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Assesment on Urban Density and Land Use Efficiency in the Ethiopian Cities

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Abstract
"Density" which refers to urban space has become an area of discussion among different scholars in urban design and town planning and among policymakers in urban development. Some advocates for the compact city (higher density) development and others to spread-out. However, the objective of this study is not evaluating the arguments of pro-density and spread out developments. The study aimed to assess and investigate to what extent Ethiopian cities are dense based on national urban development policy, acceptable global standards? Identify major challenges hindering density of development and strategies devised to solve the problem, assess land use intensity among core area, intermediate zone, and peripheral zone and identify the reason behind and suggest some policy recommendations which supports compact developments. The research approach applied in this study is a mixed approach (quantitative and qualitative) and both primary and secondary data had been collected and analyzed. Spatially, Ethiopian cities are growing in a low-density pattern as compared to global standards supposed to developing countries and national contexts (housing as well as population density). For this, a range of different factors is considered. Housing typology, land delivery system for development purpose, and deficiency in enabling environment (water supply, sewerage system, road network) and the lack of the policy directions and density standards which indicate where.....what level of density and how it can be achieved, presence of significant proportion of vacant or underused land in core areas by government institutions as well as individuals are contributed for the existence of low-density developments. There is no fit all strategies about density; therefore, to achieve a planned and healthy density, private sector and individual developer must stimulate and regulated through market and planning instruments. To do so, a comprehensive land use and density framework and planning capacity is important.
Keywords: Assessment, built-up area, core area, density, intermediate zone, land use intensity, population

1.INTRODUCTION

"Density" which refers to urban space has become an area of discussion among different scholars in urban design and town planning and among policy makers in urban development. Some advocates for the compact city (higher density) development and others to spread-out developments. Advocates of compact city development argued that higher overall densities in cities could minimise costs for infrastructure development, conserve scarce arable land for urban use, and protect the environment. Cited in Berghauser, M. & Haupt, P. (1900), Jacobs, J. (1961) suggested that a net density of a minimum of 250 dwellings per hectare as a necessary condition for a vital and participatory city life. Congestion and its destructive impacts on social and economic well beings are justified by advocates for spread out development. Cited in the same source above Unwin, R. (1909) proposed a standard net density of 30 houses per hectare. Today density and compact city development become as an indicator for sustainable urban development.

Globally, cities are growing physically and consuming land at a rate that exceeds population growth. In developed countries, urban population grew 12 percent, while urban land use increased by 80 percent, whereas in developing countries, population growth by 100 percent, while urban land use by 350 percent. This indicates how fast cities are expanding physically and consumed land which is not in a sustainable manner and calls for the need to increase the density of development (Wihbey, J.2016). Urban sprawl is considered as a typical indicator of poor land management practice and weak links in urban planning which have a direct impact on urban sustainability.

In Ethiopia, the level of urbanization is at an early stage (20%) lowers than sub-Saharan average (40%). At this level of urbanization, dealing with urban density seems premature. However, the problems which Ethiopian cities facing and the pace of urbanization forced to think proactively. Urban amenities and services are highly deteriorated and not function well. A local movement that is walking and cycling is prohibited by inconvenience found within the road network along the highways as well as feeder roads existed within the city administration. Spatially, urban centers in Ethiopia are experiencing rapid expansion with having a direct implication on productive agricultural land uses. Urban areas grow in a low-density development pattern. The physical

expansion is faster than the population is growing and the growth was not led by an urban plan. A controversial issue here is the related to the inadequacy of green and open space for the public purpose. A study on "Ethiopia Urbanization Review" by World Bank asserts that land consumption surpasses the rapid population growth, and densities decline with serious implications for service delivery, as recognized by the government's "Compact City" plans. In Addis Ababa, from 2007 to 2014, the average density of the built-up area is declining from 146 persons per hectare to 136 (World Bank, 2015). The situations magnify the need to develop a policy framework which guides urban development and to contain uncontrolled urban growth towards the suburbs and rural hinterland. Spread out development has the potential to raise the cost of infrastructure and service delivery. It has also an impact on land use, which is suitable for agriculture purpose and poses a problem of the sustainability of urbanization and overall urban development as well. Thus the high density, compact development or compact city development is suggested by many to be the most suitable model for sustainable urban for developing nations (DAVE, S., 2010 and Audirac, I., & Smith, M., 1992).

The research aimed to assess and investigate to what extent Ethiopian cities are dense based on national urban development policy, acceptable global standards and benchmark cities? Identify major challenges hindering density of development and offer alternatives devised to solve the problem, assess land use intensity among core area, intermediate zone, and peripheral areas, identify the reason behind and suggest some policy recommendations which support compact and decentralized urban developments. A recommendation from this study intends to serve the government as a reference document in developing a policy framework which guides to contain uncontrolled outward urban growth while maximising land uses compatible with plan regulations.

2. Problem Statements

Ethiopian cities are growing in a low-density development pattern and the growth was not led by an urban plan. Such types of development have the potential to hamper the growth of rapid and sustainable urbanization. It has an impact on the cost of infrastructure development and service delivery, supplying developed urban land for a different development purpose, the efficiency of mass transports within the city administration and its impacts extends beyond their administrative boundary i.e., on agricultural development and hence in food security.

To sustain urban development and rapid urbanization, the supply of urban land must be sustainable and should be utilized in an efficient manner. To ensure this city might implement different land use regulations and planning tools. Thus land use regulations and plans must be supported by appropriate density regulations and standards based on the level of development (capacity), environmental and socioeconomic context within the city administration. To do so a comprehensive density policy guidelines and strategies, regulations and institutions and finance are a critical factor. Therefore, the study tried to address such problems and come up with some possible policy recommendations to solve the problems.

3. Literature

3.1 What Is Densification?

Concepts: - Urban density is a term used in urban planning and urban design to refer to the number of people inhabiting a given urbanized area. Urban density is considered an important factor in understanding how cities functioning (https://en.wikipedia.org/wiki/Urban_density). As a tool for urban planning, density can help local authority to know how much a city is populated (densely or sparsely). For urban planners, helps to assess whether there is compactness or sprawl and make an informed decision on locations of urban amenities and social services from the spatial point of view. For policymakers it helps to it can help as an indicator to make decisions on the distribution of strategic infrastructure and social services as well as dealing with land and housing policies.

Definition: - a review of the literature on the issues indicates that there is no universally accepted definition for density. The definition depends on intended usage and objectives. Simply urban density can be defined as a number of units (population, housing units, the number of enterprises, the number of employment created, jobs and the likes in a given area (meter square, kilometer squares, hectares, acres etc...). Working definition applied in this study is built-up area density. To avoid misinterpretation on the availability of open space for further development, land areas which are not suitable for settlement and urban function (forests, mountains, rivers and agriculture purpose) are excluded in determining density.

Densification is defined as follows: The increased use of space both horizontally and vertically, within existing areas/ properties and new developments accompanied by an increased number of units and/or population thresholds (cape town densification policy, 2012).

Incremental densification, in turn, denotes the following: Small-scale densification that has a relatively low impact on the character of an area, e.g. the sub-division of a residential property or construction of a second dwelling.

Densification is not an end in itself, but a means of improving the sustainability of the city as well as the vitality of urban precincts. It is a relative indicator of the intensity of development and the population thresholds

that could support economic activity, public transport services and the like. (https://www.westerncape.gov.za/assets/departments/transport-public-works/Documents/densification_policy_-_approved_on_29_february_2012.pdf)

Motivations for densification

Densification can contribute to the creation of good quality, efficient and sustainable urban environments in a number of different ways.

- Reduces the consumption of valuable/non-renewable resources
- Supports the development of a viable public transport system
- Makes the City more equitable
- Facilitates economic opportunities and supports service provision
- Improves housing patterns and choice of housing type
- Contributes to urban place-making and improves safety

The factors that affect densification and their implications for strategy

The major factors constraining and enabling densification and impacting on the form of densification (location, design and quality) include:

- Policy, legislation and regulations
- Economic and market forces.
- Social and lifestyle considerations.
- Form and nature of the built environment.
- Technological issues.

Measurements: - most commonly used measurement is dwelling units per acre, population per acre, and floor area ratio (FAR) (http://densityatlas.org/measuring/). Density varies greatly depending on the base land area used in the density calculation (parcel, block, neighbourhood, sub-city and city level). For the purposes of this study, threshold densities that are proposed for developing nations by (UN-Habitat) are applied for comparison. The thresholds include net dwelling less than 15du/ha for low, 15-40du/ha for low to medium, 40-120du/ha medium, 120-500du/ha high and greater than 500du/ha for very high density (http://unhabitat.org/wp-content/uploads/2014/06/Leveraging-Density-Urban-Patterns-for-a-Green-Economy.pdf).

4.Study Methodology

4.1 Research Approach

Brainstorming is conducted with the management team of the research centre to identify issues that are going to be considered for discussion, tools and instruments applied to collect data, define the scope of works and determine sample cities and review benchmark cities to customised best practices that are suited to our context.

Research approach devised in this study was a mixed approach (quantitative and qualitative) approach. Data from CSA survey reports and GIS maps are analysed quantitatively. In addition, the study uses a qualitative approach to generate data from Key Informant Interview (KII), Focus Group Discussion (FGD), and observation to complement the analysis made using the quantitative data.

4.2 Research Design

The design adopted for this work is descriptive while the sampling method is purposive sampling. While understanding the difference in settlement pattern and socioeconomic activities exhibited in the city are classified as Core areas, Intermediate zones, and Peripheral Zone. Addis Ababa, Dire Dawa, Hawassa, Mekelle, Jima, and Dessie had been selected for the study based on stages of development, their role, and regional representation.

The issues discussed are land allotment to a different purpose, building height, urban planning issues, land use, infrastructure (accessibility, water, and sewage system), population and housing density, employment created, revenue and capital generated, and the area of working premises for business enterprises.

4.3 Data Collection and Analysis

The study employed both primary and secondary data. Primary data collected directly from cities GIS Maps, whereas secondary data were collected from the records of different office in the city administration and CSA reports. Taking into account Ethiopian standard industrial classification 5-10% of licensed enterprises were contacted to assess socioeconomic activity (number of employment created by the enterprises, capital and revenue contribution to city administration) parallel with their working premise to assess land use efficiency. Documents on urban development policy and strategy documents were reviewed and observations were undertaken to grasp national and global experience as well as assess shortcomings of national urban development policies and strategies towards the subject matter.

5. Results and Discussions

5.1 Density

Population and housing unit density is computed by dividing the total population or the number of housing units within a geographic entity by the land area of that entity measured in square miles or in square kilometers. Density is expressed as "population per square mile (kilometer)" or "housing units per square mile (kilometer)."To avoid misinterpretations about the availability of vacant space for further development, land which is not suitable for settlement (mountains, rivers, and forests) are left out in determining the density. Besides, documents are reviewed to make the comparison with benchmark cities i.e., London, Seoul, Shenzhen, Istambul and Cape Town gross population density. Benchmark cities have a population density of (45, 175, 75, 300-100 and 100) person per hectare respectively. And housing density of Seoul, Shenzhen and Cape Town are (58,25 & 25) per hectare respectively. These cities have designed detailed policy framework which guides all densities related matters, including density guidelines, decision-making tools and design guidelines and criteria for the development and location of higher densities. In the policy frameworks and guidelines, they try to indicate incentives/disincentives to be applied to achieve planned densification.

5.1.1 Population density

In this study, population density is referred to as the number of people living per unit of an area (per hectare/square mile/square kilometer). As an indicator, population density informs government how populated the city or sparsely populated. It can serve as a source to plan the expansion of existing or new social services that are significant for urban dwellers (schools, health center, retail, utilities and the transit expansion needed for an area). In combination with other parameters, population density notifies governments on housing policy or strategy that could be designed to solve the problem.

Population density varies considerably among sampled cities. Built-up area population density of sample city is; Dire Dawa 107 persons per hectare, Hawassa 109 persons per hectare, Mekelle 41 persons per hectare, Jimma 44 persons per hectare, Dessie 64 persons per hectare and Addis Ababa 130 persons per hectare (Table:1). This implies by all means of measurement indicators, the level of development below standards (dispersed).

5.1.2 Housing Density

Housing density informs governments on future land uses and housing policies that should be designed. It enables to make informed decisions on housing strategies to address current and future demands. Housing densities (Gross for the built-up area) in sample cities are 25 units per hectare for Dire Dawa, 23 dwelling units per hectare for Hawassa, 10 dwelling units per hectare for Mekelle and Jimma, 15 dwelling units per hectare for Dessie, and 32 dwelling units per hectare for the capital city Addis Ababa (Table: 1). This indicates the sample cities are developed in a low-density manner. Density is dispersed even when we compare with the thresholds proposed in the last structural plan of Addis Ababa city administration proposed in 2016. The existing housing density of Addis is far from the proposed new plan which is 150houses/ha and above for the core area, 100-150houses/ha in intermediate area and 50-100houses/ha for expansion areas. So it needs to do strictly according to the proposed plan.

On the other hand housing typology is a G+0 detached and semi-detached, row house buildings, apartments, and condominiums. Some trends indicate that residential units are migrating towards the urban periphery and replaced by single use buildings (only office and commercial purpose) during urban regenerations. Here is exhibited some controversy for those commercial buildings as it explained by higher vacancy rates as a result of problems related to operational problems exists in implementing one the planning agendas recognized in the urban development policy and construction policy document, i.e., mixing residential land use with other compatible land use and mixing residential service within one building that is compatible with residential purpose. The current structure plan of Addis Ababa city administration recognized the problem related with single purpose building and tried to force developers to build a mixed-use building that is compatible with residential uses.

Table 1: Population and Housing Density (Built-up Area)

S.N	City	Built-up Area in (ha)	Population	Population density (number of inhabitants/ha)	Housing density
1	Dire Dawa	2,656	285,000	107	25
2	Hawassa	4,207	436,581	109	23
3	Mekelle	8,318	340,852	41	10
4	Jima	4,244	186,147	44	10
5	Dessie	3,711	233,971	64	14
6	Addis Ababa	26,600	3,433,999	130	32

Source: Own Calculation based on the CSA and GIS data (2016)

5.2 Urban Land management and density

Urban land is a critical scare resource in urban development, thus its utilization must be in an efficient and sustainable manner by promoting more built-up space on individual sites. One of the main objectives of urban land management is to promote conservation and control trunk of infrastructure investment by promoting compact city development. Such cities can contain a substantial proportion of residents and jobs within a "reasonable" distance from central business districts. However, the prevailing practices of land management in Ethiopia lacks incentives for high utilization of existing formal land supply and result in low-density, spatially fragmented development, and limited mixed-use development. The supply of land for government office buildings, low-cost housing, social service, manufacturing industries, micro and small enterprises, and projects that are believed to have national importance are transferred free or below market price and hence they have not stimulated to use land economically. This type of development is much more expensive for the local government to supply basic urban infrastructure and services.

Within the sample cities, a significant proportion of land is possessed by government institutions and dilapidated government housing units (Kebele and Rental Housing Agency). In Dire Dawa for example, around 57 hectares are held by 18 government bodies. Hawassa identified and freed under-utilized government land (former state-owned commercial farms within the plan boundary and substandard utilised land held by government institution) for development, and Addis Ababa is trying to accommodate additional growth inside existing borders through urban regeneration and raising the density of developments.

Though some adjustments are made in the recent period (after a significant proportion of residential plot are above 200m2 (Mekele 40% residential plot above 250m2, Hawassa 72% & Dessie 67% above 200m2 and Addis Ababa 55% of the residential plot are above 250m2. Besides, more than 90% of residential buildings are G+0 buildings.

5.3 Enabling environments

The capacity of the existing/planned infrastructure services (water, wastewater/sewerage, electricity, and stormwater), and transport network to accommodate increased service demands are a critical factor in planning for density. Among sample city, only Addis Ababa has a sewer system, though its coverage is only 10% of the city administration and the rest disposed of the liquid waste through septic tank and damp track. If so how such a city can raise the height of buildings which have an impact on density? In some circumstances, water cannot discharge above 10 meters. In Addis Ababa and Mekelle city administration, Water and Sewerage Authority has no the responsibility to supply water above 10 meters and beyond the second floor respectively. If this is the case, how developers should motivate to build high rise buildings. Governments play an important role in promoting and permitting higher density development and providing it with the infrastructure it needs. Setting the structure for future urban development by building key infrastructure is the most effective method for promoting sound urban development.

5.4 Density and urban planning

Urban planning (urban, regional, city and town planning) is a technical and political process concerned with the use of land and design of the urban environment. Studies on urban planning claimed that Ethiopian urban centers have been growing predominantly in spontaneous development forms. Experience in urban planning is not well established and institutions in the sector are poorly functioning as a result of lack of experience within the experts and lack of awareness on the values and significance of urban planning by local authorities in the city administration. The planning currently practiced does not serve significant development functions, spatial and non-spatial functions. For the most part, planning focused on spatial issues such as land use allocation (residential, mixed-use development, commercial, major infrastructure, green and open space) rather than on infrastructure integration, economic and social transformation. It is not supported by tools and detailed implementation plan that could support in executing the general plan. Thus the plan failed to explain the current land use and forecast future use of land for residential, business and community purposes, the locations and capacity of streets, highways, airports, water and sewer, the types of industries embedded in the community, the characteristics of the population, employment and economic trends. Initiating infill development on vacant or underutilized lands within the existing built-up urban areas is an effective approach to maximizing the use of existing infrastructure (including transport), avoiding urban sprawl, reducing transportation needs, and allowing people to reside or remain in close proximity to employment opportunities and existing social amenities (Beltrão, G,2013).

Currently, except in Dire Dawa and Addis Ababa city administration, density is not an issue as it has been observed in their structural plan. The two city stated density thresholds that should be installed among different layers of the city which intended to be achieved, though what is achieved is far from their targets. As a result, urban plans must focus on the multifaceted environment on the physical, the social and economic environments which have direct impacts on the community. However, experience in sample cities indicates that the plan failed

to entertain local contexts and in some circumstances, it was believed that the plan is ignorant to the poor.

5.5 Employment Density

Higher densities create sufficient consumers to generate the development of economic opportunities, social facilities, and services, and enable the cost-effective provision and optimal use of infrastructure, especially where there is excess service capacity or where increased thresholds are required to provide services and infrastructure.

Employment density is valuable indicators to illustrate the variety of land uses in a given area and the ability, for example, to find housing and employment. In this study besides the distribution of employment among core areas, intermediate and peripheral, capital contribution and revenue generation in the city administration are considered as a proxy indicator for employment density. Thus the distribution of employment among core areas, intermediate zones and peripherals are 43%, 34%, and 23% respectively (figure: 1). The exception is found in Jima and Dire Dawa city administration. Intermediate zone supports a relatively higher proportion of employment as compared to core areas (42 and 45%) respectively. For Dire Dawa, there seems development of two center cities, i.e. the old center lost its attractiveness for investment and some business move out of the main center.

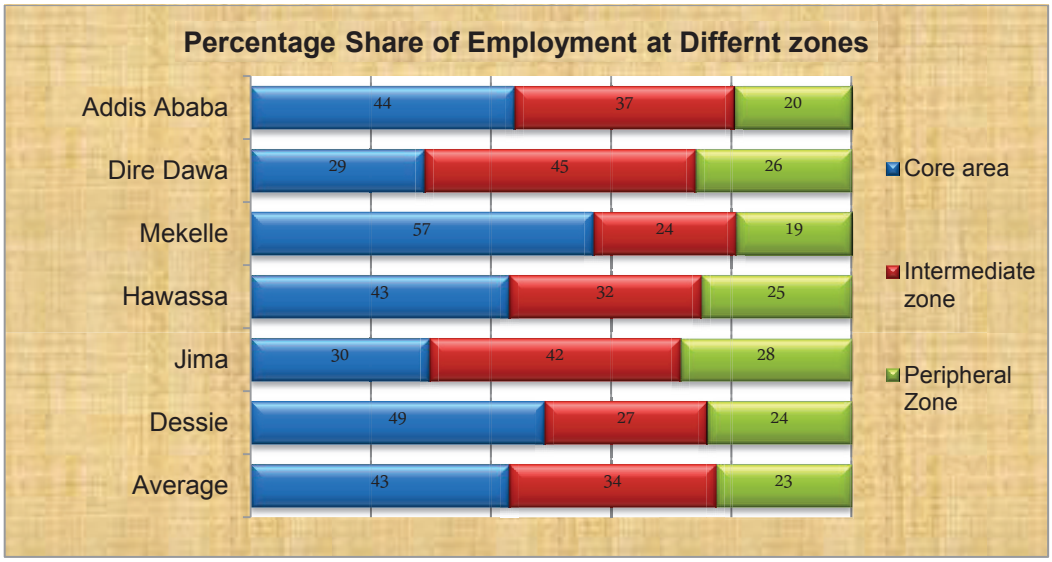

Figure 1 Distribution Employment (Core area, Intermediate and Peripheral zones)

In terms of the revenue and capital accumulation, core area contributed to 57% revenue, intermediates 27% and periphery 16% of revenue generated and in terms of capital contribution core area supports 55%, intermediate 30% and periphery 15% of capital accumulated within the city administration as we can observe figure: 2 below.

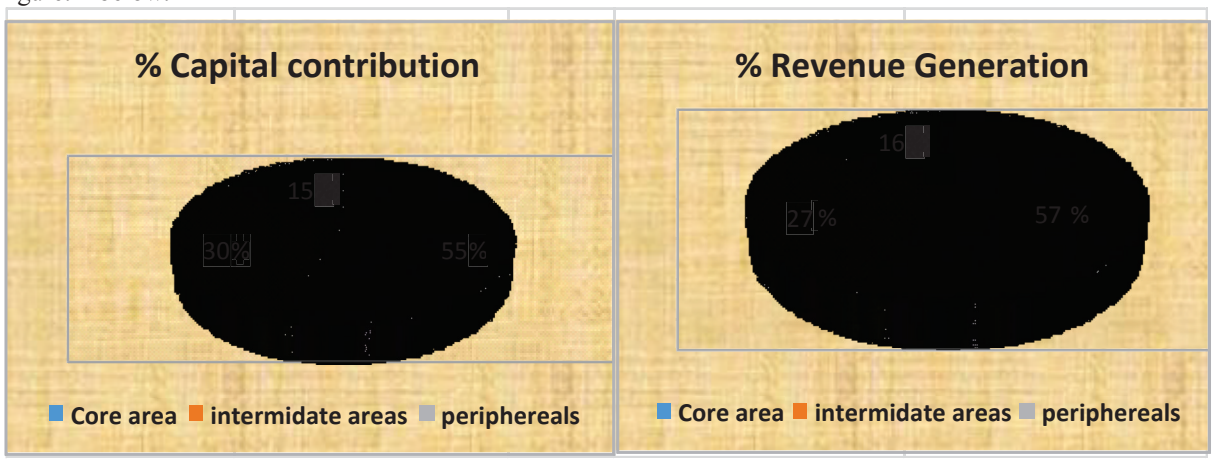

Figure 2 Capitals and Revenue Contribution

6. Findings

The national policy framework which guides the urban development advocates compact city development. It states that 30:30:40 land use ratios, i.e., 30 % for infrastructure related development, 30 for greenery and open space and 40% for building purpose (residential and other purposes) buildings. However, the policy document

fails to indicate where.....what level of density and how it can be achieved. Besides, there exist complexities and lack of clear understandings among structural and strategic planning and among the hierarchy of planning (structural, strategic, basic plan, local development plan, sketch plan etc.) among executives and planners in the city administration. Urban planning is frequently violated by the local authority. A lack of strong, competent and independent planning institution from federal to local governments is justified by urban planners in the respective city administration. These institutions can prepare, execute it and monitor and evaluate from preparation for implementations, capacitate skills in urban planning and on government policies and strategies specifically to urban contexts through research and development and short and medium term training.

Comparing Ethiopian cities with standards from UN-Habitat, Urban Pattern for A Green Economy, Leveraging Density recommended for low-income countries residential Density: Dwelling units/ha(net), most of the Ethiopian cities are dawn in the lowest standard thresholds.

A significant proportion of vacant or underused land is found in key locations, which could be used for denser and more contiguous development in existing urban areas. Government inefficiency in supplying developed land for developers and absence of finance for housing development is believed to contribute to existing undeveloped land within the core areas. Land use standards developed to be used by different institutions (ministry of health, education and the like) to supply services are not updated regularly understanding existing trends and future scenarios. A study on the Ethiopian urban expansion initiative indicates that out of total territory within the city administration, about 46 percent in Addis Ababa and Mekele, 25 percent in Bahir Dar, 77 percent in Dessie, and 32 percent in Hawassa are undeveloped lands.

In terms of employment density, spatial concentration varies among inner city, intermediate and peripheral zones. Concentration becomes less as we can move from core areas to intermediate and then to peripherals though there is in Dire Dawa and Jimma cities as compared to core areas and peripheral zones, intermediate zone apportioned a significant share of employment (45 and 42%). For Dire Dawa, there seems development of two center cities, i.e. the old center lost its attractiveness for investment and some business move out of the main center. The result of capital accumulation and revenue generation is high for inner city and intermediate zones as land use intensity are high for inner city and intermediate areas.

7. Conclusion and Recommendations

7.1 Recommendations

Based on the findings of the study a list of recommendations is proposed. Some of the recommendations proposed have policy implications, the other has some planning implications and the rest have technical and operational implications.

i) Policy implications

Comparative analysis of benchmark cities suggests the importance of a comprehensive density policy and implementation strategies. The policy direction indicates the overall directions what, where, how a density of development can achieve and incentives and disincentives to promote density of development. Higher densities allow more development per unit area, but because of the greater use of infrastructure from increased activity on the land, higher densities also can require more expenditure unit area on infrastructure supply. These issues enquired the need for government intervention in supplying basic infrastructures such as water and power supply.

Developers that have vacant lands should be stimulated to a denser development using policy incentives and disincentives (give credit access opportunities & tax exemption for a certain time from rental income for those built an additional house on their vacant land based on plan standards and taxation on vacant lands) while regulating substandard development. Here plot readjustment might be complemented with such policy interventions.

ii) Regulation and standards

Various pieces of legislation imposed on land use have an impact density of development intended to achieve. The ability to successfully implement density of development also relies upon the local regulatory environment, including building and zoning regulations. As national standards, a threshold of 20 housing units per hectare and a population of 100 people per hectare is recommended in developing master plans and local development plans to be implemented by city administrations.

iii) Planning implication

Planning should aim to reduce sprawl, enhance densification and prevent development in environmentally precarious zones. The general land use character of an area is important in designing thresholds for the density of development. Therefore, density targets should differ depending upon the land use character, i.e., single-use versus mixed use purpose. In the structure plan, critical issues can be identified, prioritized infrastructure investments, delineate

overall densities of the city. A mixture of densities should be indicted in the local development plan, and its implementation should be monitored regularly.

Establish strong and independent urban planning institution at federal, regional and city levels, which can lead and guides urban development in a manner which maximises land use efficiency, preparing an urban plan, implementing, monitoring and evaluate it at national, regional and local level. Institutions can serve as a center for knowledge transfer among different stakeholders in urban developments.

iv) Technical and operational

The Urban development policy proposed a mixed and compact settlement. However, it lacks an implementation supports at operational levels. Therefore, the national government should engage in the capacity building especially in planning and land administration areas and basic infrastructure services. The government might support the city administration in supplying operational manuals and technical training for planners and the city administration can customise tools and instrument to their local contexts. Urban planning should promote a compatible mix of land uses that create a diversified urban environment that mixes residential uses with other land uses such as shopping, employment, open spaces and the likes where necessary.

7.2 Conclusion

In summary, one can conclude that the density is below global standards (thresholds proposed for developing countries) and benchmarking cities. For these, the presence of underused or/ and vacant land in the core areas, the presence of a significant proportion single use plot and low rise(G+0 building), low level of income, infrastructure deficiency and institutional and technical inefficiency within the sample city especially in the urban plan sector is considered to be contributing factor. Density targets should be used as long-term goals, not generic; 'one-size-fits-all' approaches. The strategies recommended for density should be different depending on local contexts. The density of urban development might vary accordingly based on transport accessibility, land value, infrastructure supply (water, electric city, road, and sewer system), environment and topographic situation, technology in the construction sector; perceptions (culture) of the society. To attained sustainability of urban growth and development, the urban development policy advocates compact city development. However, the policy document faces implementation problems, as it lacks an implementation tool that indicates what level of density where and how it could be achieved.

Cities in the sample study have vacant or underused land in core areas that have well-established infrastructures and should support the extra development by applying denser development. In Dire Dawa for example, 18 government institutions hold about 57 hectares. Understanding the potentials such vacant and underused land to be redeployed for development, some cities are already taking steps in this direction. Hawassa has identified and freed under utilized government land for development, while the latest plans for Addis Ababa, Dessie, and Jimma tried to accommodate growth inside existing borders through urban regeneration and consolidation of government institutions into clustering of government office buildings.

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