

# Agro-Pastoral Large-Scale Farmers in East Africa: A Case Study of Migration and Economic Changes of the Sukuma in Tanzania

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The Sukuma live mainly in northwestern Tanzania and engage in both farming and livestock rearing. In the 1970s, some of them began to migrate southwards in search of grazing land. This paper examines characteristics of the economic activity of the Sukuma, who have settled on the shore of Lake Rukwa, in southwestern Tanzania. Their economic activity has features in common with other East African peasant economies, in that it aims to achieve stable self-sustenance, relying primarily on family labor, and in that people started to commercialize their farming and also venture into non-agricultural activities. However, the Sukuma's activity was also unique in several respects. First, they migrated into a vast, swampy land, which had not before been utilized, and they engage in large-scale farming there. Their livestock enabled them to both migrate and farm, as they needed. Second, the basic unit of their large-scale production efforts was the household, a feature that has been formed by characteristics of the pastoral society. The larger these households were, the more labor they were able to employ, and therefore the higher their production. Consequently, it was possible for a household to invest a relatively large amount into non-agricultural activities. They also faced difficulties maintaining traditional cattle rearing practices, which translated into economic problems.

**Key words:** livestock, large-scale household, rice farming, non-agricultural business, Lake Rukwa

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## 1. INTRODUCTION

The Sukuma live mainly in northwestern Tanzania and engage in both farming and livestock rearing. In the 1970s, some of them began to migrate southwards in search of grazing land. This paper examines characteristics of the economic activity of the Sukuma who have settled on the shore of Lake Rukwa, in southwestern Tanzania, in order to better understand rural societies in East Africa.

### *1.1. Agrarian societies in East Africa*

It is argued that the traditional agrarian societies in sub-Saharan Africa, particularly those from East Africa, did not have intentions of economic expansion (Hyden 1980, Kakeya & Sugiyama 1985). These societies had following characteristics. They did not intend to produce a surplus, but instead conducted self-sufficient, subsistence-based production for their families or local communities through family labors. Wealthy people were rare in these communities, because wealth was not concentrated in the hands of a few people, but was rather distributed throughout their whole society.

Such social characteristics were reinforced by reciprocal networks of relationships between relatives, and territorial bonds.

In the economic crisis and the structural adjustment programs (SAP) that followed African independence from Colonial rule, this kind of agrarian economy was affected by the global market economy and its changing characteristics. The self-sufficient, subsistence-based traditions declined, while the tendency to depend on the market economy has grown more pronounced. Furthermore, the importance of non-agricultural employment has increased for rural households (Evans et al. 1991).

In spite of these remarkable changes, many studies on rural economies in sub-Saharan Africa, field-based empirical researches in particular, have continued to focus on small-scale, poor farmers. This over-emphasis from the academic community has generated a distorted image of these economies, making it seem as though they are entirely made up of small-scale farmers, and that there are no capitalistic or enterprising large-scale farmers. Oya (2007), who studied rural capitalists in Senegal, criticized the tendency to view their communities as “undifferentiated aggregates”.

Because subsistence-based, leveled economies remain relatively common in rural areas in East African countries (Sugimura 2011), there has not been much interest in the large-scale farming communities in Tanzania. Owing to the spread of the post-SAP neoliberal market economy, the growing economic divide is inescapable in general, even in rural areas, now that Tanzania has adapted socialism.

### *1.2. Pastoral societies*

Whereas traditional agrarian societies maintain small-scale economies, traditional pastoral societies, particularly cattle-based ones, intended to expand their own economies in East Africa before experiencing the market economy. Certain anthropological studies on pastoral societies insist that their socio-economic systems are based around the exchange of women (as wives) and livestock (Spencer 1998). This theory is based on ideology of “family enterprise/family business”: the pastoralists buy wives using cattle, and women are seen as ways for a family to increase their cattle herds. The family enterprise is supported by a polygamous system that forms large family groups. These aim to perpetually increase the size of their families and cattle herds.

From an ecological perspective, the aim of maximizing the size of a herd has a strong relationship with the conditions of the natural environment (Dahl 1981). The environment where these peoples live is susceptible to unpredictable events, and their livestock sometimes suffer serious damage from disasters such as droughts and epidemics. Families attempt to maximize their herds in order to be able to restore their herds after a major disaster.

Agro-pastoral societies, those that engage not only livestock rearing but also in agricultural cultivation, have the potential to generate the largest levels of production among the various pastoral societies. Agro-pastoralists usually live near the territories of other agrarian societies, and the cultural and social characteristics of both societies somewhat resemble each other. Some agro-pastoral societies produce largely through the interaction of livestock rearing and farming; maturing in farms, feeding livestock, and exchanging livestock and crops (Schneider 1968). Such communities are able to give their livestock an ideal growing environment, where they sustainably grow their own crops and reserve much milk for calves.

### *1.3. Objective*

In order to understand the economic changes of rural areas in East Africa, it is important to clarify the appearance of large-scale farmers and the characteristics of their economic activities. The Agro-pastoral society, which intended to increase the size of its family units and expand their production, is one of the most important subjects in this study.

With this in mind, the agro-pastoral Sukuma settlers were established as the subject of this paper’s research analysis. The Sukuma live mainly in northwestern Tanzania. Many of them began to migrate southwards as part of a mass-migration in search of grazing land in the 1970s. However, there are very few reports describing their lives and activities, their culture, society, or their economy. This

paper aims to clarify the aims, economic developments, and general characteristics of the Sukuma, who migrated to the shore area of Lake Rukwa, located in southwestern Tanzania. The primary means for gathering data was field research, conducted over approximately 20 months between 2009 and 2015.

## 2. MIGRATION OF THE SUKUMA AND RESEARCH AREA

### 2.1. Details of the migration

After the First World War, Tanganyika, the continental area of Tanzania, became a British mandate. In that period, many rural development projects were put into execution in Tanganyika, including in the Sukumaland, where the Sukuma have mainly lived. These development projects increased the size of both the human and cattle populations. For example, in the Old Mwanza District that was a core area of the Sukumaland, the population density more than doubled between 1945 and 1988 (Meertens et al. 1996). The number of domesticated cattle in central Sukumaland nearly doubled between 1944 and the mid-1960s (Charnley 1997). As a result of this explosive growth, arable and grazing land began to run short, which was one of the major reasons for the great waves of migration of the Sukuma in the 1970s.

The following three concrete projects were instrumental in the development of Sukuma society. First, cattle plowing was introduced in the 1930s, which increased agriculture production (Fuggles-Couchman 1964). Second, after cotton cultivation was introduced as a cash crop, the Sukumaland became a major cotton producing area from the 1940s until 1970 (Hankins 1974). Grazing areas grew smaller as cotton fields increased, because many cotton fields were developed into grazing areas. Efforts to expand their pastoral livelihood by buying large numbers of cattle proved difficult, due in part to shortages of grazing lands (Birley 1982). Thirdly, tsetse fly eradication projects were widely carried out in Tanganyika (Meertens et al. 1995). As the result, some pastoral peoples, the Sukuma and the Maasai among them, were able to move south, because tsetse flies caused African sleeping sickness (African trypanosomiasis).

After the country gained independence from Britain, the Tanzanian government adopted a form of socialism called Ujamaa in 1967. Some of the Sukuma refused the collective settlement that was promoted by Ujamaa policy because their households were typically far apart, in order that they might rear large numbers of livestock (Galaty 1988). Due to these factors, 1970s, they began to migrate southwards in search of grazing land, settling in remote areas that had not before been utilized (Fig. 1).

### 2.2. Research area

The research area of this paper is on the shore of Lake Rukwa and the administrative division of Sumbawanga District, Rukwa Region. Lake Rukwa is under the escarpment of the Great Rift Valley and contains a vast prairie area around it. This area is not easily accessible, with only unpaved dirt roads between it and neighboring provincial cities. The climate is semiarid and clearly divided between rainy and dry seasons. Its altitude is about 850m, the annual precipitation is about 800mm, and the average annual temperature is 25.5°C. The typical vegetation in this area is prairie grasses, riparian forests, acacia and palm forests, and swamps.

The Sukuma began to settle around Lake Rukwa around 1980. For many years before the Sukuma entered the area, it was occupied by a native agricultural people, the Wanda. The Wanda engage in relatively small-scale farming with small-scale households and do not have significant amounts of livestock. The Wanda live collectively in villages along rivers, and seldom rear large livestock such as cattle or donkeys, and so do not have the capacity to carry living water from a water source. Moreover, they had not cultivated the extensive swamp on Lake Rukwa.

By contrast, the Sukuma live sparsely, in the remote areas around the Wanda's villages. By using donkeys or cattle, they are able to carry water from water sources. They also rear large numbers of

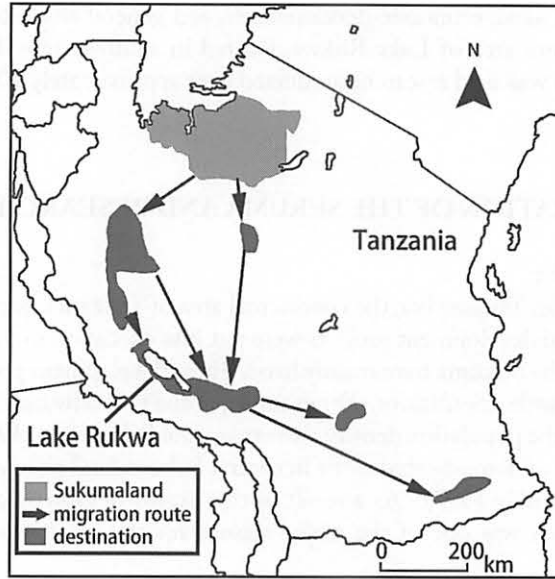


Fig. 1. The Sukuma Migration from the 1970s

cattle and grow rice, and the swamp is useful both as a grazing area and as a rice field. For these reasons, the Wanda and the Sukuma did not compete over land use. The Wanda have learned to grow rice using cattle plows by working for the Sukuma, and around 2000 began to cultivate the swamp. Still, however, they have not settled certain remote swamp areas, and they only construct small, temporary huts on the swamp when they cultivate rice.

### 3. DIVERSIFICATION OF ECONOMIC ACTIVITIES

#### 3.1. Household labor

The Sukuma society practices polygamy and forms family groups following paternal lines. This paper defines a household of the Sukuma as a paternal family group that jointly manages a single budget, property, livestock and land, under the supervision and ownership of the patriarch. A household is made up of an extended family that shares one or multiple homesteads. A patriarch has strong rights to his property, his cattle in particular, so his sons cannot inherit his cattle, and cannot even have their own cattle while they remain in their father's household. Although daughters leave their parents' household when they marry, sons usually remain there for a long time. Even though sons do have the right to inherit their father's property and become independent when they first marry, sons who have multiple wives and children typically remain in their father's household. Therefore, in the Sukuma society, a household tends to increase in size and rights to property tend to be concentrated in the person of the patriarch.

In the Sukuma society, a household is a unit of production. Among the 74 total households studied, the average number of members is 16.5, the median is 12, the maximum is 82, the minimum is 5, and the standard deviation is 13.5. Clearly, the Sukuma's households are extraordinarily large compared to the household sizes of ordinary farmers. For example, of the 80 Wanda households considered in this study, the average number of members is 6.6, the median is 5, and the standard deviation is 4. This data should be somewhat qualified by the possibility that there is significant variance among the sizes of particular households. Many of the small households are newly independent ones.

The Sukuma households employ many laborers in order to expand their production. Fig. 2 shows the relationship between the number of relatives and the number of residential laborers in each

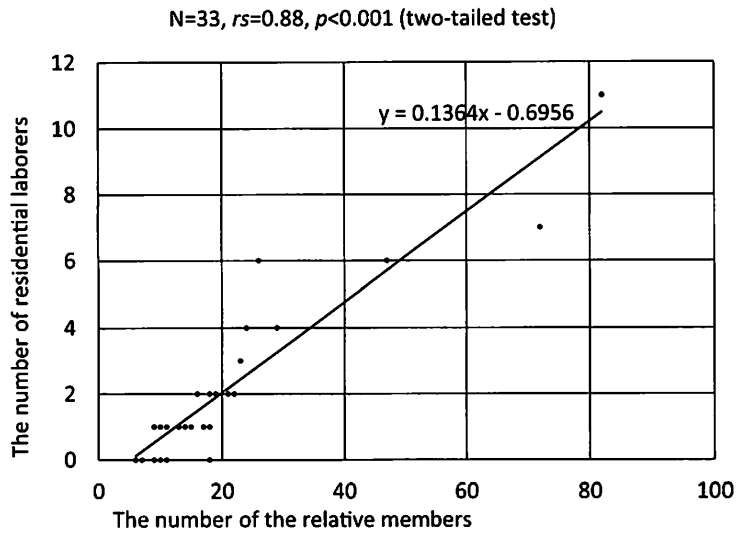


Fig. 2. The relatives and residential laborers of each household

household. Spearman's rank correlation coefficient ( $p<0.001$ ) finds a very strong correlation, meaning that the larger the household, the more laborers are employed in that household. The residential laborers engage in various activities, such as grazing, farming, and the other daily tasks. On the other hand, the Sukuma also employ many neighboring people as day laborers, especially for farming.

The Sukuma do not trust laborers, newcomers in particular, because they sometimes suddenly abandon their jobs or even steal money or household articles. Although reluctant to employ laborers, large households tend to employ many of them. In large households, members are able to watch laborers, so the anxiety about employment is reduced. Employing such laborers is a relatively new phenomenon, as the Sukuma generally did not employ and were not employed in the Sukumaland in the 1970s, and only began to employ laborers after their migration. They have found laborers such as the Wanda in small-scale farming communities neighboring the area where they immigrated.

### 3.2. Cultivation: focusing on rice production

The Sukuma mainly cultivate paddy rice, maize, sorghum, sweet potato and groundnut, and also grow some vegetables, such as tomato and pumpkin. They do not use any agricultural machines or chemical fertilizer products, and instead use livestock, particularly oxen, for their cultivation. Their four primary methods of utilizing livestock are as follows. First, they use ox-plows to effectively cultivate large fields, rather than using hand-operated hoes. Second, livestock provide fertilizing manure for their fields; they allow livestock to graze on fields after they have been harvested, putting temporary livestock pens in fields. Third, they use donkeys to transport crops and heavy materials. Some of them use two-wheeled donkey-drawn carts. Forth, they have dozens or hundreds of cattle walk in rice fields for "puddling", a practice used to prepare the land for rice planting by crushing lumps of soil and removing weeds. They prefer to use sexually immature cattle, called 'moga' in the Sukuma language, for this work.

The Sukuma consume these crops domestically and normally do not sell them, with the exception of rice. They learned rice farming in relatively recent times, when they started to emigrate in the 1970s. They applied techniques used in cotton farming, such as making furrows and ox-plowing wetlands, to the process of rice farming. They initially began doing so only for their own consumption in order to adapt themselves to their marshy environment. Their pastoral character made them adaptable to the new environment; they do not persist in using grains as their staple food as long as they have livestock products, particularly milk.

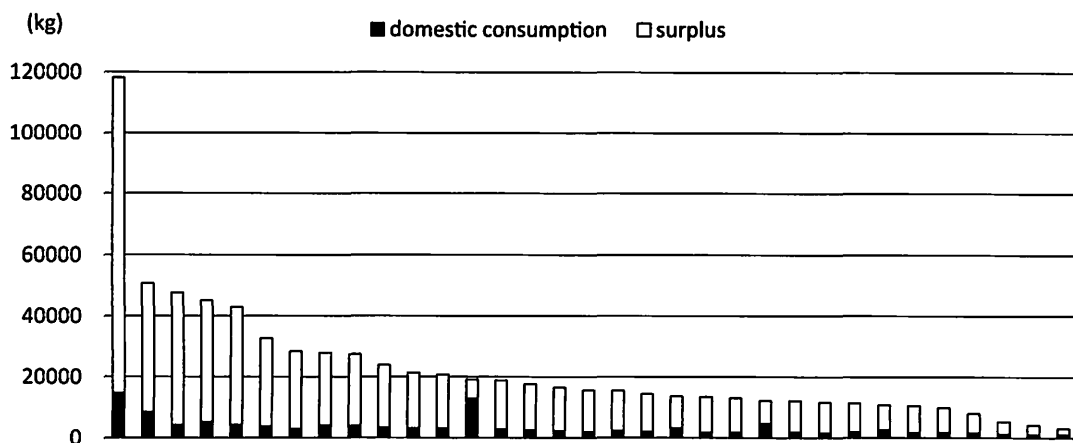


Fig. 3. Annual rice production and domestic consumption of each 33 household

They grow more rice than they consume, and recently have started to sell their surpluses. Fig. 3 shows annual rice production and consumption of each of the 33 Sukuma households examined. The values for weight are for unhulled rice (paddy). The values on Fig. 3 are estimated based on my field survey, which measured agricultural areas using GPS. Those values are as follows. The average yield of a rice crop is 4,504kg/ha<sup>(1)</sup>. The amount of the yield of each household is calculated by multiplying this value (4,504kg) by the amount of planted area. The amount of the yield is divided into consumption and surplus. According to the survey of daily meals, the per capita consumption of rice is 0.49kg a day<sup>(2)</sup>, which translates to approximately 178.9kg per year. The average consumption subtracted from the amount of yield leaves the surplus.

Fig. 3 shows that the scale of Sukuma rice production is larger than that of ordinary Tanzanian farmers. According to the census of Tanzania conducted in 2007/2008<sup>(3)</sup> (United Republic of Tanzania 2012a), the national average of rice planted area per household is 6,759m<sup>2</sup> and the Rukwa region has the largest (13,400m<sup>2</sup>). In comparison, the average size of the Sukuma's inhabited area (50,142m<sup>2</sup>) is 7.4 times larger than the national average and 3.7 times larger than Rukwa region. Their production per unit of area is also higher than normal. The yield of rice crops for Sukuma households is 4,504kg/ha, as described above, while the national averages are 1,580~2,400kg/ha, according to the censuses from 2005/2006 and 2009/2010, respectively.

The Sukuma households generally produce significant surpluses of rice: the percentages of their surpluses fall between 32.8% and 91.0%, while the average is 81.6% (the median is 85.0%). Most of the surplus is sold, although a part of it is typically reserved for emergency stockpile and seed rice. Rice production, therefore, is not only a means of subsistence, but also a major source of cash income. This large amount of surplus production has come into existence in recent years, following the liberalization of the domestic distribution system of the grain market in 1993.

Fig. 4 shows the number of members and the yield of rice crops for each Sukuma household. Using Spearman's rank correlation coefficient ( $p < 0.001$ ), there is a strong positive correlation between these factors. The scale of productivity has large variance for each household because the scale of household also varies widely. The scale of productivity is set by the household scale, which represents the core labor of each household.

### 3.3. Cattle rearing

The Sukuma rear several kinds of livestock, such as cattle, goats, sheep and donkeys. These are reared for food, except for donkeys, which are used solely as transporters. They graze around the homestead stables in small herds composed, at most, of several dozen animals. In contrast, when at a remote temporal camp of high mobility, they graze in large herds, which are often composed of hundreds of

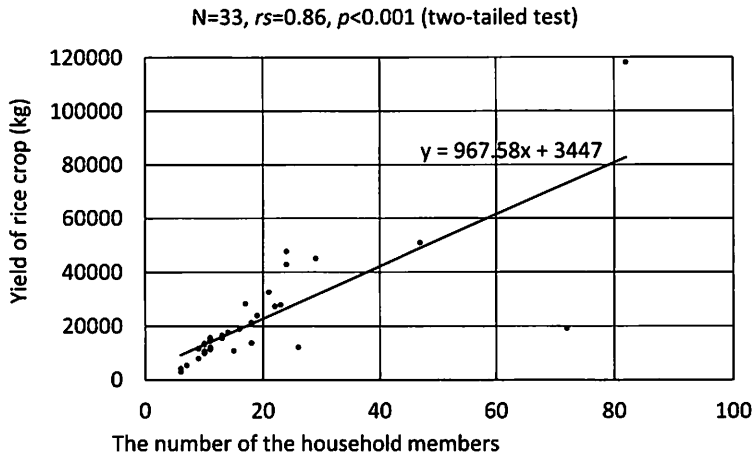


Fig. 4. Yield of rice crop and the household members

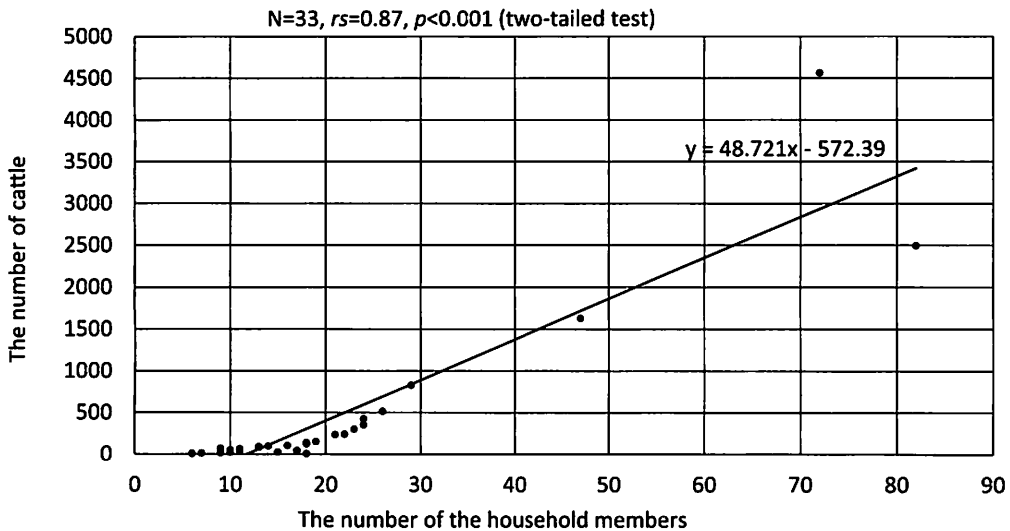


Fig. 5. The number of cattle and the household members

individuals. Such camps are set mainly for cattle because they usually do not form herds as large as those of other kinds of livestock.

Cattle have many uses in Sukuma society, and are cultivated for various purposes, as explained above (3.2). People only milk cows, and their milk is used not only for food but also for many rituals, as well as for sale to the Wanda and fishers on Lake Rukwa. Beef is eaten when households have important rituals and guests. After slaughtering cattle, Sukuma make their hides into many useful items, such as rugs and rope. Furthermore, cattle are the most important exchange for goods such as bride wealth, and they function as significant media that make and maintain households' social relationships. Cattle are the most important property and a symbol of wealth in their society, so a man who has more than a thousand cattle is called '*sabi n'taale*', with reverence. This means "a man of great wealth" in the Sukuma language.

Fig. 5 shows the number of cattle and members of each of the 33 examined Sukuma households. The average number of cattle owned is 390.2, the median is 81, and the maximum is 4,561. By comparison, according to the census of Tanzania conducted in 2007/2008 (United Republic of Tanzania

**Table 1.** Sold cattle and non-agricultural business  
(Jan. 1–Jul. 9, 2011)

non-agricultural business	male	female
presence	170	45
absence	34	21

$\chi^2=7.06, p=0.008$  (one-tailed)  
1 degree of freedom

2012b), the national average of the number of cattle owned by per cattle keeper is 12.5. It is clear that the Sukuma rear a much larger number of cattle than usual, even compared to other pastoralists. Fig. 5 also uses Spearman's rank correlation coefficient ( $p<0.001$ ) to show a strong positive correlation between the number of cattle and members of a household. Those values have high variance because most of the labor for cattle rearing relies on their own family members, as is also the case for rice farming. There are the three great cattle owners, or '*sabi n'taale*'. Each of these three households has more than 40 members, making them exceptionally large, even in the Sukuma society. In these households, the patriarch has several wives and several sons, who also have several wives and children. The married sons play important roles in helping to expand their cattle herds: they can manage the cattle camps and assist in negotiating with other households or members of other ethnic groups for their father. Unlike the large households, small households tend to have a small number of cattle, because there is less labor available to help raise cattle. In many such households, the patriarchs are young and do not have married sons.

Before the migration, in Sukumaland, the Sukuma seldom sold their cattle, while they bought it. Recently, however, they have begun to sell their cattle, although they seldom buy cattle. The market liberalization in Tanzania in 1986 extended to livestock trading, and after it came into effect, many livestock traders began to come even to this remote area. They also get income by selling rice and other crops. Many of them started to augment their lives with this newfound income: buying bicycles or motorcycles and mobile phones, and building brick houses instead of traditional wooden houses. Furthermore, some of them have invested their incomes, starting new non-agricultural business, such as building and managing hotels and truck transportation.

These changes influenced the way Sukuma sell cattle. Table 1 shows the number of the cattle sold by 10 Sukuma households in the 33 analysis ones, divided into cattle's sex and whether or not the households do non-agricultural business. Only the 3 households do non-agricultural business, but they sold more cattle than the other 7 households. According to the chi-square test results, there are significant differences ( $p=0.008$ ). There is a statistical relationship between the sex of the sold cattle and whether or not the households do the business. The households that do the business prioritize the sale of male cattle in order to maintain the herd's capacity to reproduce.

#### 4. DETAILS OF ECONOMIC CHANGES

As mentioned in the preceding section, the Sukuma have begun to change and diversify their economic activities: most of them have commercialized their rice farming and cattle rearing, and some of them have started to do non-agricultural business. This section explains the details of these changes: factors that have caused the changes and the response to these difficulties. The Sukuma people have faced challenges to their traditional pastoralism and have managed to found a way out of their traditional economy, which depend on cattle rearing.

##### 4.1. Heavy rain: the mass death of the cattle and high valuation on rice farming

The heavy rain from the end of 1997 to the beginning of 1998 caused great damage throughout



Tanzania, including large floods all over the shore area of Lake Rukwa. The heavy rain gave the Sukuma the chance to change their economy in the following two ways.

First, they experienced the mass death of their cattle and felt a sense of danger about their cattle rearing. The heavy rain spread an epidemic disease called east coast fever (theileriosis), which is transmitted by ixodid and produced a huge outbreak in the area's hot and humid environment. Because of that, most Sukuma lost many cattle in a single year. For example, a Sukuma patriarch KK, who owned about 4,000<sup>(4)</sup> cattle in that time, said that he lost about 500 cattle (12.5%) to the disease. He owned 2,493 cattle in 2011 and had lost only 26 cattle (1.0%) by accidents or disease over 183 days. It is obvious, therefore, that the spread of the disease seriously damaged the cattle populations. While the cattle that wealthy men like him lost are high in number but less personally impactful, for those ordinary owners who had only several dozens or a hundred cattle, the ratios were much higher, with many households losing 50–80% of their cattle. Many respondents reported worrying that their cattle populations would be totally annihilated.

The heavy rain also gave the Sukuma an opportunity to more highly value their rice farming, because the rice crops withstood the rain, while the other crops and cattle suffered greatly. As a result, they decided to expand their rice farming, and their neighbors, the Wanda, imitated them, beginning paddy rice farming as well. This in turn encouraged them to start selling rice, utilizing the spreading distribution networks described below. However, cattle remain the most important property for the Sukuma, and even their farming depends on their cattle. Therefore, they have managed to maintain their cattle and have started to make efforts to prevent disease, using ixodid-exterminating agents and introducing a particular breed of cattle that appears to be resistant to the disease.

#### *4.2. Social and political pressures on cattle rearing*

After starting their large pastoral migration in the 1970s, the pastoralist societies such as the Maasai and the Sukuma have been harshly blamed and received demands to decrease their cattle by the Tanzanian government, on the grounds that they are detrimental to the natural environment by involving practices such as cutting down many trees in order to exterminate tsetse flies or expand their farms. Occasionally, cattle have grazed in reserves for wild animals, which is problematic because the tourism of watching or hunting wild animals is an important industry in the country. Therefore, the government has strengthened the restrictions over grazing in the reserves. It has demanded that pastoralist communities leave reserves or water resources areas, and has sometimes violently displaced them from such areas (e.g., Porokwa 2009). Such conflicts between the government and the Sukuma are discussed by the public and covered by the media in Tanzania (e.g., Mwangoka 2012).

The pastoralists also have come into conflict with neighboring local peoples because local peoples' farms have been damaged by livestock. Although both groups usually agree to peacefully settle such disputes, they occasionally do become violent. In the shore area on Lake Rukwa, for example, there was a large conflict that resulted in the ejection of the Sukuma from a particular ward. Such conflicts also have drawn public interests and been occasionally debated in the national assembly (e.g., Lyimo 2012).

The government sometimes intervenes in conflicts between the pastoral settlers and their local neighbors. In the shore area on Lake Rukwa in the 1990s, for instance, the Rukwa regional government took their conflicts seriously, and established an ad hoc committee chaired by the region's chief governor. It held some councils in order to mediate the conflict, and the president at the time, Mkapu, participated in these councils. In 1998, the committee finally issued the 'Declaration of Mtowisa<sup>(5)</sup> (*Tamko la Mtowisa*)' (Ofisi ya Mkuu wa Mkoa Rukwa 1998). The declaration outlined specific measures for decreasing the Sukuma's cattle population and turning their energy from cattle rearing to other businesses and activities. The Sukuma representative signed the declaration, which caused economic changes for the people.

#### *4.3. Economic liberalization and established distribution networks*

Although the Tanzanian government adopted Ujamaa socialism after gaining its independence from

Britain, its economy remained stagnant for many years. As with many other African countries, the government received SAP (Structural Adjustment Program) in 1986 and then launched into an economic liberalization movement. Due to the complete liberalization of domestic grain distribution in 1991, many private merchants have started to come into even such remote places such as Lake Rukwa, starting in the 1990s.

During that time, the Sukuma faced similar difficulties in their cattle rearing as those described above. In response, they have started to utilize their distribution networks to diversify their economic activity. As mentioned in section 3, they recently have begun to sell rice and cattle, although they had seldom sold them before Tanzania's economic liberalization. Growth was especially strong in commercial rice development, a crop that before had been grown entirely for household consumption.

The following conditions were instrumental in driving the commercialization of rice and cattle production. First, demands for rice and beef increased sharply because an expanding urban population required more of these products from agricultural centers. Second, the Sukuma were able to employ many of the neighboring Wanda people as laborers. Many of the Wanda lacked sufficient means to sustain their livelihood because cash has become increasingly important after the economic liberalization. Therefore, the needs of both peoples harmonized: The Sukuma required labor, and the Wanda needed a form of cash-based income.

## 5. CONCLUSION

### *5.1. Economic changes and maintaining the cattle rearing*

Although the Sukuma had grown a great amount of cotton as a cash crop in their homeland, they sold it in order to develop herds of livestock. While they had experience in the market economy, their ultimate goal had been to cultivate cattle. The Sukuma settlers persisted in the traditional value of increasing their cattle and families even though they lost significant grazing lands in their homeland.

In recent years, the Sukuma settlers in the research area have changed their economic activities. The new activities are similar to the traditional ones in that each household functions as a core of production and rears a large number of cattle. They have, however, started to employ neighboring small-scale farmers in order to enlarge their production, particularly in rice farming. They have begun to actively sell their cattle instead of buying them. Furthermore, some large households have started non-agricultural business such as building and managing hotels and truck transportation, investing the income gained from commercialized cattle rearing and rice farming. The size of the households and their respective production capacities have a strong correlation, and while particular households vary widely in size, all are remarkably large compared to the ordinary Tanzanian farmers.

These changes have made the Sukuma enterprising large-scale farmers. However, in order to attain the developments in their production capacities, they have faced many difficulties. For example, employing neighboring labors has involved certain risks, such as cost of labor and interpersonal conflicts. Non-agricultural business brings in much less profit than cattle rearing or rice farming; however, such businesses require large initial investments. In spite of these obstacles, the Sukuma seem to have received change positively, because they have already faced difficulties in their traditional cattle rearing, such as the epidemic disease that struck the livestock and the social and political pressure towards cattle rearing mentioned in section 4. They therefore managed to break out of an economy that was strongly dependent on cattle, using established distribution networks to engage in exchange.

At the same time, the Sukuma were also able to maintain their conventional subsistence-based economy. To do so, they continued to use rice as their staple food, even as they also produced it for sale, and also sold male cattle, oxen in particular, rather than female cattle, which they used to expand their herds. Their aim in not selling female cattle is to maintain and when possible expand the reproduction capacity of their cattle herds, a fact that indicates that cattle remain the most important comprehensive property in Sukuma society. Both large-scale rice farming and non-agricultural busi-

ness are based in cattle rearing. In addition, Sukuma still cannot get married without cattle to provide in exchange for a bride wealth, and therefore cattle are highly valuable in the productive units of households.

### 5.2. Characteristics of the Sukuma's large-scale farmers

The economic activity of the Sukuma has a number of features in common with other East African peasant economies, in that it aims for stable self-sustenance, depending primarily on family labor, and in that people eventually began to commercialize their farming and venture into non-agricultural activities.

However, their economic activity is distinct among other peasant societies in several important respects. First, they migrated into vast swampy lands that before had not been utilized, and there engaged in large-scale farming. Their livestock enabled them to both successfully migrate and participate in farming. At first, they had intended to enforce their conventional livelihood of cattle rearing, and their migration kept them away from the governmental authorities and the market economy. While experiencing the risks of their cattle rearing, however, they formed their current synthetic agro-pastoral economic system and actively started to participate in the market.

Second, the unit of their large-scale production is a household that has been formed by characteristics of their pastoral society. They intend to increase their cattle numbers and the size of their families, as mentioned by Spencer (1998). In Sukuma society, the patriarchs have especially strong rights of the cattle, compared to other pastoral societies in East Africa. The members of the households enthusiastically contribute to maintaining and enlarging the properties of their households (in other words, their patriarchs' properties), rather than being employed by others. The larger that a household happens to be, the more labor they are able to employ to enlarge their production. Therefore, a household can invest relatively heavily in the non-agricultural activities. In this way, the Sukuma households exhibit capitalistic behavior, in contrast to many African peasants, who generally form smaller households and are employed in order to earn cash income.

## NOTES

- (1) 9,148kg of paddy is cropped on 20,309m<sup>2</sup> of their paddy fields.
- (2) This value is based on my survey for meals of total 593 person-days in 20 days.
- (3) It excepted Zanzibar.
- (4) According to a survey conducted by the local government for taxation purposes, KK owned 4,010 cattle in 1995. He said that he had owned approximately 4,000 cattle by the end of 1997.
- (5) Mtowisa is a town in the area where they finally reached the declaration.

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