ARDHI UNIVERSITY

POTENTIALS OF CADASTRAL DATA ON LAND USE FOR LAND ADMINISTRATION AND MANAGEMENT

A Case Study of Bonyokwa Ward –Ilala Dar es Salaam

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BSc Geomatics

Dissertation

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MAGENI MASASU

A Dissertation Submitted to the Department of Geospatial Sciences and Technology in Partially Fulfilment of the Requirements for the Award of Science in Geomatics (BSc. GM) of Ardhi University

CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance by the Ardhi University dissertation titled “Potentials of Cadastral Data on Land Use for Land Administration and Management” in partial fulfillment of the requirements for the award of degree of Bachelor of Science in Geomatics at Ardhi University.

……..

Mr. Gwaleba M.J.

(Supervisor)

Date ……

DECLARATION AND COPYRIGHT

I, **MAGENI MASASU** hereby declare that, the contents of this dissertation are the results of my own findings through my study and investigation, and to the best of my knowledge they have not been presented anywhere else as a dissertation for diploma, degree or any similar academic award in any institution of higher learning.

……..

Mageni Masasu

(Candidate)

22802/2019

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DEDICATION

I would like to dedicate this work to the three sub-ward officers from Bonyokwa, Kisiwani and Msingwa, who supported me much in data collection in their administrative units. For sure without their sincerely cooperation on organizing people to respond fully in filling the questionnaire forms, I could not achieve the good results as I did. Likewise, it could cost me much in-terms of time and finance as well.

ABSTRACT

This research was conducted at Bonyokwa ward in Ilala municipality. The main aim of it was to explore the possible benefits and applications of using cadastral data on land use for land administration and management. The use of the land which is not surveyed and registered results to many impacts on land administration and management, as its size, location and use will not be certainly determined. Thus, it becomes difficult to set policies related to land administration and management that will ensure sustainable use of the land. The questionnaire forms were used to collect quantitative information from different land parcel owners who were the members of the targeted area of study. It involved 202 participants so as to draw the conclusion at 90 percent confidence interval. The findings show that, cadastral data is of great use in both, land use and land administration and managements as it can be used in resolving land dispute, planning or proper use of land as well as formulating land policies which can ensure the future use of land.

Keywords: Cadastral data, Land use, Land administration, Land management

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ABBREVIATIONS AND ACRONYMS

CRS	Coordinate Reference System
EEA	European Environment Agency
JASP	Jeffrey's Amazing Statistics Program
LGA	Local Government Authority
MLHHS	Ministry of Land, Housing and Human Settlement
NBS	National Bureau of Statistics (Tanzania)
UNECE	United Nations Economic Commission for Europe
WEO	Ward Executive Officer

CHAPTER ONE

INTRODUCTION

1.1 Background

In Tanzania, large part of land is not surveyed. For instance, in Dar es Salaam about 70 percent of its land have been developed with informal settlement. Thus the government receives only 30 percent of income from land rent (Kijazi, 2021). So, the government loses more income to be collected from land use.

To collect land rent from a particular land parcel, the land parcel must be registered, and its registration depends on the land survey information which tends to describe the size, location and the use. This information is of great importance in estimating the amount of land rent to be charged for the particular land parcel (URT, 1999). So, the amount of land rent to be charged on the two land parcel with the same size located in the same place, will vary in case the two parcels have different use.

Due to the great use of the land without having cadastral data, meaning that the land is not surveyed and registered it has resulted to poor land administration and management. For instant, for the land that has been used for residential while it is not surveyed, houses will be built inconsistently and unsystematically. Thus, buildings may sometimes be very close from one another leading to poor ventilation, as well as obstructing comfortable access to some parcels especially when using vehicles (Nezire, 2013).

Despite the town planning drawings being available for many parts of our country, informal settlements still persist. Thus, most of the parcels of land are unsurveyed even if town planning for the particular areas have been designed. As the results, such parcels lack of cadastral where cannot be registered in the cadastral system.

Regardless of the regularization and formalization that is being carried out in many parts of the country (Magigi & Majani, 2006), Tanzania yet do not provide the satisfactory need to respective people. For instance, For the planned and surveyed land parcel before the land is developed, the social services such as the health and education centers are planned in aspect that they are placed at the centre of the planned residential areas. Likewise, the road area is designed to be wide enough to provide the carriage way and the road reserve where other services like power line, water pipes and drainage system are implemented.

But, for the regularized and formalized settlement the planning for land use is limited, as the results, some social services like health and education centers sometimes may tend to be allocated away from the residential areas. Similarly, the designed road areas may sometimes do not support the provision of adequate carriage way and road reserve (Parsa, Nakendo, & McCluskay, 2011). For the case of the land parcels for agriculture, unascertained land do not provide the passage for farming trucks so as to enable them access the crop fields easily. As the results, the transportation of the yields to the godowns, factories as well as to the consumers becomes a great challenge. Apart from poor accessibility on unplanned land development, there are other several problem which may also occur, these include land ownership related conflicts and land boundary conflicts.

Land ownership conflicts may arise due to lack of official ownership document and the lack of the survey map or plan which defines the exact position and size of the land parcel. On the other hand, the land boundary related conflicts results from lack of fixed boundaries of the specified land parcel, which may arise due to the loss or removal of the established general boundary marks.

The information from the cadastral data has of great importance on land use for land administration and Land management. In land use, cadastral data describes the location and size of particular parcel of land (Silayo, 1997). Thus, the size of the given parcel of land should relate with its use. For instance, parcel of land for residential will vary much in size from the parcel of land for cultivation. Similarly, the location of the land parcel should relate with its use. The residential parcel of land is expected to be found in both, urban and rural areas, while the parcel of land for cultivation is expected to be found in rural areas where there are sparse settlements (Pateman, 2011).

On the other hand, cadastral data is very much needed for land administration and land management. In case of land rent, the size of the particular land parcel is required so as to estimate the amount of land rent to be paid. However, this is dependent on the use and location of the stated parcel of land. For land management, cadastral data is needed so as to ensure sustainable use of land. The use of the particular parcel of land should correspond with its size so as to be used effectively and efficiently (UNECE, 2021).Therefore, from the aforementioned different uses of parcels of land it can be identified that, their sizes, value and location should be well known so as to facilitate land administration as well as land management. For instance, regarding to their size it will be possible to determine whether the allocated use will be supported to ensure sustainable use of land.

For the given parcel of land, the use can be changed with time so as to support the up to date situation. Thus, the change in the use of the defined land parcel should be updated in the cadastre so as to re-estimate its land rent and its value as well. So, the change in the use of the parcel of land should be done by the authority responsible after ensuring that it does not impact the sustainable use of land (Cienciała, Sobolewska, & Sobura, 2020).

1.2 Statement of the Problem

In Tanzania, large part of land is being used without being ascertained in the cadastral system. This leads to the occurrence of many problems such as; land related disputes, improper land administration and land management. Thus, the land parcels become not secured in terms of their use, ownership as well as their boundaries. Therefore, this study investigates the understanding of the people on the usefulness of cadastral data.

1.3 Research Objectives

1.3.1 Main objective

To investigate the potentials of using cadastral data on land use for improved land administration and management in the community.

1.3.2 Specific objectives

i. To explore the role of cadastral data in land administration and land management
ii. To identify the potential benefits and challenges associated with utilizing cadastral data for land use purposes.
iii. To provide recommendations for the effective utilization of cadastral data for land administration and management.
iv. To determine the link between the land use and the cadastral data

1.3.3 Research questions

i. To what extent does the utilization of cadastral data enhance the effectiveness of land use for land administration and management processes?
ii. What are the challenges and opportunities for cadastral data on land use for effective land management practices?
iii. How do landholders perceive and utilize cadastral data in their decision-making processes related to land use?
iv. What are the suggestions for effective utilization of cadastral data for land use towards effective land administration and management?

1.4 Significance of the study

This research may be used by the authority responsible such as local government authority on making verification for the use of land in their administrative units so as to ensure that the given parcels of land are being used as how it had been planned in order to achieve sustainable use of land.

1.5 Beneficiaries of the study

The beneficiaries of this study are individuals as well as the government. The individuals are expected to understand on the importance of using the registered land parcels, on the other hand the government will be able to administer and manage its land properly.

CHAPTER TWO

LITERATURE REVIEW

2.1 Land Parcel

Land parcel simply means the piece of land. The piece of land is defined by either general or fixed boundary. General boundaries of land parcel are always used to define the land parcel which is not surveyed, while fixed boundaries are used to define land parcel which is surveyed (Silayo, 1997). Apart from being defined in terms of its extent, the use of land parcel may also differentiate one land parcel from another.

2.2 Cadastral data

Cadastral data refers to information related to the particular parcel of land. This includes its size, location, use, owner and terms of ownership. This information is collected and recorded in the cadastral system, which is the system that comprises of two main part; the cadastre, and the Land registration. The cadastre includes of the graphical record of the defined land parcel, while the Land registration part includes of other information related to the specified land parcel such as the name of the owner, use and the its value (Kain & Baigent, 1992). Thus, land surveying is necessary for provision of cadastral data.

According to section 2 of the Land Act No. 4 of 1999, the term Land includes the surface of the Earth and the Earth below the surface and all substances other than the minerals and petroleum forming part of or below the surface, things naturally growing on the land, buildings and other structures permanently affixed to land. Thus from such meaning of land provided in the Act, the land owner is excluded from the possession of minerals and petroleum since they are public resources and are vested in the president as trustee.

2.3 Cadastral Surveying

This is one of the types of surveying which deals with definition of land parcels. The land parcels are defined in terms of their boundaries which tend to show their extent. The boundaries of the surveyed land parcel become fixed as their exact position become known through the measured coordinates of each corner point of the particular land parcel, which are also marked with survey marks such as beacons and Iron Pins in Concrete (IPC). Contrary to this, boundaries of un-surveyed land parcel are not exactly known as they are defined by using natural features such as

rivers, streams, mountains, trees and walls which become difficult to be replaced once they are lost (Silayo, 1997).

In urban areas, executing a cadastral survey must follow the Town Planning Drawing which is prepared by a Town Planner and approved by a Director of Physical Planning. While, the Town Planning Drawing is derived from the Base Map and the Topographical map. Information which are required to prepare a Base map or a Topographical map are obtained from conventional survey, photogrammetry and remote sensing imagery. Also, the TP Dwg indicates the proposed use of each land parcel shown on it.

While, executing the cadastral survey in rural area does not involves the use of Town Planning Drawing as Town Planning Drawings are only prepared in urban area. Farms are created once the cadastral survey is executed in rural areas, whereas plots are created when cadastral survey is carried out in urban areas.

2.4 Cadastral map or Cadastral Plan

Cadastral map or Cadastral plan refers to the graphical representation of the surveyed land parcel, which is drawn to scale and it describes the location, dimension, size and shape of the surveyed land parcel, and the survey marks used to define each corner point of the surveyed land parcel. These land parcel information together with the use, value and rights on the specified land parcel are the so called Cadastral data.

2.5 Land registration

Once the land parcel is surveyed, it can then be registered by the government so as to provide security of ownership and use to the owner. Apart from securing the land parcel ownership, the land parcel owner can also be able to make legal transfer of his or her land parcel and can claim for other rights on the use of his or her land such as right of way, right of light and right to water source. Thus, the information that are present on the survey plan are the one which are highly required in registering the land parcel. (URT, 1999)

2.6 Land rights

According to Jeremy Gilbert, defined land rights as "*Rights that refers to the use, control and transfer of a parcel of land, which include rights to: occupy, enjoy and use land and resources; restrict or exclude others from land; transfer, sell, purchase, grant or loan; inherit and bequeath; develop or improve; rent or sublet; and benefit from improved land value or rental income"* (Gilbert, 2013). These rights fall within the category of land laws, land tenure agreements, or planning regulations, and rarely associated with human rights laws.

2.7 Land use:

Land use involves management and modification of natural environment or wilderness into built environment such as settlements, arable and pasture fields, forestry, industrial and commercial areas. Thus, it corresponds to social economic description of the area. (EEA, 2004)

This refers to how the given parcel of land is utilized. There are several kinds of land use as the land is the core resource for development. This means that all development projects needs piece of land to be implemented. For instance, the development in the infrastructure network such as roads, railway, communication and power line, construction of industries, provision of social services such as schools and health centers and agricultural activities they all need a piece of land so as to be instigated. Thus in Tanzania, the main described use of land include residential, commercial, industrial, cultivation and grazing, recreational, social services such as open space and playing grounds, road and road reserve, forestry and national parks and game reserves. Thus, each one of these requires a specified piece of land that could sustain it use.

2.8 Land administration and management

Edward Chikhwenda defined Land administration as "*The framework (regulatory, spatial, institutional, stakeholders, systems and processes) that encompasses the determination, allocation, administration and access to information concerning land use, rights, interests and restrictions*" Thus, It is a process of determining, recording and disseminating information about the tenure, value and use of land when implementing land management policies. On the other hand, land management refers to the process of managing the use and development of the land resources so as to achieve sustainable development. Thus, is the process by which the resources

of land are put into good effects (Chikhwenda, 2019). Therefore, cadastral data are highly needed in order to attain proper land management and effective land administration.

2.9 Land Disputes

Land disputes or Land conflicts refers to the situation in which two or more parties with different interest over the land are involved (Wehrmann, 2008). The interest over the land can the related to use, transfer, ownership, compensation and boundaries problems. The land disputes related to use may occur when two or more parties are competing over the right of use for the given land parcel or due to improper use of the land which threatens the environment or the neighboring community.

The land disputes related to ownership occurs when two or more parties are competing for the ownership right over the given parcel of land. Likewise, the land disputes related to boundaries occurs when the involved parties disagree over the extent limits of their bordering land parcels (Silayo, 1997).

CHAPTER THREE

METHODOLOGY

3.1 Overview

This chapter consists of selection of study area, sampling, data collection, data processing and analysis. Thus, it includes all methods and tools used to collect data, whereas data which were collected included of number of parcels involved in the research, their uses, status of demarcation and their forms of ownership.

3.2 Selection of Study Area

The targeted area for carrying out this research was Bonyokwa ward which is found in Ilala District in Dar es Salaam city, as it is one of the places which has been covered with informal settlements. This place is located in the Northern part of the district, and it is one among the thirty six wards that constitute Ilala district. According to the National Board Statistics record of the year 2016, it has a population of 25,706 people, in which 8,576 are male and 10,513 are female.

This ward had three sub-wards namely: Bonyokwa, Kisiwani and Msingwa, and has a total size of 6.544 square kilometres.

Figure 3.1 shows the wards in Ilala municipality

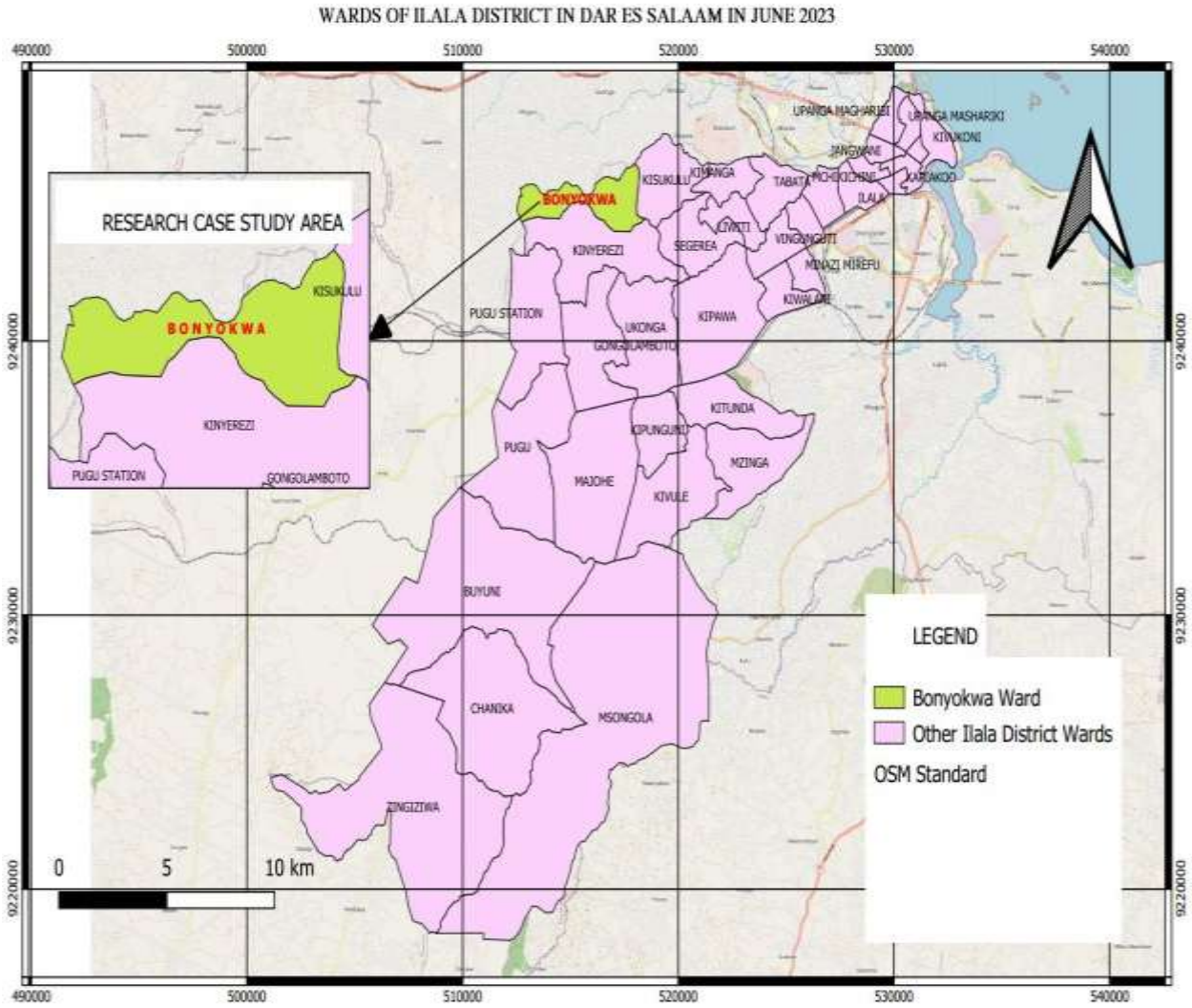


Figure 3.1: Wards in Ilala Municipality DSM city.

Source: Author's illustration.

Figure 3.2 shows the wards in Ilala municipality

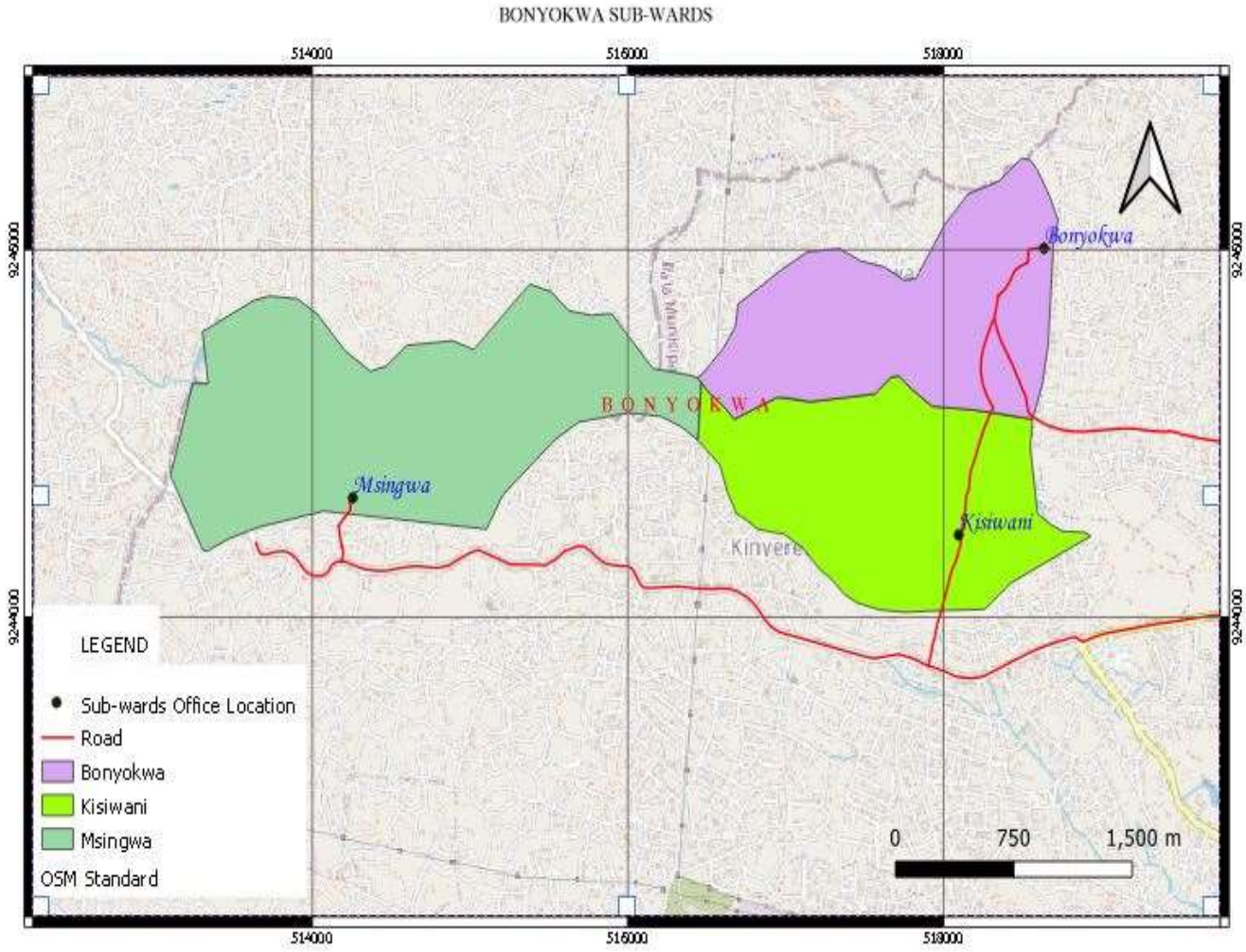


Figure 3.2: Sub-wards of Bonyokwa ward.

Source: Author's illustration.

Figure 3.3 shows the population of people in Ilala wards

SN	Kata	Mtaa	Idadi ya Kaya	Wanamume	Wanawakke	Jumla
		Bonyokwa	4,009	3,612	4,825	12,446
		Kisiwani	2,011	2,861	3,344	8,216
		Msingwa	597	2,103	2,344	5,044
32	Bonyokwa	**Jumla ndogo**	**6,617**	**8,576**	**10,513**	**25,706**
		Pugu Stesheni	2,950	4,030	5,010	9,040
		Bangulo	3,250	4,022	6,138	10,260
		Kichangani	1,150	3,021	3,001	6,022
33	Pugu Stesheni	**Jumla ndogo**	**4,400**	**11,073**	**14,149**	**26,322**
		Pugu Bombani	2,678	5,920	5,933	11,853
		Kigogo Fresh A	1,320	2,630	2,650	5,281
		Kigogo Fresh B	975	1,950	1,950	3,900
		Mustafa	799	1,500	1,698	3,196
		Kinyamwezi	1,300	1,600	2,603	5,203
34	Pugu	**Jumla ndogo**	**7,072**	**14,600**	**14,834**	**29,433**
		Butiama	2,650	5,300	5,400	10,700
		Kombo	5,527	9,996	9,995	19,991
		Majengo	2,915	5,369	5,040	10,409
		Miembeni	11,696	12,498	7,128	19,626
		Mtakuja	3,213	6,079	5,841	11,920
		Mtambani	2,968	5,092	5,206	10,298
35	Vingunguti	**Jumla ndogo**	**28,969**	**44,334**	**38,610**	**82,944**
		Mzinga	4,101	6,110	6,190	12,300
		Mwanagatii	2,844	4,134	4,399	8,533
		Magole	2,576	3,655	4,078	7,733
36	Mzinga	**Jumla ndogo**	**9,521**	**13,899**	**14,667**	**28,666**

Figure 1.3: Population of people in Ilala.

Source: NBS 2016.

3.3 Sampling

As the study area consists of surveyed and unsurveyed land parcels, the exact number of land parcels present in the study area was not known. However, from the previous program of Land Regularization and Formalization that carried out in the area in past five years, estimated the number of land parcels to be eight thousand and six hundred, in which Bonyokwa sub-ward consisted of 3500 land parcel, Kisiwani sub-ward consisted 2800 land parcel and Msingwa sub-ward consisted of 2300 land parcel thus making the total of 8600 land parcels in the ward. Therefore, by using the Cochran's Formula (Cochran, 1977) for determining the sample size of the research for finite population at ninety percent confidence interval (90%), the required number of sample sizes was supposed to be not less 197, in which 66 participants had to be from Bonyokwa and Kisiwani sub-wards had to contribute 66 participants each one, and Msingwa sub-ward had to contribute 65 participants.

The Cochran's Formula for Sample size Determination

$$n = \frac{n_0}{1 + \frac{n_0}{N}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(3.1)}$$

$$n_0 = \frac{Z^2 P\ (1-P)}{e^2} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(3.2)}$$

Whereas: n – The required number of sample size

N–The Population size

Z-The Z-score for the given confidence interval

p-The standard deviation

e-The margin error for the given Confidence interval

Thus, for the this research study, it was found that,

n – To be determined

N = 3500, 2800 and 2300

Z = $Z_{90\%}$ = score for the given confidence interval

e = 100% - 90% = 0.1

Since the information to determine the value of P was not examinable, the value of P to be used was assumed to be 50% same as 0.5 so as to provide the largest sample size as p(1-p) would provide the maximum value.

Then,

From: $n_0 = \frac{Z^2 P\,(1-P)}{e^2}$ …… (3.2)

it follows that,

$$n_0 = \frac{1.64^2 \times 0.5\,(1-0.5)}{0.1^2}, \text{ Hence } n_0 = 67.24$$

Again, From; n = $\frac{n_0}{1+\frac{n_0}{N}}$, ……..…..(3.1)

it follows that,

$$n = \frac{67.24}{1+\frac{67.24}{N}}$$

So, For Bonyokwa sub-ward: N = 3500

$$n_1 = \frac{67.24}{1+\frac{67.24}{3500}}, \text{ Hence } n_1 \approx 66$$

For Kisiwani sub-ward: N = 2800

$$n_2 = \frac{67.24}{1+\frac{67.24}{2800}}, \text{ Hence } n_2 \approx 66$$

For Msingwa sub-ward: N = 2300

$$n_3 = \frac{67.24}{1+\frac{67.24}{2300}}$$, Hence $n_3 \approx 65$

Therefore, the required total number of participant, n became $n_{1+}\, n_2 + n_3 = 197$

3.4 Data collection

In order to collect data in the study area, permission was the pre-requisite. Thus, the introduction letter from the University was collected and sent to the Dar es Salaam Regional Commissioner, who assigned it to the Ilala District Commissioner, then the District Commissioner assigned it to the Dar es Salaam City Council Director. Finally, the City Council Director provided the permission letter which was addressed to the Bonyokwa Ward Executive Officer (WEO).

After receiving the permission and reporting to WEO, the task for collecting data was the followed. Since it was difficult to get into contact with the participants at their residences in time, Questionnaire forms were used to collect the needed information. They were printed and then sent to the land parcel owners found in the field of study. The questionnaire forms were distributed to the land parcel owners found in the field of study in accompany with the members of sub-ward local council authority. Participants were given one week to fill the forms as that duration were considered to be sufficient to even reach the participants who were away from their residences for different reasons such as social and economic duties.

Table 3.1 shows the projected location coordinates in Arc 1960 of each sub-ward office of Bonyokwa ward.

Table 3.1: Positions of Bonyokwa sub-ward offices

S/No	Northings	Eastings	Description
1	9245994	518664	Bonyokwa
2	9244434	518102	Kisiwani
3	9244397	514192	Msingwa

Figure 3.4 is the photograph of the visited Bonyokwa sub-ward office during data collection.

Figure 3. 2: Bonyokwa Ward Office.

Source: Field work.

3.5 Data Processing

Once the questionnaires were collected, data were then arranged, filtered, and presented in tables, graphs and charts. The Microsoft excel was used for data entry and data arrangement, while the JASP computer software was used for both, Data processing and Data analysis. Data processing involved processing of quantitative data as it involved number of responded participants.

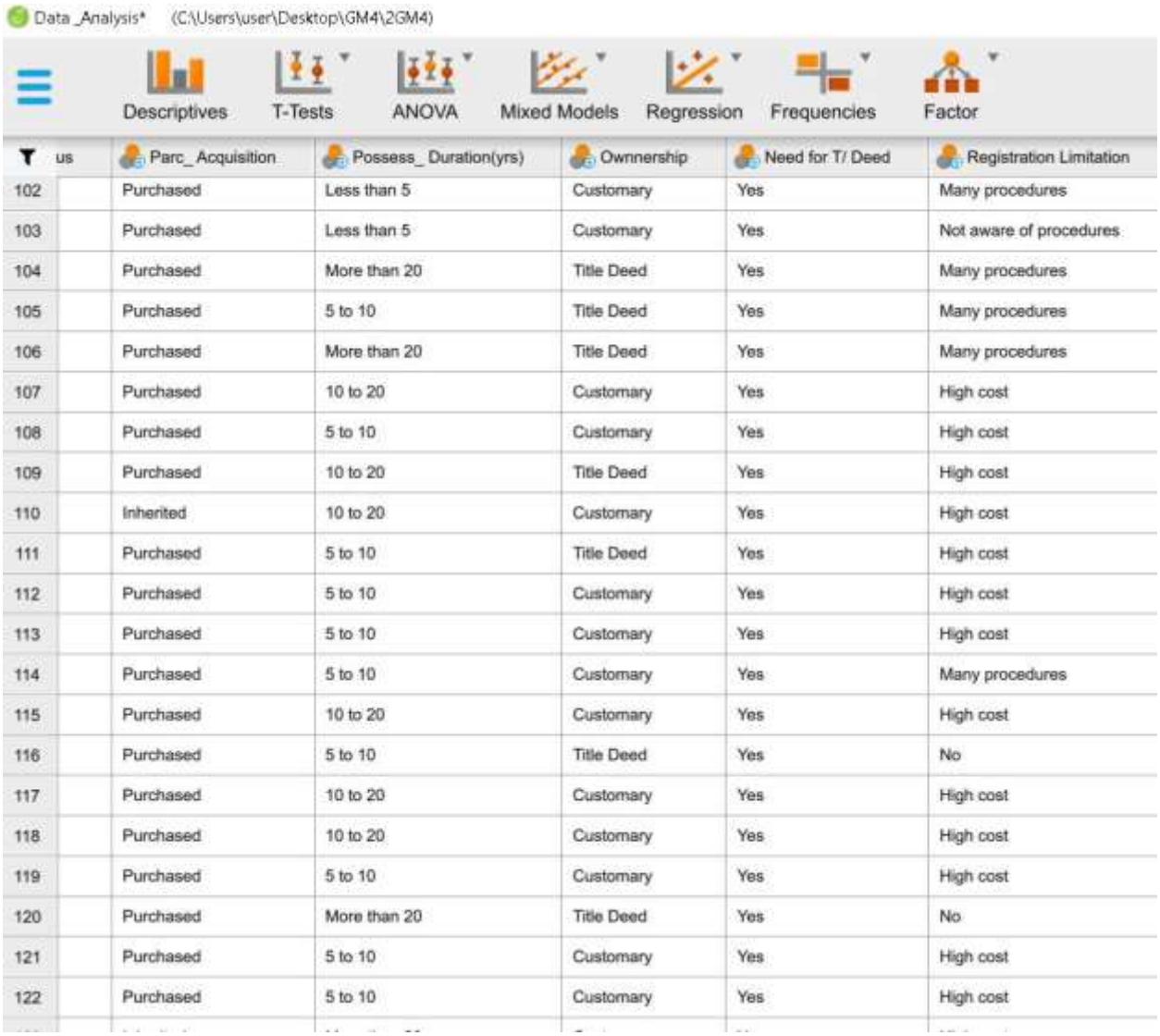
Figure 3.5 and 3.6 show data processing using the JASP software

Data _Analysis* (C:\Users\user\Desktop\GM4\2GM4)

Descriptives | T-Tests | ANOVA | Mixed Models | Regression | Frequencies | Factor

	No.	Age (yrs)	Sex	Occupation	Parcel Size	Survey Status	Parc_ Acquisition
1	1	36 to 50	Male	Business	Known	Not surveyed	Inherited
2	2	18 to 35	Male	Worker	Known	Not surveyed	Purchased
3	3	18 to 35	Male	Business	Known	Surveyed	Purchased
4	4	51 to 65	Male	Business	Known	Not surveyed	Purchased
5	5	36 to 50	Male	Business	Known	Surveyed	Purchased
6	6	18 to 35	Female	Worker	Known	Surveyed	Purchased
7	7	51 to 65	Male	Peasant	Known	Not surveyed	Purchased
8	8	18 to 35	Female	Worker	Known	Not surveyed	Purchased
9	9	36 to 50	Female	Worker	Known	Not surveyed	Inherited
10	10	51 to 65	Male	Business	Known	Not surveyed	Purchased
11	11	36 to 50	Male	Worker	Known	Not surveyed	Inherited
12	12	36 to 50	Male	Peasant	Known	Not surveyed	Purchased
13	13	36 to 50	Male	Business	Known	Surveyed	Purchased
14	14	51 to 65	Female	Peasant	Known	Not surveyed	Purchased
15	15	18 to 35	Female	Business	Known	Not surveyed	Purchased
16	16	36 to 50	Male	Worker	Known	Not surveyed	Purchased
17	17	36 to 50	Male	Business	Known	Not surveyed	Purchased
18	18	36 to 50	Female	Business	Known	Not surveyed	Purchased
19	19	36 to 50	Female	Business	Known	Surveyed	Purchased
20	20	18 to 35	Female	Business	Known	Not surveyed	Purchased
21	21	Above 65	Male	Peasant	Known	Surveyed	Purchased

Figure 3.5: Data processing.



	us	Parc_ Acquisition	Possess_ Duration(yrs)	Ownnership	Need for T/ Deed	Registration Limitation
102		Purchased	Less than 5	Customary	Yes	Many procedures
103		Purchased	Less than 5	Customary	Yes	Not aware of procedures
104		Purchased	More than 20	Title Deed	Yes	Many procedures
105		Purchased	5 to 10	Title Deed	Yes	Many procedures
106		Purchased	More than 20	Title Deed	Yes	Many procedures
107		Purchased	10 to 20	Customary	Yes	High cost
108		Purchased	5 to 10	Customary	Yes	High cost
109		Purchased	10 to 20	Title Deed	Yes	High cost
110		Inherited	10 to 20	Customary	Yes	High cost
111		Purchased	5 to 10	Title Deed	Yes	High cost
112		Purchased	5 to 10	Customary	Yes	High cost
113		Purchased	5 to 10	Customary	Yes	High cost
114		Purchased	5 to 10	Customary	Yes	Many procedures
115		Purchased	10 to 20	Customary	Yes	High cost
116		Purchased	5 to 10	Title Deed	Yes	No
117		Purchased	10 to 20	Customary	Yes	High cost
118		Purchased	10 to 20	Customary	Yes	High cost
119		Purchased	5 to 10	Customary	Yes	High cost
120		Purchased	More than 20	Title Deed	Yes	No
121		Purchased	5 to 10	Customary	Yes	High cost
122		Purchased	5 to 10	Customary	Yes	High cost

Figure 3.6: Data processing.

CHAPTER FOUR

RESULTS AND DISSCUSSION

4.1 Demographic Data

4.1.1 Male and Female Ratio

For the carried out research, out of the 202 participants, 81 participants were female and 121 participants were male, which is the same 40.1 percent of the participants were female and 59.9 percent were male. This indicated that, the number of males who occupy land, or who have great power of control over the land is greater than the number of females who have power over land parcel ownership and control in the population at the ratio of 121:81. The below charts describes the scenario explained in above in form of amount and percentage.

Figure 4.1 illustrates the demographic data for male and female.

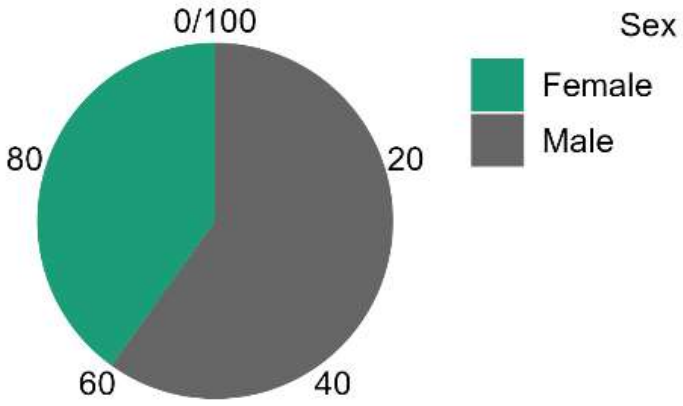


Figure 4.1: Percentage of female and male respondents.

Source: Author's illustration.

4.1.2 Occupation description

The research shows that, out of 202 participants, 109 involved in business activities, 58 were employee, 33 involved in cultivation activities and 2 were retired people. Thus 53.96 percent involved in business, 28.71 percent were employee, 16.34 percent involved in cultivation activities 0.99 percent were retired people. Therefore, more people in the research study area depend on business activities as the main economic activity so as to support their lives. On the other hand, the number of people who depended on cultivation activities was less than the number of people who were employed. This agreed with the real situation that, in urban areas cultivation and livestock keeping activities are very limited due to limited availability of ample space for carrying out such activities.

Table 4.1 shows the gender and occupation of the respondents

Table 4.1: Gender and occupation description

Gender / Occupation	Female	Male	Total	Percent
Business	46	63	109	53.96
Peasant	11	22	33	16.33
Retired	1	1	2	0.99
Worker	23	35	58	28.72
Total	81	121	202	100.00

4.1.3 Age and Land Parcel Ownership Description

As the valid age for independent ownership of the land parcel in Tanzania being 18 years and above, 19.31 percent of the land owner lied between 18 to 35 years, 54.46 percent lied between 36 to 50 years, 19.80 percent lied between 51 to 65 years and 6.43 percent of the participant had years above 65. This shows that, more people had the capability of possessing land parcel at the age between 35 to 54 years. This has also supported with the finding that will be shown later which showed that, more participants about 89.11 percent acquired their land parcels through purchasing. This indicates that, at that age the person is expected to be economically stable to some extent that he or she may be capable of purchasing land parcel.

Above 65 years old, the land parcel possession was very minimum to about 6.43 percent. This shows that, despite owning land at the age between 36 to 50 years, at the age above 65 the possession of land parcel may cease due to some issues such as due to death of the owner as the life expectance in Tanzania is 66 years (NBS, 2022), which leads to the transfer of ownership of land parcel to another owner through conveyance or inheritance.

Table 4.2 shows the land parcel occupation with respect to age

Table 4.2: Age and land parcel ownership description

Age (Years)	Frequency	Percent
18 to 35	39	19.31
36 to 50	110	54.46
51 to 65	40	19.80
Above 65	13	6.43
Total	202	100.00

4.2 Land Parcel Acquisition Description

Since the means of Land acquisition in Tanzania is either by inheriting, purchasing or receiving as a gift (Silayo, 1997), 89.11 percent of the participants obtained their land parcel through purchasing, and only 10.89 percent received their land parcel through inheritance. This shows that, the need for the land parcels in field of study was high.

Also, the large percent of land acquisition through purchasing indicates that more people who live in the field of study immigrated, are people with no blood relationship from the original land parcels owners. Likewise, it shows that the area have some attractive factors which support lives of people such as schools, health centres, security, market, employment opportunities and transport and communication networks.

Table 4.3 shows the means of land acquisition in the study area

Table 4.3: Land parcel acquisition description

Parcel Acquisition	Frequency	Percent
Inherited	22	10.89
Purchased	180	89.11
Total	202	100.00

4.3 Land Parcel Ownership Pattern

The research shows that, 82.67 percent of the participants own their land parcel customary while only 17.33 percent own their land through a title deed. Thus, large part of the land in the study area is not registered. In the later sections, it will be shown that, despite more people were interested in possessing registered land parcel, they did not fulfil their interest due to high cost of land surveying and registration.

Moreover, it indicates that large part of the research area was occupied by informal settlement, as the large part of the area is not surveyed.

Figure 4.2 illustrates the land parcel ownership pattern in the study area

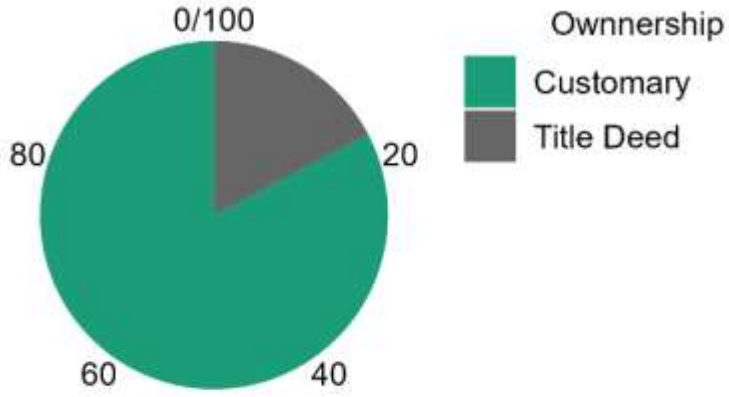


Figure 4.2: Percentage of land parcel ownership pattern.

Source: Author's illustration.

4.4 Duration of Land Parcel Ownership

The duration for land parcels possession for many participants in the field of study was above five years as they contribute more than 85 percent while those with occupancy of less than five years were 14.85 percent only. So, many participants had been in the study area for a long time indicating that were more familiar with their place.

Since more land parcels were obtained through purchase, this indicates that, in ten years ago the purchase of land in the study area was very high. Thus, the settlement as well as the population of peoples in the study area grew higher from that period. On the other hand, the possession of land parcel for less than 5 years decreased much to 14.85 percent which indicates that the purchase of land parcel in the study area decreased too. This may be due to lack of land parcels as the land is limited in size. So, in past 10 years, undeveloped land or land which was not used for settlement was large, and in last five years the total land in that area was almost occupied as the result the transfer of land parcels decreased.

Table 4.4 shows the duration of land parcel ownership

Table 4.4: Duration of land parcel ownership description

Possession Duration (Years)	Frequency	Percent
10 to 20	76	37.62
5 to 10	75	37.13
Less than 5	30	14.85
More than 20	121	10.40
Total	202	100.00

4.5 Land Parcel Survey Description

Surveyed land parcels in the study area for the involved participants were 61 while un-surveyed land parcels were 141. Thus 30.20 percent of the land parcels in the field of study were surveyed and 69.80 percent were un-surveyed. Thus, the boundaries and sizes of many land parcels in the study area were not precisely determine. Thus, larger population of people in the study area live in unplanned or informal settlement.

Despite the fact that many people were interested in occupying the surveyed and registered land parcels as will be shown by findings in the next section, this reveals that there some unfavourable issues which limit them from possessing the registered land parcel. Thus, regardless of possessing their land parcels for more than ten years as it has been shown in previous section, their land parcels were still not yet surveyed and registered.

Figure 4.3 illustrates the land survey status in the research area

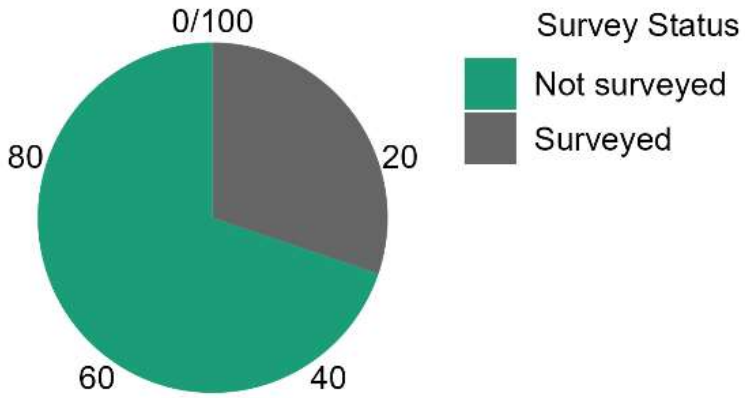


Figure 4.3: Percentage of land parcel survey description.

Source: Author's illustration.

4.6 Need for Possessing the Surveyed and Registered Land Parcel

The findings show that, many people were interested in possessing land parcels which are surveyed and registered for different reasons. However, it has been shown that about 64. 85 of the population required surveyed and registered land parcels so as to secure their ownership as well as the boundaries of their land parcels as each one of them had greater than 30 percent. This indicates that, many people need their land parcels to be officially identified in terms of their boundaries and ownership so as to avoid getting into land disputes related to such cases.

Also, it has been shown that, a small number of the population of about 1 percent required surveyed and registered land parcels so as to transfer their land parcels. This indicates that, more people need land parcels for their own use. On the other hand, less number of people of less than 1 percent required surveyed and registered land parcels so as to be able to get loans from financial institutions. Thus, less number of people depend on their land parcels to obtain loans.

Table 4.5 shows the need for possessing a surveyed and registered land parcel

Table 4.5: Need for surveyed and registered land parcel

Use of Cadastral data	Frequency	Percent
All	33	16.34
Loan	1	0.50
Nil	6	2.97
Proper land use	29	14.35
Securing Ownership	64	31.68
Securing Parcel boundaries	67	33.17
Transfer	2	0.99
Total	202	100.00

4.7 Limitations for Land parcel registration

Despite the findings show that the larger population require the surveyed and registered land parcels, they still possess or live on unregistered land parcels as it has been shown in previous section that more than 80 percent own their land parcels customary. The high surveying and registration cost was claimed to be the main obstruction for achieving their need as 65.8 percent of the participants responded towards it.

Behind this claim it can be noted that, the income level for majority of the people in the study area is low, hence it becomes difficult to bear the surveying and registration cost. This can also be used to determine the level of economic activities carried out by the members of the researched area.

The figure in below illustrates the limitation for possessing a surveyed and registered land parcel in percentage.

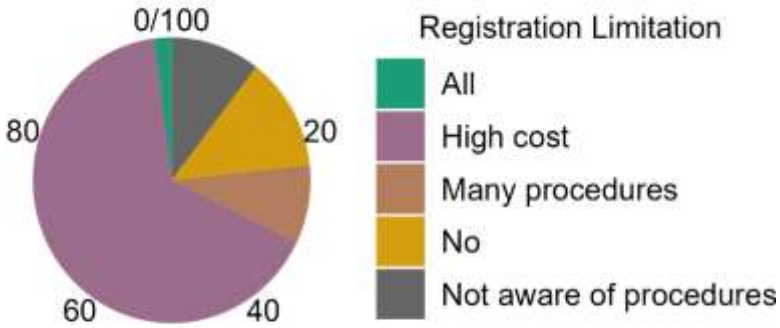


Figure 4.4: Limitations for surveying and registering land parcel in percentage.

Source: Author's illustration.

4.8 Land Disputes Description

4.8.1 Occurrence of Land Disputes Description

The findings show that about 12.38 percent of the participants had ever been subjected towards land related dispute and the land parcel boundaries was the common land dispute occurred in the community. This shows that, missing of the permanent marks which define the land parcel boundaries is the major problem.

Table 4.6 shows the frequency of occurrence of land disputes in the research area

Table 4.6: Frequencies for Land dispute occurrence

Land dispute	Frequency	Percent
No	177	87.62
Yes	25	12.38
Total	202	100.00

4.8.2 Type of Land Dispute Description

Out of 12.4 percent of the land related conflicts, 8.41 percent were disputes related to land boundary followed by land disputes related to ownership with 3.47 percent. The land disputes related to land use were very low to about 0.5 percent. Thus, this indicates that, about 67.7 percent of all land disputes were associated with definition of land parcel boundaries, and 28.2 percent of the land disputes were associated with land parcel ownership. The rest 4.1 percent of all land related conflicts were land disputes related to other issues such as land use.

Figure 4.5 illustrates the distribution of types of land dispute in the study area.

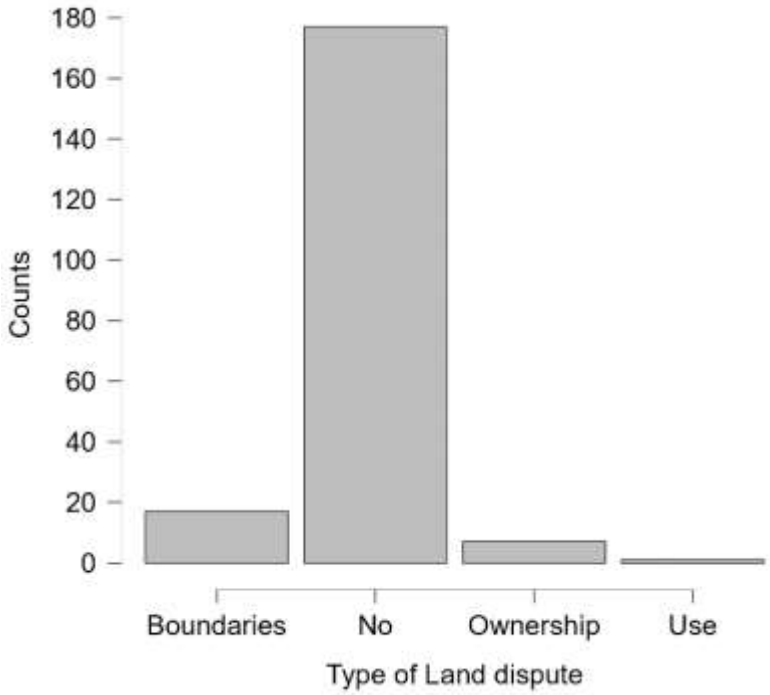


Figure 4.5: Types of land dispute description.

Source: Author's illustration.

4.8.3 Ways of Resolving Land Dispute

The common way of resolving the occurred land disputes was negotiation. As out of 12.4 percent of the conflict occurred, 9.9 percent resolved their disputes through negotiation. The neighboring land parcel owners, under the presence of the ward or sub-ward officer made agreement on what to be done so as to end their misunderstanding in peace. This was the only best way to deal with the disputes as the land parcels involved in the dispute were not surveyed so the exactly position of their parcels were not determined.

Table 4.7 shows ways of resolving land disputes in percentage

Table 4.7: Ways of resolving land dispute

Ways of L/dispute Resolution	Frequency	Frequency
Judicial proceedings	4	1.98
Documents	1	0.50
Negotiation	20	9.90
Negotiation	177	87.62
Total	202	100.00

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The findings show that, large part of the research area had informal settlement. Therefore, the land is not effectively administered as it lacks of cadastral data, and there is no revenue collected from land rent as a source of government income. Also, in case of land disputes, it becomes very difficult to provide the right solution. As the results, people use negotiation as the means of ending their dispute due to lack of cadastral data such as surveying data and ownership documents whereas the method focuses much on ending the dispute rather than providing the right judgment.

Moreover, cadastral data is very much useful in making proper planning for the use of land parcel such as designing the building that best fit the particular parcel of land, also through title deed, it can be used as a security when applying loans from financial institutions. Cadastral data add value of the particular land parcel.

On the other hand, the land cannot be managed properly if the specific size and use of the each land parcel is not determined. This threatens the future use of land due as the sustainable use of the land depends much on it size and location so as to protect the environment in general.

5.2 Recommendations

From the research results obtained from findings it can be recommended that,

(i) The government through the LGA should be setting plan for Land Planning and Surveying Project regularly so as to provide uniform expansion of the places in the administrative units where equitable allocation of resources such as schools, health centres, and water sources can be attained. Such plans are also important to the community in the following aspects:

(a) This will facilitate land registration as people will be purchasing ready surveyed land parcels, on the other hand registration process will be one of the process for completing the purchasing.

(b) Land disputes will be minimized. For instant, permanent and coordinated survey marks are placed to surveyed land parcels so as to avoid loss of boundary but also can be restored once it is lost. Similarly, land disputes related to ownership are minimized as the owner of the land parcel will be ascertained and documented at the moment of acquiring the parcel.

(c) The sustainable use of land will be achieved once the use of the land will be planned according to its size and location.

(ii) People should prioritize on purchasing surveyed land parcels where apart from being secured in term of land parcels boundaries, registration process may be carried out immediately after purchasing, and from title deed their ownership will be quarantined by the government and can be used as a security when applying for loan.

References

Chikhwenda, E. (2019). *Cadastral Surveying for Land Managers.* Lambert Academic Publishing.

Cienciała, A., Sobolewska, K., & Sobura, S. (2020). Credibility of the cadastral data on land use and the methodology for their verification and update. *Land use Policy*.

Cochran, W. (1977). *Sampling Techniques.* New York: John Wiley & Sons.

EEA. (2004). *Land cover and Land use.* Copenhagen.

Gilbert, J. (2013). Land Rights as Human Rights. *International Journal on Human Rights*, 32.

Kain, R., & Baigent, E. (1992). *The Cadastral map in the service of the state: a history of property mapping.* Chicago: University of Chicago Press.

Kijazi, ,. A. (2021, September 19). *Ministry of Land Housing and Human Settlement Development* . Retrieved from Ministry of Land Housing and Human Settlement Development web site: https://www.lands.go.tz/

Magigi, W., & Majani, B. (2006). *Community involvement in Land regularization for informal settlements in Tanzania: A strategy for enhancing security of tenure in residential neighbourhoods.* Dar es Salaam.

NBS. (2022). *Population and Housing Census.* United Republic of Tanzania.

Nezire, O. (2013). *Neighbourhood Concept and Built Environment Relations.* LAP Lambert Academic Publishing.

Parsa, A., Nakendo, F., & McCluskay, M. (2011). *Impact of formalisation of property rights in informal settlements: Evidence from Dar es Salaam City* . Dar es Salaam.

Pateman, T. (2011). *Rural and Urban areas: Comparing lives using rural - urban classifications.* UK.

Silayo, E. (1997). *Cadastral Surveying Practce in Tanzania.* Dar es Salaam: Dar es Salaam University Press.

UNECE. (2021). *Land Administration and Management.* Geneva.

URT. (1999). *Land Act No. 4 of 1999.* United Repulic of Tanzania.

URT. (1999). *Land Act No. 4 of 1999.* United Republic of Tanzania.

Wehrmann, B. (2008). *Land Conflicts: A practical guide to dealing with land disputes.* Eschborn, German.

Appendix A

Introduction

*I Mageni Masasu am a student from Ardhi University with Reg. No. 22802/T.2019 email; magenimasasu@gmail.com, contact; 0655-082424 pursuing a bachelor degree in Geomatics. It is my expectation that I will receive a positive response towards my research as I investigate on "**The potentials of cadastral data on land use for Land Administration and Land Managemen**".*

Directions

Tick the choice of your response in the space provided (✓), in some cases, multiple selection is allowed. Blank spaces have been provided for filling in your personal explanation

QUESTIONS TO LAND PARCEL OWNER AT BONYOKWA (DSM CITY –ILALA)

Cluster Name .....

1. What is your age ?

   (a) 18 to 35 years ( )
   (b) 36 to 50 years ( )
   (c) 51 to 65 years ( )
   (d) Above 65 years ( )

2. What is your gender ?

   (a) Male ( )

   (a) Female ( )

3. What is your occupation ?

   (a) Peasant/Farmer ( )

   (a) Businessman/Businesswoman ( )

   (a) Worker ( )

4. Do you know the size (area) of your land parcel ?

   (a) Yes ( )

   (b) No ( )

1

5. Do you know the dimension of each side of you land parcel ?

(a) Yes ( )

(b) No ( )

6. Is your land parcel surveyed ?

(a) Yes ( )

(b) No ( )

7. How did you acquire your land parcel ?

(a) Purchased from Local Government Authority ( )

(b) Purchased from local people ( )

(c) Inherited ( )

8. When did you acquire your land parcel ?

(a) Less than 5 years ago ( )

(b) Between 5 to 10 years ( )

(c) Between 10 to 20 years ( )

(c) More than 20 years ( )

9. How do you possess your land parcel ?

(a) Customary / Letter of sales agreement ( )

(b) Title Deed ( )

10(i) If the land parcel is owned customary, would you like to register your land parcel ?

(a) Yes ( )

(b) No ( )

10 (ii) If YES, why is your land parcel is not registered ?

(a) Not aware of the procedures to follow ( )

(b) High surveying and registering cost ( )

(c) Many procedures are involved ( )

11. What is the use of your Land Parcel ?

(a) Residential ( )

(b) Commercial and Residential ( )

(c) Cultivation ( )

(d) Commercial ( )

(e) Others (Specify) .....

12. Have you ever been involved in any land dispute ?

(a) Yes ( )

(b) No ( )

13. From Qu. 12, in above, If YES, what was that type of land dispute ?

(a) Boundary related conflicts ( )

(b) Ownership related conflicts ( )

(c) Land use related conflicts ( )

(d) Others (Specify) .....

14. From Qu. 12, in above, If YES, how the conflict was resolved ?

.....

.....

.....

15. What is/are the need(s) of registering your land ?

.....

.....

.....

.....

.....

16. What cadastral information is more important to you ?

(a) Dimensions and size of the land parcel ( )

(b) Title deed ( )

(c) Use of land parcel ( )

(d) Others (Specify) .....

17. What is/are the use of cadastral data in using your land parcel ?

(a) For securing the land parcel boundaries ( )

(a) For securing the land parcel ownership ( )

(b) For proper planning on the use of the land parcel ( )

(c) For making legal transfer of land parcel ( )

(d) Others (Specify)

.....

.....

.....

Thank you for taking part for successful completion of this research

Appendix B

Introduction

I Mageni Masasu am a student from Ardhi University with Reg. No. 22802/T.2019 email; magenimasasu@gmail.com, contact; 0655-082424 pursuing a bachelor degree in Geomatics. It is my expectation that I will receive a positive response towards my research as I investigate on ***"The Potentials of Cadastral Data on Land use for Land Administration and Land Management"***

Tick the choice of your response in the space provided (✓), in some cases, multiple selection is allowed. Blank spaces have been provided for filling in your personal explanation

QUESTIONS TO THE AUTHORISED LAND OFFICER (DSM CITY – ILALA)

1. What is your age ?

   (a) 25 to 35 years ( )
   (b) 36 to 50 years ( )
   (c) 51 to 60 years ( )

2. What is your gender ?

   (a) Male ( )

   (a) Female ( )

3. Does the City Council has places which are not yet covered by the Master Plan ?

   (a) Yes ( )

   (b) No ( )

4. Does the City Council has places which are covered by the Master Plan but not surveyed and occupied by informal settlements ?

   (a) Yes ( )

   (b) No ( )

5. Does the council has surveyed plots to be sold to the citizens ?

   (a) Yes ( )

   (b) No ( )

6. In which year did the City Council implement the last land planning and surveying project?

.....

7. How frequent do the people request for the surveyed plot ?

(a) High ( )
(b) Average ( )
(c) Low ( )

8. (i) Does the City Council has a plan for land planning and surveying project ?

(a) Yes ( ) If Yes, state the expected year for its implementation .....

(b) No ( )

8. (ii) If No, Why does the City Council has no plan for land planning and surveying project ?

(a) There is no request for surveyed plots ( )

(b) Due to deficit budget ( )

(c) Others (Specify)

.....
.....
.....
.....

9. What types of land disputes are normally reported to your office ?

(a) Boundary related conflicts ( )

(b) Ownership related conflicts ( )

(c) Land use related conflicts ( )

(d) Others (Specify)

.....
.....
.....
.....

10. What cadastral information is more important ?

(a) Dimensions and size of the land parcel ( )

(b) Name of the Land parcel owner ( )

(c) Use of the land parcel ( )

(d) Others (Specify)

.....

.....

.....

11. How do you use the cadastral data ?

(a) For land registration ( )

(b) For resolving land related disputes ( )

(c) For making legal transfer of land parcel ( )

(d) Others (Specify)

.....

.....

.....

Thank you for taking part in successful completion of this research

Appendix C

JAMHURI YA MUUNGANO TANZANIA

OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA
HALMASHAURI YA JIJI LA DAR ES SALAAM

Kumb. Na.DCC/AF.3/ Tarehe 04/05/2023

AFISA MTENDAJI WA KATA
KATA YA BONYOKWA
ILALA – DAR-ES-SALAAM

YAH: RUHUSA YA NDUGU MAGENI MASASY KUFANYA PROJECT/FIELD/RESEARCH

Tafadhali rejea somo tajwa hapo juu.

Mtajwa hapo juu ni mwanachuo katika chuo cha ARDHI-DAR-ES-SALAAM (ARU) ambaye amekubaliwa kufanya Project/Field/Research juu ya UWEZO/UMUHIMU WA TAARIFA ZA ARDHI KATIKA MAJUMUI katia ofisi yako kuanzia tarehe 02/05/2023 hadi tarehe 20/05/2023

Hivyo mpokee na kumpa ushirikiano kulingana na mahitaji yake.

Nakutakia kazi njema.

Amr: MKURUGENZI WA JIJI
HALMASHAURI YA JIJI LA DAR ES SALAAM

Kny: MKURUGENZI WA JIJI
HALMASHAURI YA JIJI LA DAR ES SALAAM

OFISI YA MKURUGENZI, 1 MTAA WA MISSION, S.L.P 20950, 11883 DAR ES SALAAM, SIMU NA 2128800, 2128805.
Tovuti: www.dcc.go.tz, Barua Pepe: info@ilalamc.go.tz

Appendix D

THE UNITED REPUBLIC OF TANZANIA
President's Office
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

DAR ES SALAAM REGION
Phone Number: 2203158
Fax number: 2203158
email: ras@dsm.go.tz
website: www.dsm.go.tz

In reply please quote:
Ref. No. .....

REGIONAL COMMISSIONER'S OFFICE,
3 RASHID KAWAWA ROAD,
P.O. BOX 5429,
12880 DAR ES SALAAM

APRIL 27th 2023

District Administrative Secretary,
ILALA,
P. O. Box 20950,
DAR ES SALAAM.

RE: RESEARCH PERMIT

~~Prof/Dr/Mrs./Ms/Miss~~ Mr MAGENI MASASU is student/Researcher from ARDHI UNIVERSITY has been permitted to undertake research on THE POTENTIALS OF CADASTRAL DATA ON LAND USE FOR LAND ADMINISTRATION AND LAND MANAGEMENT

From MAY 2nd, 2023 to MAY 20th 2023.

I Kindly request your good assistance to enable her/his research.

For; REGIONAL ADMINISTRATION SECRERTARY
DAR ES SALAAM

Copy: Municipal Director,
ILALA
DAR ES SALAAM.

Principal/Vice Chancellor
ARDHI UNIVERSITY

Appendix E

THE UNITED REPUBLIC OF TANZANIA

PRESIDENT'S OFFICE

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

ILALA DISTRICT
Phone Address:

Phone No: 2203185/2203182

In reply quote: **Ref. No:** AB.60/87/01

DISTRICT COMMISSIONER'S OFFICE
ILALA DISTRICT,
1 RASHIDI KAWAWA ROAD,
P. O. Box 15486,
12880 DAR ES SALAAM

Date: 27.04.2023

City Director,
City Council,
DAR ES SALAAM.

RE: RESEARCH PERMIT

Prof./Dr./Mr./Mrs./MS./Miss: MAGENI MASASU
from The ARDHI UNIVERSITY she/he has been permitted to undertake a field work research on "THE POTENTIALS OF CADASTRAL DATA ON LAND USE FOR LAND ADMINISTRATION AND LAND MANAGEMENT" *The case study at Ilala District from* 02.05.2023 *to* 20.05.2023.

Therefore, you are asked to give the said researchers necessary assistance and Cooperation.

For. District Administrative Secretary
ILALA

Copy: MAGENI MASASU

Principal/Vice Chancellor,
ARDHI UNIVERSITY