

# Comparative Analysis of Factors Affecting Farmers Cooperatives Development. Case Studies of Zanzibar - Tanzania and Baoding City of China

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**Abstract:** The main objective of the study was to assess factors affecting development of farmer cooperatives between Zanzibar-Island of Tanzania and Baoding City of China. Both qualitative and quantitative methods of data collection were used to gather necessary information from study area. The responses were elicited from 135 respondents from Zanzibar Island and 140 from Baoding City of China, selected randomly from target population. Furthermore, fifteen key informants from Department of Cooperatives and Ministry of Agriculture from both cases were interviewed to clarify respondent's answers. In order to identify factors influencing cooperatives development, multiple regression analysis using standardized method together with Statistical Packaging for Social Sciences (SPSS) version 17 were used to analyses and interpret data findings. The results showed that, for Zanzibar Island poor provision of cooperatives training, conflicts derived within cooperatives, low level of production and lack of business contract has negative influence on the development of farmer cooperatives. For Baoding City member's knowledge and skills, and poor participation of members in administrative election has negative influence on the development of farmer cooperatives. In addition, for both case studies poor product technology and value addition, poor construction of marketing channels, lack of knowledge and skills of strategic plan of cooperatives leaders, has negatives influences on the development of farmer's cooperatives. However good administration system and supporting policy has positively influenced development of farmer in Baoding City. Finally, research suggested remedial measures for both side such as engagement of youth in cooperatives activities, cooperatives should carry out product technology and values addition, including of combining agricultural operation with modern agriculture, administrative concern should improve and construct marketing channels, which will enable cooperatives to avoid loss of benefit from intermediaries.

**Keywords:** Social factors, Economic factors Institutional factors, Baoding city, Zanzibar Island

## 1. INTRODUCTION

Agriculture is the main source of employment and income in rural areas where most of the world poor and hungry people live[1]. Farmer's cooperatives play an important role in supporting small agricultural producers and marginalized groups such as, young people and women. They improve their members economically and socially and generate rural employment through business models, that are flexible to economic and environment shocks[2].

In developing countries, farmers cooperatives have long been considered and incorporated in government plans, for the intention of feeding considerable growing population and lifting economic development of marginalized people [3]. They enable small holder farmers, to take better advantage of opportunities offered in the market place as well as access information and make improved use of the natural resources base [2].

For Zanzibar context, farmer's cooperatives cover long history of development, and remain a reliable engine to facilitate and organize small-scale marginalized farmers to access credit, marketing opportunity and economies scale of agricultural production [4].

For China, government has developed a series of policies to promote farmers professional cooperatives, in particular as one means to resolve the contradiction of "small scale production" and the "big market" under the current food marketing system.[5]. The cooperative law of 2007 has brought a flourish of new farmer cooperative, which gives priority and promote economic collaboration among small holders farmers [6].

Generally, farmer's cooperatives in both countries have been considered strategic as a mechanism to transform rural livelihoods of small scale farmers. However, there is a remarkable improvement of cooperatives development of China relative to that of Zanzibar, which may be influenced by different reasons. Therefore, this study will focus on the factors influencing farmer's cooperatives development in both countries.

## Objectives of the study

The general objective of present study was to compares factors influencing development of farmer cooperatives between Zanzibar Island and Baoding City of China. The specific objectives are

- To compare social factors influencing farmer cooperatives development
- To compare economic factors influencing farmer cooperatives development.
- To compare institutional factors for farmer cooperatives development.

## 2. LITERATURE REVIEW

A cooperative has been defined as “an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically- controlled enterprise”. Cooperatives are guided under the value of self-help, self-responsibility, democracy, equality, equity, solidarity, honesty, openness, social responsibility and caring for others [7].

Cooperatives around the world have the same seven principles of voluntary and open membership; democratic member control; member economic participation; autonomy and independence; education and training; cooperation among cooperatives; and concern for community [7]. Cooperatives are normally formed by those individuals experiencing complexity in dealing with aspect of economic change [8].

For Zanzibar context cooperatives is an association of person who have come together with an objectives of promoting the economic and social welfare of it is members [4].

Cooperative movements in Zanzibar begin in 1920s, and legalized by Cooperatives Societies' Ordinance (Cap.490) of 1925. The British colonial government fostered cooperatives marketing among small holders, so that the cost of producing cloves would go down and more cloves could be exported [9]. The clove growers association was early types of voluntary cooperatives that government agricultural officers helped to organize, with intention of regulating the cost of production of cloves by fixing wages and gaining control of the clove marketing and financing the clove planters. However, in 1934 cooperative business operations were disbanded due to duplication of cooperatives role with those of the state controlled clove growers association, and clove marketing was kept under the control of clove grower association (CGA) which now become a government agent with the monopoly of buying and selling cloves [9].

Zanzibar cooperatives were organized on tribal lines in each context (Africans, Arabs and Indians) having its own cooperatives, as a consequence lead to deterioration of cooperative movement [9]. Cooperative movement reestablished after twelve years later and department of cooperative societies created in 1950 with the appointment of cooperatives register [4]. In 1986, Law of Cooperatives Society Act No. 4 approved to give a new legal base for cooperatives movement and activate it is economic roles.

Cooperatives movement in Zanzibar has three-tier structure as provided from cooperatives law, i.e. primary cooperatives, secondary cooperatives (Unions), and an apex body [4].

Cooperatives societies in Zanzibar operate mainly in four sectors namely; agriculture, small scale manufacturing, finance, tourism, and services sectors. Agriculture based cooperatives form the bulk of cooperative societies in Zanzibar, based on available data there are 1,936 agriculture related cooperatives societies as of July 2017 corresponds to 73.8 percent of existing registered cooperatives [4].

Farmer's cooperatives of Zanzibar have continued to be an important pillar for organizing and supporting livelihood of large proportion of rural population, it is responsible for ensuring social relationship, food security, and improving agriculture production. It has a potential of increasing employment opportunities to nearly half of the labor force, as well as extending financial services delivery through Savings and Credit Cooperative Society [9 - 10].

For China context, specialized farmers cooperatives are mutual- help economic organizational joined voluntary and managed in a democratic manner by the producers and operators of the same kind of farm products or by the providers or users of services for the same kind of agricultural production and operation [4]

Farmer's cooperatives organization began to emerge in rural China in 1900s. During 1920s and early 1930s the National Government promoted a number of rural credit cooperatives, an initiative commended by the historian R.H. Tawney. However it was not until after 1949, when widespread agrarian reforms had helped to release some of the constraints on rural development that an emergent network of supply and marketing, credit, handicraft and agricultural producer cooperatives began to take real shape [11].

Following a collectivization drive in 1955-1956, cooperatives network was effectively absorbed into the frame work of the state planning by the end of 1950s, which lead to destroy any prospects for the emergency of a stronger autonomous cooperatives movement and continues to inhibit their development for fear of reincorporation by local government [11].

Market opening reforms were introduced in 1983 to 1991 to operate essentially within the frame work of planned economy following a rise in price paid to farmers for grain, these development were supported by a fundamental restructuring of the rural economy with the abolition of commune system in 1984, and change to a system of family farming through the introduction of the individual households responsibility system(HRS), on the other hand collective land ownership remain the basis of the rural economy[12].

Rural collective economy was reformed in 1985 into community township and village level, and become crucible for development of a variety of other rural cooperative forms; community cooperatives were responsible for handling the administrative and social affairs of the village providing agricultural as well as public services, coordinating and organizing initiatives to develop village economy [11]. By 1997 – 1998, the ground rules for the agricultural economy began to change basically as rising national market moved from a supply to demand orientation, and in turn require new types of farmer organization.

Farmer's specialized cooperatives gain a quick momentum after promulgation of cooperatives law in 2007, which provides it with a legal support. State administration for industry and commerce of China statistics shows that by the end of November 2014, a total number of specialized farmers' cooperatives reach 126.7million, with total investment of 2670 billion yuan [12].

Chinese government has developed a series of policies to promote farmer professional cooperatives as a way to improve farmer's production and marketing capacities. In 2008 regulation on finance and accounting system was formulated by Ministry of Agriculture together with the Ministry of Commerce, in the same year Ministry of Agriculture and Commerce Department launch a project of linking farmer's cooperatives to supermarkets which creates platform for communication between farmer's cooperatives and supermarkets. Furthermore, in 2010 Ministry of Agriculture announced suggestions to support qualified farmers professional cooperatives to take up public funded agricultural development projects [6].

Farmer's cooperatives in China have contributed to important change in the village incomes, and living conditions of members have improved considerably, The cooperatives spirit and experience build up over time have been used for the improvement of roads, irrigation facilities and establishment of a small training centre[6].

For decades, Zanzibar and China have been in a stream of organizing and improving efficiently of farmer's cooperatives to cope with the dynamic nature of world economies. However, China has shown profound improvement of farmer's cooperatives, which might be a lesson to learn from other developing countries. Little has been documented on the factors influencing cooperatives development in both countries.

Factors influencing farmers cooperatives development, has been investigating by many researchers in different areas as discussed below.

Previous report [13] identify factors such as policy legislation, cooperative initiator, leadership, cooperative

membership, cooperatives governance and management, training and education, were important aspects for successfully development of farmer cooperatives in northwest China. In addition [14] study on the factors affecting success of agricultural marketing cooperatives of BechoWoreda in Ethiopia found that, mutual trust among member participation in cooperative governance, member homogeneity, communication medium, interpersonal skills and market access are the influential factors for the success of agricultural marketing cooperatives. Furthermore, a study [15] on the analysis of success, failure and demand factors of agricultural cooperatives in Kenya found that among of the success factors for agricultural cooperatives were, vertical integration, high quality produce, volume of membership, proper record keeping, level of technology, skills of management committee and staff, timely dimension of appropriate information, diversification into profitable enterprises, and adoption of strategic plan was a key success for agricultural cooperatives. Further, a study [16] reported that suitable institutional arrangement and good governance are significance to the performance of agricultural cooperatives, low levels of equity and debt capital, reliance on government funding, low level of investment, and subsequent loss of members are caused by institutional problems. Absence of secret ballot, low levels of education, lack of production and management skills training, and weak marketing arrangement are the consequences of government problems. Moreover, study on the strengthening factors of tea farmer cooperatives in Indonesia, using analytical network process (ANP) documented that, cooperation with other related institutional ,commercialization aspect of their products, value added, market and finance information access and share-holding, are among elements that are most prioritized by farmer groups [17].

Previous study on factors affecting cooperatives performance in relation to strategic planning and member's participation in Malaysia result shows that, member participation and strategic planning are the identified factors that contribute to the overall success of cooperatives. Furthermore suggested that cooperatives need to have their own mission and vision and focus on long-term planning reflected from their vision and mission, and ultimately encourage participation of members in their administration [18].

In addition [19] discussed key success factors for emerging of agricultural marketing cooperatives from fifty-two cooperatives, those factors were sufficient equity before start up, maintaining an adequate business volume, keeping and distributing accurate financial records, previous cooperatives experience and continued management training .

Therefore, the present study focuses on the factors affecting farmer cooperatives development between Zanzibar Island of Tanzania and Baoding city of China. The study examines factors such as social factors economic factors and institutions factors.

### 3. METHODOLOGY.

#### 3.1. Research design

This study used a case study design in combination with both qualitative and quantitative methods in data collection. The data analyzed with the intention of gaining an in depth understanding of the cases. In addition, mixed methods selected to understand and test causal propositions [20].

#### 3.2 Study Areas

The study was conducted in Zanzibar Island of Tanzania and Baoding City of China. Selection of countries was chosen based on the following underlying similarities; both are developing countries they depend primarily on agricultural as an essential industry to feed a growing population. Therefore farmer's organization becomes an integral part in realizing agriculture development.

Moreover, specific selection of cases studies was made based on the accessibility of studies areas for researcher, and adequate accumulation of cooperatives related to agricultural activities.

#### 3.2. Description of Zanzibar

Zanzibar is semi-autonomous part of United Republic of Tanzania, located in the Indian Ocean between latitude  $04^{\circ}50' - 06^{\circ}30'S$  and longitude  $39^{\circ}10' - 39^{\circ}50'E$  and about 35 km off the northern coast of East Africa (Figure 1). Zanzibar has two major Island of Unguja with an area of 1,554 km<sup>2</sup>, and Pemba with an area of 990 km<sup>2</sup>. The climate of Zanzibar is warm and humid influenced by peripheral thicket/forest scrub, and tropical climate with bimodal rainfall pattern. The long rain season (Masika) occurs from March to May and the short rain (Vuli) from October to November. The hot season occurs during the NE monsoon period (Kaskazi) between December and February and a relatively cool dry season (Kipupwe) occurs between June and September.



Figure 1 Map of Zanzibar

The study was conducted from July to September 2017.

#### 3.3. Description of Baoding city

Baoding City is located in the west – central portion of Hebei province and lies on the north China plain, with Taihang mountain to the west, bordering Zhangjiakou to the north, Langfang and Cangzhou to the east, Shijiazhuang and Hengshui to the south, also borders Beijing to the north east and Shanxi to the west. The west part is dominated by mountains and hills that are more than 1,000 meters (3,300ft), it includes parts of Laishui Yi, Mancheng and Shunping. The highest peak is mount Waitou, with elevation of 2,286m (7,500ft).It has total population of 11,194,379 (2010) with population density of 504.55/km<sup>2</sup>,it has total area of 2363km<sup>2</sup>.

Baoding City has a continental monsoon climate, influenced by humid continental characterized by hot humid in summers, and very cold windy and dry in winters. Annually rainfall is about 60% of which in July and August, monthly average temp ranges from  $-32^{\circ}C$  in January to  $26.8^{\circ}C$  in July and annual mean is  $12.9^{\circ}C$ . There are 2,500 to 2,900hrs of bright sunshine annually, and the frost – free period lasts 165-210 days



Figure 2 Location of Baoding City

The study conducted from October to December 2017.

### 3.4 Study Population

For both cases, study population comprised cooperatives members and cooperatives leaders from registered farmer's cooperatives engaged in farming activities, with at least five years of experiences. The total target population consists of 1350 and 1400 farmers for Zanzibar Island and Baoding city respectively.

Additional key informants from cooperatives unions, cooperatives department and from ministry of agricultural from both cases studies were included to provide clarification of respondent's information.

### 3.5 Sample Size and Sample Technique

For the present study, 10% used to define sample size. This figure was preferred as per previous study [21] that posited that for social research sample size should be 10% of population, but if the population is small then 20% may be required.

Therefore, using simple random sampling techniques, 135 respondents from Zanzibar Island, and 140 respondents from Baoding city were selected for interview. A technique used in order for each member to have equal chance of being selected [20]. In addition, 15 key informants from both cases purposively selected based on their working experience in a field of cooperatives study.

### 3.6. Data Collection

Study collected both primary and secondary data. Primary data collected from selected respondents through interview using structured questionnaire. Secondary data collected from research publications, technical reports and related document obtained from Department of Cooperatives and Ministry of Agriculture.

### 3.7. Data Processing and Analysis

The respondent's demographic characteristics analyzed using descriptive statistics in SPSS version 16 and presented as percentages and frequencies in a table. Standard multiple regression analysis used to analyze factors influencing cooperative development, represented by a specific model shown as Equation (1):

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 \dots \beta_t X_t + U_t \quad (1)$$

Where:

$Y$ =Dependent variable (Farmers Cooperatives development)

$\beta_0$  =Intercept

$\beta_1 - \beta_t$  =Vectors of estimated coefficient of the explanatory Variables

$X_1$  = Understanding Responsibility

$X_2$  = Cooperatives knowledge and skills

$X_3$  = Training and Education

$X_4$  = Member participation

$X_5$	=	Accessing Information
$X_6$	=	Disloyalty and Conflicts
$X_7$	=	Product value Additions
$X_8$	=	Business Contract
$X_9$	=	Strategic plan
Ut	=	Basket of remaining variables and errors linked to Usage of data (error term)

## 4. RESULT AND DISCUSSION

### 4.1. Demographic Characteristics of Cooperatives members.

As highlighted in Table 1 below, for both cases majority of cooperatives members were in the age above 50, which implies minimum participation of youth in agriculture cooperatives. These findings support the report by the Ministry of Agriculture of Zanzibar[22] which found that the current proportion of youth engaged in agriculture activities is very low. In addition [23] argued that, most of the farmer's cooperatives members in Baoding city are aged, so their sense of cooperation is not strong. Recently, a research study [24] revealed that cooperatives in Kenya has found difficulty in attracting youth into agriculture activities, because a number of youth become resistant to continue working in agriculture sector. Interview with leaders in both side were asked about youth involvement, they said that youth are only joined with intention of obtaining loans, and if they fail to get loans they left. This makes the agricultural cooperatives be dominated by women and adults.

In addition, Table 1 below shows that for Zanzibar Island, 63.8% of cooperatives members were female while 36.2% were male. The larger proportion of female participation in collective action than men is because of women play essential part in agricultural production as subsistence farmer, cash crop growers, food processors and livestock owners. Another reason is mainly women were doing most of farming, while men use to work as migrants in another area. The results is supported by previous reports[24 - 25], which suggested that in developing countries, women play integrals part in agricultural production as subsistence farmers, cash crops growers, food processors and livestock.

In contrast to Baoding City, farmer cooperatives memberships were dominated by male. The reason is that head of households are allowed to be registered as farmer cooperatives members, male domination was also observed in previous study. Similarly, in Nigeria cooperatives were dominated by man [26].Furthermore previous study found that, women in developing countries are faced by difficult restriction, that block their active participation in cooperatives, like misconception of women's reproductive and domestic responsibilities that constitute their main role [27].

Furthermore, Table 1 below shows that among interviewed cooperatives member in Zanzibar, proportion of illiterate farmer is high compared to those attained college

education and vocational training. This result contradicts with previous report [25] which found out that there is high literacy rate of vegetables farmer in Zanzibar Island, as explained by the fact that most of educated farmer are not interested in joining agricultural cooperatives, and instead are employed in other sector. Previous research [24] found similar results in Kenya, that agricultural cooperatives are constrained by low level of member education.

In contrast to farmer cooperatives in Baoding City, proportion of educated member is higher compared to illiteracy members, significance of education on improved farmer's behaviors towards adoption of agricultural practices has been observed by previous studies [28-29]. Moreover, previous research [30] contends that education increase farmer ability to obtain and use information relevant to the adoption of improved agricultural technologies.

Table 1. Demographic Characteristics of Cooperatives Members

Variable	Zanzibar Island		Baoding City	
	Frequency	%	Frequency	%
<b>Gender</b>				
Female	67	63.8	28	37.3
Male	38	36.2	46	61.3
<b>Age</b>				
Less than 30 years	5	4.8	11	14.7
30-39 years	14	13.3	10	13.3
40-49 years	32	30.5	19	25.3
Above 50 years	54	51.4	34	45.3
<b>Education level</b>				
Illiterate	16	15.2	5	6.7
Primary School	18	17.1	25	33.3
Middle School	64	61.0	26	34.7
High School	1	1.0	13	17.3
College Education	5	4.8	5	6.7
Vocational Training	1	1.0	0	0.0
<b>Farm Size</b>				
Less than 1 Ha	45	42.9	0	0.0
Above 1 Ha	60	57.1	74	100.0

#### 4.2 Demographic Characteristics of Cooperatives Leaders

As shown in Table 2 below, for both cases studies, proportion of male leaders is higher than female leaders. This implies that there is less participation of women over control of their resources. The fact is explained by the cultural belief that women are obligated to domestic work. Men leadership is also common in another part of Tanzania mainland as it has been reported that it is difficult for women to take a leadership position in agricultural cooperatives, due to cultural and local norms [31]. Among interviewed

respondents, For Zanzibar Island 20% attained primary school, 70% attained middle school and only 6.7% attained college education. This implies that majority of leaders lack knowledge of leadership skills.

In contrast to Baoding City, 11% of cooperatives leader attained primary school, 34% attained middle school and 15% attained college education. These results suggest that majority of leaders have knowledge of leadership skills.

Table 2. Demographic Characteristics of Cooperative Leaders

Variable	Zanzibar Island		Baoding City	
	Frequency	%	Frequency	%
<b>Gender</b>				
Female	11	36.7	9	13.6
Male	19	63.3	57	86.4
<b>Age</b>				
Less than 30 years	1	3.3	1	1.5
30-39 years	5	16.7	15	22.7
40-49 years	5	16.7	31	47.0
Above 50 years	19	63.3	17	25.8
<b>Education level</b>				
Illiterate	1	3.3	2	3.0
Primary School	6	20.0	11	16.7
Middle School	21	70.0	34	51.5
College Education	2	6.7	15	22.7
Other Training			3	4.5

#### 4.3 Comparison of Social Factors Affecting farmer Cooperatives

Social factors are those factors that address and facilitate cooperation relationships and trust among cooperatives members [32]. Present study includes the following attribute of social factors, which are member's knowledge and skills and cooperatives governance and leadership. A multiple regression analysis used to test if social factors significantly predicted farmer cooperative development.

##### 4.3.1 Member's knowledge and skills

The results of the regression analysis indicate that, For Zanzibar Island member's knowledge and skills variables explained 10.5% of the variance,  $F(3,101) = 3.799$ ,  $p = 0.013$ . Table 3 shows that training and education had a negative and significant influence on farmer cooperative development, despite efforts made by the Cooperatives Department and Ministry of Agriculture in service provision. A numbers of cooperatives receiving training is of minimum, as argued by other member that,

"I have got no chance of attending any training". Poor provision of training is due to insufficient training materials and less numbers of cooperatives officers. The result is similar to previous report [10] who found that the

Cooperatives Department of Unguja is constrained by lack of technical staff, and working gear. Effects of training in cooperatives development were also identified in previous studies [33 -34] which found that number of training attended, and quality of programs offered have profound effect on the success of cooperatives development.

On contrary to professional farmer cooperatives of Baoding City, results of regression analysis indicate that members knowledge and skills variables explained 5.3% of the variance,  $F(3, 70) = 1.309, p = 0.001$ . Table 3 shows that lack of cooperative knowledge and skills among cooperatives members had negatives influence on farmer cooperatives development. The reason behind this is that most of the farmers in Baoding city are aged peoples, thus their educational background and knowledge of cooperation are deprived, this finding support previous studies [23] which found out that most of cooperatives members in Hebei Province are aged and so their education and sense of cooperation are not strong, most of them want to enjoy profit rather than share risks. Discussion with cooperatives leaders shows that due to lack of cooperatives knowledge, members have less sense of solidarity and work only at the immediate interest.

Table 3. Regression Analysis of Member Knowledge and Skills

Study Area	Explanatory Variable	B	SE (B)	t	p-value
Zanzibar Island	Understanding Responsibility	-3.517	18.676	0.088	0.523
	Cooperative Knowledge & Skills	-10.601		0.086	0.533
	Provision of Training	38.249	0.109	-0.322	0.001**
	Constant	28.236	0.227		0.001
Baoding City	Understanding Responsibility	-16.572	11.155	-0.241	0.142
	Cooperative Knowledge & Skills	16.546	9.469	0.311	0.085*
	Provision of Training	0.603	8.110	0.011	0.941
	Constant	38.599	7.823		0.001
Goodness-of-fit	Zanzibar Island	Baoding City			
R <sup>2</sup>	10.5%	5.3%			
F-ratio	3.799	1.309			
p-value	0.013**	0.001**			
Observations	105	74			

Significant at \*10% level of significance, \*\*5% level of significance & \*\*\*1% level of significance

#### 4.3.2 Cooperative Governance and Leadership

The results of the regression analysis indicate that, For Zanzibar Island governance and leadership variables explained 35.2% of the variance,  $F(3,101) = 18307, p < 0.001$ . Table 4 below shows that disloyalty and conflicts had a negative and significant influence on development of farmer cooperatives. The factors that contributed to this includes poor management of cooperatives funds, mistrust

between leaders and members, poor financial contribution of cooperatives members, difficult in loan refund, corruption and mismanagement of cooperatives money. This finding is consistency with [35] suggests that most farmer cooperatives in Africa have failed because of problem in holding administration accountable to members, leading to financial irregularities, conflicts and mistrust within cooperatives. Furthermore, previous study [36] found that, failure of California Rice Growers Association was caused by leadership collapse to supervise management, and lack of understanding of proper financial transactions.

On the side of professional farmer cooperatives of Baoding City, results of regression analysis indicate that cooperatives governance and leadership variable explained 14.0% of the variance,  $F(3, 70) = 3.801, p < 0.002$ . Table 4 show that, member participation in election of management board had negatives influence on the development of farmer cooperatives. That is to say, not all members have a chance to participate in management election, the findings is consistency with previous study [32] who contend that Chinese farmer cooperatives are characterized by skewed allocation of decision rights, ownership rights, and income rights, between core and common members, and confirm that several governance practices by cooperatives are not in line with the requirements specified by the law. Interview with key informants contend that, farmers cooperatives of Baoding City work under poor standardized management model, which affect general prosperity of their development. Previous studies [36-39] emphasized that, member participation in administrative affairs are the key factors for the long run development among cooperatives

Table 4. Regression Analysis of Cooperatives Governance and Leadership

Study Area	Explanatory Variable	B	SE (B)	t	p-value
Zanzibar Island	Member participation in election	-1.152	6.902	-0.014	0.868
	Accessing Information	1.415	10.201	0.012	0.890
	Disloyalty and Conflicts	-37.612	5.086	-0.593	0.001**
	Constant	65.899	10.085		0.001
Baoding City	Member participation in election	18.386	5.674	0.366	0.002**
	Accessing Information	-11.169	10.638	-0.118	0.297
	Disloyalty and Conflicts	-14.774	14.645	-0.112	0.317
	Constant	33.557	10.571		0.002
Goodness-of-fit	Zanzibar Island	Baoding City			
R <sup>2</sup>	35.2%	14.0%			
F-ratio	18.307	3.801			
p-value	0.001**	0.002**			
Observations	105	74			

\*\*Significant at 1% level of significance

#### 4.4 Comparison of Economic Factors Affecting Farmer cooperatives

The results of the regression analysis indicate that, For Zanzibar Island economic variables explained 85.6% of the variance,  $F(3, 26) = 51.323$ ,  $p < 0.001$ ). For Baoding City economic variable explained 16.3% of the variance,  $F(3, 62) = 4.032$ ,  $p < 0.001$ ). Table 5 below shows that in both case studies, strategic planning had a negative and significant influence on development of farmer cooperatives. This situation leads them to hire external planners, which acquire extra cost and may affect the long-term objectives of the cooperatives. The findings are consistent with that of [23]-[26], which asserts that majority of cooperative leaders lack appropriate knowledge of strategic planning. This hinders an opportunity for them to develop action programs, essential for remarkable development change. Study on the success factors of cooperative development in Malaysia reveals that, it is important for cooperatives to have adequate planning and encourage participation of members in administration [19].

Table 5 also shows that for Zanzibar Island business contract had a negative and significant influence on farmer cooperative development, which implies that majority of farmer cooperatives sell their product based on the word of mouth and trust, as a consequence limiting their market bases. Poor enforcement of contract creates insecurity within the marketing system and brings opportunistic behavior on the part of buyer. Previous study [41] revealed that absence of contract make private traders to announce higher prices but effectively pay lower prices, as a result farmer income reduces.

Furthermore, Table 5 indicates that in both case studies product value addition shows a negative coefficient and significantly influences farmer cooperative development, which implies that there is a lack of product value addition within farmer cooperatives. The factor that contribute to this include poor technical and storage facilities and inadequacy of creativity and entrepreneurship skills. This result supports a previous report [22], which found that agricultural sector in Zanzibar is constrained by lack of value addition in agriculture commodities such as fruits and vegetables, which hinder it is export significance and potentials. In addition previous research [23] asserts that most of farmer cooperatives in Baoding City ran traditional agriculture and produce mainly primary products, with low technological contents of products. Problem of poor value addition were also observed in other parts of developing countries.

Previous study found that among factors influencing farmer cooperatives performance in Rwanda were poor value addition, low levels of quality checks as well as low replication of modern agricultural practices at household's level to boost members productions [24].

Table 5. Regression Analysis of Economic Factors Affecting Farmer Cooperatives

Study Area	Explanatory Variable	B	SE (B)	t	p-value
Zanzibar Island	Product value addition	-2.809	1.623	-0.159	0.095*
	Business contract	-5.996	1.700	-0.343	0.002***
	Strategic plan	-9.996	1.700	-0.572	0.001***
	Constant	23.554	0.924		0.001
Baoding City	Product value addition	-8.278	4.850	-0.215	0.093*
	Business contract	2.890	5.029	0.073	0.568
	Strategic plan	-12.270	4.921	-0.312	0.015**
	Constant	42.795	4.223		0.000
Goodness-of-fit	Zanzibar Island	Baoding City			
R <sup>2</sup>	85.6%	16.3%			
F-ratio	51.323	4.032			
p-value	0.001***	0.001***			
Observations	29	66			

Significant at \*10% level of significance, \*\*5% level of significance & \*\*\*1% level of significance

##### 4.4.1. Comparison of Production Capacity of Cooperatives

Fig 3 below show that, majority of farmer cooperatives in Zanzibar produce less than one tone compared to farmer cooperatives in Baoding. This result supports previous report [22], which contends that, agricultural sector in Zanzibar characterized by small-scale farmers with low level of productivity. The factors that contributed to this include, low level of input used, such as lack of improved planting materials, (seeds, pesticides, and fertilizers) limited knowledge on improved production technology, and weak support services (research extension and credit). Consequence of low productivity is that a cooperative fail to benefit from transactions cost and gather maximum economic of scale, and strongly affect their development. Previous study [15] conducted on dairy and coffee cooperatives in central province of Kenya and found that successful cooperatives are those which had more members and handling large volume of produce.

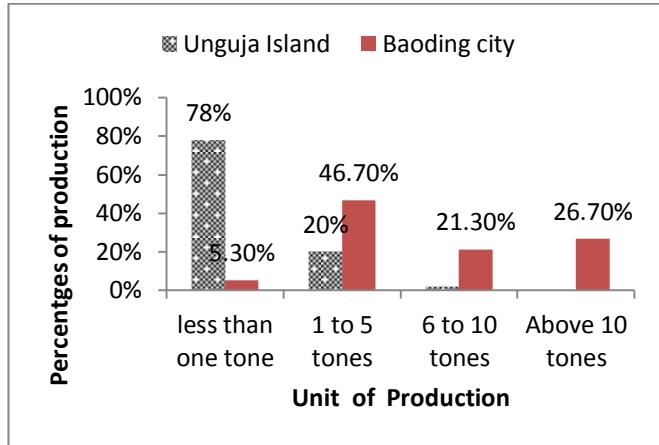


Fig 3. Production capacity of farmer cooperation

#### 4.4.2 Marketing of Cooperatives Produce

Fig 4 below show that, for Zanzibar Island majority of farmer cooperatives sell their product in cooperatives market and others market, The reasons is explained by the fact that cooperatives product fail to meet demand and quality required by the available super market . As a result they depend on small traders to venture their produce, and these dependencies reduce them to price takers, and handle benefit to traders. The findings is in line with the report [31]which reveal that, cooperatives have not been able to resuscitate their activities in the face of competition from better prepared private traders.

On contrary to Baoding City, Fig 4 shows that majority of cooperatives sell their product in local market and super market. The findings is in line with [23] which found that, in Hebei province cooperatives mechanism in the construction of marketing system is absent, and competence in marketing is poor. Therefore the main model of sale relies on wholesaler and self-consumption of cooperatives members, as consequences most of the profit flow into the middleman. In addition some researchers assert that majority of farmer cooperatives in china sell their product in wholesaler market [12, 23]

The present study suggests that in both cases, marketing channel should be integrated at optimal level, to ensure further development of farmer cooperatives.

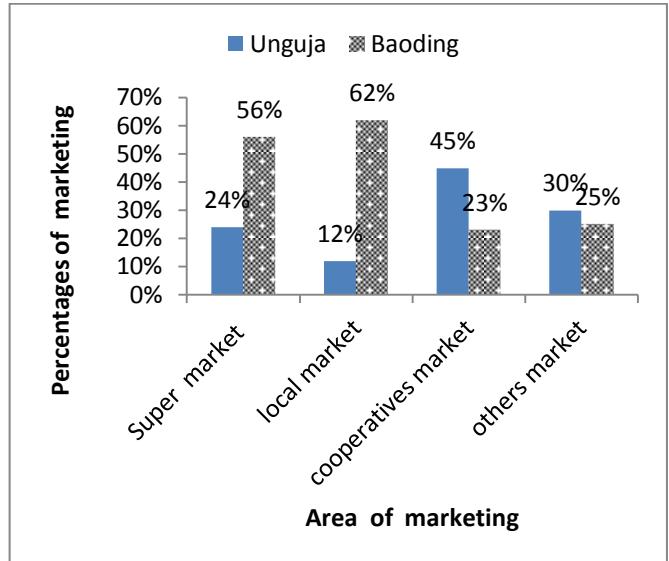


Fig 4. Marketing of cooperatives produce

#### 4.5 Comparison of Institutional factors influencing farmer cooperatives

The present study includes the following attribute of institutional factors, which are administrative system and cooperatives law and policy.

##### 4.5.1 Administrative System

For Zanzibar, the present study found out that, responsibility of cooperatives vested under the Department of Cooperatives within the Ministry of Empowerment, Social Welfare, Youth, Women and Children. The mandatory area of the department includes registration of cooperative societies, facilitation of cooperative education and training, auditing, monitoring, and follow up of cooperatives societies and advise Minister on matters relating to cooperative society, particularly on external financing[4]. However, the department has less capacity to deal with available number of farmer cooperatives, due to inadequate facilities, understaffing and poor staff qualifications. The finding is similar to [8] which found that cooperatives department of Zanzibar has minimum capacity to deal with available numbers of farmers cooperatives due to insufficient facilities and working gear. Furthermore discussion with cooperative officers reveal that low level of education qualification and working equipment has made it difficult for the department to attain set objectives, arising from complaints by some cooperative members, thus there is inadequate supervision of cooperative officers, especially for those located far in the country side. Previous research [39] found out that, frequent visit by cooperative officers is important factor among Turkey agricultural cooperatives.

On the side of Baoding city available document show that, professional farmers cooperatives are affiliated to

administrative department for industry and commerce, within the ministry of agriculture. The mandatory area of the department includes registration and facilitation of cooperatives regulation and its development. The professional farmer's cooperatives in China has been supported by several government departments as well as by a number of academic organization, among of them includes, the state scientific and technological commission, and China association for science and technology which are focusing on providing new technology and related training [6,23]. Government departments including the Ministry of Agriculture, together with Ministry of Finance should formulate regulation of finance and accounting system of farmer cooperatives. In addition, the Ministry of Commerce in collaboration with the Ministry of Agriculture should create a platform for cooperatives and supermarkets to set up cooperation relations [6].

#### 4.5.2 Cooperatives Law and Policy

For Zanzibar Island, the study found out that cooperatives law is outdated to the pace of global cooperative movements, and is not prescriptive in terms of differentiating the nature of operation as well as relationship between local law and cooperatives law, in such a way that is not promise desirable level of cooperative development.

Furthermore, the study found out that the government has been able to provide different incentives in collaboration with available NGOs. Among incentive provided include, financial support, improvement of irrigation system, subsidies of agricultural inputs (seeds and fertilizer), and improved agricultural techniques. However, coverage of incentives is inadequate as, as consequence majority of cooperatives find difficult to generate and operate their own business, discussion with cooperatives leaders contends that, they depend on members contributions to coordinate cooperatives operation, which is not enough to manage the available expenses. A previous study found out that cooperatives income and sufficient equity before start- up are important factors for cooperatives development. [32].

The current reviewed document in China shows that first professional farmer's cooperatives law was endorsed in July 2007, followed by recently improvement of cooperatives law in December 2017. The law provides principles and application procedures for cooperatives that are broadly consistent with international standards. Registered cooperatives are admitted to the following principles (1) membership is mainly composed of farmers; (b) cooperative's mission should work for their common interests and serve members need; (c) members are voluntary to join and withdraw from membership; (d) members enjoy equal status, and democratic management must apply; (e) profits should be distributed proportionally according to the volume of the transactions between the cooperatives members [12]. In addition, cooperatives law allows, merging and integration of primary cooperatives of the same kind of

production, as a means to improve collective actions. The application procedure used to register a new cooperative is both simple and straight forward. At least minimum of five members are needed for registration at the local government industrial and commercial bureau, and there is no mandatory requirement for registered capital cooperative and its members [12].

Major supporting policies of professional farmer cooperatives include official documents to promotes FPCs, tax exemptions (i.e. 16% discount of VAT payments by cooperatives on input sold to members on purchases from cooperatives by registered companies), issuance of credit, technical training for farmers providing land or office space, awards from the upper level government in terms of money or any kind [5].

#### 5. CONCLUSION

The general objective of the present study was to assess factors influencing development of farmer's cooperatives, between Zanzibar Island of Tanzania and Baoding City of China. Therefore the findings of the study identify several factors includes social factors, economic factors and institutional factors and their influential effect on the development of farmers cooperatives, as concluded below.

For Zanzibar Island poor provision of cooperatives training, conflicts derived within cooperatives, low level of production and lack of business contract has negative influence on the development of farmer cooperatives.

For Baoding City, member's knowledge and skills, poor participation of members in their general election has negatively influence development of farmer cooperatives development. In addition, for both case studies poor product technology and value addition, poor construction of marketing channels, lack of knowledge and skills of strategic plan of cooperatives leaders, has negatives influences on the development of farmer's cooperatives, and hence setbacks national effort of poverty reduction plans. However, for Baoding City good institutional system and supporting policy has positive influences on the development of farmer cooperatives. Based on the findings and conclusion of this research work, the following recommendations are drawn.

#### 6. RECOMMENDATIONS

Both countries should build up the level of youth participation in farmer cooperatives, since they are very powerful vehicle for modernization of the agricultural sector. Sensitization of cooperative members on the benefits of cooperation and should be involved in cooperative activities.

For both sides, cooperatives should carry out product technology, and values addition, including of combining agricultural operation with modern agriculture, in order to reduce post-harvest loss and strengthening position in competing world marketing.

Administrative concern of both sides should improve and construct marketing channels, which will enable cooperatives to avoid loss of benefit from intermediaries.

For Zanzibar Island frequent visit and close supervision of cooperatives officers should be continuous process, in order to monitor cooperatives progress, and reduce conflicts.

For Zanzibar Island cooperatives law should be necessarily revised to the pace of word cooperatives movements.

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