Accounting Practices and The Use of Money in The Reign of King Udayana in Bali: An Ethnoarcheological Approach

I Gusti Ayu Nyoman Budiasih
Accounting Department, Udayana University

and

Eko Gani Sukoharsono
Accounting Department, the University of Brawijaya

Abstract

The study takes an ethnoarcheological approach to exploring the existence of accounting practices and the use of money in the reign of King Udayana (during the period 989-1011 Maschii). The period was considered important since it was the golden age of the Singkamandawa Kingdom in Bali where King Udayana successfully integrated Bali and Nusa Tenggara, and its influence reached East Java. King Udayana had a prominent role in the development of the economic, social, political and religious values of the people of Bali.

It is concluded that using the ethnoarcheological approach, in the era of King Udayana, some clear pictures of the existence of accounting practices could be drawn. Accounting was understood in the era in various forms, including economic transactions in the traditional markets, the use of currency on many social occasions, and simple models of record keeping. It is also believed that King Udayana used religious values as the basis of people's social and economic transactions.

It is also found that in the reign of King Udayana, money in the form of coins was used intensively. Coins were minted using gold and silver plates as the local currency used strongly reflected the spiritual contexts which were highly respected by local community. The symbols on the coins had two similar patterns which were the same on both the left and right sides; on the gold coins they depicted life which has a balance between outward and inward or material and spiritual concepts. Similarly, the pattern featuring four sandalwood flower petals that was printed on silver currency as a sacred tree. Belief in this spiritual foundation was a very important concept to put into practice in order to obtain a balance between material and spiritual life. It is also believed that the accounting practices performed during the era of King Udayana also used the practice of balance. Transactions related to the use of currency trading were carried out between the kingdom and the villagers, as expressed in the inscription, showed how the empire really understood the meaning of well-being and balanced life.

Keywords: Accounting History, King Udayana, King Airlangga, Ethnoarcheological Approach, History of Money

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I Gusti Ayu Nyoman Budiasih is an Accounting lecturer at the Accounting Department, Udayana University, and currently a Doctoral Candidate at the University of Brawijaya.

Eko Gani Sukoharsono is Professor of Accounting, at the Accounting Department, and Director of International Program, the Faculty of Economics and Business, the University of Brawijaya.
Accounting Practices and The Use of Money in The Reign of King Udayana in Bali: An Ethnoarchaeological Approach

1. Introduction

Accounting that occurred in the past is generally understood to provide an overview of economic and industrial development only. There is also an assumption that an understanding of accounting that occurred in the past is viewed in the same way as the one in the present (Laughlin and Lowe, 1985; Tyson, 1993; North, 1985; Sukoharsono, 1995). This narrow understanding tends to view accounting as an overview of techniques alone, and is not affected by, or does not have any interaction with, its environment, whether political, economic, social or cultural. This has resulted in current accounting research being dominated by the analysis of economic developments and industrial practices. As Sukoharsono (1995) pointed out, accounting emerged in the business of society, it was not only because of industrial development, but it was also influenced by cultural and religious factors.

Economic development and industrial practices of developed countries are a major concern of accounting researchers. This has been held up as a benchmark for developments in accounting in the future which ignores the fact that accounting actually existed in the past with its own social context. The same thing is presented by Young and Monck (2006) that history serves as an awareness of how the past can be used to influence the transition of ethical responsibilities from the present to the future.

The historical development of accounting in Indonesia is still rarely expressed except in the golden age of Singosari Kingdom observed by Sukoharsono and Lutfillah (2008). In particular, the history of the local accounting practices in Bali has never been explored before in the form of scientific research. On the other hand, constructing the accounting practices in the past in various regions in Indonesia provides possibilities to make comparisons so as to obtain new findings that can be considered in terms of accounting developments nowadays and those in the future.

Trade that developed rapidly led to the need for a medium of exchange for transactions. This medium is expected to be objects made of durable material, easy to carry, that have a certain weight based on mutual agreement, and have a sign or stamp from the authority which has stated that it is as a legitimate medium of exchange called money (Amelia, 2003).

Money is a fundamental thing for accounting since it not only serves as a means of exchange but also as a monetary unit. Money is used as a means to conduct exchange indirectly as a means of payment, unit standard, and exchange medium (Evers: 1986). Information on money is an important marker of accounting as information systems that allow people to use it continually, and because the information is expected to exist during the period when that registration, classification and aggregation occurs.

Money as a marker of information has four fundamental characteristics (Swanson, 1988), namely as accounting unit, mobility, certification and value in its relation to new developments in calculating, recording, personal seal, weight and measurement. Besides, according to Littleton in Alexander (2002), money as a form factor for accounting for the money is “the common denominator” for exchanges, for there is no need for bookkeeping except to reduce the transaction to a set of monetary values.

In the reign of King Udayana, the use of local currencies in the form of gold, silver, and Chinese kepeng illustrates that at that time there were financial interactions that included not only local but also international relations. Looking at the trade relationship, it is possible that there were accounting practices which needs to be explored.

1.2 Research Motivation

Evolution of accounting is generally known from accounting history research in developed countries which has been conducted in America, Canada, Spain, Britain and Australia. The accounting evolution that occurred in these countries is of course adapted to the socio-cultural, economic and
political state of the respective countries, and that is not necessarily adaptable to the conditions in Indonesia. Up to now Indonesia, the development of accounting is still viewed in terms of Western countries, which do not necessarily have a relationship with Indonesia's own accounting evolution.

On the other hand, different cultures, either in terms of political, economic, social and cultural factors, will result in different revelations of their historical accounting development. Research on the accounting history in Indonesia has only been conducted by Sukoharsono (1995) and Sukoharsono and Lutfillah (2008) on the golden age of Singosari, so it is necessary to conduct research in this field in order to give a clear understanding of the initial thinking in terms of accounting and this will be useful as a precursor to the development of accounting research in the future. This is the motivation of researching accounting practices in terms of currency usage in Indonesia especially in Bali, in the reign of King Udayana period of 989-1011M by taking an ethnoarcheological approach.

1.3 Research Questions

With regard to the reign of King Udayana, accounting practices can be studied from explorations of inscriptions, written assessments, historical objects or cultural traces and practices associated with the use of currency. Using an ethnoarcheological approach, accounting practices are explored in this study. Aspects of economic, social, political and religious values are used to find the existence of accounting practices. Based on the above statements, the study focuses on the question “What accounting practices and what uses of money existed in the reign of King Udayana?”

1.4 Research Objectives

The aim of the study is to explore the existence of accounting practices and the use of money in the reign of King Udayana observed using an ethnoarcheological approach. The study is inspired by the study conducted by Sukoharsono and Lutfillah (2008) who explored intensively accounting in the era of the Singosari Kingdom. Unlike that one, this study is for the period 989-1011 in Bali where the practices are believed to be older and where some interesting inscriptions are relatively well preserved.

1.5 Research Contributions

The results of this study are expected to provide theoretical and practical benefits in the context of early accounting practices in Bali, especially in the reign of King Udayana. For theoretical benefits, this study is expected: 1) to contribute thought to the development of accounting in the local scope of the existing accounting practice where it was formed; 2) to add a theory about accounting reports by examining the accounting values of the past; and 3) to add insights to the accounting discipline as the dissemination of accounting knowledge in every field of science such as archeology. For practical benefits, it is hoped that this study will contribute to: 1) the researchers of historical accounting development in Indonesia, by considering the role and function of accounting where it is located, so as to raise local cultural values that affect it; 2) for accounting policy makers who are expected to use the accounting values of the past as the basis for current and future accounting policy; and 3) to promote the accounting role and functions extensively in other scientific approaches, namely archeology.

2. Research Method

The study is a qualitative research using an ethnoarcheological approach in analyzing the problem proposed. This approach is used in order to provide understanding of the accounting practices in the usage of currencies applied in the past. Getting a clear picture of this requires a research method that is able to uncover the inside research question proposed.

Uncovering the accounting practices in terms of the usage of currency in the reign of King Udayana which took place a thousand years ago, requires a sharp knife of analysis to be able to
reconstruct explicitly the data contained in the remaining artifacts in order to obtain a reconstruction of the accounting practices. Accounting research based on historical data needs the discipline of archaeology to uncover archaeological data.

The main obstacle in reconstructing past lives is the existence of data which is limited both in terms of quality and quantity as well as the interpretation of the data itself. However, the basic culture has remained in Bali, allowing research with this method that is more easily carried out because the ethnography evidence is quite clear. It is seen from the cultural community that can be traced back to past cultures that existed on the site of the Singhamandawa kingdom and Bali Aga village (Sukawana) using ethnographic data. The mixture of archaeological and ethnographical data generates an analysis method called ethnoarcheology.

2.1 Archaeology and Ethnography Data Collection Procedures
2.1.1 Determination of Context, the Site and Historical Research

Determination of context is conducted for the inscriptions of ancient history as written evidence. Historical objects and culture trace the past to support the description of phenomena. All data were derived from archaeological and ethnographic research conducted at the site of Samuan Tiga Temple, Bedahulu village as the site of the royal Singhamandawa and Gunung Kawi temple as the heritage site of King Udayana. Another research site used to acquire data was Sukawana village which is one of the Bali Aga	extsuperscript{2} ethnographic villages. Informants in this study were those who really know about what happened in the past such as the historian, Pengempon	extsuperscript{1} Pura Gunung Kawi temple, archaeologists as the excavation team and researchers at the Archaeology Institute Denpasar, as well as an epigrapher.

2.1.2 Archaeology and Ethnography Data Collection Techniques

In order to produce a reconstruction of accounting practices in the use of currency in the reign of King Udayana that is based on the pieces of data that do not have a clear context, the necessary data collection techniques are:

2.1.2.1 In-depth interview with The Ancient Historians, Pengempon Pura Heritage, archaeologists and Epigrapher.

Studies using an ethnoarcheological approach generally assumes that the observed object can give an idea or interpretation that may have something in common with the cultures of the past and current cultural phenomenon. In-depth interviews were conducted with the ancient historian who knows and understands the various histories of life, the Pengempon (guardian) of King Legacy Temple, and the archaeologists. In addition, an epigrapher was also interviewed for he could read the inscriptions which use language and scripts that are not known to the researchers. A search of cultural traces of the past was made in Bedahulu village as the site of the Singhamandawa Kingdom, and Sukawana village as the site of Bali Aga village. In addition, participatory observation of these sites, interviews with traditional leaders and citizens of the local communities were also conducted.

\textsuperscript{1} Native Balinese who were not willing to accept the influence of the power of Majapahit kingdom that at the time managed to take control of Bali, so they were forced to live in the mountains (Aga means mountain). Bali Aga communities that still exist maintain their original culture, although many cultures want to influence it.

\textsuperscript{2} People who are in charge of maintain and preserving the Pura
2.1.2.2 Direct Observation of the Archaeology Institute and the Archaeological Museum

Data collection techniques included looking directly the activities undertaken by the archaeologist and examining the artifacts related to the accounting practices in the use of currency in the reign of King Udayana. This technique involved directly observing the activities of the Denpasar Archeological Institute and the Archaeological Museum in Gianyar.

Observation of the Denpasar Archeological Institute intended to directly examine the activities carried out by archaeologists as they carried out their excavation. An observation of the Gianyar Archaeological Museum was conducted to get direct knowledge of the historical relics that have been found, derived from the completed findings of the archaeologists' research.

2.1.2.3 Participating Observations in Related Research Sites

In order to improve understanding of the phenomenon observed, the data collection used was participatory observation. This data collection technique was used in order to explore thoroughly the phenomenon observed by participating in the site excavation. Mingling with the community was also conducted at the site of Singhawandawa kingdom and Sukawana village as the site of Bali Aga village.

2.2 Contextual Description and Analysis

The data obtained from documentation, interviews, participatory observation, and various physical artifacts must be explained contextually in order to facilitate interpretation of the data. This is conducted in order to obtain valuable findings about accounting practices in the usage of currencies in those days and to obtain accounting values in the development of accounting practices in the future as well.

Data analysis was performed using a qualitative analysis technique with ethnoarcheology as the prism through which the analysis was made. Since the data used in this study were qualitative data, there was a need to interpret the data found so as to obtain an in-depth understanding. The interpretation of archaeological data from informants would result in interpretation of accounting practices in the usage of currency. The interpretation on the ethnographic data taken from rural and community leaders on the linked site generate an interpretation of social reality. The interpretation of artifacts and the reality of accounting practices in the usage of currency were reinterpreted by the researchers, and therefore reflected the findings.

2.3 Research Model

An overview of the methods used can be summarized in the model of research. The model that was designed can be seen in Appendix 5 (Research Model). It can be described as a study which used ethnoarcheology to reconstruct the accounting practices and the use of currency in the reign of King Udayana. To investigate the historical events of the past, the researchers used archaeological data or artifacts, both written in the form of inscriptions and historical studies, and the unwritten form of the heritage ancient objects. Archaeological data was obtained from both the direct observations of the Archeological Institute in Denpasar and Gianyar Archaeological Museum, as well as through in-depth interviews with the ancient historians, staff at King Udayana heritage temples, archaeologists and an epigrapher.

The data collection of archaeological artifacts produced an interpretation of the accounting practices in the usage of currency. Since archaeological data only supported analyzing data contextually, it required additional data to make it possible to explore archeological issues in an explanatory way. Therefore, ethnographic data were needed. These data were obtained by tracing past cultures which were related to the site by adapting the cultural past of the rural communities of Bedahulu village and Sukawana village.
Ethnographic data generate an interpretation of reality of accounting practices in the usage of currency. The interpretation of artifacts and the reality was then reinterpreted by the researchers to produce an interpretation of accounting practices in the usage of currency. The interpretation of the research results was then shared in consultation with the informants along with other data sources to identify and test the truth of the interpretation results by triangulation.²

3. Accounting Practices and King Udayana

The accounting practices adopted by the people in Bali in the reign of King Udayana 989-1011 AD can be attributed to various aspects. Idea accounting was known and applied at that time and formed part of the dynamic interaction in the social environment. The reign of King Udayana was characterized by the strong influence of the Queen in running the government. This can be seen from the inscriptions that were issued where the name of the Queen always precedes the name of the King. This was different to the inscriptions issued by the Kings who ruled before and after, when the name of Queen was not written on the plaques.

The Singhamandawa kingdom was ruled by King Udayana in Bali from the year 989 until 1011. He was a King who managed to unite the entire island of Bali with Nusa Tenggara, and his influence even reached East Java. The leadership of King Udayana can also be seen from his ability to solve problems that arose in the community, along with the growing influence of Hindu religion and literature on the island of Bali. Some of the records contained in the inscriptions refer to the leadership of King Udayana and how he paid great attention to the welfare of his people, both materially and spiritually. As in the case of religious belief, King Udayana respected the diversity of the people's religion. This can be seen from the religion that developed at that time, namely Hinduism (Siwa) and Buddhism and their various sects or cults. Belief in cultural diversity can be seen from the inscriptions that are written using God's Nagari writing, and also Kawi and Sanskrit writing, as well as ancient Balinese and Old Javanese. Similarly, in the field of welfare, King Udayana enacted a policy to use the tax system and individuals' gold for tax exemption in a place used by the general public. In the running of the government, the King always sought consensus agreement in making decisions and provided an opportunity for citizens to complain directly.

Although the system of government that was adopted was a monarchy, the decision making of King Udayana was based more on an attitude which was democratic using high ranking royal officials as well as through checking directly in the field. The bureaucratic structure of the kingdom during the reign of King Udayana started from the bottom with the village-level official, then it was the officials at the central level and the last was the King who was accompanied by two groups of Siwa and Buddhist priests. Although people adopted two different sects of religion and belief, the island was secure and prosperous. King Udayana demonstrated success in unifying the two different religions and their sects grew in Bali and they were able to live at ease and at peace. King Udayana paid a lot of attention to religious matters, both the Siwa and Buddhist religion, and this is found in inscriptions which mention the group name Dang Acarya for a Dang Opadyaya priest of Shiva and Buddhist monks for the class of (Goris, 1954: 94). So we can say that at that time the community had embraced two religions which were Shiva and the Buddhist religion, which had deep spirituality.

Markets that existed during the reign of King Udayana were placed in strategic locations, which made transactions easy to perform, such as near the palace (central markets). These markets considered having dense population and included crossroads, and at the harbours. The role of markets in the reign of King Udayana was to meet the needs of the community. It was also about trade relations between regions and islands. Along with the market exchange tools, there were also traded commodities in the reign of King Udayana. Accounting was known by its people, although it was still very simple to keep a record of their transactions.

² Triangulation in this case is the way of collecting data from various data sources to obtain valid information.
The tax which was levied on fees to residents in the reign of King Udayana was already very well known, as widely expressed in various historical records and inscriptions made at that time. Actual tax arrangements issued by King Udayana were set so as not to burden the people. However, the implementation led to many problems caused by the employees in charge of collecting taxes who sometimes did so arbitrarily by increasing the amount of the tax payments (Poesponegoro and Notosusanto, 1993: 204-207). Most of the inscriptions were known to contain the King’s decisions regarding the establishment of a village or region to region Swatantra (in Java called Sima) or the existence of the special land protected by the monarch and free from any form of taxation.

The emergence of accounting can also be seen in the reign of King Udayana as disclosed by the inscriptions written in ancient Balinese and Javanese that recorded a wide range of financial transactions, so as to create a social phenomenon with a record and classify events that took place at the time. The use of letters in the reign of King Udayana can be seen in the three stone inscriptions or pillar-shaped monuments that date back to the year 835 Saka or 913 AD in the village of Sanur Blanjong. The inscription used two languages (bilingual) namely the Balinese language and Sanskrit language and the use of two kinds of script Kawi and Negari letters. Numbering did not constitute a lot of writing on the plaques, but there were some inscriptions that still used numbering using Hindu Sanskrit consisting of nine digits are 1, 2, 3, 4, 5, 6, 7, 8, and 9. At the beginning of trade transactions carried out by people in ancient times by the exchange of goods for goods (barter), but some were already using the medium of exchange in a variety of shapes and standard values, although very simple such as in the form of beads, teeth of 3 nted animal, rocks and shells (Subrahwa, 2009).

In the reign of King Udayana, as revealed in the data from some of the inscriptions, it was mentioned that money (see Appendix 2, 3, 4) as a symbol was used as a tool of the trade and exchange. Coinage or coins were more important because of the presence of the ornaments or text found on both sides. Coin was considered as an artifact that contained the name of the King or the ruler and the year. The money used in international trade transactions was a currency called ‘kepeng’ brought by the Chinese traders for the conduct of trade in Bali. Kepeng were used with consideration of the need for money in small denominations and numerous amounts, and easy to carry as it was denominated kepeng hole in the middle there were typically used to bind together significant amounts. Gold and silver currency was usually only held by the kingdom because it had high value so it was difficult to use for small-value transactions.

The milestones in the progress of society during the reign of King Udayana started with farming and hunting and at that time people already had a settled life in a place and did not move around like in prehistoric times. The livelihood of the population involved a way of life in which people worked together in order to carry out the duties and functions as part of the community. Trade had grown rapidly as evidenced by the various inscriptions about issues related to trade, so it can be said that the economic development of society at that time was more advanced.

4. The Use of Currency

Initially, trading transactions by the public before the era of King Udayana were conducted through the exchange of goods for goods (barter), but some were already using the medium of exchange in a variety of shapes and standard values, although very simple such as in the form of beads, teeth of hunted animals, rocks and shells (Subrahwa, 2009). Along with the trade, which evolved quite rapidly, it required a medium of exchange for their transactions. A medium of exchange is expected to be an object made of durable material, that are easy to carry everywhere, have a certain weight based on mutual agreement, and have a sign or stamp of the authority at that time stating that the object is used as a legitimate medium of exchange called money (Amelia, 2003).
4.1 Money as a Tool of Exchange and Monetary Unit in Accounting

Based on observations in some traditional markets in the village of Bali Aga Sukawana, exchange of cultural goods with barter-based transactions carried out in purchasing are still found. There is a buyer who offers onions in exchange for fish. There are also other buyers who would like to bring bunches of bananas and trade them for serontong (a tin) of rice. Exchanges occur if the two parties, both the buyer and the seller, have agreed on the amount of goods exchanged, and then there is the sale and purchase transaction.

In the reign of King Udayana, according to the data from some inscription, money is mentioned as a symbol that was already used as a tool for trade and exchange. Money is fundamental to accounting for it not only serves as a medium of exchange but also the monetary unit in accounting. International trade transactions in those days used kepang brought by Chinese traders for trading in Bali. Chinese kepang are used with consideration of the need for money in small denominations and numerous amounts, and they were easy to carry anywhere. This is possible for there is a hole in the middle of kepang which allows the money to be tied together in greater amounts. Gold and silver currency in those days was usually only held by royal or noble people because it had high value so it was difficult to use for small-value transactions. The coin plays an important role because of the decoration or writing on both sides. Coins are considered to be artifacts that contain the name of the King or ruler of the time and the year that they were issued.

Money as a medium of exchange in those days was already known in Bali both in the form of gold and silver, and Chinese kepang. Based on interviews with an epigrapher and from directly examining the physical evidence, it was revealed that the gold coins consist of: 1) masa/masaka (mas ma), 2) kupang (mas ku), and 3) saga (mas sa). Silver currency unit consisting of: 1) masa (ma), 2) Kupang (ku), 3) saga (sa), and the smallest unit 3) piling (pi). Coins were first made in Bali in the 8th century AD and were made of gold and silver (Figure 4.1 a, b). The form of coins that were made at that time was square with a slightly rounded shape and about the size of soybean seed for the gold coins, and approximately equal to a kepang for silver coins, based on the archaeological evidence found by the excavation team from the Archaeological Institute in Denpasar. Based on interviews with the epigrapher and the author’s observations, it was seen that the gold coins were stamped on one side with sesame seeds and the letter "ta" on the other side, which stands for tahil, written in Dewa Negari script which means ‘to pay’. The gold coins were a rather round-shaped square and the largest unit was the masa. On the back, there were two indentations each of contained a pattern of two spherical shaped sesame seeds ed. As for the meaning denoted by the pattern of sesame seeds, it was the Purusa Pradhana symbol meaning men and women, which also means the balance between material and spiritual.

Silver currency was spherical and concave with the largest unit having a diameter of 9 mm. Inscribed on one side letter ma or ku written in Dewa Negari. Kupang currency has a more concave shape than masa. The other side has an indentation with the four petal sandalwood flower pattern. The meaning signified by the pattern of sandalwood petals is that it symbolizes the tree which is sanctified by the Balinese and it is often used during sacred ceremonies and as a building material. The meaning of the four corners of the leaves is as a symbol of the four cardinal directions, because the Balinese people believe that every corner of the world is controlled by the God and Goddess and it shows their magic which protects their people.

As for the making of money, Balinese people always relate to it with religious sanctity. So the currency is not only intended as a means of exchange and monetary policies, but also contains a symbol of purity so that it is always makes a connection between finance and purity. These two factors in the past were always closely linked. Sanctity in every religious ceremony and upakara considers financial factors which are the funds. On the other hand, as for financial terms, the sanctity factors are presented both in terms of the currency symbol and financial transactions. So these are two different things that can be harmonized in its implementation.

The calculation of the gold and silver currency in Java by Stutterheim (1946: 17) mentions that 1 kati is equal to 20 suwarna or 20 dharana or 20 tahil. Then 1 suwarna or 1 tahil is equal to 16 masa, and
1 masa is equal to 4 kg. If the calculation is further described it will result in the sequence value comparison as follows: 1 suwarna = 1 tahil = 16 masa = 64 kupang. It is caused by 1 tahil = 1/16 kati, with calculation of 7 kati = 0.61761 kg, the weight ratio obtained by calculation:

1 suwarna = 0.038601 kg, 1 masa = 0.002412 kg, and 1 kupang = 0.000603 kg.

In addition to the currency of gold, at that time there was also silver currency which was usually called atak which had a value equal to 2 kupang or 1/2 masa, so the weight of 1 masa is equal to 4 kupang (Christie, 1994 in Nastiti, 2003: 100). This is caused by 1 masa weighing between 2.4 and 2.5 grams with a diameter of 12-15 mm, and a kupang consists of 2 kupang or 1 atak or 1/2 masa weighing about 1 to 1.2 grams with a diameter of 10 mm and 1 kupang weighing 0.5 to 0.7 grams (Nastiti, 2003).

Considering the different sizes of gold and silver coins when it was connected with the accounting practices as a means of payment can be described in a variety of transactions in society at that time. Bwahan B Inscription written in the year 1025 AD mentions buying or selling forest land area of 900 x 1100 depa\(^6\) for 10 masa mas and 10 masa (Goris, 1954:104):

".....ikang alas 1 burvan hagi ri samapa ri thannya. ring masu 10 pith masu 10 i paduka hagi. hinganya kulwan hnu mula ike pamulangan, panjangnya 900 dpa thanny 1100 dpa ........."

Meaning:

"..... bought the hunting woods of the king around his village for 10 masa 10 masa to the King ...... the west limit is Pamulangan, its length is 1100 dpa and 900 dpa wide ......"

The inscription explains that the Bwahan villagers were lacking land for farming and were having difficulty in finding firewood and grass to feed their cattle, so the villagers begged to buy the king's hunting forest land around the village. The king granted the request after the villager paid 10 masa gold (10 masa) and 10 masa silver (10 masa). The purchase of land if it is converted into the previously reviewed weight will be:

1 masa = 2.5 grams, then 10 masa = 25 grams of gold,
1 masa = 1.2 grams, then 10 masa = 12 grams of silver.

If converted to gold and silver prices nowadays, in which:

1 gram of gold worth Rp 500,000 and Rp 5,000 silver, then:
10 masa = 25 grams x Rp 500,000 = Rp 12,500,000.
10 masa = 12 g x = Rp 5,000 to Rp 60,000.

So the total price of land purchased reviewed in terms of present day currency is Rp. 12,500,000. If the land purchased is converted to the land price in the Bwahan village now, then the land area is 900 x 1100 depa = 990,000 depa, where:

1 depa = 1, 65 m, then 990,000 depa = 1.6335 million m\(^2\) or 16 335 acres. If one acre of land in the village Bwahan now estimated at Rp 3,000,000, then the price of the purchased land now would be Rp 49,005,000,000 (16.335 acres x Rp 3,000,000 = Rp 49,005,000,000).

Reviewing the comparison of the conversion done, both in terms of weight of the currency and the area of land, it can be interpreted that: 1) the price of land purchased by the Bwahan village with the conversion ratio of gold prices and land prices nowadays shows that the rise in land prices is not proportional to the increase in the price of gold, 2) the price of land purchased by Bwahan villagers are very cheap, illustrating that the King gave it solely in the hope of helping people to meet their needs and promote the agricultural sector.

Only by paying a sum of money amounting to 10 masa mas and 10 masa silver, could the Bwahan villagers obtain land area of 900 x 1100 depas or 1.633.500m\(^2\) or 16 335 acres. The amount paid by the villagers being small compared to the land acquired meant that people of that time could increase their living standards. The transaction illustrates how the king as a supreme ruler at that time was very

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\(^6\) A kind of measurement using the length of arm, approximately 1.65 meter.
concerned about the welfare of his people. The main purpose of the King is to put the people’s interests in improving their living standards above his own personal interests in hunting activities.

On that basis, it can be interpreted that in the past, the government sector implemented locality-based accounting, where the people were given responsibility in managing the assets of the kingdom to make them more productive, but people still had an obligation to pay non burdensome prices. This is done solely to provide learning for people. These accounting values reflected in the transactions were associated with the accounting in the governance sector as they covered transactions made by the central government, in this case the kingdom. Those accounting values were expected to be used as an input for the government sector accounting practices that were currently being implemented as centralized financial accounting.

Comparisons that describe other transactions appear in the Dawan A inscriptions from 1053 AD (Santosa, 1965) which mention the purchase of 30 buffaloes at a price of 6 masaka for each buffalo purchased by the King in the desert. Those Buffaloes were given to the Lutungan villagers as a capital loan from the King in order to work the land for farming. When harvest time came, the villagers were expected to return the cost of purchase (30 buffaloes x 6 masaka = 180).

"...kbo prana 30 siki, ulih paduka haan amambas 1 gurun, yata milu wnehaken irukanang karamani lutungan mapakna wuwititanya masaka. kbo 1 milu ma 6...."

Meaning:

".... 30 buffaloes are purchased by the King in the desert, those are also given to the Lutungan villagers intended as a capital ... one buffalo costs 6 Masaka...."

Clearer transactions found in the Dawan inscription mention that the Lutungan villagers were granted a loan by the King as capital amounting to 30 buffaloes at a price of 6 masica (6 mas ma). The provision of the loan was intended as a livestock loan given to the people of the Lutungan village in order to plow their fields so they could harvest rice, because they could not afford to buy buffaloes. A successful harvest for the Lutungan villagers meant that residents could eventually pay the loan. In addition, the tax revenue from kingdom’s agricultural sector and other taxes associated with the irrigated fields could later be collected in accordance with the expectations of the kingdom. If the transaction is converted into present day currency with a weight ratio of current prices, then the following calculation is obtained:

1 mas ma = 2.5 gram, 6 mas ma = 15 grams, if 1 gram of gold is now estimated to cost Rp 500,000, then the 6 mas ma = 15 grams x Rp 500,000 = Rp 7.5 million per buffalo. For 30 buffaloes as a capital loan by the King was Rp 3,750,000,000,000 (30 buffaloes x Rp 7,500,000). So, 1 buffalo at that time was 6 mas ma at a price of Rp 7,500,000 buffalo are considered very cheap, because a buffalo right now worth at least Rp. 15,000,000, meaning double the price that buffalo used to be. It is as a form of learning and assistance by the King for his people.

Both types of transactions were done using gold and silver currency as the transaction has of high value. Transactions with a lower money value such as transactions involving the purchase of various household items where it was not possible to use the two currencies (gold or silver), they used barter and exchange of money from Chinese kepeng or perforated pis.

Trade relations at that time became more advanced in terms of the relationships with other islands and foreign countries such as China and India. Along with the arrival of the Chinese people to engage in trade, they brought Chinese kepeng which were used as a means of payment. Therefore, the use of kepeng became popular in Bali because of this trade relationship. The enormous quantity of kepeng resulted in the setting aside of the local currency of gold and silver. Chinese kepeng became a more popular means of payment in Balinese society in those days because it has a hole in the middle, so it was practical to carry it everywhere and it was not easily lost. Another reason was that the gold and silver came in large denominations and people needed money in small denominations to carry out transactions. This was due to trade deals where it was not possible to use gold or silver currency because of the lower cash values therefore kepeng were used (Chinese copper coins) called pipis (Figure 4.2). Up
to now, the term used for currency in Bali is still pesis or pis⁷, therefore the current kepeng in Bali right now known by the name of pis bolong⁸.

The meaning of the pattern on the upper side of kepeng was Chinese characters that showed the name of dynasty which made it with two letters as the symbols Rwa Bhinéda’ and Pirusa-Pradana⁹. On the bottom side there is an image of an eight petal lotus as a symbol of Dewata Nawa Sangga¹⁰. In the middle, there is a rectangular round hole which symbolizes the rotation center.

Those coins have been found by people in some areas of Bali and during the excavations by the research team from the Archeological Institute Denpasar. Gold and silver coins are stored in the laboratory at Institute up to now, while kepeng are still stored in various temples where they were discovered. The number of gold and silver coins found at most only numbered a few dozen whereas the number of Chinese kepeng reached thousands like those found in the Kubu Salya village of Bali Aga Sukawana (Figure 4.5). At the time of discovery and research into kepeng in Kubu Salya village, precisely in the Pura Lempuyang Cemeng, the writer participated in the process and could observe the different types of kepeng¹¹ directly.

Kepeng during the reign of King Udyanana had a relatively high rate of exchange which shows Bali trade relations with the outside world (China) had been increasing rapidly. This could also be proved by the discovery of kepeng in relatively numerous amounts made by Tang Dynasty (621-907 AD), Sung Dynasty (960-1174 AD), Ming Dynasty (1368-1678 AD), and the Ching Dynasty (1662-1796 AD). The use of these kepeng is written about in the Gobleg Batur C temple inscriptions dated 1398 M (Calicifvels, 1926:13) which mention the offerings of local communities measured with thousands units of money.

Kepeng or perforated pis has been used as a medium of exchange in Bali for at least 1,200 years, and stopped being used as a means of payment when the Dutch came to Bali. When they ruled the island in the early 1900s, the Dutch Guilden currency flowed to Bali and was regarded as kepeng for exchange or trading. Kepeng had significant meanings to Balinese at that time because it features in all aspects of Balinese life in terms of religious, cultural, social, political, and economic activity. Currently, kepeng are only associated with culture in terms of art and religion, while for the social, political and economic matters, its roles are increasingly blurred. Kepeng come in a number of varieties since they are made from various different metals and lettering. The similarity is that all kinds of kepeng have a hole in the middle which is used to place a union bind.

Although kepeng came from China, the Balinese fully accepted it as their own currency. It illustrates the existence of a relationship between culture, religion, economics, politics, society and government. Kepeng in Bali now have very high value in religious ceremonies and works of art. For example, a cleanup ceremony or for marking the completion of a building, requires kepeng to be planted at the base of the building. A funeral ceremony also requires kepeng to be burned. The making of holy Rambut Sedana¹² statue uses kepeng with a Cili¹³ shape. It symbolizes the generosity of Ida Sang Hyang Widhi in providing fertility in this world.

In addition, the Balinese calculation system has a direct relationship with kepeng. For example, the words “fifty” in Balinese is selket derived from a word “se” means one and “ket” or tie means to tie something into one unity. So it can be said that the use of currency gold, silver or kepeng are closely related to mathematical and economic concepts of the Balinese.

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⁷ Pesis or pis is a Balinese term for money
⁸ Pis bolong is a perforated money or kepeng money
⁹ Rwa Bhinéda means two different things
¹⁰ Pirusa Pradana means male and female
¹¹ Dewata Nawa Sangga is eight different direction with each god
¹² Types of Kepeng obtain from excavation by Archeological Institute Denpasar consists of Chinese kepeng from 8-19 AD, Japanese kepeng from 12-19 AD, and Vietnamese (siam) kepeng from 12-18 AD
¹³ Rambut Sedana is a holy statue that made from kepeng as a symbol of fertility and prosperity
¹⁴ Cili as a symbol of Sang Hyang Widhi generosity in the forms of beautiful woman
4.2 Reflection of Accounting Practices in the "Symbol" of Currency

Seen from material aspect, the value of the currency in the reign of King Udayana was measured by the material of which it was made, which was either gold or silver. Based on the understanding of the currency's symbols, it was more related to spirituality. The development during the era eventually led to accounting practices for transactions that used money as the medium of exchange. Money has always been an interesting topic for discussion since ancient times. Besides barter, the use of money as a medium of exchange was introduced during the reign of King Udayana. The monetary units may have been accepted by society at that time as a medium of exchange because of the guarantee from the kingdom. The kingdom created gold and silver currency with various units as the local currency in Bali. Gold and silver was the local currency at that time but it also used certain symbols that actually have very significant meaning.

The symbol on the gold currency for example, which was a pattern depicting sesame seeds, when viewed in terms of its shape may not mean anything and did not show any artistic dimension. Yet, deep down, the meaning contained in the pattern of two sesame seeds symbolizes Purusa Pradhana (male and female), which describes the source of life. Without men and women, it seems there would be no life in this world. In addition, other meanings contained in the pattern of sesame seeds are that the sesame seeds on the left and right have the same shape and balance, so this means the accounting practices must be constructed based on balance. Balance here has a wide meaning. In terms of accounting practices, it means that business life does not solely emphasize the material benefits but emphasizes spirituality as well. Similarly, in making a financial statement, it has to be based on balance where it is not only about a report describing the calculation of the figures, but it also considers social accounting, environment, and spirituality as well.

The symbol of the pattern of four sandalwood petals depicted on silver coins also has deep meaning when explored further. Besides the fact that the sandalwood tree is sacred to Hindus in Bali, it also can also be interpreted according to the number of petals. The four petals represent the four points of the compass. For Balinese Hindus, each direction is occupied by the god and goddess who use their magic to protect their people in the world.

Accounting practices related to the use of money as a medium of exchange and monetary units, are expected to be guided by the various symbols present on those units. Overall, the symbols on the currency can be interpreted as follows: if you always remember and be guided by the fact that all things are His and will return to Him in the practice of accounting for any transaction, then the transaction will be done with his mercy and in accordance with his guided path. The guided path is the path of goodness, honesty, sincerity and simplicity of life that ultimately is the road to emotional and physical well-being. If all people, be it businessmen, government officials or anyone else, use this concept, then there is no such thing as crime, corruption and other misconduct. Nowadays many people only see money as one of the external factors which they consider to be the most important factor in life, and so they then forget about the harmony between the outer and inner well-being. So the accounting practices used by humans should always refer to the symbols found on the ancient currency which reflect harmony and balance between physical well-being (material) and inner happiness (spiritual).

5. Conclusion

In the era of King Udayana, some clear pictures of the existence of accounting practices could be traced. Accounting was understood in the era in various forms, including the economic transactions in the traditional markets, the use of currency, and simple models of record keeping. It is also believed that King Udayana used religious values as the basis of people's social and economic transactions.

The history of accounting practices, with regard to the use of money as a medium of exchange and monetary units, is closely associated with the symbols printed on the currency. The symbols were printed on gold and silver coins as the local currency that was used strongly reflected the spiritual context which was highly respected by the local community. The symbols on the coins had two similar patterns.
which were the same on both the left and right sides, on the gold coins they depicted life which has a balance between outward and inward or material and spiritual concepts. Similarly, the pattern during four sandalwood flower petals, that was printed on silver currency as a sacred tree, represented the four cardinal directions, because the Balinese believed that God and Goddess were the guardians of the people in every corner protected by their greatness. Belief in this spiritual foundation was a very important concept to put into practice in order to obtain a balance between material and spiritual life. It is also believed that the accounting practices performed during the era of King Udayana also used the practice of balance. Transactions related to the use of currency trading were carried out between the kingdom and the villagers, as expressed in the inscription, showed how the empire really understood the meaning of well-being and balanced life. The release of capital in the form of royal land assets, and lending transactions in the form of livestock in certain rural communities, were used as examples to illustrate the existence of the practice of accounting.

5.1 Limitations of The Study

Since the data sources are in the form of artifacts that have been buried for thousands of years, the researchers have not been able to describe the actual form of accounting practices at that time. The meaning of the accounting practices in the study was established based on the interpretation of the inscriptions and these might be considered to not yet describe fully the real form of accounting practices that occurred during the reign of King Udayana.

This study also has limitations in the use of inscriptions as its primary data source as Balinese considered them sacred, thus making it difficult to extract more data from the inscriptions. Besides this, the inscriptions were written using either ancient Balinese or Javanese script which are not commonly used, as well as many of the inscriptions being no longer intact, meaning there was some text in the inscriptions that was not legible to the epigrapher. Thus, it resulted in difficulty for the writer in describing the contents of the inscriptions and its interpretation clearly.

5.2 Implications of The Study

Getting a full picture of the history of accounting practices in the reign of King Udayana would require more research in this field. Historical Accounting research in Indonesia is being conducted in a new study that explores the history of accounting in Singosari Era. It is expected that the next study of accounting history will take other periods and topics of discussion, so that the integrity and clarity of accounting construction in the early history of Indonesia can be clearly revealed.

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