Comparative Study of Fractional Numbers on the Division of Inheritance Based on Islamic Law and Law of Lampung Pesisir Tribe

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Abstract. This article explains the comparison of the division of inheritance viewed from two viewpoints namely Islamic law and law of Lampung Pesisir tribe. This paper describes the comparison of the concept of division of inheritance based on the inheritance law contained in Islamic law and the division of inheritance contained in the law of Lampung Pesisir tribe by using the concept of mathematical fractions. In addition, this comparative study also provides an overview of the linkages and differences between the division of inheritance in Islamic law and the distribution of inheritance in the Lampung Pesisir tribe. This article concludes that the comparison between the division of Islamic legal heirs and the law of Lampung Pesisir tribe using the concept of fractional numbers can be drawn equations or differences. Because in Lampung Pesisir tribe whose majority religion is Moslem.

1. Introduction

Mathematics is an exact science that becomes the basis of another science. Mathematics is one of the necessary knowledge in everyday life and for the development of science and technology [1]. According to Bambang Sri Anggoro, mathematics is a lesson that requires reasoning and a continuous process of understanding concepts [2]. Mathematics is a calculation of numbers that will never escape from everyday life. Math is considered far from human life. Mathematics is only considered a tool of science in sciences such as physics, chemistry, astronomy, and economics only. Learning done in the classroom is only as a mathematics that is absolute without any relation to human life.

D’Ambrosio reveals that mathematics is an important actor as well as the backbone of modern human civilization. For example in everyday life, mathematics in relation to culture, known as a study called ethnomathematics [3]. In the process of learning in school, educators are one of the factors that are quite important in choosing and using approaches in implementing learning procedures. In choosing an approach to pay attention to learning that involves many students to be active in learning [4].

Ethnomatics is a culture-based mathematical study. Ethnomatics ideas will be able to enrich existing mathematical knowledge (Edy Tandililing, 2013). Examples in the art of weaving. The art of weaving is a form of craft art. The existence of woven art is an ancestral legacy that has existed for thousands of years. From the observations, the results of this woven craft contained mathematical elements [5]. Another example in Lampung society. Without studying the mathematical concepts the community has applied these concepts in daily life. It is proven that there are mathematical concepts contained in
Mathematics is true not only as a tool of science in sciences such as physics, chemistry, astronomy, and economics only. But also as a science that deals with metaphysics or intermediaries of earthly science. Another example in daily life that often occurs in the community and is very closely related to the application of mathematics count is the division of inheritance. Examples in terms of mathematics and religion. In the Qur'an, it is stated that the heavens created by God numbered seven. The creation of these seven heavens if they are correlated with major prophetic events such as the decline of revelation and Isra'-mi'raj, turns out to have a mathematical secret [7]. In addition, related to religion there are other problems related to mathematics. The problem referred to here is specifically on the problem of the rules of rad in the science of mawaris or what is known as the science of farai 'dh. Calculation of property in science farai 'dh uses mathematics, especially the concept of fractions [8]. Usually, in a family, the inheritance owner will give his heirs to the heirs by using the principle of inheritance of each family, and the division of such inheritance did not escape the mathematical arithmetic.

The law of inheritance is the law governing the transition of property left behind by a deceased person and resulting to his heirs. Regarding inheritance, there are at least three types of inheritance law that still exist in the state of Indonesia, namely inheritance according to Islamic law, inheritance according to customary law, and inheritance according to the Civil Code (KUH) / BW [9]. Of the three laws of inheritance that still exist in the midst of society and the most dominant in the implementation of division of inheritance in Indonesia is based on customary law and Islamic law.

The Republic of Indonesia consists of various tribes with different cultures. Protection of cultural heritage has been reviewed ethically and legally, nationally and internationally [10]. This nation has so many tribes and cultures that we have known from Sabang to Merauke. Since independence day until now, recorded the number of tribes in Indonesia reached more than 400. With that number, Indonesia became the country with the most tribes in the world. One of the tribes that exist in the country of Indonesia is Lampung tribe located in Lampung province. Lampung is a southernmost province on the island of Sumatra, with Bandar Lampung as its capital [11].

The indigenous tribe of Lampung is divided into two systems of custom and dialect, namely Pepadun using dialect O and Peminggir (Saibatin) using dialect A [12]. Lampung Saibatin is also called Lampung Pesisir because most of its people are dominated Pesisir areas. But not all Saibatin people are in Pesisir area, Lampung Saibatin deployment area also covers Lampung Timur, Lampung Selatan, Pesawaran, Bandar Lampung, Tanggamus and West Lampung areas.

Society of Lampung Pesisir tribe has its own way of arranging an inheritance system that is by embracing the patrilineal system. The patrilineal system is a hereditary system in which the descendants are drawn according to the father's line, the position of the man is more prominent than the female position.

Lampung not only thick with its customs but also known as the religious strength of the majority of people, namely Islam. Islam itself has laws that govern the lives of its adherents belonging to the distribution of inheritance. As Allah Almighty explained in Surah An-Nisaa’ Verse 7, which reads: Meaning: "For men, there is a right of the inheritance of their fathers and relatives, and to the women, there is a right of the inheritance of their fathers and relatives, whether little or much according to predetermined portions". (Q.S An-Nisaa’: 7)

Surah An-Nisaa’ verse 7 explains that in Islam Allah SWT has assigned part of the inheritance for men and women according to their respective proportions. Although with different amounts, whether small or large, all have been established with appropriate proportions according to the law of Allah SWT.

The customary inheritance law that uses the man system is slightly different from the inheritance law in Islam which divides the treasures of family property, in which both men and women earn a share in the ratio established by Allah SWT. Moreover, in Islamic inheritance law is known as the term as a consequence of death, which means inheritance exists if the inheritance owner dies. Inheritance exists as a result of the death of a person so that what a person has will be given to his heirs.
Such diverse legal configurations will, of course, bring further consequences. Differences will also occur in the division of the number of inheritance, the heirs can be faced with two choices of law in determining the distribution of inheritance. If each heir in a family chooses a different legal system, it certainly allows polemics among the heirs. This happens because each has a very strong argument about his confidence in the choice in inheritance law. Each of these inheritance laws has fundamental differences regarding inheritance systems, especially in the pattern of distribution of their inheritance. For that reason, the need to study more comprehensively relates to comparative studies of fractions on the division of inheritance according to Islamic law and the law of Lampung Pesisir tribe.

Both Islamic and customary law have their own patterns in calculating inheritance. Based on the pattern of inheritance distribution stipulated in Islamic rules in Surah An-Nisa verse 11, indirectly that in the division of inheritance there is a mathematical calculation. Likewise on the inheritance system in the Lampung Pesisir tribe. Based on previous research conducted by researchers, researchers found a number pattern in the division of inheritance in the Lampung Pesisir tribe. Inheritance according to Islamic law and the Lampung Pesisir tribe both has different patterns but essentially follow a mathematical system. This research was previously carried out by Suci Atmidasari, entitled Ethnomathematical Study of Assignment of Inheritance Assets in Lampung Society in terms of Customary Perspectives. However, the fundamental difference from research that researchers do is in the previous research, examines the existence of elements of mathematics in the division of inheritance in the tribe of Lampung (ethnomathematics) and is reviewed from an Islamic perspective. while the research that researchers do, looking for fractions in the division of Lampung Pesisir inheritance, they will be compared with fractions in the division of inheritance based on Islamic law.

2. Discussion
2.1 The Law of Inheritance
The law of inheritance is the law that governs the transition of property left by a deceased person and its consequences to his heirs. In principle, only the rights and obligations in the field of property law/property may be inherited. Some exceptions, such as the right of a father to deny the validity of a child and the right of a child to demand to be declared the legitimate son of his father or mother (both rights are in the field of family law) are declared by law inherited by his heirs. Wirdjono Prodjodikoro provides restrictions on inheritance, among others:
• A person who leaves an inheritance (inflater) at the time the person dies.
• Someone or some heirs (erfenaam), who have the right to receive the wealth he left behind.
• Inheritance (nalaten schap), the wealth left behind and always turning to the heirs.

Before discussing the law of inheritance according to custom or religion then first must know background from a kinship condition. For indigenous Indonesians not having a kinship that can be included in several kinds of groups, namely:
• Fatherly nature (Patrilineal)
• Motherly nature (Matrilineal)
• Nature of the fatherly-motherly (Parental)

2.2 Division of Islamic Legal Inheritance
The law of inheritance in Islam is a law used to regulate the transfer of rights and obligations to the assets of a deceased person to his heirs. In Islam, the law of inheritance is also called the law of fara'idl, the plural form of fari'dlah in which literally means part. The latter are "heirs" and "the heirs". The science of mawaris is a very important science and is only found in the religion of Islam, because with the knowledge of mawaris a person's inheritance can be given to those who are entitled at the same time can prevent any dispute about the inheritance, so that the inheritance (inheritance) can be shared with those entitled to receive by good and right without anyone feeling aggrieved, because everything is based on the rules or provisions of the applicable law [13]. In the law of inheritance, there are so-called inheritors, heritage, and heirs [14].
• An heir is a person who has died and is declared dead by leaving the heirs and treasures.
Treasures relics, property left by the heir, in the form, tangible property, treasures of unpaid debts, the joint treasure of husband and wife.

Heirs, persons who have blood relations or wives left by the heirs and are entitled to receive the estate of the heirs.

Regarding the inheritance verses and the things set forth therein are as follow: (Sajuti Thalib, 1987)

Q.S An-Nisaa ': 7
This verse confirms that in Islamic law both men and women both have the same right to obtain the inheritance of both parents or their dead relatives.

Q.S An-Nisaa ': 11
This paragraph regulates the articles of acquisition of the estate:

2.3 Division of Legal Inheritance of Lampung Coastal Tribe

The community of Lampung Pesisir tribe has its own division of inheritance. Lampung Pesisir uses Patrilineal heritage system, namely inheritance system in which the eldest son is entitled to all inheritance and as the successor to their descendants (Kusnadi). The patrilineal system is a heritage system in which the descendants are drawn according to the father's line, the position of the man is more prominent than the female position, the eldest son who is entitled to all the treasures of the relics and as the successor of their descendants.

The process of dividing his estate based on the decision of the parents, where the holder and as the owner of the decision is absolutely taken over by the father. But the eldest son cannot ask for his waifs right before his parents die. In the process, the father as the holder of power and the full decision will
give testament both in writing and oral to his wife, after the father died then the oldest new son will get
the heirs that he will manage for family interests.

The heirs to be given in accordance with the customary law of Lampung Coastal tribe are:

- Garden
- Sabah (rice field)
- Slow Tuha (old house / main house)

Some ways in the process of inheritance performed by the Coastal Coastal tribe are as follows:

2.3.1 Forwarding or Redirection
The mode of inheritance by transferring or transferring the right to this position and property is valid at
the time of the elderly heir, the heir of the eldest son is also well established married. This way of
inheritance has resulted in the transfer of rights and duties as head of the household, but the Heir because
it is still alive still has the role of advisor.

2.3.2 Appointment
The transfer of tenure and ownership of the means of hereditary appointment shall be fully applicable
to the heirs when the heir has passed away. If the Heir is still alive, he shall only be entitled to enjoy the
benefits of such designated property and shall be responsible for its administration. Prior to the
appointment, the Pewaris first collects his children for family deliberation to determine who will be
appointed to be given certain property.

Lampung Pesisir has the inheritance of the patrilineal system in which the eldest son has the fullest
inheritance. However, if in a family does not have a son then in the implementation of inheritance with
the adoption of children and marriage. If a family in a Pesisir community does not have sons or only
daughters, then, in this case, the family of the women will undertake the adoption of a son, which after
the adoption of the child will then be married to the daughter.

The adoption of children in indigenous communities of coastal Lampung is done by several stages,

- Family Deliberation
- Deliberation of relatives
- Deliberation of indigenous peoples
- Ceremony

After the process of adoption, the family performs a marriage procession. In this case, the indigenous
people of Lampung use patrilineal honest marriage form, by local residents called jujokh or metudau
marriage, meaning marriage is done by payment "honest" from the man to the woman.

2.4 Comparative Studies

| No. | Part | Description | Terms |
|-----|------|-------------|-------|
| 1   | 1/2  | Husband → no descendants of the heirs of the men | Daughters → only child |
|     |      | The granddaughter of the man → alone | Ukhtun Syaqiq → no brother (alone) |
|     |      | Ukhtun Liah → alone |   |
| 2   | 1/4  | Husband → If the heir has a child | Wife → if the heir does not have children |
| 3   | 1/8  | Only wife → 1. If have children | → 2. If the wife is more than 1 then syirkah |
| No. | Part | Description → Terms |
|-----|------|---------------------|
| 4   | 2/3  | 2 daughters or more → no boys  
|     |      | 2 granddaughters or more of the men's path  
|     |      | → no surviving heirs  
|     |      | → did not inherit with the grandson of men  
|     |      | 2 siblings (ukhtun Aqiqah)  
|     |      | → no Father/Grandfather  
|     |      | → did not inherit with the brother of the heir  
|     |      | 2 or more fellow brothers  
|     |      | → no Father/Grandfather  
|     |      | → did not inherit with siblings/women |
| 5   | 1/3  | Mother  
|     |      | → no children/grandchildren of the offspring of boys  
|     |      | → no 2 siblings or better siblings or half-brothers  
|     |      | Brothers and sisters in 2 or more persons  
|     |      | → no children (men or women)  
|     |      | → no Father/Sister  
|     |      | → the number of brothers 2 people / more |
| 6   | 1/6  | Father → if the heir has children  
|     |      | Mother  
|     |      | → if the heir has a son/woman/grandson of male descent  
|     |      | → 2 brothers or more  
|     |      | Grandma → from Mother / Father if the heir does not have Mother  
|     |      | The grandson of the female descendant of boys → the number of 1 person / more  
|     |      | Ladies and gentlemen  
|     |      | Siblings Men a thousand |

### Table 2. Distribution of Lampung Pesisir tribal heritage

| No. | Part | Description | Terms |
|-----|------|-------------|-------|
| 1   | 1/2  | The First boy | Have 1 brother |
| 2   | 3/4  | The First boy | Don't have a brother |
| 3   | 3/10 | The Second/third boys | Have a sister |
| 4   | 1/4  | The daughter | Has a brother |

Comparison of the distribution of inheritance according to the law of Lampung Pesisir and Islamic Law:

#### 2.4.1 Equations

From the data contained in the above table can be seen that there are equations in the division of inheritance according to the law of Lampung Coastal and Islamic Law, namely:

- Both the Lampung coastal law and Islamic law both use male-male systems, meaning that men have a greater right to obtain the inheritance than women. And also the system of inheritance adopted the namely Patrilineal system, namely the heirs withdrawn from the line of my father.
- Both the law of Lampung Coastal and Islamic Law, both have their respective sections for men and women. Although the division is based on a male's mail system, women also get a share of the inheritance left by the heir.
2.4.2 Differences
From the data contained in the above table can be seen that in addition to equations, there are also differences in the distribution of inheritance according to the law of Lampung Pesisir and Islamic Law, namely:

- In the law of Lampung Pesisir, heirs are only descendants (children) of the testator only, parents are not included in the list of heirs. But in Islam, not only children are on the list of heirs, but parents and wives are also included in the list of beneficiaries of the heirs.
- In the law of Lampung Pesisir, the first son has more inheritance than his younger brother, but in Islam, every boy gets the same portion, both first and second, and so on.

Inheritance in Lampung Pesisir tribe can still change, according to the agreement in the family deliberations, but Islamic Law absolutely cannot be changed because it comes from Al-Qur'an and Hadith.

3. Conclusion
Based on the results of research and discussion, can be concluded that 20 item questions of two-tier multiple choices instrument to measure students' higher-order thinking skills in the static fluid are declared valid based on Aiken Validity. The two-tier multiple choices instrument represents indicators to measure higher-order thinking skills.

Acknowledgments
Both inheritance law in Lampung Pesisir and Islamic Law, both have different legal principles and systems. Although the principle and legal system is different there is still equality between the two, namely the heirs using male majority, this is because that the establishment of the legal system in Lampung Pesisir tribe is also taken from the principle of Islam, it can be quoted from the history of Lampung itself ie from a Sultan who scavenges science in the Islamic empire in the past.

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