INTRODUCTION

The concept of affordable housing is broadly defined by UN-HABITAT (2011) as that which is adequate in quality and its location does not cost so much that it hinder its occupants meeting other basic living costs or threatens their enjoyment of basic human rights. UNCHS (1998) elaborate further that completeness of housing adequacy should be in terms of satisfactory privacy; space; physical accessibility; security; security of tenure; structural stability and durability; lighting; heating and ventilation; basic infrastructure, such as water-supply, sanitation and waste-management facilities; suitable environmental quality and health-related factors; and accessible location with regard to work and basic facilities - all of which should be available at an affordable cost. Access to adequate and affordable housing is dependent upon sufficient supply of land, basic infrastructure, construction materials, labour and finance. URT (2007) defines affordable housing as housing which its associated financial costs are at a level that does not threaten other basic needs and represents a reasonable proportion of an individual’s overall income. Housing affordability is not just about the price of housing but it is about the degree of obtainability and accessibility of the cost of housing finance. UN-HABITAT (2011) indicates that it is only 15% of the population in African cities and towns can afford formal housing with its associated financing costs. Generally, Mark et al. (2006) view affordability of an item as an amount of financial stress that the purchaser would encounter. This stress is in two folds, first how much of the income goes to various purchases and secondly how much income is left unspent at that particular time. Zainal (2010) observed that housing price, like any other goods and services in the market economy are determined by the interactions of demand and supply. Peoples’ demand for owner-occupied-housing is
primarily determined by price of housing, population growth and household formation rate and income growth. There is an inverse relationship between the quantity demand for housing and the cost of housing. A higher price leads to fewer saving. Other factors influencing demand for housing are population, income, price of building materials, social trends, interest rates, mortgages and the availability of financial credits.

In the year 2011, the Adequate Housing Series underscored that four world regions, namely Africa, Asia, Europe/North America and Latin America/the Caribbean were having varying housing characteristics and difficulties but common to all is that the access to adequate and affordable housing is a serious challenge (UN-HABITAT 2011). Moreover, housing affordability records are not readily available in African countries because Government institutions and Non Governmental Organizations (NGOs) do not bother to research and document relationship between house purchase and rent prices, household income and housing-related expenditure. Available statistical data shows that for the year 2001 the African urban context had the highest house price-to-income ratio compared with other continents. UNCHS (2001) estimated that in the period-2011 over 60 million new house units were needed to accommodate the rapidly growing number of new urban households in Africa. While African continent is predominantly rural, its urbanization rate is very high. The current population of Africa is 1,241,447,355 as of May 2017 which is 16.36% of the total world population. It has been established that African cities have to accommodate extra 40,000 people daily from rural areas for the next fifteen years, and by 2025 nearly half of Africa’s population (47.2%) will be living in cities (UN-HABITAT 2010). Giddings, (2007) further reported that while in 1983 just 21% of sub-Saharan Africa’s population of 400 million was urban dwellers, the situation changed to 36% in 2003 with 700 million people in cities and towns. From 1990 - 2003 urban growth rates increased by 4.6% per annum, almost twice as much as overall population growth rates.

Tanzania for example, has the largest population and lowest population density (51 persons per square kilometer) in East Africa with an average household size of 4.8 of which more than 70 % of the country population resides in rural areas in houses built with locally available materials such as mud and poles or sun dried earth blocks for walls with grass thatch roofs as shown in figure 1. The urban population is growing at a rate of 6% per annum which is about twice the Tanzania national rate of population growth. The population of Tanzania has grown from 12,313,469 persons in the 1967, 44,928,923 in 2012 and it reached 53.47 million people in 2015 (URT 2013; URT 2016; Kiondo et. al. 2017; CIA 2017). Tanzania is considered to be one of world’s poorest countries in terms of per capital income. The GDP per capita income in Tanzania was as low as 457.53USD in 1994 and reached its highest level of 842.37 USD in 2015 which was equivalent to 1,815,812.77 TZS local currency. URT (2014), estimate that 28.2% of total population in Tanzania was poor in 2012 in respect to their basic needs. Tanzania defines poverty line using two dimensions. Firstly food poverty line which represents the cost of obtaining sufficient food to meet calorific needs and secondly the basic needs poverty line which include non-food essentials.

METHODS

The study was carried through library search in Dar-es-Salaam to understand countries and individual levels of economies in order to explore housing affordability capacities. Field surveys were conducted in Dar-es-Salaam urban formal housing in Kigamboni and informal housing in Manzese contexts. Field surveys were extended to rural areas, namely Missungwi village in Mwanza region located in the Northwest of Tanzania to underscore rural and urban housing affordabilities; and to learn different types of local building materials used to construct residential houses. Dar-es-Salaam urban and Missungwi rural contexts were selected because they are considered to be rich with information of urban and rural housing studies. Multiple data collection tools that were employed were literature review, observations, and photographic registration. Collected data and information were studied and presented in the form of text, tables, histograms and photographic impressions.

RESULTS AND DISCUSSIONS

It has been a huge problem to access affordable housing to many citizen of the planet we live. In 2004 United Nations reported that three billion people or 48% of humankind were urban dwellers (UN 2004). High rate of urbanization and poverty have caused over one billion poor people to live in urban areas without access to basic services or adequate shelter and hence inadequate housing to majority. To-date, urban human settlements in Africa are largely unplanned. The slums that exist in African cities are a result of poor housing policies and strategies of almost all African countries in providing affordable housing alternatives especially to low and middle-income households. Slums in Sub-Sahara African are the most challenging slums in the world compared to those of Latin America and Asia (UN-Habitat 2003). Sadly, one in three Africans have no any kind of toilet facility, and half the population rely on basic latrines which provides minimal sanitary protection (Kihato 2012). Table 1 shows that in 2012 households without any kind of toilet facilities were 11.7% in Tanzania and were compelled to camouflage themselves in bushes as an alternative. This table also shows that 88.3% of households were using various types of toilet facilities such as

---

1 Exchange rate 1 US$ = 2,155.6TZS on 31st December 2015.
open pit without covering slab, pit latrine with slab, ventilated improved pit-latrine; pour flush toilet, flush toilet with cisten and composting toilet latrine. Only 1.2% of Tanzania households had flush toilets with cisten for family members to use (URT 2014)! Figure 1 and table 1 are provided to show the extent of inadequacy of housing in Tanzania as the result of high poverty level of the people.

Table 1 Percentage of Households Using Type of Toilet Facility in Tanzania – 2012

| Type of Toilet Facility              | Dar-es-Salaam  | Other Urban Areas | Rural Areas | Tanzania Mainland |
|-------------------------------------|----------------|-------------------|-------------|-------------------|
| Open pit without slab               | 16.5           | 23.6              | 27.1        | 25.0              |
| Pit latrine with slab (not washable) | 13.3           | 22.2              | 44.2        | 35.9              |
| Pit latrine with slab (washable)    | 28.9           | 17.0              | 6.3         | 11.3              |
| Ventilated Improved Pit-latrine     | 14.5           | 13.6              | 2.8         | 6.4               |
| Pour flush toilet                   | 21.8           | 16.9              | 1.5         | 7.2               |
| Flush toilet with cisten            | 3.8            | 2.1               | 0.3         | 1.2               |
| Composting toilet/ecosan latrine   | 0.3            | 0.7               | 0.1         | 0.3               |
| Others                              | 0.9            | 1.9               | 0.7         | 1.0               |
| Total with toilets                  | 99.6           | 98.4              | 83.0        | 88.3              |
| Without any kind of toilet          | 0.4            | 1.6               | 17.0        | 11.7              |
| Grand Total                         | 100.0          | 100.0             | 100.0       | 100.0             |

Source: URT 2014

Giddings (2007) contends that in Africa less than 10% of the population lives in formal housing in cities and towns. For instance, in Zambia 74% of urban dwellers live in informal housing, Nigeria 80%, Sudan 85.7%, Tanzania 70%, Madagascar 92.9%, and in Ethiopia as high as 99.4% (Giddings 2007; Kiondo et al. 2017). Access to affordable land housing is a critical challenge for the majority of urban residents to obtain and retain adequate and affordable land for housing. Housing affordability remains a challenge and it is worsening due to economic reasons and effects of the global financial crisis (UN-HABITAT 2011).

Affordable Housing in Tanzania

The term “Affordable Housing” in Tanzanian context refers to adequate housing which can adequately shelter all people below and above the poverty line. Majority of the rural population lives in type houses as the ones shown in figure 1. Rural population is not adequately housed because they miss basic social infrastructural services such as house durability, electricity, water supply, sanitation, security of the land tenure and so forth. In the year 2012, main building materials that were used in housing construction in rural areas were mostly non-industrial. That is, for walls: non-industrial materials such as poles, branches, grass, mud & poles, stones, mud, mud bricks, (51.8%); industrial materials were burnt bricks, concrete and cement sand blocks (48.2%); for floors: non-industrial materials were earth and others (60.6%), industrial building materials were cement and tiles 39.4%; for roofs: non-industrial materials (32.3%) and industrial materials were concrete, cement, galvanized metal sheets/iron sheets, asbestos sheets and tiles (70.3%) as shown in table 2.

Only 35% of houses in urban Tanzania are in compliance with existing building regulations in terms of spatial planning and building material specifications. URT (2000) admit most housing units in urban areas are constructed without reference to urban development controls and regulations as shown in figure 2 where housing developer can buy-off the urban poor and build a multi-storey housing apartment side by side to the dilapidated urban housing units. Plot coverage and building heights are hardly controlled. Housing survey conducted in 1995 in Tanzania showed 70% of urban population was housed in the unplanned human settlements and more than 60% of the urban housing units were found in these settlements.

Table 2 Household Percentages showing Usage of Modern and Non-modern Building Materials in Tanzania

| Construction Material | Dar-es-Salaam | Other Urban Area | Rural Area | Tanzania Mainland |
|-----------------------|--------------|-----------------|------------|-------------------|
|                       | 2001 | 2007 | 2012 | 2001 | 2007 | 2012 | 2001 | 2007 | 2012 | 2001 | 2007 | 2012 |
| **Floors**            |      |      |      |      |      |      |      |      |      |      |      |      |
| Non-Modern            | 7.6  | 9.7  | 3.5  | 38.8 | 38  | 31.6 | 87.5 | 84.4 | 80.1 | 74.8 | 68.2 | 60.6 |
| Modern                | 92.4 | 90.4 | 96.5 | 61.1 | 61.9| 68.4 | 12.5 | 15.6 | 20  | 25.2 | 31.8 | 39.4 |
| **Walls**             |      |      |      |      |      |      |      |      |      |      |      |      |
| Non-modern            | 11.5 | 9.9  | 2.9  | 61.7 | 49.4| 32.1 | 83.3 | 78.2 | 66.9 | 75.3 | 66.0 | 51.8 |
| Modern                | 88.5 | 89.9 | 97.1 | 38.3 | 50.6| 67.8 | 16.7 | 21.9 | 33 | 24.7 | 34.1 | 48.2 |
| **Roofs**             |      |      |      |      |      |      |      |      |      |      |      |      |
| Non-modern            | 1.8  | 2.8  | 0.8  | 16.3 | 15.4| 9.5  | 68.7 | 58  | 45.2 | 56.4 | 44.4 | 32.3 |
| Modern                | 98.2 | 97.1 | 99.2 | 83.7 | 84.6| 90.5 | 31.2 | 42  | 54.8 | 43.6 | 55.6 | 70.3 |

Source: URT 2014

Tanzania uses the national poverty line to determine poverty while the World Bank defines poverty by using the benchmark of living cost of less than 1US$ per day. Available data of 2012 shows that Tanzanian person was considered to be basic needs poor if her/his consumption expenditure per day was below Tanzanian Shillings (TZS) 1,216 which is equivalent to 0.39 US$. Eventually, 9.7% and 28.2% of Tanzania population were below the national and food poor if her/his expenditure per day on food was below TZS 858 which is 0.39 US$.

Figure 2 Unplanned and Uncontrolled Urban Housing in Manzese-Dar-es-Salaam in Tanzania

Source: Kiondo, et.al 2017 Field Survey

|  |
|---|
|  |
|  |
|  |

Note: Exchange rate 1 US$ = 2,229TZS on 1st May 2017.
Furthermore, Table 3, figures 3 & 4) shows percentages of households who were below the food poverty line and basic needs poverty line in Tanzania were 7.2 and 21.5 respectively. These percentages may appear to be low in figures but many people are suffering from severe poverty and subsequently cannot meet the minimum requirements of affordable housing concepts. Hence, indicating high degree of “unaffordable housing” for majority in Tanzania. In this case, the concept of “affordable housing” for majority in Tanzania. In this case, the concept of affordable housing is disappointingly changing to “unaffordable housing concept” in the Tanzanian context.

If the consumption per adult falls below the food poverty line, a household is necessarily consuming less than the minimum food requirement and it is considered to be food poor. If it is not affording food and other essential needs such as clothes, health and education it is termed as basic needs poor. Persons or households which have per capita incomes or expenditure below the basic needs poverty line are considered as living in poverty (URT 2014). Combined situation of basic needs poverty and food poverty is referred as extreme poverty scenario.

| Table 3 Persons and Households Food and Basic Needs Poverty in percentages in Tanzania Mainland |
| --- |
| Area | 2007 | 2012 |
| | Population | Households | Population | Households |
| | Food | Basic Needs | Food | Basic Needs | Food | Basic Needs |
| Other Urban | 8.9 | 22.7 | 6.6 | 18.3 | 8.7 | 21.7 | 6.0 | 16.0 |
| Rural Area | 13.5 | 39.4 | 10.3 | 32.7 | 11.3 | 33.3 | 8.8 | 26.7 |
| Dar es Salaam | 3.2 | 14.1 | 2.0 | 9.8 | 1.0 | 4.1 | 0.7 | 2.6 |
| Tanzania Mainland | 11.8 | 34.4 | 8.7 | 27.5 | 9.7 | 28.2 | 7.2 | 21.5 |

Source: URT 2014

Limited housing affordability is further handicapped with limited available formal housing units. URT (2000) indicate that the gap between the supply and demand for housing has been widening with time. It was estimated that the demand was 2,200,000 housing units in 2000 but currently the demand is over 3,000,000 units in Tanzania (NHC 2010). Facts and figures show that the average number of persons per room used for sleeping is an indicator of the extent of overcrowding in a situation of insufficient formal housing units. The mean number of persons per room is obtained by dividing the number of household members by the number of rooms used for sleeping. The mean number of persons per room in Tanzania was 2.7 in 2012 (URT 2014) as shown in table 4.

| Table 4 Average Number of Persons Per Sleeping Room in Tanzania mainland |
| --- |
| Year | Dar-es-Salaam | Other Urban Area | Rural Area | Tanzania Mainland |
| 1991/92 | 2.45 | 2.31 | 2.61 | 2.56 |
| 2000/01 | 2.50 | 2.21 | 2.44 | 2.41 |
| 2007 | 2.10 | 2.22 | 2.29 | 2.26 |
| 2011/12 | 2.20 | 2.30 | 2.80 | 2.70 |

Source: URT 2014

In the absence of formal affordable housing, the majority of the urban population has resolved to accommodate themselves in crowded and substandard housing units mainly in unplanned areas with little attention from national authorities responsible in the provision of social and economic welfare (URT 2000).

**National Housing Corporation “Affordable Housing” Scheme in Tanzania**

National Housing Corporation (NHC) was established in 1962 in Tanzania with a primary objective to deliver affordable housing to Tanzanians. In particular, NHC was mandated to construct low cost houses for the low and middle income people to rent under the slum clearance programme, to construct houses for outright sale or for tenant purchase scheme, to provide local authorities with housing finance and to engage in the production of building materials. The corporation managed to construct 15,931 housing units from its...
inception to the year 1987 but could not proceed with production of more units because of various reasons including that of financial constraints (URT 2000). The Corporation remained dormant for many years from 1987 without any production of housing units. Nevertheless, NHC is currently one of few real estate developers in Tanzania with a clear vision and intention of reducing the deficit of formal housing units in urban areas. NHC has provided a framework guideline in collaboration with 16 commercial banks in Tanzania to assist prospective buyer to get housing loans. Figure 5 is the floor plan and figure 6 is a perspective view of one of NHC house types. The practice has shown that the urban poor cannot afford to buy these type houses but they are “sold out” to high income and seldom to middle income people. The price of NHC house type one in Iyumbu Dodoma (The Capital City of Tanzania) with 79m² is TZS 57,700,000 or US$ 25,782 US$ and type two with 115 m² is TZS 85,000,000 or US$37,980 this year¹. Apart from failing to assist the urban poor to acquire adequate and affordable housing the Corporation has certainly increased the number of formal urban housing units for the rapidly growing cities in Tanzania. For instance, Dar-es-Salaam, the largest commercial city in Tanzania and the third fastest growing city in Africa have experienced urbanization growth of 5.6% from 2002 to 2012 as compared to 4.3% in the period of 1998 to 2002. The population of Dar-es-Salaam was 4,364,541 in 2012, currently it is 5.1 million people and it is projected to reach 5,690,000 in 2025 (URT 2015, URT 2013; CIA 2017). All these people need to be housed adequately. Watumishi Housing Company (WHC) is another housing developer in Dar-es-Salaam engaged in construction of formal housing units considered to be affordable by the low income earners to buy. However, bank formal financial procedures to assist urban poor people are not friendly in Tanzania due to high down-payment requirements, short loan periods and high interest rates. These situations make adequate housing unaffordable to the vast majority.

CONCLUSION

This paper has discussed and answered the question of affordable housing concept and to who it is affordable with reference to Tanzania case. Generally, it has been observed that citizens of countries in Latin America, Asia and Africa have difficulties in accessing adequate housing and hence struggle in various ways to achieve affordable housing from an angle of limited financial resources facing the majority of the people in the world. The global policy of adequate shelter for all by the year 2000 couldn’t be realized because of various reasons including the fact that it was not a realistic. At this material time the affordable housing concept is apparently another unrealistic and a white-elephant housing concept. It has been observed that purchasing power of people is too low especially in developing countries where people are too poor to afford even their food and basic needs. One out of three who has no any kind of toilet in Africa or the 11.7% of households in Tanzania without toilet facilities cannot dream of affordable adequate housing as prescribed by the UNCHS and other

¹ Exchange rate 1 US$ = 2,238TZS on 10th May 2017.
housing institutions. Majority of the rural population in Tanzania can only afford non-industrial material house type shown in figure 1 and explained in table 2. Certainly, they cannot afford adequate housing as the ones designed and constructed by NHC. The NHC houses have turned to be too expensive for the targeted low income people to afford. Provided definitions of affordable housing concept by different scholars and global housing institutions are questionable to who is affordable. Figure 7 is a billboard for affordable housing which was found during this research but in actual sense it has nothing to do with affordable housing but mere business advertisement of interlocking and vibrated blocks! Affordable housing scholars and institutions shouldn’t be trapped in the same manner as figure 7 but should rethink and redefine the affordable housing concept because the current affordable housing concepts and definitions have turned out to be unaffordable housing concept to the very people it intended to assist. Governments must strategize on poverty eradication programmes to enable them afford food, basic needs, social services and decent housing. Spatial planners and architects must re-consider how to design housing spaces by the use of improved local available building materials and innovative technologies. Designed housing functional spaces should be kept minimum and allow space-use-flexibility such that the total built-up area is minimized to reduce building cost. The lesser built-up area the lesser construction cost.

References

CIA. 2017. 2017 CIA World Fact Book and Other Sources, Washington D.C.

Giddings. 2007. Housing challenges and Opportunities in Sub-Saharan Africa, International Housing Collation.

Kiondo, M. and Mosha, L. 2017. Synthesis of Human Settlement Layers in Mbeya City in Tanzania, In: International Journal of Recent Scientific Research. 8(3), pp. 16194-16199.

Kihato, M. 2012. Infrastructure and Housing Finance: Exploring the Issues in Africa, Centre for Affordable Housing Finance in Africa.

Mark R., Grant M. and Brian H. 2006. Affordability of Housing: Concepts, Measurement and Evidence, New Zealand Treasury, Wellington.

NHC. 2010. Strategic Plan for 2010/11-2014/15, Government Printers, Dar-es-Salaam.

Shadiya M., Aini S. Fauziah. R. 2015. “Describing the Need for Affordable Livable Sustainable Housing Based on Maslow’s Theory of Need.”, in: Mediterranean Journal of Social Sciences.

UN. 2004. World Urbanization Prospects: The 2003 Revision, New York.

UNCHS, 1998, ‘The Istanbul Declaration and the Habitat Agenda’, UNCH, Nairobi.

UNCHS. 2001. Synthesis of National Reports on Implementation of the Habitat Agenda in the Africa Region. Special Session of the General Assembly for an Overall Review and Appraisal of the Implementation of Habitat Agenda, New York.

UN-HABITAT (2010), African Infrastructure Country Diagnostic Fast Facts Water Resources, Irrigation, Sanitation and Supply, UNCHS (Habitat), Nairobi.

UN-HABITAT. 2003. The Challenge of Slums, Eathscan, London.

URT. 2016. Tanzania Demographic and Health Survey and Malaria Indicator Survey 2015 – 2016, National Bureau of statistics Publication, Dar-es-Salaam.

URT. 2015. Migration and Urbanization Report 2012 Population and Housing Census, Volume IV, National Bureau of statistics Publication, Dar-es-Salaam.

URT. 2014. Tanzania Mainland Household Budget Survey Main Report 2011/2012, Government Printers, Dar-es-Salaam.

URT. 2013. 2012 population and housing census, National Bureau of statistics Publication, Dar-es-Salaam.

URT. 2010. Tanzania National Strategy for Growth and Reduction of Poverty II, Government Printers, Dar-es-Salaam.

URT. 2007. The Tanzania Households budget survey 2007, National Bureau of Tanzania, Dar-es-Salaam.

URT. 2000. National Human Settlements Development Policy, Government Printers, Dar-es-Salaam.

Zainal. A. 2010. House Price and Affordability in Malaysia, Faculty of Economics and Business, University of Kebangsaan, Malaysia.