emergence of a phenomenon, then manifests it in the form of a set of logical statements in the form of a hypothesis and ends with a conclusion that is

connected with the phenomenon studied previously. Axiology is revealing the usefulness of science for humans (Abdullah, 2011).

Further Francis Bacon in Abdullah (2011) states that knowledge is power, which is a reflection of how important knowledge is. However, the power possessed by this knowledge is highly dependent on humans as users of knowledge, because science itself is neutral. Every knowledge basically has specific characteristics regarding ontology, epistemology and axiology. These three foundations are interrelated with each other, so if we want to discuss the epistemology of science, it must be related to the ontology and axiology of science (Suriasumantri, 2001). The core of the epistemological approach is to question how the process of science occurs, including scientific means, scientific methods, scientific truth.

In the epistemological aspect of accounting science uses various methods according to its needs. Financial Statements are the result of recording and accounting processes used for decision making by the authorities. In compiling a financial report, one must use existing data or which has been known firmly, accurate evidence in the form of notes and other supporting evidence.

3. Conclusion

Basically, accounting science develops within the framework of the philosophy of science which is the basis through ontology, epistemology and axiology in the scientific method. Philosophy reviews accounting science as a science that is learned for the purposes of a job in terms of making financial reports and analyzing transaction data. In the aspect of epistemology, accounting science uses various methods according to its needs. Islamic epistemology, based on the monotheism paradigm. The fixed parameter is from revelation (Al Qur'an and As Sunnah).

The times have greatly influenced the development of accounting science and the role of accounting research is very much needed in answering the phenomena that occur. Through the research carried out, it is hoped that it can give birth to various new ideas that creatively make accounting science have a very decisive role in society both in thought and feeling (heart).

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