



# Implementation of National Land Policy and Industrial Development in Tanzania: Highlights from Mbeya Region

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## Authors' contributions

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## 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

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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 streamline the land registration process.

*Keywords: Land property rights; industrial development; land policy; von thunen model.*

## 1. INTRODUCTION

The term land generally refers to the surface of the earth. However, economics includes all parts of land that are available free of cost from nature as gifts to human beings [1,2]. The land stands for all nature, living and nonliving, which is used by man for production. The importance of land as a factor of production in every kind of production cannot be neglected [2-4]. Land is a fundamental factor of production, providing raw materials and space/surface for setting up the sites for industrial infrastructure agriculture, and land is considered the main factor of production [5]. 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 around the world, and therefore, sustainable development (SD) initiatives are being advocated globally [2]. One of the issues discussed under SD is the extent to which industrial activities contributed to the development as countries strived to expand their economic growth.

Securing access to land as a productive resource is critical to livelihoods around the world [6]. Land use management is a challenge all over the globe [4]. Secure land rights enable land participants to invest heavily with the expectation that they will reap the benefits without fear that their land may be confiscated arbitrarily [7]. Formal and informal land rights are therefore seen as key to improving the conditions of people with low incomes in developing countries in terms of economic growth. Land use management is a tool for agricultural production, natural resource management, gender-related inequalities, conflict management, and local governance processes more generally [5,6]. The land is the material basis for the survival and development of human society, including industrial development. The land system requires regulating the relationships between land and its users as the necessary arrangement of production relations in a country and the most basic system in all systems [8]. The choice of land system is an essential issue concerning

farmers' livelihood, agricultural development, and industry development. For a long time, land tenure/system reform has been a priority on the agenda of system reform in many countries in Tanzania [9,10].

The Tanzanian Government, realizing 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 [9]. However, despite the priority attached to industrialization, the structure of the economy shows a manufacturing deficit. The main issue for industrial investors in industrial development is the lengthy procedures for acquiring and registering land [11]. 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 [12,13]. The Government of Tanzania appointed several Commissions of Inquiry into Land Matters (hereafter the Land Commission) as a runup to revamping the country's land policy to meet the industrialization moves [11,14]. The Government aims 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 review [6]. Now that the Land Commission needs to think of a new land policy, the central focus will be land use and land tenure [9]. The Consideration of land use is still a challenge to meet the demands of industrialization in Tanzania and the world movement [15]. In Tanzania, land use and management are challenges for industrial development, and extraordinary intervention is needed.

The Government of Tanzania has embarked on expanding its industrial base and is seeing it as

an opportunity to enable Tanzania to fulfill its economic goal of attaining a middle-income economy by 2025 [2]. The government efforts are in recognition that industrial development has helped the economic growth of modern societies. Industries are needed to offer goods and services to societies. It is not surprising since independence, the Government, on many different occasions, has encouraged and developed various strategies to support industrial development (URT, 2017; Astrid & Johnes, 2017; Msambichaka & Kipene, 2020). The emphasis now is on industrialization that absorbs the rapidly growing labour force, boosting local production, producing products and services that are competitive in the domestic and international markets, and improving people's livelihood.

Land property right allows the owner the right to use land in different ways for 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 [16]. Land rights may comprise a wide range of rights to use, own, and 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, renting, or allowing different parties to use it. Property rights can provide individuals with collateral and thus access to credit, which, in turn, can be used to facilitate other transactions for investments [17]. An individual who would like to set up an industry might be able to access credit by using the land or other property rights as collateral.

## **2. National Land Policy Review**

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 and to 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 [18]. Speculation in the 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 [18]. The environment has changed from only the use of land for housing and agriculture, and industrial development has emerged as an essential tool for human development. At present, part of the land is being allocated to individuals, private firms, and foreign investors, regardless of their proven ability to develop them. As a result of the land allocation system, large areas of land remain undeveloped.

Despite the national land policy being operational since 1997, individuals and firms are still facing challenges in accessing land for industrial development. The policy concentration is on agriculture, village allocation, urbanization, and other uses, such as reserved areas. However, the policy clearly states that the Government will ensure that there is proper land use allocation, simple access to land and land registration, and challenges for industrial investors in terms of access to land and registration [9].

The Government of Tanzania in 1996 developed an industrial policy. Industrial policy is the Government's efforts to shape the economy by targeting specific industries, firms, or economic activities. The policy implementation is achieved through a range of tools such as subsidies, tax incentives, infrastructure development, protective regulations, and research and development support. Industrial policy is a tool to foster agricultural development, which is critical to citizen employment and the exploitation of other natural resources. The Government of Tanzania is focusing on industrialization as targeted in "Vision 2025" and making efforts to improve its business environment through enhancement of its productivity, management capacity, and international competitiveness. It is proposed for Tanzania to have an industrial base that is supportive of job creation, sustainable livelihoods, capable of increasing returns on investment, using finite resources efficiently, reducing harm to the environment, increasing global competitiveness, and ensuring long-term business sustainability [12,13]. The overall objective of the industry policy is to contribute towards human development and the creation of employment opportunities and 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 import substitution. That is, manufacturing is a weakness despite having abundant natural resources [12,13]. 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 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 increase in the 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 the underdevelopment of industries in Tanzania are conceived in relation to colonial era institutional set-up coupled with unreliable infrastructure and 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 [19,20]. The challenges for infrastructure, skilled labour, technical skills, and the domestic market have improved; however, the area of land and property rights for industrial investors in different sectors has not been improved to international standards. Land management is an essential area of concentration for industrial development; hence, it is vital to enhance the environment for industrial development to encourage investors from within and outside the country.

The aim of this study is in line with the recommendation of the paper by Kweka [9] on monitoring policies and industrialization in Tanzania; the papers argue the Government should effectively invest in facilitation for industrial development as per the land policy of Tanzania. The aim, therefore, is to assess the effectiveness of implementing the national land policy, specifically in terms of land allocation, access to land, and land registration procedures for designated industrial areas, to facilitate ease for investors in industrial development.

## 2. LITERATURE REVIEW

The land use model guides the present study. The model was propounded by Von Thunen in 1826. The Von Thunen model was developed in 1826 and was first applied to analyze agricultural land use patterns in the 19<sup>th</sup> century. The primary 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 [21]. 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 [22].

The modeling of land use (MLU) was developed using the Von Thunen model in 2016 by Malamis. The model explained the planning process for land use in cities as a complex multiparameter challenge [23,4]. As land use decisions critically impact environmental issues, it is essential to control land use in order to mitigate air, water, and land pollution and provide enough land for green and open spaces. Several models of urban land use have been developed, which are characterized by different levels of complexity and include agriculture, reserve areas, open spaces, and industrial space, among others. Land use, in this case, is assigned on the basis of the 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 [5]. Based on this assumption, land planners need to consider the general characteristics of land use and their systems for allocation.

Empirical evidence from Tanzania reveals that several challenges hinder the development of industries [12,13]. The challenges to the sustainable development of industries include the allocation of land, registration complications, and higher costs of acquiring land for industry development [14]. The high price and registration procedure of formal titling acts as the main barrier, preventing a broader expansion of the land, hence affecting private investment and public investment [24]. Literature shows that it is difficult for investors to invest in industries without assurance of land property rights transferred and registered to the investing company and or shared land rights with other investors or the public [25,10]. Weak property rights affect not only the level of private

investment but also the level of public investment [26]. Also, Property rights affect the efficiency of resource allocation, which enhances investment incentives by limiting investment risk and facilitating market transactions that reduce the need to divert private resources to protect property [16].

Tanzania's land management is entrusted to the Ministry of Land and Urban Settlement, which is vested with all land procedures [18]. The Ministry is responsible for planning, allocating, and registering all land resources, including the provision of title deeds to investors. The challenge of the procedure is that it is long and sometimes takes longer to acquire planned land for industrial investment [14]. The process of acquiring land for industrial investment is not very clear in the National Land Policy between the Local Government and the Central Government responsible organ. The Government decentralized the provision of title deeds to regional 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, labour, and capital [27]. This argument has referred to the developed countries, which include China, America, and Europe, where the system of land acquisition is reasonable.

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

### 3. METHODOLOGY

The study was conducted in the Mbeya region, where the demand for industrial development is high for the processing of natural resources and farm produce. The Mbeya region contributes 5.7 percent of the crop production and mining processing [28]. The Mbeya region consists of six districts where samples 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 six councils [28]. From each district council, the study picked

purposive randomly 20 respondents from the list of small and medium industries, which accounted for a sample of 120. Data were collected using a structured questionnaire, and they were self-administered. Where necessary, assistance was provided to facilitate the accuracy of data. The collected data were subjected to IBM-SPSS for analysis. The tools used were descriptive and Correlation analysis to see the relation of access to land, land use plans, development of by-laws, land allocation, and land registration variables with the success of retaining the potential investors in the industrial sector. The variables were picked from Tanzania's land management policy [18]. Correlation is a statistical method used to assess a possible linear association between two or more continuous variables [29]. The variables measured to test the relationship of variables to industrial development included land access, knowledge of land allocation, and land registration processes. The choice of the two tools was expected to give answers to the question of industrial development challenges in Tanzania and the way forward for industrial development leading to Vision 2025.

## 4. RESULTS AND DISCUSSION

### 4.1 Descriptive Statistics Results

The results show that the response rate was 75% for all targeted respondents. The response rate shows that the data collection is sufficient to make conclusions. Literature shows that a response rate above 60% is reliable for discussion and decision-making [30,31]. The scholarly authority shows that the response rate of this research is reliable for making a decision.

The study wanted to know the distribution of gender in small industry ownership. Table 1 above shows the composition of males in small industries was 54% male and 46% female. The results show that males still dominate the sector. The study also wanted to know the age categories of small industries in the study area. The findings in Table 2 show that the age group of 19-50 years scored 79%, and those aged greater than 66 years scored 6%. The findings show that the majority of small industries are owned by the workforce group, which can work sustainably in the sector for a long time compared to the life expectance rate of 67 years [32]. The finding is promising to the extent that the majority of the workforce in the small industrial sector in Tanzania is a good workforce. Table 2 justifies this workforce promise.

#### 4.2 Small Industry Ownership and Experience

The study went far in establishing 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 someone's business. The findings suggest that owner-managers dominate the sector; however, the employment rate is not negligible as is approaching the owner-managers. Regarding experience in the industrial sector, the finding shows that only 4% had experience above 26 years, and 37% had experience of less than or equal to 5 years (Table 3). The results inform that the majority of small industrial holders have no experience in business, which may lead to business failure due to non-experience in the sector environment.

#### 4.3 Access to Land for Industrial Development

The study is set to investigate whether the public is aware of and can access land for industrial development. The findings show that 37% disagreed that access to land is easily accessible for industrial development, 32% said they have an easy access procedure, and 31% had no opinion that access to land is not easily accessible. The findings suggest that 63% of the results show that the land is not accessible for prospective investors in the small industries development sector. Access to land for industrial development is a challenge for industrial development as per the findings. The results contradict the development vision of Tanzania to reach the middle-income country with industrial development. Also, the 2025 vision on industrial development suggests having a transformation of the industrial for export lead economy [33].

**Table 1. Gender-wise distribution of respondents**

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

**Table 2. Age categories of respondents**

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

Source: Research 2024

**Table 3. Experience in business**

Experience/year		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	≤ 5	33	36.7	36.7	36.7
	6-10	14	15.6	15.6	52.2
	11-15	17	18.9	18.9	71.1
	16-20	11	12.2	12.2	83.3
	21-25	10	11.1	11.1	94.4
	26 and above	5	5.5	5.5	100.0
	Total	90	100.0	100.0	

Source: Research 2024

#### **4.4 The Village or Councils have a 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 plans, 31% were not sure about 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 villages and councils. The results are in line with the documentation of the land policy strategy that the Government uses to allocate land for industrial development. That is, the Government is in the plan to develop plans for industrial development [18]. The findings also show that the majority do not know how to access land for industrial investment. The findings relate to a report on land reforms policy by Kweka [9]. known as Monitoring Tanzania policies on industrialization and the framework and guidelines on land policy in Africa, and the reports suggested the reforms to be well stipulated for industrial development [9,12,13]. Access to land for industrial investment is essential for sector development; however majority do not know the procedures for land acquisition. In the era of information technology, the database embedded in the internet is inevitable for easy access to available land for industrial development, as suggested by the policy brief developed by Kweka [9] and Aikael & Markussen [15].

The study further examines whether the land for industrial development is just for inquiry and one gets access. The findings show that only 25% had agreed that, just for investigations, the land is accessed for industrial development and investment, 38% said they are not aware of the land access procedures, and 33% said they do not agree that just for an inquiry the land for industrial development is accessed. The result denotes that the process of acquiring land for industrial development is not known to the public; hence, investment in industrial development is at a disadvantage. Newman et al., 2016 in a report on comparative studies of industrial development in Africa and emerging Asia, suggested that land acquisition needs to be readily available if African countries want to develop the industrial sector [34]. The report suggested that land acquisition should be straight and easily accessible to the public and investors.

#### **4.5 The by-Laws for Industrial Development at Local Government**

The study wanted to investigate whether local governments have by-laws for the protection of industrial land development. The findings of the study revealed that 75% had no knowledge of the by-laws of say-no by-laws developed by the local Government for industrial development. Only 25% agreed that local governments, including villages, have by-laws for industrial development. The by-laws are necessary for the assurance of investors on their funds and security. The by-laws help to control the allocation of land for sustainable industrial development. By-laws designed for land use mainly fall within six main categories, including agricultural, residential, recreational, commercial, industrial development, and transportation. The prepared by-laws try 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 the development of by-laws for proper management of land to save all sectors of the economy.

#### **4.6 Land Allocation for Industrial Development**

The study wanted to establish the preparedness of land for industrial development at the village and council levels. The villages have a mandate to allocate land for industrial development as well as the local governments [18,35]. The study sought to understand whether the allocated land on whether to have access to critical infrastructures like electricity, water, and roads, the suitability of land for industrial development, and whether the owner of the land can transfer to another investor. The findings show that 15% agreed that infrastructures are accessed in the allocated areas, 23% had no opinion or did not know, and 62% disagreed that infrastructures are readily available in the assigned region for industrial development. The findings suggest that some efforts need to be made to motivate investors to allocate land for industrial development in Tanzania. Lawry et al. [6] noted that the state and all authorities for land allocation have the role of planning the infrastructure for industrial development.

The study wanted to know if land allocated for industrial development is suitable for industrialization. The findings indicate that 14%

agreed to have land that is well allocated and ideal for industrial development, and 31% did not know whether land allocated is suitably allocated for industrial development. 52% of the respondents had the opinion that the allocated land is not suitable for industrial development. The results indicate that the allocated land is not ideal for industrial development. The results related to the land policy challenge on land allocation for industrial development to motivate investors [18]. Also, Astrid & Johnes [25] commended the importance of land allocation for suitable industrial development.

The study also wanted to know the legality of the owner can transfer the property to another investor. The findings show that 35% agreed that the land allocated for land could be transferred to another owner. 21% did not know, and 40% said the allocated land could not be transferred to another one; more details are in Table 4 below. The results indicate that the respondents were indifferent about whether the land could 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 evolving land ownership is to apply to the relevant authority [26]. 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.

#### 4.7 Industrial Land Registration

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

The study wanted to know the process of mapping industrial land for industrial development in Tanzania. The findings indicated that only 6% accepted the land mapping that was correctly done, 23% did not know, and 67% did not agree. The results showed that the majority are not comfortable with the mapping process of the land designed for industrial development. Land planning and mapping are designated to experts in land management [18]. The findings show the investors for industrial development are

not comfortable with the process of land mapping for industrial management. The national land use plan/strategy clearly states the need to centralize land management planning in zones [19,20]. Despite the respondents having no knowledge and others did not agree, the policy strategy is apparent 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 not to know 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 not know, and 34% agreed that the land is allocated by sector. The allocation of land sector-wise is essential for monitoring the sector development. The land allocation sector helps for the management of possible wastes of the same kind. The development of the industry is in line with the land planning strategy, which wants land planning depending on sectors [19,20].

The study further investigates whether the process of registration is known to investors. The findings indicate that 17% are knowledgeable, 28% are not aware at all, and 53% do not agree that the process is not simplified. The results indicate that the process of industrial land registration needs to be simplified and known to the investors [12,13]. The process is not attractive to investors, as this was noted by the land research policy review, which is to be improved [31]. The study aimed to assess the cooperation of staff designated to land management with industrial development investors. The results show that 19% said they had cooperation, 28% were not sure of the collaboration, and 52% had no opinion on the staff from the Government designated to land investors and staff cooperation. The study suggests the collaboration of government staff and industrial development investors.

The study aimed to determine whether the process of land registration is simplified for industrial development. The results are that 21% agreed, 18% were not sure that the registration is simplified, and 58% disagreed that the land registration process is streamlined. The findings show that the majority of investors are not comfortable with the process of registration. The policy has an obvious statement for the process of land registration. URT, National Land Policy, [18] states that, for the Right of Occupancy, the Government will ensure that the Certificate of title



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

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	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
	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		

Source: Research 2024

**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	0.382 <sup>a</sup>	0.146	0.103	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

**Table 6. Regression of land access knowledge for industrial development**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.900	4	4.225	3.412	0.013 <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

is 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 [18].

#### 4.8 Regression Analysis

The study aimed to calculate the autocorrelation between variables to see whether there is a 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 the Durbin-Watson statistic is 1.974, which is less than 2.0, which means there is autocorrelation among the variables for land development accessibility. The study also wanted to know how the variables for land access fit into 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 exercises 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 shows 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 the independent variable can explain. In other words, r-squared shows how well the data fit the regression model (the goodness of fit).

The statistics from the model indicate that there is a 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 the variables explain land access for development in Tanzania. The age, sex, and ownership are predictors of land access for industrial

development in Tanzania. The findings of the study related to the survey [14] paper on industrial development in Tanzania and the [12,13] paper on integrated industrial development strategy.

The study wanted to test whether the investors know about accessing land for industrial development. The study used the F-test to test for the variances of the variables at a 0.05 significance level. The findings, as shown in Table 6, show an F value of 3.412 and a significance level of 0.013. The study indicates that there is a 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 compare 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 influence the knowledge of land for industrial development. The study implies that ownership, sex, and age are not determinants for investors to know the ownership and allocation of land for industrial development in Tanzania. The industrial policy clearly states the procedures for acquiring land for industrial development, and one needs to know the process [36].

## 5. 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 to land for industrial investment, and land registration procedures for allocated industrial areas. The study concludes that, in Tanzania, despite 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 to land for industrial development, and the procedures for land registration for industrial development. The investors do not know 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 to land for industrial development. It is essential as the country moves to a middle-level economy, and the basis is transforming agriculture and natural resources to benefit the majority by the use of

industrialization. The transformation can be easy when the Land policy is well implemented to allow investors to know how to access and acquire land and the process of registration for industrial development.

The study recommends the land policy reformation and lets the investors have the right to access, acquire, and own land for industrial development. Also, the Government supports investors for quick access and registration of land for industrial development. Several transformation papers have been presented in real-time to use the suggestions for industrial development in Tanzania. However, researchers argue to use the paper's inputs for the generation of more studies to support the industrial development in Tanzania. The study is the basis for other studies on industrial land allocation for industry development and supports Land policy implementation.

## DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s), as a result of this, declares that generative AI technologies such as Large Language Models Open AI (2024) have been used during the editing of manuscripts. The model used for editing using Open AI version 3.5. The prompts used included editing the abstract and interpreting data. Also, another prompt was the refinement of the topic to link with the primary objective of the study. The AI was not used beyond the ethical issues related to copy and paste of other materials; however, the authors have acknowledged the use of the material.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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