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## Biological assets valuation reconstruction: A critical study of IAS 41 on agricultural accounting in Indonesian farmers

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### Abstract

This paper is an in-depth review of IAS 41 from two dimensions, technical-theoretical dimension and meaning dimension simultaneously. The study aimed to anticipate the hazardous potentialities in valuation caused by monetary logo-centrism in accounting. The concepts offered are based on the condition of the existing culture in Indonesian society that was abstracted through ethnomethodology. These concepts represent Indonesian farmers' viewpoints and ways of life in that are also closely related with agriculture utilities cycle. This paper suggests that agriculture accounting can be carried out even if it does not use monetary unit as its valuation approach.

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*Keywords:* Accounting; agriculture; farmer; biological asset; ethnomethodology

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### 1. Introduction

According to Suwardjono (2005, 274) valuation is the determination of the measuring unit to an object to represent certain or specific meaning of it. Valuation is determined by monetary amount that must be attached to an object involved in financial transaction. Further, valuation has a purpose to represent certain asset's attributes by using the appropriate assessment base (Suwardjono, 2005). It is an important and a crucial aspect in accounting. Assets, equities, and liabilities can be presented in financial reports because valuation has translated their attributes

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to quantitative form, with monetary unit as the indicator.

Similarly, the application of valuation in the agriculture world will allow the occurrence of performance reporting in the form of numeric and monetary units close to the economic activity. There are various literature about agricultural accounting in the West such as Roberts (1903), Goodyear (1911), Bexel and Nichols (1913), Finlay (1914), Scovil (1918), and Warren (1918). In those papers, accounting was originally used as tools and information systems related to agricultural activity. Along with the development of the Western world towards the 21st century, agriculture accounting helped change agriculture as a business. Accounting is one of the ways to understand agriculture in the business context (Mulawarman, 2012). Scovil (1921) reminds further, that farmers should be aware that their businesses gradually change into capitalized industry.

The defining of agriculture as a business spreads to various parts of the world by the means of accounting “colonialism” which is shaped as harmonization and convergence of accounting. Financial accounting practices are determined by local, social and cultural factors, such as economic system, political systems, social systems, and forms of organization in the community (Triyuwono, 1998). The occurrence of this accounting colonialism could not be separated from the power of capitalism hegemony and positive sciences that have become the mainstream.

Agriculture characteristics in Indonesia are certainly different from the agriculture characteristics in the Western world where capitalistic hegemony is anchored strongly. Agricultural accounting standards made by the Western countries, such as the IAS 41, may not correspond to the existing conditions in Indonesia. Thus the adoption of foreign accounting standards to Indonesian GAAP is not the best way to form accounting standards in Indonesia. In addition, logocentrism which is characterized by the binary opposition prioritizes monetary-quantitative valuation that can trigger a threat. Triyuwono (1998) describes as follows: “Valuation or measurement based on logocentrism of monetary aspect will change one's mindset into a capitalistic mindset.”

Referring to Triyuwono's opinion (1998) which explicates that financial accounting practices are determined by local society's social and culture factors, it is seen urgent to create Indonesian agriculture accounting concept based on existing socio-cultural conditions. The creation of accounting concept based on local society's culture will enable agriculture accounting practices to be implemented. This research poses a research question: how is the reconstruction of biological asset valuation by using contextual (socio-spiritual-economic) condition of local farmers?

## 2. Research method

The paradigm which is used in this study is postmodern paradigm. We thought this paradigm was suitable paradigm because it is the antithesis of modernism, which sees reality both objectively and subjectively (Mulawarman, 2012). We are analogizing IAS 41 as a form of modernism, as conventional accounting which exists today. In modernism there is a failure in giving the order for a better social life. Postmodern is a critique of modernity that transforms the human way of thinking to be rigid and inflexible with various social phenomena. Modernity, in the same way, modern accounting also tends to be stiff, rigid, and intolerant with social reality. By employing different paradigm, a holistic accounting can be reconstructed. Moreover, for Indonesian agriculture accounting, where agriculture becomes part of the culture of the community, it must be able to accommodate existing values without slightly marginalizing the function and purpose of farmers in their local natural environment. Thus, agriculture accounting (preceded by biological asset valuation) should be built on a pattern of existing local values, instead of on values that has few relevancies to local practices. This study employed ethnomethodology extended with deconstruction as research method. The study in this paper will be done in two phases. First phase is to find technical dimension and meaning dimension (values is abstracted from practice) by ethnomethodology study. Technical dimension related with IAS 41 from theoretical perspective was explored. We would proceed to find meaning dimension to combine accounting with abstract dimensions such as social values, religiosity, and spirituality.

The second phase is deconstruction, adding values and what we have found from first phase, especially based on ethnomethodology study to reconstruct the concept of agriculture accounting standard that is represented by IAS 41 as a symbol of accounting colonialism. The deconstruction compositions were obtained by gathering empirical evidence that was analysed with indexicality and reflectivity as the analysis instrument in

ethnomethodology (Burrell and Morgan, 1979:248). Through indexicality analysis, we will conduct observations and capture what is implicitly given by the actors in the form of its ordered activities. By reflectivity analysis, we will find meaning of agriculture accounting through the actor's statements. The informants of this research were from PT. Sapta Karya Damai, Mr. Sukardji (fish farmer), Mr. Yanto (palm farmer), KUD (Village Unit Cooperation) Dau, and farmer community surrounding author's resident.

### 3. Finding and discussion

From the data collected, there are some of similar things about farmer characteristics in managing its agricultural entity. The similarities seem to be triggered by culture and social customs in the community, and the interactions that are based on kinship in the farming society. Farming society is a group of people that run agricultural entity, formed due to the incidence of a wide range of social interactions when managing farm or agricultural activities. Farming society is not only limited to the owner of the farm but also the workers who are directly involved in the farm management. A society may be referred to as farming society when there are various interactions pertaining farming activities in the society. The concept of farming society is very different with agribusiness and agricultural industries concept. When we did research at coconut palm plantation in the district Kotawaringin Timur-Central Borneo, we found that palm plantation company as well as farmers formed an established social society. It was formed by settlements and housing of its workers in the palm plantation area. Unlike the farming society, this society interaction is only based on work/professional interaction. The company's society is just a linear society with a single purpose, corporate profits.

In other (non-government) agriculture characteristic, different motives are underlying the emergence of the various interactions. Those motives are religious motives, cultural motives, and social motives. In the religious interaction, religion and spiritual beliefs held is the main motivator of the interaction. It is caused by the common cultural and religious beliefs in one or several communities on the region. Uniquely, religious interaction and culture interaction can be fused with each other. It can be viewed from religious activities that are still wrapped in culture or *vice versa* in the local community, such as prenatal ritual over crops, festivals (*kenduri*) and ceremonial meals (*selamatan*) in various villages in Java. Other forms of spiritual farming activities are the use of offerings (*sesajen*) as forms of expression of gratitude to God in indigenous ceremonies associated with the agricultural event. Of course economic motive certainly exists, but it is balanced with other motives. This explains that farmer can be regarded as a *homo religious*, *homo economicus* and *homo socius* at the same time. Empirical evidence that we have found can be analysed in ethnomethodology framework as shown in Table 1.

Next characteristic is the subsistence or semi subsistence pattern of the farmer or agricultural society. Farmers' roles are as producers and consumers of their own products in this farming pattern. It has been frequently encountered that many farmers and ranchers consume their own agriculture products. In detail they did not take into account how much agriculture products they have consumed by themselves or enjoyed them with their community. They do not charge it on the expense or cost. The purpose of subsistence farming is not entirely commercial. Socially, subsistence farming has its own wisdom. Arguably, this is the humanist form of agriculture because in this kind of farming the orientation is more directed at how agriculture related with community's going concern.

#### 3.1. Accounting in people-based agriculture

The recording (accounting) conducted by people's farmers tend to be a traditional recording. If there is any accounting implementation, it is formed as a simple accounting like single entry or simple bookkeeping. It is based on the characteristics as described earlier, that most of farm entities owned by farmers, such as farms, fisheries, forestry, and animal husbandry are owned privately. The majority of the agricultural or farming entities are proprietary entity. In this people's based agriculture proprietary entity, there is no separation between business and

the farmer as the owner of the entity. This phenomenon is caused due to the form of subsistence agriculture in which the orientation is the fulfilment of the basic needs of farmer's family.

Table 1. Ethnomethodology Analysis Matrix

Research object	Reflectivity	Indexicality
PT. Sapta Karya Damai	<ul style="list-style-type: none"> <li>Asset valuation is based on historical cost</li> <li>Biological asset is classified as Productable Asset and Unproductable Asset</li> <li>Asset's value creation through capitalization method</li> <li>The implementation of depreciation into biological asset</li> </ul>	<ul style="list-style-type: none"> <li>Asset is interpreted as production instrument</li> <li>Use linear rationality in valuing and meaning the utilities of biological asset</li> <li>Measuring biological asset from material aspect</li> <li>The relationships that exist between the people and asset are only based on the professional purpose and earning money purpose</li> </ul>
Mr. Yanto	<ul style="list-style-type: none"> <li>Accounting is not used in the palm groove</li> <li>Using simple calculation method</li> </ul>	<ul style="list-style-type: none"> <li>Using intuition and his experiences in cost calculation</li> </ul>
KUD Dau	<ul style="list-style-type: none"> <li>Using body scoring valuation standard according to the cow's weight to determine the value of the cow</li> <li>Biological asset valuation still refer to selling price existing in the market</li> <li>Bearer asset valuation method is consumable asset valuation (equal) method</li> </ul>	<ul style="list-style-type: none"> <li>Its business is based on society</li> <li>Using the biological asset's utilities for empowering local society or community</li> <li>Using the feeling/spirituality in the cow credit operational, so the KUD places the farmer as main priority</li> </ul>
Mr. Sukardji	<ul style="list-style-type: none"> <li>Using simple bookkeeping to record expenses, income, and calculating gain or loss</li> <li>Only record vital expenses, such as fish seed, woof expense, and medicine expense</li> </ul>	<ul style="list-style-type: none"> <li>The consumption function and production function is correlated</li> <li>Only record the realized income to the money</li> <li>Income oriented, not profit</li> </ul>
People's Farmer (as general)		<ul style="list-style-type: none"> <li>Biological asset's utilities and benefits are often more prioritized than its value of money</li> <li>Community or society (<i>stakeholders</i>) is prioritized</li> <li>The expenses for community purpose, religious purpose, and tradition purpose are not recorded as expense but as part of consumption from their income because it is seen as communal joy</li> </ul>

In subsistence farming, as we have explained, there are close links between production and consumption, thus causing the fusion between business entities with private entities. Here is an opinion from Mr. Yanto, the owner of local coconut palm plantation, about bookkeeping or recording:

*"No, it is not recorded, because if I have some money I will buy some fertilizers. If I want to fertilize my plant then I will buy some fertilizers. It is kind like heavy too because I only buy fertilizers if I have a money. No, (I) never made (bookkeeping), because it is a private property (the coconut palm plantation), so it is not necessary (to perform bookkeeping)."*

His opinion showed us that he did not need recording. Beside the financial condition that tend to be unstable, Mr. Yanto did not need to make some recording or bookkeeping or some kind of accounting treatment because he did not need to justify his performance, that plantation is his private property.

In the people-based agricultural world, there is a utility cycle. This cycle rotates among farmer, biological asset, and their community. Money is just one many of these utilities and it is the easiest utility to be measured. But there are other utilities such as energy, thoughts, beliefs, trust and other abstract utility that cannot be measured in accounting. For example if biological assets are taken care by all members of the family, accounting norms should see this family members as labour and as expense that must be compensated with money or salary, whereas in reality the farmer will not pay each member of its family based on their hours of work.

We were inspired by the thought of Fritjof Capra (2004) in reconstructing and open this new dimension. Nevertheless we do not fully agree with his arguments. Capra's explanations about perspectives, spirituality and meaning are always in the corridor of *autopoiesis* theory, where living organisms have the ability to renew itself. We disagree with *autopoiesis* theory expressed by Capra (2004). We reject that theory because in our opinion, even in material stage, living organisms are not able to operate on its own, even reforming itself. There is an absolute power which led life organism capable to do *autopoiesis*. That power is the power of God.

According to Capra (2004), a meaning is defined as reflective awareness in understanding symbolic interaction of various aspect which creates social reality without realizing that there is an absolute power. We tend to consider meaning as a dimension rather than as a perspective. The farmers we have observed have a role as a *homo socius* and religious. Society is the result of farmer's reflective awareness projection over the social reality and they act in their communities, whereas religiosity is the farmer's awareness point over the absolute power in the universe. As the conclusion, what we mean about spiritual perspective is a way of looking at an object or something that no longer fixated on its material form and benefits. Spiritual perspective is a way of looking or judging, or defining an object based on his/her existence of an absolute power which is relates to the object's benefits. Spiritual perspective could be achieved through religiosity or sociality, because these two aspects enable to make human beings to become sensitive to the existence of absolute power.

### 3.2. Biological Asset Concept and Valuation Reconstruction

Before an asset is measured, it should be defined in advance about biological asset and its characteristics so that we will obtain a proper valuation concept and the accounting treatment. Physically, biological assets are plants or animals that are controlled by business entities, obtained through both economic and non-economic sacrifices. Biological asset, in the meaning perspective is a collection of utilities that are formed from the utilities accumulation by farmer to the animals and plants which are kept, as part of the cycle of utility. Biological asset is controlled or kept by the agricultural entity so farmer or agricultural entity is able to take its benefits and utilities. Utilities lies on biological asset are religious utility, social utility, and economical utility. Religious and social utility may be called as spiritual utility. Religious and social utility appears due to the spirituality within the farmers. For them, biological asset is not merely an instrument for making money and profit (economical utility) but also as an instrument to achieve the will of God and as instrument to strengthen social ties or relations among people in their community.

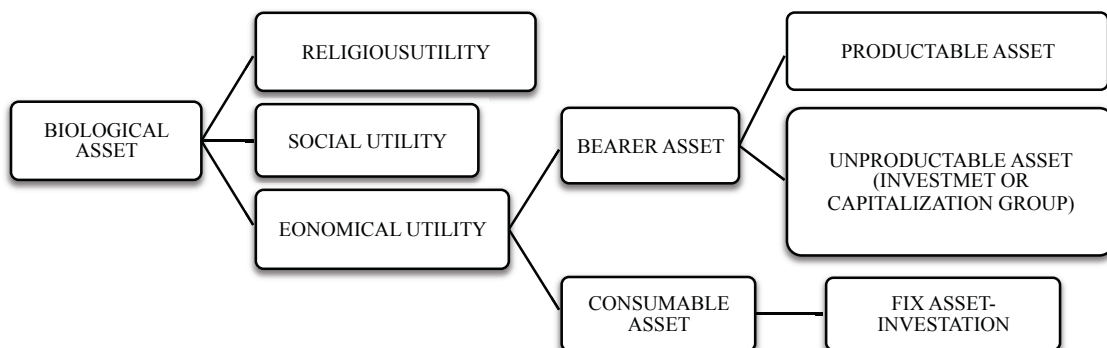


Fig 1. Biological asset concept

Related with IAS 41 itself, there are some limitations. First limitation is that IAS 41 allows recognizing future earning even if it is not realized yet, this treatment can trigger earnings volatility. According to biological asset's nature, its useful life is uncertain because it can die anytime by diseases. Uncertain earnings realization could decrease reliability of financial reporting. Second limitation as mentioned by Aryanto (2012), IAS 41 performed overgeneralization into biological asset. Basically in terms of its economic utility, biological asset can be classified into two types, bearer assets and consumable asset. This classification is very important because it will impact the accounting treatment to the biological asset. Unfortunately, IAS 41 does not arrange in detail about this kind of classification, just an advisory, not in the main priority of this standard. Bearer asset is an asset that is maintained to produce agricultural products or produce other biological assets (breeding). Consumable asset is an asset that

nurtured, bred for the purpose to sale at a certain age as an agricultural product. Specifically bearer asset can be defined further into productable asset when it can produce agricultural product and unproductable asset if it cannot yet produce asset.

Religious and social utility are utilities that cannot be valued and reflected with monetary unit as valuation or measurement indicator. Money cannot be used to measure these two utilities because these two utilities are qualitative. Later, spiritual utility will form a spiritual capital, which is a capital that is formed from the contributions of biological asset's utilities which is used in the spiritual and social purposes of the business entity or its owner. The creation of spiritual capital cannot be converted into monetary value.

In the mainstream asset valuation concept, whatever the kind, value of the asset will be measured by its monetary value. For large companies such as PT Saptia Karya Damai, monetary valuation model is the most suitable valuation model because they have similar orientation with this valuation model: money as the best indicator. In the other words, for the private company, asset is an instrument to make money and profit, hence, mainstream valuation model becomes the most rational method to be implemented.

Unlike private companies, people's farmer assumes assets as more than just to earn money or profit. For them, assets, especially biological assets are collection or accumulation of many utilities and benefits that they can feel or utilized. Their assumption of the biological assets as a collection of utilities can be proven through their subsistence farming which consumption and production function closely interrelated (Mubyarto, 1995). Farmers usually directly consume their agricultural product. Besides that, it also can be used for other agricultural activities such as the manufacturing compost, or the feeding the livestock, or to donate to the community. Thus, valuation method to measure or to value asset as an accumulation of utilities are required besides measuring asset from monetary aspect.

Biological asset valuation as the valuation of the production instrument owned by farmer should be performed using valuation method that views asset from the farmer perspective, not from market perspective. Cost-based valuation is a very reliable valuation because it is formed by costs which occurred in the agricultural entity. This valuation will also be more objective because it is free from assumptions and estimations. The objectivity from this valuation method is high because the economic sacrifice is actual.

Cost-based valuations can represent the flow of utilities from the farmer to the biological assets through monetary units. Costs reflect economic sacrifice as the one of utility that flow from the farmer in taking care and prepare biological asset until it can produce various benefits. Due to its ability, we consider that cost-based valuation method is better than fair value valuation method. Unfortunately, cost-based biological asset valuation concept only measures biological asset in terms of its economic utility as well as fair value valuation on IAS 41. The concept of asset has been expanded to the meaning dimension by viewing asset as an accumulation of utilities and benefits. Moreover, when spiritual utility attribute (religious and social) is attached to the asset, then valuation should be extended to the meaning dimension besides doing cost-based valuations. As conclusion, the way to valuing the amount of spiritual utility from asset is by reporting the contribution of biological asset as the utilization of spiritual utility into qualitative reporting.

Spiritual utility is located on the meaning dimension, so the best way to measure it is by meaning or defining the utility itself. Utility can defined when it utilized i.e. by forming a capital asset from biological asset. In connection with this, we offer two ways to measure it. First, measurement can be done through our (human) projection and mental image. Valuations with this media will depart from the definition of the utilities and translated through the words which can provide insight and reasons about the utilization of the utilities for fulfilling spiritual and social needs. The report will be created in the explanatory paragraphs that can be inserted in a special section in the notes to the financial statements. Thus the users will become the parties who interpret and gauge the amount of the spiritual capital of the entity which report it (self-meaning).

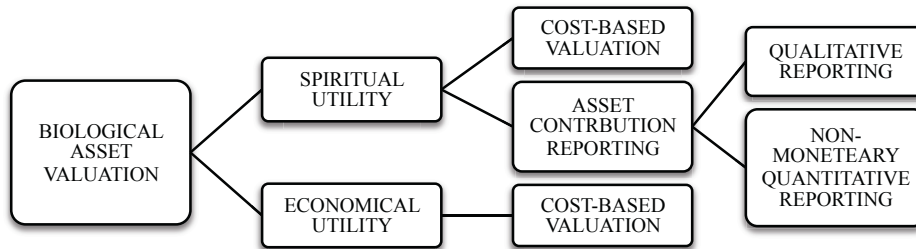


Fig 2. Biological asset reporting and valuation concept

The second option is through non-monetary quantitative information such as contributions report, or translate it into a monetary value (monetary information) such as social-spiritual funds allocation reports. Quantitative monetary valuations can also be made through the conventional accounting report. The advantage of this valuation is that the monetary value of a biological asset (which has been measured) can be integrated with other accounting information.

#### 4. Conclusion

Valuation concept in accounting is very important thing because it can provide useful information to the concerned parties. Unfortunately, valuation concept also has some potential in dragging accounting into *logocentrism* and “single-ization” of the materialism and monetary aspect as the valuation indicator. Valuation concept also has the potential to weaken agricultural entity by using of fair value valuation method based on market price as used in IAS 41. Besides full of logocentrism accent, valuation based on market price does not have relevance with the agricultural entity’s efforts and the sacrifices in order to obtain or create its biological asset. IAS 41’s fair value valuation is also considered not reliable because full of subjectivity without strong argument.

What we have found as the result of empirical study showed that agriculture in Indonesia has its own way in valuating biological asset. Farmers do not always use money as valuation indicator of biological asset or performance indicator. For them, biological asset is not enough to be measured with money, because biological asset is the accumulation of various utilities that do not only consist of economical utility. Indonesian farmers also have its particular ways in recording this utility accumulation. If it is seen from conventional accounting perspective, it would seem that farmers do not have capability in the matter of recording and that their need about accounting information is low. On the contrary, their simple ways that have been implemented for a long time are the best ways in agriculture accounting. There is unnecessary need to refer to the foreign agricultural accounting standard which is certainly unsuitable with the agriculture condition in Indonesia.

If best financial accounting practices are determined by local society’s social and culture factors, economic system, politic system, social system, and the form of organization in the society, then it is only appropriate if agriculture accounting standard is formed based on the way Indonesian farmers manage their agricultural entity. The concept of utility cycle, farmer’s assumption about income, and how they abstract meaning and value of asset, are more relevant to valuing biological asset rather than the top-down approach found in international standard. In the end, agriculture accounting practices can be more suitable for the farmers if its concepts are developed from the farmers themselves.

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