

## IMPLEMENTATION OF NATIONAL LAND POLICY AND INDUSTRIAL DEVELOPMENT IN TANZANIA: EVIDENCE FROM MBEYA REGION

Comment [P1]: Can be written as: Insights from...

### Abstract

*Industrial development is crucial for the progress and economic strength of any nation, as it can absorb a large workforce and bolster the economy. Efficient land use planning is essential for industrial development. This study assessed the implementation of Tanzania's national land policy in terms of land allocation for industrial purposes, access to land for industrial investment, and the procedures for registering land for industrial use. Guided by Von Thunen's land use model, the study involved 120 randomly selected small industry owners from six districts in the Mbeya region. Using a quantitative approach and descriptive statistical analysis, the findings revealed that the current land management policy fails to meet investors' needs for easy land access for industrial development. The study highlighted the challenges faced in developing local by-laws for land management, with no effective land planning at the local government level. Additionally, the registration process for industrial land was found to be problematic. The study recommends reforms to the land policy to facilitate easier access and ownership of land by investors and to streamline the land registration process.*

**Keywords:** Land property rights, Industrial development, Land policy, Von Thunen Model

### Introduction

The term land generally refers to the surface of the earth. But in economics it includes all parts of land, which is available free of cost from nature as a gift to human being (Winders, 1964; Baya & Jangu, 2017). Land stands for all nature, living and nonliving which is used by man in production. Importance of land as a factor of production in every kind of production cannot be neglected (Baya & Jangu, 2017; Zhou, Li, & Liu, 2019). Land is a basic factor of production, to provide raw material, space/surface for setting up the sites for industrial infrastructure, agriculture, and land is considered as the main factor of production. It is therefore known that all sources of power and other resources emanate from land. The international community is aware of the extent of environmental damage happening in the world and therefore sustainable development (SD)

Comment [P2]: Add some reviews on Land Use in 2024

initiatives being advocated globally (Baya & Jangu, 2017). One of the issues discussed under SD is the extent in which industrial activities contributed to the development as countries strived to expand their economic growth.

Securing access to land as a productive resource is key to the livelihoods around the world (Lawry, et al., 2017). Land use management is a challenge all over the world. Secure land rights enable land participants invest heavily with the expectation that they will reap the benefits without fear that their land may be confiscated arbitrarily (Amot, Lukert, & Boxall, 2011). Formal and informal land rights are therefore seen as key to improving the conditions of the poor in developing countries in terms of economic growth. Land use management is tool for agricultural production, natural resource management, gender-related inequalities, conflict management and local governance processes more generally (Lawry, et al., 2017). Land is the material basis for the survival and development of human society including industrial development. Land system requires to regulate the relationships between land and its users, as important arrangement of production relations in a country and the most basic system in all systems (Han, 2018). The choice of land system is an important issue concerning farmers' livelihood, agricultural development and industries development. For a long time, land tenure/system reform has been put on the priority agenda of system reform in many countries Tanzania included (Kweka, 2019).

Comment [P3]: Add 2-3 recent reviews

The Tanzanian government, realize its vision of becoming a middle-income country by 2025, through its Five-Year Development Plan II (2016/17-2020/21) has prioritized industrialization as the key driver of economic transformation (Kweka, 2019). However, despite the priority attached to industrialization, the structure of the economy shows a manufacturing deficit. The main issue industrial investors in industrial development are the long procedures for acquiring and registering land (World Resources Institute, 1995). For instance, to date, the manufacturing sector has played a much smaller role in driving growth and job creation, contributing less than 10 percent of GDP and employing around three percent of the labour force.

Tanzania's land policy has been in a state of crisis for quite some time (Maziku, 2020). The Government of Tanzania appointed several Commission of Inquiry into Land Matters (hereafter the Land Commission) as a runup to revamping of the country's land policy to meet the industrialization moves (World Resources Institute, 1995; Msami & Wangwe, 2013). The aim of

Comment [P4]: Check the bibliography comment

the government is to see land contributes to the gross Domestic Product. Some of the Commission's findings indicated that matters pertaining to the allocation, use, tenure, and administration of land are indeed in a state of confusion, and that the existing land law is in need of a drastic reviewed (Lawry, et al., 2017). Now that the Land Commission's need to think of a new land policy the central focus of which will be land use and land tenure (Kweka, 2019). The consideration of land use is still a challenge to meet the demands of industrialization in Tanzania and the world movement (Aikael & Markussen, 2022). In Tanzania the land use and management are a challenge for industrial development which need special intervention.

The Government of Tanzania has embarked on expanding industrial base and seeing it as an opportunity to enable Tanzania fulfill its economic goal of attaining middle income economy by 2025 (Baya & Jangu, 2017). The government efforts are in recognition that industrial development has helped economic growth of modern societies. Industries are needed to offer goods and services for societies. It is not surprising since independence the government in many different occasions has encouraged and developed different strategies to support industrial development (URT, 2017; Astrid & Johnes, 2017; Msambichaka & Kipene, 2020). The emphasis now is for industrialization that absorbs the rapidly growing labor force, boosting local production, produce products and services that are competitive in the domestic and international markets and improve people's livelihood.

Land property right allow owner's right to use land in different ways for a purpose of income generation and other development activities. It can also include the right to transfer it to another party, in the form of a sale, gift, or inheritance (Besley & Ghatak, 2010). Land rights may comprise a wide range of rights to use, own and/or transfer land, as well as impose rules and exclude outsiders (URT, 1995; Msambichaka & Kipene, 2020). A property right also typically conveys the right to contract with other parties by mortgaging, pledging, or renting or by allowing other parties to use it. The property rights can provide individuals with collateral and thus access to credit which, in turn, can be used to facilitate other transactions for investments (Msambichaka and Kipene 2020). An individual who would like to set up an industry might be able to access credit by using the land or other property right as collateral.

### **National Land Policy review**

Comment [P5]: 2 references of same name and year

The government of Tanzania developed a national Land Policy in 1997. The main objective of the National Land Policy in Tanzania is to guide the allocation, ownership and use of land but also help resolve any recurring land conflicts. However, the policy retains the four central land tenure beliefs in a modified form that land is publicly owned and vested in the President as a trustee on behalf of the citizens (URT, 1997). Speculation in land will be controlled; rights of occupancy whether statutory or customary are and will continue to be the only recognized types of land use; and rights and title to land under any consolidated or new land law will continue to be based mainly on use and occupation. The overall aim of a National Land Policy is to promote and ensure a secure land tenure system, to encourage the optimal use of land resources, and to facilitate broad-based social and economic development without upsetting or endangering the ecological balance of the environment (URT, 1997). The environment has changed from only use of land for housing and agriculture, industrial development has emerged as an important tool for human development. At present part of land are being allocated to individuals, private firms including foreign investors regardless of their proven ability to develop them. As a result, the land allocation system, large areas of land remain undeveloped.

Despite of the National land policy been operational since 1997, the challenges of individuals and firms to access land for industrial development still a big challenge. The policy concentration is on agriculture, village allocation, and urbanization and other uses like reserved areas. However, the policy clearly states that, the government will ensure that there is proper land use allocation, simple access of land and land registration, challenges for industrial investors are facing in terms of access to land and registration (Kweka, 2019).

The government of Tanzania in 1996 developed an industrial policy. Industrial policy is the government efforts to shape the economy by targeting specific industries, firms, or economic activities. This is achieved through a range of tools such as subsidies, tax incentives, infrastructure development, protective regulations, and research and development support. The industrial policy is a tool to foster the agriculture development as a key to citizen employment as well as exploiting other natural resources. The Government of Tanzania is focusing on industrialization of as targeted in "Vision 2025" and making efforts of improving its business environment through enhancement of their productivity, management capacity and international competitiveness. It is proposed for Tanzania to have industrial base that is supportive of jobs creation; sustainable

livelihoods; capable of increasing returns on investment; using finite resources efficiently; reducing harm to the environment; increased global competitiveness and ensure the long-term business sustainability (Maziku, 2020). The overall objective of the industry policy is contributions towards human development and the creation of employment opportunities; economic transformation in order to achieve sustainable economic growth; external balance of payments; environmental sustainability; and equitable development. All of these objectives are consistent with the National Vision 2025.

Tanzania's industry is based on the processing of its agricultural goods and on import substitution that is, the manufacture as a weakness despite of having abundant natural resources (Maziku, 2020). The principal industries are food processing, textiles, brewing, and cigarette production. However, the government to overcome the weakness developed the so-called environmental consideration for sustainable industrialization in Tanzania. The integrated industrial development strategy it is expected to create employment opportunities, directly and indirectly, through the expansion of the industrial sector and by stimulating informal sector development. The goal of economic transformation is to benefit from the projected increasing share of industry in GDP.

The development of intermediate and capital goods industries will enhance sustainable productivity increases, technological progress, structural change and inter-sectoral linkages. Complaints for underdevelopment of industries in Tanzania is conceived in relation to colonial era institutional set-up coupled with unreliable infrastructure, a high degree of unskilled citizens. Others are poor technical skills and human capital, poor managerial capabilities, insufficient energy, lack of indigenous entrepreneurship, and a small domestic market for industrial goods (URT, 2017). The challenges for infrastructure, skilled labour, technical skills and domestic market are well improved, however, the area of land and property rights for industrial investors in different sectors has not been improved to international standards. This is an important area of concentration for industrial development; hence it is vital to improve the environment for industrial development to encourage investors from within and outside the country.

The objective of this study is to investigate the implementation of the national land policy on issues of Land allocation for industrial development, access of land for industrial investment, and land registration procedures for allocated industrial areas.

## Literature review

This current study is guided by the land use model. The model was propounded by Von Thunen in 1826. The Von Thunen model was developed in 1826 and was first applied to analyze the agricultural land use patterns in the 19th century. The main assumption of Von Thunen's model was that agricultural land use is formed as concentric circles around the central market. The latter consumes all the surplus production, which must be transported from the rural areas to the market (Dauphine, 2017). The main drawback of the model is that it does not consider differences in local, physical conditions since it has been developed in an isolated state (Upadhyay, 2006).

Modeling of Land Use (MLU) was developed from the Von Thunen model in 2016 by Malamis. The model explained the planning process for land use in cities as a complex multiparameter challenge (Overman, 2009). As land use decisions critically impact on environmental issues, it is important to control land use in order to mitigate air, water, and land pollution, provide enough land for green and open spaces. Several models of urban land use have been developed, which are characterized by different level of complexity and include agriculture, reserve area, open spaces, industrial space among others. Land use, in this case, is assigned on the basis on its physical and functional characteristics that they have in the rural and urban structure, and the aim of occupying the space in an orderly manner and according to their physical capacity. From the assumption the Land planers need to consider the general characteristics of the land use and their systems for allocation.

Empirical evidence from Tanzania, reveals that several challenges hinder the development of industries (Maziku, 2020). The challenges for the sustainable development of industries include, the allocation of land, registration complications and higher costs of acquiring land for industry development (Msami & Wangwe, 2013). The high price and registration procedure of formal titling acts as the main barrier, preventing a broader expansion of the land hence affects private investment but also public investment (Ayalew, Deininger, & Goldstein, 2014). Literature shows that, it is difficult for investor to invest in industries without assurance of land property right transferred and registered to investing company and or shared land rights with other investors or public (Astrid & Johnes, 2017). Weak property rights affect not only the level of private

**Comment [P6]:** Most of the reviews are old which is not justifying the title. Add for 2020 to 2024

investment but also the level of public investment. Also, The Property rights affect efficiency of resource allocation which enhance investment incentives by limiting investment risk and facilitating market transactions that reduces the need to divert private resources to protect property (Besley & Ghatak, 2010).

Tanzania land management is entrusted to the ministry of land and urban settlement, which is vested to all land procedures (URT, National Land Policy, 1997). The ministry is responsible for planning, allocation, and registration of all land resources including provision of title deeds to investors. The challenge of the procedure is long and sometimes takes longer to acquire planned land for industrial investment (Msami & Wangwe, 2013). The process of acquiring land for industrial investment is not very clear in the National Land Policy between the Local Government and Central government responsible organ. The Government decentralized the provision of title deed to region offices which might simplify the process of title deed provision. The process expects to speed up the investment as the investors will be able to mobilize resources on time as well as finance their projects. Studies show that the process of acquiring land impact investment for industrial development and economic growth to primary factors of production which are land, labor, and capital (Wang & Gu, 2015). This argument has referred to the developed countries which includes China, America and European where the system of land acquisition is good.

The objective of study was to investigate the implementation of the national land policy 1997 on issues of Land allocation for industrial development, Access of land for industrial investment, and land registration procedures for allocated industrial areas. The study

### **Methodology**

The study was conducted in Mbeya region where demand of industrial development is high for processing of natural resources, and farm produces. The Mbeya region contributes 5.7percent of processing of crop production and mines (Mbeya Region, 2015). The Mbeya region consists of Six district where sample were picked randomly from the list of industrial developers. The district councils include Chunya, Mbeya Urban, Rungwe, Mbeya Rural, Kyela and Mbalali. The population of small and medium industrial development is 688 in all the six councils (Mbeya Region, 2015). From each district council the study picked purposive randomly 20 respondents from the list of small and medium industries which accounted to a sample of 120. Data were

collected by the use of structured questionnaire, and they were self-administered and where necessary assistance were done to facilitate the accuracy of data. The collected data were subjected to IBM-SPSS for analysis. The tools used were descriptively and Correlation analysis to see the relation of access of land, land use plans, development of by-laws, land allocation and land registration variables with the success of retaining the potential investors in industrial sector. The variables were picked from the land management policy of Tanzania (URT, National Land Policy, 1997). Correlation is a statistical method used to assess a possible linear association between two or more continuous variables (Voinov, Nikulin, & Balakrishanan, 2013). The variables measured to test the relationship of variables to the industrial development included, land access, knowledge on land allocation, and land registration processes. The choice of the two tools were expected to give answers to the question of industrial development challenges in Tanzania and the way forward for industrial development leading to vision 2025.

### **Results and Discussion**

The results show that, the response rate was 75% of all targeted respondents. The response rate shows that the data collection is sufficient to make conclusions. Literature shows the response rate above 60% as reliable for discussion and decision (Pharm, 2008; Wu, Zhao, & Aime, 2022). The scholarly authority shows the response rate of this research is reliable for decision.

**Descriptive statistics results**

**Table 1: Sex**

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	49	54.4	54.4	54.4
Valid Female	41	45.6	45.6	100.0
Total	90	100.0	100.0	

**Table 2: Age categories**

	Frequency	Percent	Valid Percent	Cumulative Percent
≤18 years	5	5.6	5.6	5.6
Valid 19-34 years	47	52.2	52.8	58.4
35-50 years	24	26.7	27.0	85.4
51-66 years	8	8.9	9.0	94.4
≥ 66 years	5	5.6	5.6	100.0
Total	90	98.9	100.0	
Total	90	100.0		

The study wanted to know the distribution of gender in small industries ownership. Table No 1 above shows the composition of male in small industries were 54% male and 46% female. The results show that, the sector still dominated by male. The study also wanted to know the age categories of small industries in the study area. The findings in table 2 show that, age group of 19-50 years scored 79%, and those aged greater than 66 years scored 6%.

The findings show that majority of small industries are owned by the workforce group which can work sustainably in the sector for long as compared to life expectance rate is 67 years (WHO, 2022). The finding is promising to the extent that majority of the workforce in the small industrial sector in Tanzania are in a good workforce.

**Comment [P7]:** Add If any reviews supporting your result data

### Small industry ownership and experience

The study went far to establish the state of ownership of small sector industries and the experience of owners. The results revealed that, 52% of small industries were owner managers and 43% were either employees or managing for someone business. The findings suggest that, the sector is dominated by owner managers, however the employment rate is not negligible as is approaching the owner managers. On the experience in business industrial sector the finding shows that, only 4% had experience of above 26 years, and 37% had experience of less or equal to 5 years Table 3. The results inform that, majority of small industrial holders has no experience in business which may lead to business failure due to non-experience in sector environment.

**Table 3: Experience in business**

	Frequency	Percent	Valid Percent	Cumulative Percent
≤ 5 years	33	36.7	36.7	36.7
6-10 years	14	15.6	15.6	52.2
Valid 11-15years	17	18.9	18.9	71.1
16-20 years	11	12.2	12.2	83.3
21-25 years	10	11.1	11.1	94.4

26 and above	5	5.5	5.5	100.0
Total	90	100.0	100.0	

**Access of land industrial development is easily known**

**Comment [P8]:** Title needs to be revised as it isn't understandable

The study set to investigate to whether the public is aware and can access land for industrial development. The findings show that, 37% disagreed that the access of land is easily accessible for industrial development, 32% said have easy access procedure, and 31% they had no opinion that means the access of land is not easily accessible. The findings suggest that, 63% of the results show that, the land is not accessible for prospective investors in small industries development sector. The access of land for industrial development is a challenge for the industrial development as per the findings. The results contradict with the development vision of Tanzania to reach the middle-income country with industrial development. Also, the 2025 vision on industrial development suggests to have transformation of industrial for export lead economy (URT, 2003; URT, 2019).

**The village or Council have land use management plan**

The study ought to know whether the villages or Local Government Authorities have a land use management plan. The finding shows that, 36% accepted that villages and Councils have land management plan; 31% were not sure to have knowledge on land use management, and 31% again disagreed that the villages/councils have land use management plans. The results indicate that, 62% of the respondents do not suggest the availability of land for industrial development planned by village and councils. The results are inline with the documentation of the land policy strategy that the government to allocate land for industrial development. That is the government is in plan to develop plans for industrial development (URT, 1997). The findings also show that, majority do not have knowledge on how to access land for industrial investment. The findings relate with report on land reforms policy by Kweka (2019), known as monitoring Tanzania policies on industrialization and the framework and guidelines on land policy in Africa, the reports suggested the reforms to be well stipulated for industrial development (Kweka, 2019; Maziku, 2020). Access of land for industrial investment is important for sector development however majority do

not know the procedures for land acquisition. In the era of information technology, the database embedded in internet is inevitable for easy access of available land for industrial development as suggested by the policy brief developed by Kweka, (2019).

The study went further to investigate to whether, the land for industrial development is just for enquiry and one gets access. The findings show that, only 25% had agreed that, just for enquiry the land is accessed for industrial development and investment, 38% said are not aware of the land access procedures, and 33% said they do not agree that just for an enquiry the land for industrial development is accessed. This denotes that, the process of acquiring land for industrial development is not known to the public hence investment for industrial development is in the disadvantage. Newman et al., 2016 in a report of comparative studies of industrial development in Africa and emerging Asia, suggested the land acquisition need to be readily available if the African countries want to develop the industrial sector (Newman, Page , & Rand, 2016). The report suggested for land acquisition should be straight and easily accessible to the public and investors.

#### **The by-laws for industrial development at Local Government**

The study wanted to investigate to understand whether local governments have by-laws for protection of industrial land development. The finding of the study revealed that, 75% had no knowledge of the by-laws of say no by-laws developed by local government for the purpose of industrial development. Only 25% agreed that local governments including villages have by-laws for industrial development. The by-laws are necessary for assurance of investors on their funds and security. The by-laws helps to control the allocation of land for sustainable industrial development. By-laws designed for land use mostly falls within six main categories, including agricultural, residential, recreational, commercial, industrial development, and transportation. The prepared by-laws tries to accommodate all of the categories for sustainable development. The land Act provides for the village government and local government to develop their land use plans including development of by-laws for proper management of land to save all sectors of the economy.

### **Land allocation for industrial development**

The study wanted to establish the preparedness of land for industrial development at village and councils level. The villages have mandate to allocate land for industrial development as well as the local governments (URT, National Land Policy, 1997: URT, 2019). The study thought to understand the allocated land whether have access to important infrastructures like electricity, water and roads; the suitability of land for industrial development, and whether the owner of land can transfer to another investor. The findings show that, 15% agreed to that infrastructures are accessed in the allocated areas, 23% had no opinion or do not know, and 62% disagreed that infrastructures are readily available in the allocated area for industrial development. The findings suggest that, some efforts need to be made to motivate investors to the allocated lands for industrial development in Tanzania. Lawry, et al., (2017), noted that, the state and all authorities for land allocation have the role of planning for the infrastructure for industrial development.

The study wanted to know clearly, is the land allocated for industrial development is suitable for industrialization. The findings indicates that, 14% agreed to have land which is well allocated and suitable for industrial development, 31% had no knowledge whether land allocated is suitable allocated for industrial development. 52% of the respondents had opinion that, the allocated land is not suitable to industrial development. The results indicates that, the allocated land is not suitable for industrial development. The results related to the land policy challenge on land allocation for industrial development to motivate investors (URT, National Land Policy, 1997). Also, Astrid & Johnes, (2017), commended the importance of land allocation for suitable industrial development.

The study also, wanted to know the legality for the owner can transfer the property to another investor. The findings show that, 35% agreed that the land allocated for land can be transferred to another owner. 21% had no knowledge, and 40% said the allocated land cannot be transferred to another one More details in table 4 below. The results indicate that the respondents had indifferent whether the land can be transferred. In Tanzania, the process of changing land ownership and transferring the right of occupancy involves several steps and costs. The first step in changing land ownership is to submit an application to the relevant authority (Danvast, 2024). The authority varies depending on the type of land involved village land, the application is made to the village council, while for general land, it is made to the District Land Officer or the Commissioner of Lands.

**Table 4: The allocated land can be transferred to another investor**

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	8	8.9	9.1	9.1
Agree	24	26.7	27.3	36.4
Not sure	19	21.1	21.6	58.0
Valid Disagree	23	25.6	26.1	84.1
Strongly disagree	14	15.6	15.9	100.0
Total	88	97.8	100.0	
Missing System	2	2.2		
Total	90	100.0		

**Industrial land registration**

The study was eager to know the process of industrial land planning for industrial development in Tanzania. The main issues dealt in the study include land planning/mapping, land registration against sectors, simplified process of registration and cooperation of staff designed to land management planning. The study also went far to find out the process of land registration is known.

The study wanted to know what is the process of mapping the industrial land for industrial development in Tanzania. The findings indicated that, only 6% accepted to the land mapping that was properly done; 23% had no knowledge, and 67% did not agree. The results indicated that, majority are not comfortable with the mapping process of the land designed for industrial development. The land planning and mapping is designated to experts in land management (URT, National Land Policy, 1997). The findings show the investors for industrial development are not comfortable with process of land mapping for industrial management. The national land use plan/strategy clearly states the need of centralizing the land management planning in zones (URT, 2017). Despite the respondents having no knowledge and others did not agree, the policy strategy very clear that, the ministry responsible for land is required to make land use planning viable for industrial development. At this juncture, the majority of investors seem to have no knowledge of the land mapping for industrial development.

The study also wanted to understand the industrial land for industrial sectoral design. The results show that, 24% agreed that land for industrial development is sectoral wise designed, 40% did have no knowledge and 34% agreed that the land is allocated by sector. The allocation of land sector wise is important for monitoring the sector development. The land allocation sector helps for the management possible wastes of the same kind. The development of sector is in line with the land planning strategy which wants the land planning depending of sectors (URT, 2017).

The study went further to understand whether the process of registration is known to investors. The findings indicate that, 17% are knowledgeable, 28% not aware at all, and 53% did not an agreed that the process is not simplified. The results indicate that, the process of industrial land registration need to be simplified and known to the investors (Maziku, 2020). The process is not well interesting to the investors as this was noted by the land research policy review to be improved (Wu, Zhao, & Aime, 2022). The study wanted to know the cooperation of staff designated to land management with the industrial development investors. The results show that, 19% said they had cooperation, 28% are not sure of the cooperation, and 52% had no opinion on the staff from government designated to land investors and staff cooperation. The study suggests that the cooperation of government staff and industrial development investors.

The study wanted to know the process of land registration is simplified for industrial development. The results are 21% agreed, 18% were not sure with the registration is simplified, and 58% disagreed that the land registration process is simplified. The findings show that, majority of investors are not comfortable with the process of registration. The policy has very clear statement for the process of land registration. URT, National Land Policy, (1997) states that, for the Right of Occupancy the Government will ensure that the Certificate of Title given within 180 days from the date one gets the letter of offer of the land in question. Otherwise after the expiration of that period the said grantee will be allowed to register the Letter of Offer with the Registrar of Titles as notice of impending ownership (URT, National Land Policy, 1997).

## Regression analysis

**Table 5: Model Summary of Land access for industrial development**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.382 <sup>a</sup>	.146	.103	1.113	1.974

a. Predictors: (Constant), Experience in business, Sex, Ownership, Age

b. Dependent Variable: The access of land for industrial development is easily known

The study wanted to calculate the autocorrelation between variables to see whether there is correlation between them for decision making. The Durbin Watson statistic is a test for autocorrelation in a regression model's output. The Durbin-Watson statistic ranges from zero to four, with a value of 2.0 indicating zero autocorrelation. Values below 2.0 mean there is positive autocorrelation and above 2.0 indicates negative autocorrelation. The finding in table 5 shows that, the value of Durbin-Watson statistic is 1.974 which is less than 2.0 which means there is autocorrelation among the variables for the land development accessibility. The study also, wanted to know how the variables for land access fits in the model relationship. The study used the confidence of determination for decisions. The study calculated the R square as shown in table 5. The decision is R Squared, indicating the extent of influence a specific independent variable exercise on the dependent variable. Typically ranging between 0 and 1, values below 0.3 suggest weak influence, while those between 0.3 and 0.5 indicate moderate influence. The table also, show the coefficient of determination R-Squared ( $R^2$  or the coefficient of determination) is 0.382; the statistical measure in a regression model that determines the moderate proportion of variance in the dependent variable that can be explained by the independent variable. In other words, r-squared shows how well the data fit the regression model (the goodness of fit).

The statistics from the model indicates that there is strong relationship between experience in industrial development, sex, age and ownership are closely related to industrial land access and development in Tanzania. It is implied that, land access for development in Tanzania is explained by the variables. The age, sex, and ownership are predictors of land access for industrial development in Tanzania. The findings of the study related to study by (Msami & Wangwe, 2013) on paper on industrial development in Tanzania and (Maziku, 2020) on paper integrated industrial development strategy.

**Table 6: Regression for Land access knowledge for industrial development**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	16.900	4	4.225	3.412	.013 <sup>b</sup>
Residual	99.053	80	1.238		
Total	115.953	84			

a. Dependent Variable: The access of land for industrial development is easily known

b. Predictors: (Constant), Experience in business, Sex, Ownership, Age

The study wanted to test the whether the investors have knowledge on accessing land for industrial development. The study used the F-test to test for the variances of the variables at 0.05 significance level. The findings as shown in table 6 shows an F value of 3.412 and significance level of 0.013. The study indicates that there is variance between experience in business, sex, and ownership status. The decision rule states the circumstances under which the null hypothesis will be rejected. For a research paper, this will be comparing the obtained p-value (level of significance) of the test statistic to the alpha set for the hypothesis. For example, "If  $p < 0.05$ , the null hypothesis will be rejected." The decision is to reject the hypothesis that age, sex, experience, and ownership are influences the knowledge of land for industrial development. The study implies that, the ownership, sex and age are not determinant for investors easy to know the ownership and allocation of land for industrial development in Tanzania. The industrial policy clearly states the procedures for acquiring the land for industrial development, that one need to know the process.

### **Conclusion and recommendations**

The objective of this study was to investigate the implementation of the national land policy on issues of Land allocation for industrial development, Access of land for industrial investment, and land registration procedures for allocated industrial areas. The study concludes that, in Tanzania despite of having policies in relation to investment, the implementation is still in its infancy. The investors in industrial development in Tanzania are not comfortable with the land allocation, access of land for industrial development, and the procedures for land registration for industrial development. The investors have no knowledge on how to acquire land, and registration of land for industrial development. Several papers have been presented to the government for the purpose of improving the process and access of land for industrial development. It is important as the

country moves to middle level economy and the basis is transforming agriculture and natural resources to benefit majority by use of industrialization. The transformation can be easily when the Land policy is well implements to allow investors have knowledge on how to access, acquire land, and the process of registration for industrial development.

The study recommends for the land policy reformation and let the investors have the right to access, acquire and own land for industrial development. Also, the government to support investors for quick access and registration of land for industrial development. Several transformation papers have been presented it is real time to use the suggestions for industrial development in Tanzania.

## References

- Aikael, J., & Markussen, T. (2022). Titling and the value of land in Tanzania. *Journal of International Development* 34(3), 512-531.
- Amot, C. D., Lukert, M. K., & Boxall, P. C. (2011). "What tenure security?". Conceptual implication for empirical analysis. *Land Economics* 87(2), 297-311.
- Astrid, R. N., & Johnes, P. (2017). *The Importance of Property Right for Successful Urbanization in Developing Countries*. Helsinki: Land Right Policy Brief.
- Ayalew, A. D., Deininger, K., & Goldstein, M. (2014). Environmental and gender impacts of land tenure regulations in Africa: Pilot evidence from Rwanda. *Journal of Development Economics* 110, 262-275.
- Baya, B. T., & Jangu, M. H. (2017). *Environmental Consideration for sustainable industrialization in Tanzania*. DSM: National Environmental Council of Tanzania.
- Besley, T., & Ghatak, M. (2010). Property Rights and Economic Development in Dani Rodrik and Mark Rosenzweig. *Development Economics* 5, 4525-4595.
- Danvast, L. (2024, February 6). *Medium.com*. Retrieved from <https://landproperty.com>: <https://landproperty.com>
- Dauphine, A. (2017). *The Geography Models with Mathematics*. Natural Resources and Environmental Economics.
- Han, C. (2018). China's rural Land systems reforms: Newsletter about the works in rural areas 7(3). *China Development Review*, 40-45.
- Kweka, J. (2019). *The Role of State Owned Enterprises in Industrialization in Tanzania: Lessons from East Asian Economies*. Dar Es Salaam: Uongozi institute.
- Lawry, S., Samii C, Hall, R., Leopold, A., Hombly, D., & Mtero, F. (2017). Impact of Land property right intervention on investment and agriculture productivity in developing countries: A systematic Review. *Journal of Development Effectiveness* 9(1), 61-81.

Maziku, A. (2020). *Highlights of Sustainable Industrial Development Policy in Tanzania*. DSM: Macmillan Publishers.

Maziku, A. K. (2020). *Integrated Industrial Development Strategy 2024*. DSM: Ministry of Industry and Trade.

Mbeya Region. (2015). *Mbeya Regiona Socia-economic Profile*. Mbeya: Regional Secretariate.

Msambichaka, J., & Kipene, V. (2020). The Role of Housing in Industrial Development: Fast Tracking Industrialization in Tanzania. *MUST in Action*, 412-438.

Msami, J., & Wangwe, S. (2013). Industrial Development in Tanzania. In c. Newman, J. Page, & J. Rand, *Manufacturing Transformation: Comparative Studies in Africa and Emerging Asia* (pp. 155-173). Helsinki-Finland: United Nations University World Institute for Development Economics Research.

Newman, C., Page, J., & Rand J. (2016). *Cooperative Studies of Industrial Development in Africa and Emerging Asia*. Finland: Helsinki.

Overman, H. G. (2009). Regional Science. *Natural Resources and Environmental Economics*.

Pharm, A. M. (2008). Response rates and responsiveness for survey standards and the journal. *American Journal of Pharmaceuticlas Education* 72(2), 43-45.

Upadhyay, T. P. (2006). *Use of models to analyse land-use change, forest/soil degradation and carbon sequestration with special reference to Himalayan*. Himalaya: Forest Policy and Economics.

URT. (1997). *National Land Policy*. DSM: National Printer.

URT. (2003). *Small and Medium Enterprises Policy*. DSM: Ministry of Trade and Industry.

URT. (2017). *Environmental Consideration for Sustainable Industrilization in Tanzania*. DSM: NEMC.

URT. (2017). *Strategies of addressing land use planning challenges in Tanzania*. DSM: United Republic of Tanzania.

URT 2019. (2019). *The Formalization of Micro-Enterpirses in Tanzania; Policy Review*. DSM: Government Publisher.

Voinov, V., Nikulin, M., & Balakrishanan, N. (2013). *Chi-Squared Goodness- of -fit Test With Applications*. Chicago: Elsever.

Wang, J. K., & Gu, G. F. (2015). The study on contribution of land elements to Urban growth in China. *China Population and Environmment* 25, 10-17.

WHO. (2022, November 22). [www.who.int/data](http://www.who.int/data). Retrieved from <http://population.un.org/wpp>: [www.who.int/data/com](http://www.who.int/data/com)

Winders, P. J. (1964). Land Use Planning for Industrial Development. *Vanderbilt Law Review* 17(40), 1467-1489.

World Resources Institute. (1995). *Land Policy In Tanzania: Issues for Policy Considerations*. Dar Es Salaam: University of Dar Es Salaam.

**Comment [P9]:** If 2 similar references are there having same year and name write a and b after year. Check your journal format.

**Comment [P10]:** Same comment as above

Wu, M. J., Zhao, K., & Aime, F. F. (2022). Response rate of online surveys in published research: A meta Analysis. *Computer in Human Behaviour Report* 7, 1-11.

Zhou, Y., Li, X., & Liu, Y. (2019). Rural Land Systems Reforms in China: History, Issues and Prospects. *Land Use Policy* xxx(xxxx), 1-15.

UNDER PEER REVIEW