

Influences of Colonial Policies to Evolving Process and Growth of Urban Structure in Dar es Salaam, Tanzania

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<https://doi.org/10.15017/20677>

出版情報：都市・建築学研究. 11, pp.1-11, 2007-01-15. 九州大学大学院人間環境学研究院都市・建築学部門

バージョン：

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Influences of Colonial Policies to Evolving Process and Growth of Urban Structure in Dar es Salaam, Tanzania

ダルエスサラーム市の都市構造と発展過程に対する植民地政策の影響に関する研究

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This study intends to present and demonstrate the city of Dar es Salaam as an example of cities in Developing countries which originated from multi-colonial settings for centuries. This study demonstrates various colonial policies and regulations which were set for the interest of colonial administration, hence clarifying how the policies influenced the evolving process of the city of Dar es Salaam and its growth. The study analyzes the sub-division of three zones in the city which were planned under segregation policies. As a result, we clarify how the planning mechanism resulted into the various shortcomings which led to the physical planning of the city. Finally, we point out that the study links the whole evolving process to the current urban structure and growth pattern.

Keywords: *Infrastructure, Land use, Colony, Developing countries, Segregation*
都市基盤, 土地利用, 植民地, 発展途上国, セグレーション

1. INTRODUCTION

1.1 Background

Chronologically, man has had several revolutions that have resulted in a major change in the way that he lives. The struggles to control the environment led in to the discovery of fire and agricultural revolution which also resulted into increase of awareness to create social interaction. Studies show that, early cities in Mesopotamia started as small villages of about 200~500 individuals of few acres of land. Lewis Mumford in his magisterial of idiosyncratic book 'The City in History' (1961), sees the beginnings of urban life in the formation of the earliest villages as long as 15,000 years ago. 'The modern city itself, for all its steel and glass, is still essentially an earth-bound Stone Age structure', he says, and points out that the granary, the bank, the arsenal, the library, the store, the canal, the drain, the sewer, citadels and sacred sites all pre-dated the city, and continued in numerous manifestations as the importance of the city grew.

In studying Urban Morphology Transformation of Historic Urban center in Spanish-American Colonia city, Lopez and Deguchi revealed that, the city center followed a particular pattern that give it an important recognition in

shaping urban structure (Lopez.M, Deguchi.A, 2006). This shows that, cities have particular pattern which make them what they are.

The study from Japanese cities have shown that, historically, cities have been evolving gradually in different stages into diverse patterns in different regions based on the standard measurement borrowed from China in 8th Century (Lopez et al). The study continues to show that, from 17th C onwards, Castle towns became the characteristic form of the Japanese cities until the period of modernization in 19th C. Furthermore, it shows that, from 19th C, Japanese cityplanning was oriented towards new economic conditions and transformation aiming to adjust the transportation network, and improvement of living environment.

The studies in Africa shows that, the development of many countries has been significantly impacted by previous colonization by Europeans. Traditionally, most countries worldwide have developed urban systems that somewhat resemble the model of central place theory (CPT). CPT states that urban systems develop under a well-ordered structure of agglomeration economies and transportation costs (Becker, 2005). The theory behind this process is based on the triangular model of interaction between large cities, small cities, and agricultural areas. The large cities mass-produce goods, which are then shipped to smaller cities for distribution

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to more rural agricultural areas. The agricultural areas then produce food that is shipped back to the urban areas, thus completing the triangle. However, the colonization of Africa did not permit a natural course of development, and CPT has little application on this continent.

During the pre-colonial period in Africa, however, urban areas did develop to some degree. Some urban areas arose for defensive reasons, while others grew as a result of minor trade networks (Becker et al, 2005). Barter did exist between some societies, and permanent settlements eventually developed along trade routes. The background of this study, vividly show the difference between evolution of colonized african cities and the other global cities.

1.2 About the Study

Consequently, apart from various studies in developing countries of South East Asia, African, and Latin America, this paper aims to illustrate the evolving process of the multi-colonial dominated Dar es Salaam city which grew from a small village level and now into a city. It focuses on the transformation process based on the colonial land use planning segregative policies whose influences have been inherited from one colonial system to another as well as to the post independent era. Informal settlements, un controlled expansion of the city, poor infrastructure systems in the city, poverty, lack of housing are rooted back to the colonial policies which have been inherited from one generation to the other. These factors have been enormously contributing to the social, economical and environmental impacts of the city as a whole as well as to the individuals.

2. OBJECTIVES

Urban growth refers to the process of growth and decline of economic agglomerations. The pattern of concentration of economic activity, and its evolution, has been found to be an important determinant, and in some cases the result, of urbanization, the structure of cities, the organization of economic activity, and national economic growth. However, this was not the case for many of colonial dominated cities which evolved from simple forms (village) to a more complex systems of town and city under the influence and interests of the colonial policies. Therefore, the main objectives of this study are:

1. To clarify the evolving process of Dar es Salaam city under the multi colonial influences for several centuries. This includes an illustration of colonial policies and architectural features which have influenced the evolving process.

2. To demonstrate the influence of colonial policies in the structure of Dar es Salaam and compare the three zones planned by the colonialists.
3. To illustrate the influence and the problems existing in Dar es Salaam due to the growth pattern of the city center as a result of the colonial policies.

3. RESEARCH METHODS

Due to the nature of this study which involves historical findings, development process, as well as the current and future of the city, the study encompass three main types of methodologies to gather the information.

- Library findings which have been contributed by data from Historical maps from the national archives, Ministry of Land and Human Settlements Development
- Statistical data from the National Bureau of Statistics, and previous researches.
- Physical observation through field survey based on sketching, photographing and mapping. This involved the three zones planned by colonial occupation for Europeans, Asians, and Africans
- Interview with city officials. This involved the historical background, existing problems, and the future of the city.

4. EVOLVING PROCESS OF DAR ES SALAAM

4.1 Definition of Terms

In this study, we define evolution of a city as a gradual process of growth from simple form (village) to a more complicated form (City). The process involves development of urban infrastructure, urban form, population, and other activities.

4.2 Chronological Growth

Chronologically, colonial policies in Tanzania were meant to exploit the country as well as to fulfill the interest of the colonialists. Policies were also changing according to the interest of a particular colonial master. However, some of the policies resulted in to creating positive impacts in urban areas of villages, and towns along the coast of East Africa in which Dar es Salaam was among the earlier towns.

4.3 Factors Behind the Evolution Process

Evolutions of towns were in relation to occupation era. For instance, the towns along the coast of East Africa which were firstly occupied by Portuguese, Arabs, Germans and British, developed much faster than the inland ones.

Dar es Salaam took advantage of this colonial occupation

as well as the geographical location.

i) Introduction of Custom Duty

Introduction of custom duty by the Arabs to all products from inland and slave trade was an economical achievement which was later dominated and administered by the Germans who developed various custom posts along the coast Dar es Salaam being one of them. This contributed to the prosperity of the coastal strip where Dar es Salaam is located (Fig 1).

ii) Geographical Location

The presence of natural harbor in Dar es Salaam was a good advantage to the Germans to develop it including other facilities such as port houses, light house, control tower, bonded warehouses which were developed to support the exploitation systems.

iii) Early Infrastructure of Dar es Salaam

All the railway lines from the mainland were developed towards the harbor to facilitate transportation of agricultural goods such as coffee, cotton, sisal, coconuts, forest products, and minerals. This led the early development in Dar es Salaam to accommodate locomotive drivers, crews, and other colonial officers.

Immediately, this was followed by the area concentrated with shops, hotels, churches, and leisure clubs but all based on racial and social segregation. Most of the Asians were the business owners in this area.

Germans were the first to set the basic infrastructure of Dar es Salaam which later became among the first administrative districts. Dar es Salaam and other districts were given administrative power to manage the infrastructure systems, colonial developments, and urbanization. This was another opportunity for Dar es Salaam to concentrate more in management of infrastructure such as traffic lighting, road construction, sewage collection, and land acquisition from the natives. All these developments were based on social and

racial segregation among whites, Asians, and Africans.

5. INFLUENCES TO URBAN FORMS

5.1 Architectural Influences

Architectural development in Tanzania has been influenced by many factors colonial administration being among and the most noticeable one. The influence varies depending on the era and the type of colonial occupation. We gathered information about typologies of architectural elements that can be seen in Tanzania. There can be four major kinds of influences from Portuguese, Arabs, Germans, and the British. These include: influence on building elements, colonial policies, Street patterns, and building types.

5.2 Building Elements

Most of the coastal strip architecture including Dar es Salaam was much influenced by Arabic/Islamic features such as windows, doors, spatial organization, roofs, texture, and color. Sharp pointed windows and doors are more commonly in the early towns of Tanzania such as Kilwa, Bagamoyo, and Dar es Salaam. Domed roofed mosques can be found in some places such as Kilwa (Table 1).

5.3 Spatial Organization

Likewise, the influence of Islamic culture can be revealed through the meanings and organization of spaces in traditional houses of the coastal strip which includes Dar es Salaam and Zanzibar. Features such as narrow streets and courtyards in Zanzibar carry a good message from the Arabs domination with Islamic features along the coastal of East Africa. The culture and dress were also based on the Islamic religion. These features were also adopted during the development of Kariakoo for natives. Table 1 shows some of the features.

5.4 Colonial Policies

Development of Dar es Salaam was mainly influenced by different policies which were given by different colonial administration at different times. Apart from the fact that, there were several colonial systems, the most influential policies in shaping Dar es Salaam was given by the Germans and later the British. All of these policies played physical, social, economical, and administrative role in shaping Dar es Salaam. It should be known that, most of these policies were based on exploitative interests of the colonial administration. Policies were set basing on social and racial segregation which later led in to the physical planning of the city.

Germans used various mechanisms to achieve their

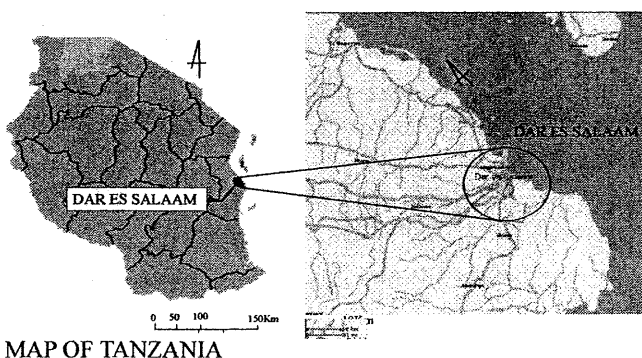


Fig. 1 Location Map of Dar es Salaam

intention of exploitation. Land use policies, land grabbing policies, compensation, short land lease, zoning, segregation, and infrastructure systems such as railway track were some of the methods applied by the colonialist in the pretext of development. Chronologically, most of the colonial policies have played role to shape the city of Dar es Salaam (Table 2).


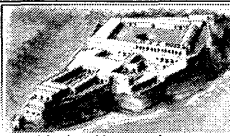
















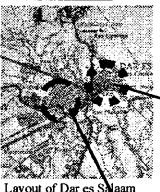

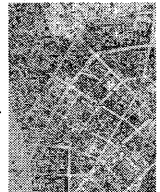



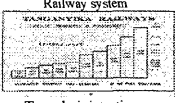
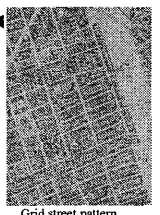
5.5 Street Patterns

Since there are no recorded information in terms of physical planning of Dar es Salaam before the coming of colonialists, various records show that, the first documented physical planning was introduced by the Germans in to the

towns of Bagamoyo, Dar es Salaam, Tanga, and Tabora. Table 4 (1, 2, 3, and 4). In order to understand this influence in urban planning, we documented information from various towns and cities which were planned by the Germans in order to understand whether there was a unique or specific approach related to their interests.

Chronologically we found that, although different towns were established at different periods, there was a similarity of the street patterns. Most of these cities are based on triangular street patterns which was one of the techniques during the war periods. Information obtained from four different towns shows that, there was a form of fortification (BOMA) to hide during attacks. This was located in a strategic point

Table1 Colonial Influence in Urban Forms

Colonialist	Period	Colonial influences		
		Language/ Culture	Building elements	Urban planning/design
Arabs	12c.	<ul style="list-style-type: none"> ● Dressing ● Religion ● Language ● Foods 	 <p>Domed Mosque in KILWA</p>	 <p>Islamic architecture-palace</p>  <p>Sharp pointed windows</p>
Portuguese	From 1400 to 1700	<ul style="list-style-type: none"> ● Religion ● Language 	 <p>Fortification of cities</p>	 <p>Fortification of cities</p>
Arabs	From 1700 to 1890	<ul style="list-style-type: none"> ● Dressing ● Religion ● Language ● Foods 	 <p>Islamic architecture-windows, roofs</p>  <p>Zanzibar door</p>  <p>Decorated verandahs</p>	 <p>Narrow streets</p>  <p>Arabic courtyards</p>  <p>Islamic features-verandah</p>  <p>Streets layouts</p>  <p>Irregular streets pattern</p>
Germans	From 1860 to 1919	<ul style="list-style-type: none"> ● Dressing ● Religion ● Language ● Education ● Administration 	 <p>Roman window s</p>  <p>Free style facade</p>  <p>Steep gable roof</p>  <p>Gothic architecture</p>  <p>Fortification in cities</p>	 <p>Layout of Dar es Salaam</p>  <p>Commercial centres</p>  <p>Triangular pattern</p>  <p>Transportation</p>
British	From 1919 to 1960	<ul style="list-style-type: none"> ● Dressing ● Religion ● Language ● Foods ● Education systems ● Administr 	 <p>Windows,doors,roofs and facade comprised of European architecture</p>	 <p>Railway system</p>  <p>Tax administration</p>  <p>Grid street pattern</p>

in the town. There was a relation between the fort and the town streets which were originating from the fort (Boma). These patterns are vividly in the towns which were designed by the Germans (Table 3). However, after the WWI the German colony was taken by the British. In terms of urban planning, British had different approaches. They introduced grid pattern which was implemented in Kariakoo for native housings. Other physical planning developed by the British,

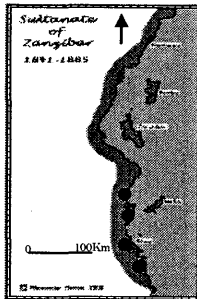

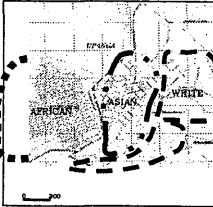
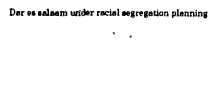
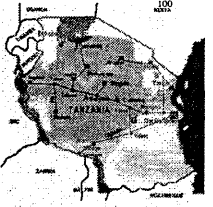
followed the grid pattern system. Table 3.

6. INFLUENCE OF SEGREGATION TO URBAN STRUCTURE

6.1 Segregation

Like the majority of other colonial cities around the world, Dar es Salaam had racial residential segregation implemented by the Germans during their construction of

Table 2 Chronological Influence of Colonial Policies to Urban Forms

Year	Policy/ System /Regulation	Impact to urban planning	Location
1885	Treaty by Germans to Arabs to use a Coastal strip to send goods duty free	Expansion of trade along the coast.	
1885-87	Germans established a number of stations for trading posts, plantations,	Urbanization of various towns along the coast,	
1888	Sultan of Zanzibar allowed Germans to collect custom duties at the coast, to mine minerals, regulate commerce and improve communication Germans intended to monopolize the whole trade in the coast strip. So they confiscated all the commercial activities along the coast. It was decided that, all merchandise exported from coast should be paid to the German authorities at Tanga, Pangani, Bagamoyo, Dar es Salaam Kilwa, and Mikindani.	This gave room for the first infrastructure systems in Dar es Salaam to be set. This led to economic prosper of the towns along the coast. Towns such as Bagamoyo, Dar, and Tanga grew to big towns which later became administrative and military centers.	
1891	Administrative under the German was established slowly. Four administrative district were established on the coast	Setting of administrative zones and towns along the coast.	
1890	German and Britain agreed to partition of east Africa and the sultan of Zanzibar was persuaded to give up his claims for compensation. Tanganyika (Tanzania) was taken by the Germans while Kenya and Uganda was taken by the British. This led to the fully establishment of German colonialism in Tanganyika	The Germans set their infrastructures in Dar es Salaam to establish a new headquarters.	
1900	Segregation policy was institutionalized as the only means to prevent malaria. It was believed that if Europeans would live close to native Africans, they could be infected by malaria. By this policy, land use planning was implemented in terms of racial and social segregation	Dar es Salaam was divided into three main areas for whites, Asians and Africans. Development was also based on this racial segregation	
1901	Established of communal unions for the districts of Dar es Salaam, Bagamoyo, Pangani, and others. Unions were given duties to including establishing schools, street lights, refusing collection, drainage, road construction, bridges, and distribution of seeds to natives and management of cooperative village farms. Banks were also established.	Extensive development of Dar es salaam traffic systems, street light, establishment of social services, urbanization etc.	
1903	Tanganyika had been divided in to 12 civil and 16 military districts	Dar es Salaam was created as among the early districts	
1906	The 1, 250km long Central Line (Mittelland Bahn) between Dar es Salaam and Lake Tanganyika surveyed in 1894 was started in 1906, reached Tabora in 1912 and Kigoma in February 1914. The Usambara railway linking Tanga to Moshi (Nord Bahn) was built to develop trade with the northern plantations and was completed in 1911	Establishment of railway systems in Tanganyika boosted the urbanization of Dar es Salaam. Many infrastructures to accommodate the railways was built in Dar	 <p>Dar es salaam under racial segregation planning</p>  <p>Railway systems during German and British Occupation</p>
1908 1909 1910	The imperial councilor order created municipal council in Tanganyika. Municipals were to be led by the councils headed by district commissioners. Councils had roles such as upkeep of roads, public space, water supply, street lighting, cleaning, garbage disposal and school governing. In this case, Dar es Salaam and Tanga had municipal status	Set of administrative structure for the infrastructure system. Districts were more urbanized during this period	
1909	Medical officers promulgated a policy that, all Europeans should be required to live in special reservations separated from the nearest African dwelling by 400 yards a distance considered wide enough as not to be transverse by mosquito or rats (Kironde,1995)	This led into a segregative policy on housing typology and budget allocation for whites, Asians and Africans.	
1914	Tanganyika was divided into 24 districts, 2 were military		
1919	After the end of the First World War, Britain received a League of Nations mandate to administer Tanganyika where they replaced Germans' headquarters in Dar es Salaam. The British developed various projects which were already established by the former colony. Sir Horace Byatt the first British governor in Tanganyika prepared a land ordinance which clearly favored African ownership and development; and he hoped to establish a separate education system which would ignore the missionary system and	Infrastructure systems, housing, land policy for natives, better life, indirect rule system was implemented. More land in the outskirts of Dar es Salaam was allocated to natives. Educational schools were built in the country. This led to further urbanization.	
1923	On 26 th January, The first Land ordinance (cap 113) was released. This document defined the meaning of natives, and non natives. It protects the rights for natives to possess land	More land was allocated to natives. Land grabbing from natives was slowed Down. Development of native houses	

Dar es Salaam. The Asian and Arab population moved near government officials housing outside the downtown of Dar es Salaam. Just outside the Africans population resided with their Swahili style housing. Suburbs on the outskirts of the city that were once racially segregated haven been broken down due to the fast urban growth.

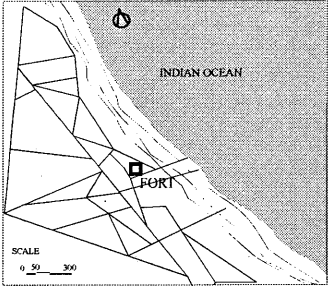
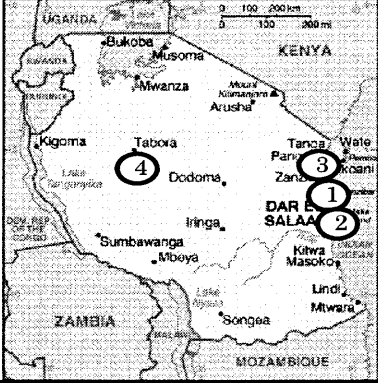
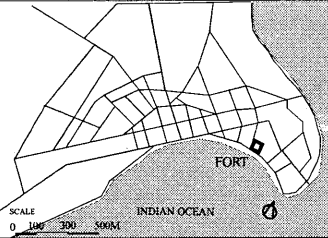
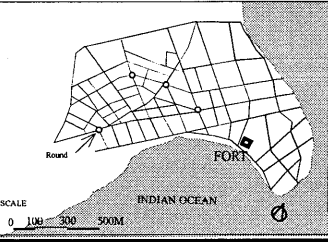
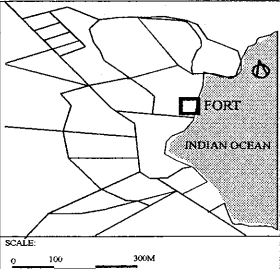
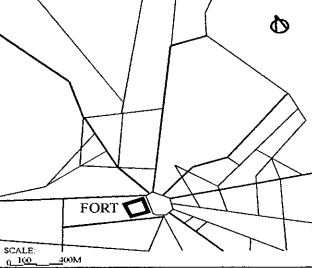
This racial segregation is also noticeable through the areas of commercial shopping. Africans, Asian, Arabs and whites shop in different areas due to the differences in income. Africans shop at the Kariakoo market as instead of the main commercial center by Askari circle on Independence Avenue.

Askari circle connects the CBD to the commercial area in Dar es Salaam (Fig. 2).

6.2 Urban Land Use Structure

The structure of Dar es Salaam is described as pie shaped sectors rather than the typical concentric belts. The city evolves around the city center core. This core is the harbor of Dar es Salaam. Surrounding the harbor are the Central Business District (CBD), industrial areas, residential areas, transportation belts, parks, schools and sport grounds. Industry is to the south, second and third class housing is to the west, first class residential is to the north, and a

Table 3 Street Patterns

Colonialist Year //Place	Location	Architectural Influence	
		Characteristics	Street Patterns
Germans 1860-1891	① Bagamoyo 1860-1891 This was the first headquarters for the Germans in East Africa.	Most of the streets have triangular patterns which are linked to the escape way through the ocean. Most of these streets in early towns occupied by the Germans, there was a militaristic approach to trick enemies and to escape easily	
Dar es Salaam 1891-1919	② Dar es salaam 1891-1919. This was the second headquarters for the Germans in East Africa. Preliminary streets patterns 	Early layout for Dar es Salaam was also set in triangular pattern to achieve the militaristic strategies The later development of the street patterns consists of three different features: ● Triangular pattern ● Grid pattern ● Round about All of the above features can be found In Dar Es Salaam to date Dar es salaam 1891-1919. This was the final street patterns which were later developed by the British. British introduces round about systems	 
Tanga 1900-1919	③ Tanga 1900-1919. This figure shows a sketch which was produced for Tanga town. Tanga was a military center and headquarters for the Germans. The town was designed to achieve military strategies and techniques to escape during the war	Tanga was one of the towns which were established as administrative districts in the coastal area of Tanganyika. It was also used as a military headquarters for the Germans, while the Navy was centered in Dar es Salaam. The original street layout follows the triangular pattern	
Tabora 1905-1919	④ Tabora 1905-1919. This sketch shows the street pattern which was produced by the Germans for Tabora town. Tabora was a stronghold as well as a commercial center for Arabs during the slave trade. Germans faced a strong resistance to occupy the town. Hence they built a military fort. The entire streets patterns converged at the fort of protection	Tabora town was the main trade center for Arabs before the German Occupation. There was a strong resistance for the Germans to acquire the towns. For security reasons, the fortification mechanisms (boma) were constructed. All the streets were laid diverging to the fort. However, the streets follow the triangular pattern	

governmental sector is to the east. Each of these zones form a piece of the pie that is next to the harbor core (Fig. 2) .

6.3 Structure of the City

The transfer of the capital in 1891 from Bagamoyo led to the construction of hospitals, European style government buildings, a post office, the Railway system, a Lutheran Church and private European style homes that now occupy Samora Avenue. The Government buildings fulfill the definition of European planning due to their use of the space around the buildings.

The architecture throughout the city is in decent shape. The Germans also laid out a street plan that gave a structured street pattern to the downtown area and Kariakoo market. This layout has controlled Urban growth downtown ever since. Structure was given to the market in an attempt to reduce the chaos and sprawl of the area. The market was lined with Swahili style housing and apartment blocks. However, most of them have been transforming gradually in commercial area.

6.4 Social Distribution

The market still acts as the CBD for the third class. Due to racial segregation, previously by force and now by income, Africans shop and trade there as opposed to going into the main CBD in the core of Dar es Salaam. Oyster Bay for those who are employed in the suburb. The Asian and Arab population moved near government officials housing outside the downtown of Dar es Salaam. Just outside the Africans population resided with their Swahili style housing. Suburbs on the outskirts of the city that were once racially segregated are beginning to be broken down due to the fast urban growth. This racial segregation is also noticeable through

the area. The streets, however, are not of the traditional European style. They converge at various angles and meet in traffic circles. Similarly, they are extremely narrow and not all the same length. This created problems when cars were introduced into Dar es Salaam. The German and British planted trees along the streets, like in most European cities, for the purpose of shade in this humid and sunny climate. Yet not all of the streets are well maintained, especially when you leave the European sector of Dar es Salaam. Numerous still remain unpaved out in the suburbs and third class neighborhoods.

6.5 Early Zoning

During the European Occupation in Tanzania, Dar es Salaam was divided into three zones for development.

Zone I means the place where first priority on every service was given. Zone II also was given second priority with second racial group. Zone III was the last to be considered for development plans. We selected three blocks from Zones I, II, and III. These were assigned numbers 1, 2, and 3 consecutively for demonstration. Since these zones have been developed by the colonial influences, with different characters, we analyzed them to demonstrate how the colonial planning policies were based on segregation and how they influenced the future development of the three zones (Fig. 2).

The three blocks which we selected have different spatial qualities in terms of location, size, development plans, and they belong to the three different racial groups.

7. COMPARISON OF INFRASTRUCTURE SYSTEMS

7.1 Racial Basis

Colonial land use rights and planning were allocated basing on social and racial segregation. However even among the whites there was allocation of land favouring one's social class such as senior officers, crews, and low rank officers.

Africans and Asians were not given priority for land ownership and uses.

Colonial government started allocating land to these two social groups when there was extremely needs. Nevertheless, allocation of land was also based on the social segregation for Asian and African staffs. In this study, we demonstrate the factors influencing land allocation to the three racial groups such as location, density, quality, and specifications.

7.2 Location and Infrastructure Systems

Most of the land allocated to the Europeans was located along or near the beach, near the ocean or the most fruitful

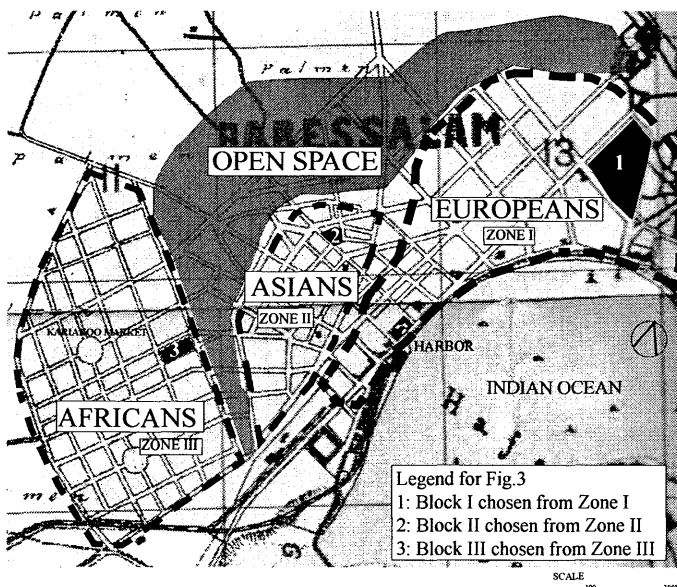


Fig.2 Segregative Planning of Dar es Salaam in 1913

natural land. All the strip along the ocean was reserved for the colonial interest and development. Infrastructures such as roads, water, electricity and other urban amenity were located into these zones. Budget allocation by the colonial government was in favor of the Europeans zone in terms of housing development, improvement of street lights, drainage systems, garbage collection and the general amenity.

Asian were allocated near to the Europeans but separated by natural elements or by planning mechanism such as open space, or garden. Most of the Asians origins including few Arabs were business oriented people. So they occupied the central area lying between the Europeans and the Africans.

Allocation of budget for infrastructure systems was in the second level especially when there was excessive budget from the colonial government.

Africans were allocated far away from the whites, separated by open spaces or gardens. The quality of housing, infrastructure, services were the poorest or not provided at all. According the correspondences we obtained between the colonial officers towards development of Africans zone, it showed that, there was no budget allocation for Africans.

The use of grid iron street pattern in Africans area could be a psychological way to demonstrate a strict colonial administration with strictness and rules. According to the policies, we observed that, the colonial government set a rule to prohibit Africans from visiting and staying in towns for more than six days.

7.3 Densities and Floor Area Ratio

Development of Dar es Salaam was sub grouped into three main zones named Zone I, Zone II, and Zone III for Europeans, Asians, and Africans respectively.

Land use densities and Floor Area Ratio (FAR) for the three zones was also based on racial and social groups.

We obtained three different areas from representing the three zones, We determined the densities from each of the area. We present the plot areas in relation to the building areas as shown in fig 3.

From the above findings, we observed that, the three zones were given different spatial qualities of individual depending on the racial group. Also basing on the field survey in these three zones, we observed that, only in European zones, these were allocation for servant quarters, store, room for cooks who were mainly Africans working for the Europeans.

8. EXISTING SITUATION

8.1 Street Qualities

During the field survey in Dar es Salaam, we took various

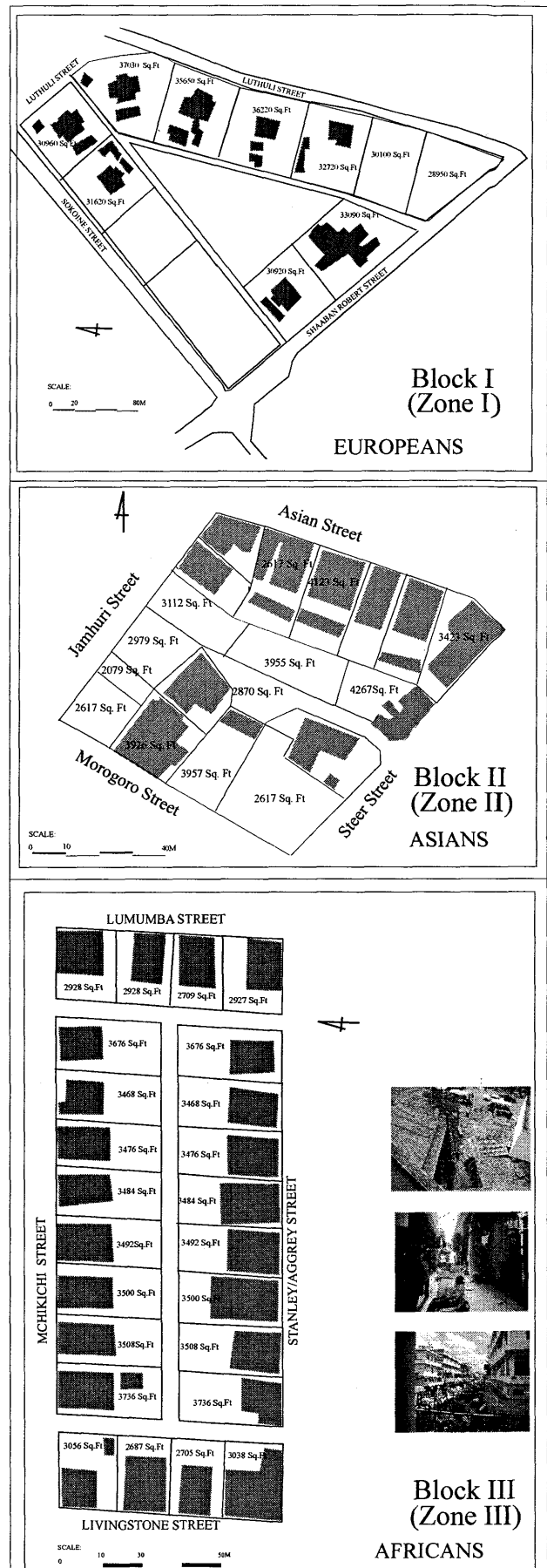


Fig.3 Comparison of Sub-division Plan among the Blocks

photos showing the current situation in order to clarify the influence of colonial policies in the overall current urban structure, quality of space, and amenity. We walked along Shaaban Robert Street and Sokoine Drive for the case of zone I. We observed a high quality of well maintained streets, with cleaning, drainage systems, and garbage collection except of few places which were not well maintained. Also in terms of current development, the area is always overseed by the city council for the kinds of buildings to be built (Fig 4:Block I).

For the case of zone II which is also close to zone I, and which is the Central Business District, there was good condition though not compared to zone I. Drainage system was poor, streets were dirty, and due to the widths of the streets, most of the streets were congested. There was no provision of car parking, only cars park along the road hence causing more congestion and difficulty for pedestrians to walk free. Conservation of historical architecture of these old street are not given priorities due to the un controlled development

of new commercial structures. Greenery and open spaces are quite few (Fig 4:Block II). Kariakoo area which belonged to zone III during colonial occupation in Tanzania, has been growing with a lot of low quality spaces, streets, buildings, infrastructure as well as the environmental quality.

During the field survey, we took various photos along different street to demonstrate the current situation. The area has the most poor infrastructure as compared to zones I&II.

Most of the roads and streets are not paved or paved with low quality materials.

There is no pedestrian walkways, hence forcing the pedestrians to share the same route with motorized vehicles. This has led to a number of fatal accidents.

There is no street drainage which can manage to drain water during heavy rains. Hence the area has temporary floods during rainy seasons.

Sewage system and solid waste management is not








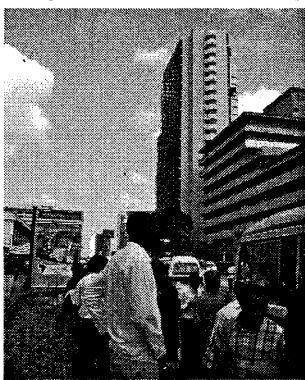


ZONE I (EUROPEANS)	ZONE II (ASIANS)	ZONE III (AFRICANS)
GOVERNMENT INSTITUTIONS SENIOR OFFICERS	ASIANS , CBD	ASIANS, AFRICANS, CBD
 <p>Street Quality, Parking, Tarmac</p>	 <p>Old street, No Roadside Drainage</p>	 <p>Business Street Quality-No Drainage Garbage Collection, Congestion</p>
 <p>Development of New Structures, Provision of Parking, Tarmac, Greenery</p>	 <p>Congestion, Roadside Parking</p>	 <p>Street Quality-No Paved Streets</p>
 <p>Garbage Collection on Street</p>	 <p>Congestion Pedestrian Way</p>	 <p>Street Quality-No Pedestrian Ways</p>  <p>Street Quality-Filthy, No Drainage</p>

Fig.4 Current Street Views and Characteristic Points in the three Zones

properly administered in this area hence causing filthy environment (Fig 4:Block III).

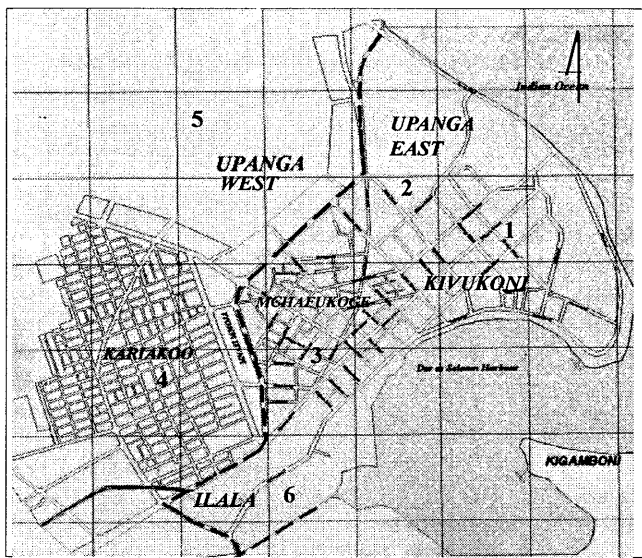
8.2 From Colonial to Current Urban Structure

Although official colonial occupation ended in 1961 after the acquire of independence from the British, the growth of Dar es Salaam has been so much influenced by the colonial policies and occupation.

Most of the Indian and Arabs (Asians) who were next to Europeans, occupied the rich land near zone I. Even though the government introduced different policies to allocate land to Africans, to develop other areas in the city for the new government, there has always being a growth following the same colonial zones.

There has been an equal propotion of growth and service provision in the city of Dar es Salaam.

We obtained a map of Dar es Salaam city center to demonstrate the growth patterns and zones (Fig.5). From these zones, it can be observed that, land use allowance such as density varies according to the zone. This has led most of the low income people to live far away from the city center or there has been growing of informal settlements in the city sub urbs. As it can be seen from the distribution of the urban structure, there is a strong relation between the original planning policies of racial and social segregation to



LEGEND	
1. THIS AREA WAS PLANNED BY THE GERMANS AND LATER OCCUPIED BY THE BRITISH. AFTER INDEPENDENCE, IT BECAME THE GOVERNMENT INSTITUTIONS AND THE STATE HOUSE. CURRENTLY, THERE ARE MOST OF GOVERNMENT OFFICES	4. KARIAKOO WAS FIRSTLY PLANNED BY THE GERMANS BUT IMPLEMENTED BY THE BRITISH. IT WAS A SETTLEMENT FOR NATIVE AFRICANS. IT WAS THE MOST UNDEVELOPED IN THE CITY. CURRENTLY, IT IS THE SECOND CBD OF DAR ES SALAAM
2. THIS AREA WAS PLANNED BY THE GERMANS AND LATER DEVELOPED BY THE BRITISH. IT IS CURRENTLY OCCUPIED BY FEW HIGH INCOME PEOPLE ESPECIALLY ASIANS GOVERNMENT OFFICIALS. IT IS A SUPER LOW DENSITY WITH GOLF COURSE AND HOTELS	6. THIS AREA WAS PLANNED BY THE BRITISH AS AN EXTENSION OF THE GERMAN PLANNING SCHEME TO ACCOMMODATE COLONIAL OFFICERS. IT WAS LOW DENSITY DOUBLE STOREY HOUSES. IT IS CURRENTLY OCCUPIED BY FEW HIGH INCOME PEOPLE ESPECIALLY ASIANS AND AFRICANS
3. THIS AREA WAS PLANNED BY THE GERMANS AND LATER OCCUPIED BY THE BRITISH. IT WAS OCCUPIED BY ASIANS DURING COLONIAL ERA. IT WAS DEVELOPED AS COMMERCIAL AREA FROM THE BEGINNING, CHARACTERIZED BY TRIANGULAR STREETS. IT IS NOW THE CENTRAL BUSINESS DISTRICT (CBD)	5. THIS AREA WAS PLANNED BY THE GERMANS AND LATER DEVELOPED BY THE BRITISH TO ACCOMMODATE AFRICANS. IT IS HIGH DENSITY WITH SINGLE STOREY BUILDINGS. IT IS CURRENTLY OCCUPIED BY MEDIUM INCOME PEOPLE AND DEVELOPED AS COMMERCIAL CUM RESIDENTIAL.

Fig. 5 From Colonial to Current Urban Structure of Dar es Salaam

the current settlement layout where income and social group influences the urban layout (Fig.5).

8.3 Observation from Colonial Population Trend

The data we obtained from the Bureau of Statistics, and also from the Study by (Kironde, 1995) and (Lupala, 2002) shows that, during colonial occupation, people were counted basing on their racial groups. For colonial administration, this was an element they used to allocate budget and development of the three zones depending on the population of each racial group. However, this method of demographic counting was abolished after the independence in 1961 (Table 4).

8.4 Observation from the Current Urban Growth Trend

Observation from the growth of population from colonial era to the current situation (1887-1992) in relation to the growth of urban structure shows an influence from colonial set up. The original urban form which was ideally based on racial grouping has been maintained throughout to the current trend. Roads and other infrastructure set for the interests of colonial administration has been the leading

Table 4 Population Trend

Year	Population (race)				Total
	Africans	Asian	European	Others	
1887*		350			2000
1894*	9,000	620	400	NOTE: These data were not available	10,020
1900*	18,000	1,480	360	due to the methods of population counting	19,840
1913*	19,000	2,500	1,000		23,500
1921*	20,000	4,000	600		24,600
1931*	24,000	9,000	1,330		34,330
1948*	50,765	16,726	1,726		69,317
1957*	93,363	29,986	4,479	914	128,742
1967*	NOTE: These data were not provided due to the fact that, after independence (1961) population was not counted on the racial basis				272,821
1978*					843,090
1988**					1,360,865
1992**					2,487,288

Source: * Kironde, Evolution of the Land Use Structure of Dar es Salaam 1890-1990
**National Bureau of Statistics 1988, 1992

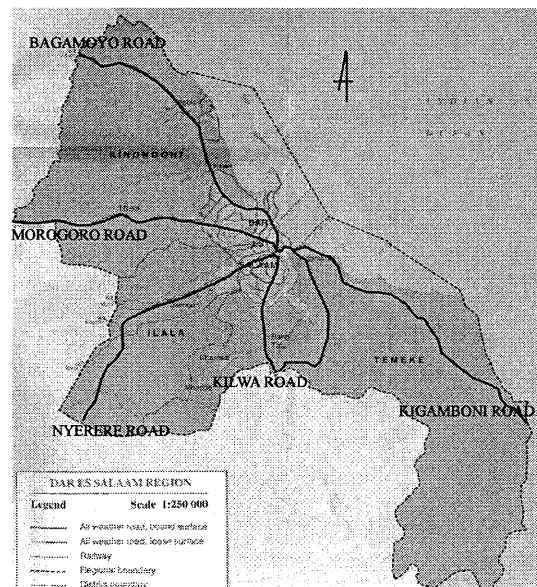


Fig. 6 Influence of Roads to the Growth Structure

growth direction. The map in figure 6 shows the major roads most of them set by the colonial administration. From the Map on figure 6 above, the growth trend of Dar es Salaam is being spearheaded by the six major roads. This character is contributed by also the original set up of urban structure, land use planning, social income grouping, and lack of services. It has caused formation of unplanned settlements within the city sub urban (Fig. 7).

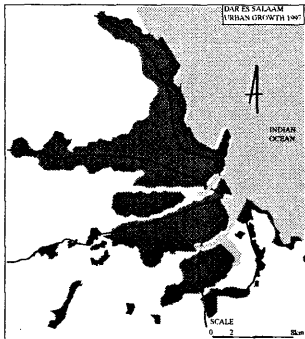


Fig.7 Overall Growth Trend

9. CONCLUSION

In this study, we presented the historical background and the evolving process of the city of Dar es Salaam as an example of other cities which have gone through multi-colonial domination for centuries in the coast of East Africa. Chronologically, the study demonstrated various colonial policies which were inherited from one form of colonial system to another hence influencing the evolving process of the city from the village level to the current city state. As a result of multi-colonial domination, the study has shown various cultural, features such as dressing and language which were influenced by the colonial systems.

Architecturally, the study has observed several influences in building elements which were inherited from each of the colonial domination hence admiring the city of Dar es Salaam for its rich architectural values.

From the colonial policies, the study has clearly demonstrated several impacts caused by the policies leading into the existing physical planning. We used an example of segregation planning policy which is the most sensitive and uniquely noticeable in terms of social and physical planning to demonstrate the negative impacts on partial growth and qualities in the city of Dar es Salaam. In this example, we compared the three colonial planned zones in terms of infrastructure systems, quality of streets, cleanliness, and current development strategies. In the study we observed that, there was a clear disparity in both physical and social planning which has also been inherited after the independence.

Furthermore, the study links the social impacts from colonial systems which was inherited by Africans after the independence as a factor behind partial planning system and other city growth problems leading to the existing informal settlements in the city suburbs as well as horizontal growth pattern causing sprawl.

Observing population growth rate from the colonial era to the current situation, the study highlighted a sharp increase from 1978 which does not correspond to the improvement of social and infrastructural services. In order to avoid this problem, the study proposes to review land use plan of the city center especially the area planned as zone I so that, the city can be compacted through changing the densities to allow more building structures which can provide housing services within or near to the city center. This will not only lead in to solving housing problems but also to minimize energy and pollution caused by long distance commuting in Dar es Salaam.

Lastly, the study proposes to orient more research in the on going growth pattern of Dar es Salaam in order to create a long term social, economical and environmental solution to the city and other cities in developing countries. This is due to the fact that, country's urban system has a strong affect on national and regional economies, hence, the governments of developing countries are greatly concerned with the factors influencing the development of urban primacy.

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(受理：平成 18 年 12 月 7 日)