

# Assessing the Efficacy of Spatial Planning and Development System in Improving Living Conditions of the Society

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## 1 ABSTRACT

Globally, spatial planning and development systems have proven to be critical instruments for establishing long-term, sustainable frameworks for improving social, territorial, and economic development conditions. In developing cities, spatial planning and development systems are generally used to enhance the integration between sectors such as housing, spatial justice, transport, energy and industry, and improve people's quality of life. This paper uses a case study research approach to unpack how spatial planning and development systems have contributed to the enhancement of society's living conditions in the City of Johannesburg, South Africa. Interviews with key stakeholders and questionnaires were used to gather information from the University of Johannesburg, the City of Johannesburg Municipality, and the Housing development Agency. The findings reveal a need to develop institutional and financial mechanisms to improve communities' quality of life and planning tools designed as drivers for spatial change. The paper also highlights the challenges that hinder appropriate living conditions and urban transformation, including high urbanisation rates, poor service delivery, high rentals, and unemployment. The paper concludes with a discussion of the significant gaps in knowledge that concerns the implementation of spatial planning and development systems in urban areas for the purposes of improving the status quo. The work recommends the adoption and implementation of adaptable and regenerative spatial planning as a vehicle for the improvement of living conditions in cities of the developing world.

Keywords: Spatial, sustainable frameworks, urban transformation, quality of life, Johannesburg

## 2 INTRODUCTION

The spatial injustices of apartheid and rapid urbanisation had a large influence on the spatial structure of Johannesburg, with negative development shortbacks such as urban sprawl, spatial inequalities, fragmentation, limited mixed-use development and people-oriented spatial planning development. Despite, the evidence of spatial rectifications and reconstructive developments that has been introduced in the previous years, the current spatial planning and development systems require extensive reviews in order to match the status-quo of the community needs in the city as well as meeting the future spatial visions. Spatial injustices in the city of Johannesburg remains a definitive element of the quality of life, settlement patterns and urban sprawl. The lack of spatial integration has led to misalignment in locations and concentration of economic opportunities. The housing-job approach does not match and create inequalities in the city, concentration of socio-economic activities does not correlate to the location where people live (Bertoldi, 2015).

The present spatial planning and development system introduced known as, Joburg Growth and Development Strategy 2040 is a key priority spatial planning and development strategy that directs spatial growth, defines the type society and development the city intend to achieve by the year 2040. This strategy capacitate the city with institutional powers to resolve the unattended past development and spatial injustices which emerged from apartheid regime meanwhile moving towards a just city, non-prejudiced and developmental city (Harrison & Todes, 2014). Nevertheless, traditional approaches have been adopted in many developing countries to foster effective relationship between the spatial planning, development systems and society, particularly these approaches were imported from North America and Europe. Unfortunately, the adoption of these approaches in developing states led to more isolated land uses, activities, society while they were serving the interests of colonial communities. For instance, sub-Saharan

African communities attempted to improve the standards of living through the nationalisation of resources and all land, while some countries such as Zimbabwe and Delhi have shown limited success in the allocation of such lands for development purposes (Ebrahim, 2017). Across the world, cities are faced with complex spatial planning and development challenges. These challenges threaten the future of cities as they tend to become more uncertain and unpredictable, the spatial development planning paradigm of cities has been altered with anthropogenic drivers. In this regard, city spatial planning strategies must direct the tension between future spatial uncertainties, development growth paths and adequate quality of life.

According to Schensul & Heller (2010), cities in South Africa particularly the city of Johannesburg, Ekurhuleni, Pretoria and Durban are demonstrating a clear example of spatial inequalities and development fragmentation. The post-1994 spatial planning legislation and development guides were meant to transform social exclusion, injustices and disparities from the apartheid regime- their preliminary objective was to improve the quality of life of society who became victims of land dispossession and spatial injustice using various interventions such as integrated public transport, reconstruction development plan, housing delivery, adequate health, social services, corridor and nodal development. As a result of these interventions, many lives have been transformed through land reforms, delivery of more than four million housing backlogs and development of integrated and inclusive city (The Presidency, 2014). The adequate spatial planning and development system has the potential to influence the urban growth and livelihoods of Johannesburg by addressing major spatial discontinuities and providing sustainable frameworks that will present significant areas of economic opportunities. This paper assesses the efficacy of spatial planning and development systems in improving the living conditions of the society in the city of Johannesburg. The study will specifically focus on the challenges that hinder appropriate living conditions and urban transformation, including high urbanisation rates, poor service delivery, high rentals, and unemployment.

### 3 LITERATURE REVIEW

Spatial planning and development system can be seen as a transformation of the city fabric that is spatially defined and builds on multifaceted series of resource driven practises, in which the land use form, substance and development implementation of urban space are intentionally altered to show the principles of spatial reform and equitable social order (Williams, 2000:169). The concept of spatial planning and development systems has gained popularity as tools to redress the past spatial injustices and restructuring of new urban change. However, these space transformation tools can be related to the drivers of living experiences for urban dwellers. Essentially, a more productive, inclusive, well-planned and sustainable city is characterised by residents' benefits of high quality of living and close proximity to functional spaces, these elements contribute towards place-making and shaping the city (Max-Neef, 1992). This section provides a critical review of contributions made by other scholars in as far as spatial planning and development systems are concerned in terms of legislative and policy frameworks, stakeholder roles, strategies and global experiences.

#### 3.1 Unpacking Spatial Planning and Development concepts

Spatial planning is a prominent function of a public sector to drive the distribution of future spatial activities. This planning tool is responsible to allow more informed territorial allocation of land uses and integration amongst them, to balance the needs for development with the aim of protecting the environment, attaining social and economic objectives. Spatial planning intends to improve and manage the effects of various sectorial legislations and policies on land use development, to achieve a more equal share of economic opportunities within regions. Therefore, spatial planning is a critical lever for achieving sustainable development and improving the standards of living of the society. The techniques provided by spatial planning assist the local government to equally distribute the natural resources, communities and spatial activities of different scales to improve the built environment, social and economic sectors of the society.

Spatial planning cuts across multiple disciplines such as land use development, transportation, urban regeneration, regional and community planning. On the other hand, development is closely related with spatial planning. Development refers to as the process of creating growth, positive transformation and progress with regards to the addition of economic, social, environmental and physical transformation (Todes, 2015). The role of development is to ensure that the spatial planning objectives such as infrastructural development, mixed use development, economic growth etc are measurable and implemented onto practises with relevant policy-guide and developments guide. Development shapes the urban fabric in terms of

organising land-uses, responsible growth of urban spaces, enabling accessibility through various transportation modes, enhance adequate human settlements which are resilient to natural disasters and conducive to human quality of life.

### **3.2 Legislative and Policy frameworks in Spatial planning and Development**

European Spatial Development Perspective (1999) was introduced as a policy document to transform the European cities towards a more equitable and sustainable territories of the European union. The objective of this policy is to drive the development towards the three fundamental goals of European policy and ensure are attained equally around the regions of the European Union, which are preservation and effective management of natural resources and cultural heritage; social and economic cohesion; a balanced competitiveness in the territory of the Europe. In essence, the European Spatial Development Perspective is applicable to Johannesburg as it wishes to conduct a balanced and sustainable spatial development policy which is complementary to the spatial planning goals that are outlined in the City of Johannesburg Spatial Development Framework. However, the basic skeleton of this perspective is narrowed down to its exclusion of urbanization as a driver of spatial planning and development which is a true reality in the city of Johannesburg.

Land Use and Spatial Planning Act 925 of 2016 (Ghana), provides for uniform spatial development and land use planning across national, regional and district level in Ghana. This framework established Spatial Development Planning Fund and Spatial Planning Authority that are mandated with functions of providing sustainable development of land and human settlements using a decentralised planning and development systems. This act revise and integrate various legislation on spatial planning and development in order to improve quality of life of the society, enhance economic growth and promote safety and health in human settlements. The LUSP Act prioritize issues of spatial fragmentation, inequality and mixed use development which are preliminary ills of the Joburg spatial planning, despite the efforts for spatial redress this policy draws its setback on exclusion of the marginalised groups in the production and distribution of space.

Spatial Planning and Land Use Management Act 16 of 2013, this act serve as the national law of spatial planning and development in South Africa that was promulgated in 2013. It is mandated to provide a uniform framework for land use management and spatial planning in the country, unlock inclusive, developmental and efficient spatial planning across different spheres of government. Amongst one of the key objectives of this law is to address the past spatial and regulatory imbalances that emerged from apartheid government and ensure that there is equitable development across the country. SPLUMA policy becomes relevant to this study as it emphasises redress, social justice, community participation and capacitate public institutions with powers to shape and influence city growth and development. However, the drawbacks of this policy are limited justifications on current pressing issues such as climate change, industry 4.0 and smart city development.

### **3.3 Strategies in the provision of Spatial Planning and Development**

The Municipal Systems Act 32 of 2000 makes a provision for local municipalities in South Africa to produce an Integrated Development Plan, that outlines the future of the cities over the short, medium and long-term period. The Integrated Development Plan consider issues such as spatial planning, economic development, risk management and performance measurement systems. This super plan directs the overall framework of development and attention to a coherent strategies that improve the quality of life for all the society within the jurisdiction of the municipality and look at socio-economic development of an area as a whole including service delivery and infrastructural development. As part of the IDP, there is a component of Spatial Development Framework which makes provisions for future spatial planning and development desirability of cities as well as issuing a directive for coordinated and uniform development.

### **3.4 Challenges in areas of Spatial Planning and Development**

This section outline an overview of key areas that impose various challenges for spatial planning and development, focusing in the City of Johannesburg. These challenges include demographic change, globalization, spatial inequalities and job-housing mismatch, exclusion and increasing informalities.

- Demographic change

The city of Johannesburg metro area is currently having a population of 5 927 000 in 2021 with a 2.50% increase from 2020. Tracing a year ago in 2020 the city had a population of 5 783 000, with an increase of 2.63% from 2019 (City of Johannesburg IDP, 2020). These demographic trends are a cause for concern to areas of spatial planning and development with regards to coordinated land uses, service delivery and economic development. The growing population in the city give rises to activities such as land invasions, informal erection of dwellings, highjacking buildings, increase criminal activities and pressure on available resources and infrastructure.

- Globalization

The trends of globalization has positive and negative implications for the city of Johannesburg which include the growth of competitive economic markets, limits to the state intervention in developments, the demise to traditional life in the city, economic pressure as the city is benchmarked with international cities, the demand to develop as a world class city which has implications on the environmental sustainability and loss of unique identity of the city.

- Spatial inequalities and job-housing mismatches

In Johannesburg, there are still evidence of spatial inequalities and development fragmentation. The urban poor are still situated in places that are far away from economic opportunities as well as jobs. The large region D of the city which is made of South-Western township (SOWETO) is still undergoing issues of power cuts, lack of connectivity, integrated transport systems and adequate service delivery (City of Johannesburg, 2011). Meanwhile, areas in regions such as Sandton in Region E is kept under constant development and adequate services.

### **3.5 Stakeholder roles in Spatial planning and Development**

Successful implementation of spatial planning strategies and development is largely dependent on the institutional support of all stakeholders including the civil society, non-governmental organizations and public-private sector. Involvement of various stakeholders provides a shared-knowledge, information and skills/support that improves informed decision-making in the processes of spatial planning and implementation of development. The engagement of stakeholder also enhance understanding as well as increased support for proposed policies and strategies. For example, the provincial government of Gauteng in South Africa introduced and implemented the project of e-tolls in freeways of cities including Johannesburg; the systems were developed to fund the R20.1 billion highway upgrade program in 2007-2011, however, due to lack of effective public participation the project is not generating enough revenue as anticipated because of backlash and limited support from the society (National Planning Commission, 2011).

### **3.6 Review of Experiences (Developed, Transitional and Developing countries)**

European spatial planning and development systems are informed by the a document drafted in 1999 called European Spatial Development Perspective (ESDP), which has influenced the spatial planning and development policies in the European Union member states. The European Union emphasised an integrated approach to spatial development planning, and The Urban Agenda calls for an equitable, sustainable and unified approach towards urban challenges, taking into account the Leipzig Charter on sustainable European cities that focuses on major elements of urban development (including social, economic, environmental, cultural and territorial aspects) (European Union, 2008). Furthermore, The Urban Agenda of the EU advocate for a direct relationship with the New Urban Agenda of the UN as well as sustainable development goals to unlock potentials of sustainable urban land use and focus on issues of affordable quality housing, eliminating poverty, limit urban sprawl and social inclusion (Faludi, 2003:09).

In the Federation of Russia, there are various types of spatial planning and development systems adopted by the state: strategic, spatial, socioeconomic and financial. These approaches in all forms of planning are administered by the normative legal acts and legislative frameworks. Across the spheres of government there are Land use planning schemes of the state Federation that regulate and monitor fields such as federal transport, urban sprawl, quality of life and service delivery (Petrov, 2011).

In the case of Uganda, spatial planning and urban land use are facilitated under the Town and Country Planning Act Chapter 246 of 2000 and the Physical Planning Act of 2010. The urban growth in Uganda is described as unplanned, with high levels of urban sprawl, lack of uniformity between sectoral and spatial

planning, poor provision of basic services, significant financial constraints and weak urban management capabilities (Somik Lall, 2012:17). The spatial planning and land use development system in Uganda are closely linked with corruption and political power. As a result, unplanned and chaotic development is prevailing the cities and making it difficult for spatial planners to develop towards urban sustainability and adequate living environments. Over 60.1% of the urban population is found in slum dwellings of poor infrastructure such as poor road network, drainage, sanitation, solid waste and unplanned neighbourhoods that are vulnerable to natural hazards.

### 3.7 Theoretical Framework

Lefebvre's theory of production of space models the analysis of this study. As a Marxist thinker, Lefebvre (1991) elaborate on the production of space through a three-part system between everyday practises and perceptions, representations and the spatial imaginary of time. The primary argument is that the space is a result of a social product which is based on the value and social production of meanings that moulds the social practises and perceptions (Lefebvre, 2014). Therefore, it is reasonable to use this theory as a guide to assess the efficacy of spatial planning and development system in improving the quality of life in the city of Johannesburg because the foundation of this theory assume that that spatial practise, development of space and representations of spaces contribute in various ways to the qualities of the society and as well production of space.

## 4 STUDY AREA

The city of Johannesburg is classified as the economic powerhouse of Gauteng, South Africa and Southern Africa at large. It was founded in the late 1880s during the discovery of the gold Reef on the Witwatersrand. The metropolitan of Johannesburg emerged in 2000 by the merger of five interdependent municipal areas which covered a total area of 1 644 km<sup>2</sup> with a density of 1 963 persons per square kilometre (City of Johannesburg IDP, 2020). Johannesburg is surrounded by the two independent metropolitan areas of Gauteng, namely: City of Tshwane and Ekurhuleni. The city is made up of a 5,92 million population currently spread across 1 434 856 households with an average of household size of 2.8 persons per household (StatsSA, 2013).

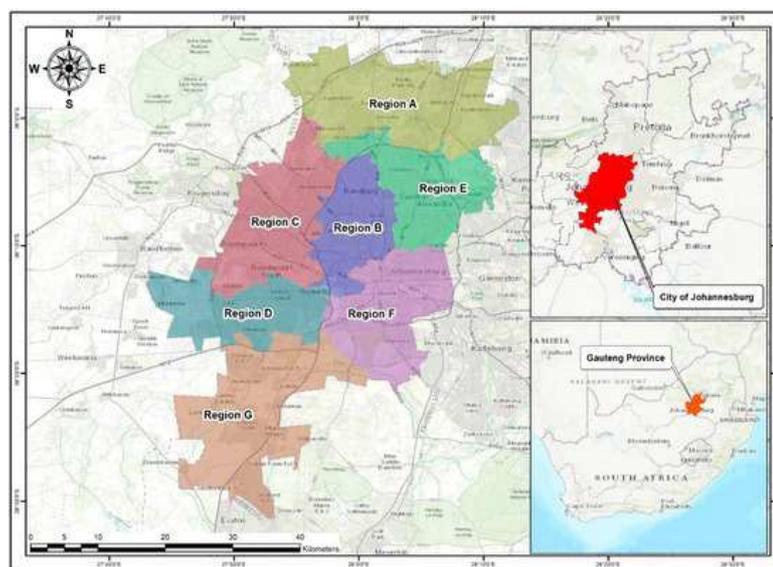


Figure 4.1: Study Area of the City of Johannesburg. Source: City of Johannesburg (2015)

The development in the city is prioritised within and spiralling outward from the urban centre with high densities of residents, amenities and economic activities. At the heart of the vision compact polycentric Johannesburg consist of a strong metropolitan core and the inner city. This core embodies the urban qualities that details the spatial transformation themes of building a compact, connected, inclusive and resilient city.

## 5 APPROACH AND METHODOLOGY

This research adopted a case study phenomenological design to generate in-depth, multi-dimensional and critical understanding of spatial planning and development system in the city of Johannesburg. The case

study design allows for the exploration and understanding of complex issues, it can also be regarded as a robust research method especially when a holistic, in-depth and multifaceted investigation is required (Johnsons, 2006). Through case study method, this research went beyond the quantitative statistical results and analysed the behavioural conditions through the actor's perspective. It was noteworthy to note that despite problems in the city such as lack of affordable housing, fragmented pockets of development, limited infrastructure, criminal activities, gentrification and areas of poor living conditions- the Inner City has the capacity to intensify and realise the growth needs through spatial planning and development systems to develop a vibrant core of the city.

Furthermore, this study relied on the mixed methods approach that allows layering of various methods and methodologies in data analysis and collection. It employed both the qualitative and quantitative methods. Purposive sampling was applied to identify key informants from all relevant institutions including the University of Johannesburg, City of Johannesburg and Housing Development Agency. Snow Balling was used for identifying municipal officials that specialize in spatial planning and development department of the city. In addition, both the stratified sampling and convenience sampling were also employed to select participants in the human settlement programme and housing delivery for the study in the Housing Development Agency. The city of Johannesburg and Housing Development Agency share housing delivery programmes within the city, currently they have adopted a priority project of closing the housing gap and title deeds backlogs. Therefore, Stratified sampling was then applied to sample each individuals into sub-groups to investigate their consumer satisfaction of housing delivery, tenure security and standards of living within the portions of the city.

## **5.1 Data Collection methods**

Both the primary and secondary data types were collected to inform this study, through employing various data collection techniques including conducting interviews with officials, distribution of survey questionnaires, field observations, desktop study using literature sources and municipal documents to guide the research.

### **5.1.1 Survey Questionnaires**

According to De Vos & Fouche (1998), questionnaires are research instruments that are composed of open or closed questions or statements to which a respondent must react to. For this study, questionnaires were structured in an objective manner and consisted of four sections each, of which were categorised on the objectives set for this study excluding the profiling of demographics for participants. A total 100 questionnaires were distributed electronically to the municipal officials who are responsible for land use planning and development, also 50 questionnaires were distributed to community leaders and citizen within the jurisdiction of the city of Johannesburg.

### **5.1.2 Interviews**

Formal interviews were conducted with relevant key stakeholders of spatial planning and development in the University of Johannesburg, City of Johannesburg and Housing Development Agency. The interviews were conducted through Zoom and Microsoft teams in order to adhere with covid-19 regulations set by the South African government. The interview questions varied across the participants, the first badge of questions were specifically on spatial planning and development within the city and the second badge focused on quality of life, human settlements and service delivery. Professor Trynos Gumbo who is serving as the Head of Department for Urban and Regional Planning at the University of Johannesburg was engaged in this study as the potential spatial planning researcher and involved in consultation stages for development of spatial development policies of the city of Johannesburg. Ms Nokuthuka Thusi (Director: Land Use Development) in the city of Johannesburg was interviewed, whom is identified as the relevant stakeholder involved in influencing spatial planning, land use and management of the city of Johannesburg. Chief town planner in Housing Development Agency was interviewed for his role in human settlement development in the city, Mr Leroy is involved in drafting of Regional Spatial Development Framework for the city.

### **5.1.3 Literature sources**

Extensive review of legislative and policy frameworks such as SPLUMA, IUDF, SDF, IDP was conducted to track the efforts taken by the city to improve quality of life through inclusive and effective spatial planning

systems. Also, key scholarly journals focusing on areas of spatial planning were used for information relating to studies done previously on the analysis of the city.

## 6 RESEARCH FINDINGS

This section of the study presents the research results of the efficacy of spatial planning and development systems in improving the standards of living of the communities in the City of Johannesburg. The section further integrates the research results with objectives and aim of the study and apply the research results to draw up conclusions and recommendations. The argument of this study is based on the understanding that the City of Johannesburg is the driving force of economic development in Gauteng, South Africa and Southern Africa, which is why the city is associated with active economic growth, high urbanisation rates, poor service delivery and opportunities that comprehend the quality of life. Johannesburg spaces are hubs for innovation, science, infrastructural development, commerce and culture including challenges that may hinder the city from developing sustainable development frameworks, creating jobs, enhancing quality of life for communities etc. Primarily, Johannesburg continue to prove legacy of spatial segregation, development fragmentation, poverty and exclusion of socio-economic opportunities. Therefore, there is need to assess the extend to which spatial planning and development systems can be utilized to improve the standards of living in the city.

### 6.1 The current state of spatial planning and land-use development in the city

The regional map of the City of Johannesburg divides the city into seven (7) various regions, however, for the results of this study greater attention is focused on Region F of the city which is made up of the inner city (Central Business District). Below in figure 6.1 is a spatial representation of the inner city and various land uses as well as the current development implementation.

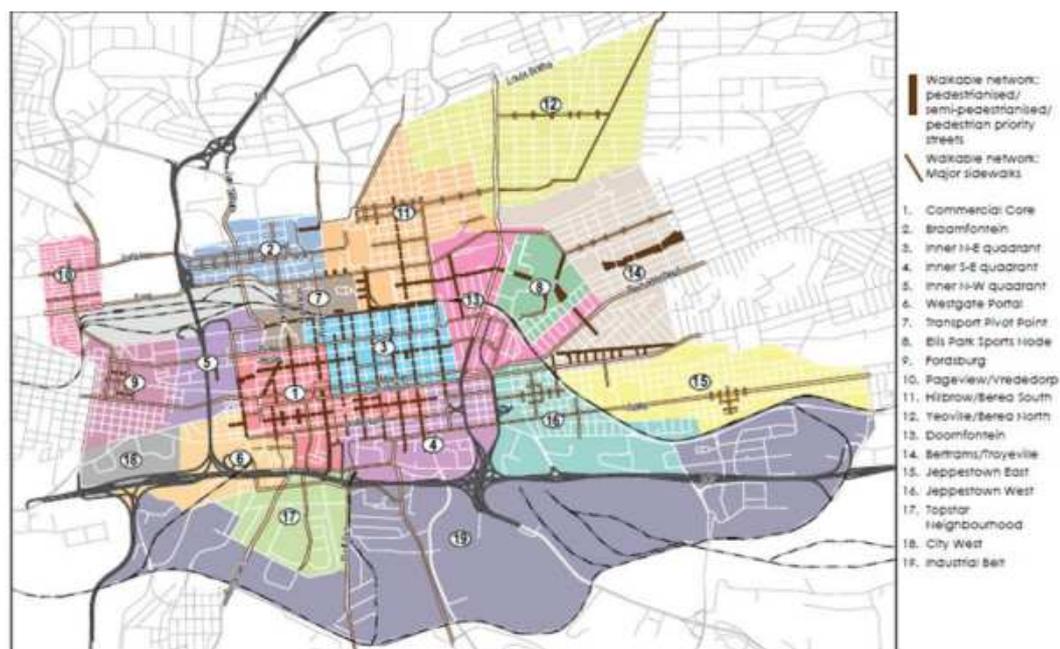


Figure 6.1: The spatial representation of the inner city of Johannesburg. Source: City of Johannesburg Municipal Spatial Development Framework (2016/17)

The inner city of Johannesburg is planned and developed into various land-uses, this is influenced by one of the justifications of municipal spatial development framework which emphasis mixed-land use development in the city to address the past spatial injustices of spatial segregation, development fragmentation, lack of connectivity etc. Above in figure 6.1, it is represented that across various areas of the city there are portions of mixed-use development mainly consisting of residential, business, commercial, recreation, industrial, municipal, transportation etc. This type of development continues to prove the commitment of the city to employ tools of spatial planning and development to improve the quality of life in the city. Over the past years, the city of Johannesburg has been earmarked the most growing city in the SADC region and economic hub of South Africa based on the development systems adopted by the city.

## 6.2 Challenges that hinder appropriate living conditions and Urban transformation

The National Development Plan (particularly, Chapter 8: Transforming Human Settlements) and Integrated Urban Development Framework (IUDF) emphasize that spatial planning and space development in cities are the primary priorities for reducing inequalities, poverty, unemployment and managing high urbanisation rates in South Africa. The city of Johannesburg is faced with urban challenges of high urbanisation rates, basic service delivery, high rentals and unemployment (specifically youth unemployment) which require intervention at a city-level and other organs of the state. Prioritizing spatial planning initiatives, targets, development investments, plans and sustainable legislative frameworks can assist the city in strengthening economies, boost quality of life through creation of employment, social inclusion, spatial justice and sustainable development.

Through engagements with municipal officials using interviews and questionnaires, it is safe to conclude that the City of Johannesburg is confronted with massive spatial paradox, where socio-economic development investments tend to intensify existing spatial segregation and developments fragmentations, particularly in urban areas. The city of Johannesburg demonstrates the need for institutional coordination in various parastatals of the local government to enhance the city's spatial transformation vision as envisaged in Municipal Spatial Development Framework.

### 6.2.1 Service Delivery

The city of Johannesburg through its spatial planning and development tool, Integrated Development Plan (IDP) that is reviewed annually, committed itself to provide adequate access to basic service delivery across all households of the city. The basic service delivery in the city of Johannesburg is currently high with the number of households in both (formal and informal areas) having access to sanitation (96.4%), electricity (92.3%) and piped clean water (98.8%) in 2020.

Service	Households Serviced %	Approximate Backlog in Households	Backlog %
Housing (formal dwellings)	75.1%	448 200	24.9%
Water	98.8%	22 200	1.2%
Sanitation	96.4%	66 601	3.6%
Electricity <sup>19</sup>	92.3%	133 540	7.7%
Refuse removal	92.9%	131 352	7.1%

Figure 6.2.1: Service delivery and backlogs in the city of Johannesburg. Source: City of Johannesburg Integrated Development Plan (2020/21)

The city has a total of 1.8 million households currently in 2021 and of these households, the aforementioned service backlogs have been realised (refer fig 6.2.1 above): formal dwellings (24.9%), Water (1.2%), sanitation (3.6%), electricity (7.7%) and refuse removal (7.1%). These backlogs are a cause for concern because there continues to be evidence of a deficit, specifically in informal settlements in which less than 50% of the households have access to basic sanitation. The following backlogs are manifested by the high population growth in the city and expansion of informal dwellings developing from illegal land invasions which have led to almost 211 informal areas between the years 2016 and 2021 (Oranje, 2014).

### 6.2.2 Too many Spatial planning and development strategies

There are multiple planning and development strategies introduced at the national, provincial and city-level which may derry the focus of development goals, due to contradiction of one another. For example, the NDP has realised the negative impacts that its inefficient spatial arrangements impose on the urban poor group and introduced the new spatial transformation that transform economic activities and livelihoods for the poor, while reducing high levels of urbanisation (National Planning Commission, 2011). Meanwhile, the city of Johannesburg used the Transit-Oriented Development as a tool to fight spatial inequalities to bridge the gaps of jobs-housing mismatch. The corridors of freedom strategy which is a resultant of the Joburg 2040: Growth and Development Strategy is the spatial vision of the city to allow the urban citizens to have increased freedom of movement and allow people to live closer to economic opportunities and allow access to jobs or places of learning to the unemployed groups also bring school learners closer to the schools in the city (City of Johannesburg, 2014). Too many strategies and legislative frameworks of spatial planning and development may contradict each other, address spatial visions differently and introduce different approaches on how to deal with transformation which is a setback for sustainable development goals. There

is a need for uniform and single priority strategy that address development and spatial planning across various cities and the country regions.

### 6.2.3 Proliferation of Informal Settlements

The majority of informal settlements in the city has been developed before the year 2000 with approximately 135 settlements erected already after this record, there were no new informal settlements developed after the year 2003 (Oranje, 2014). Currently, statistics shows that the percentage of the city's households living in informal areas is below 7.51%. According to Housing

Development Agency Status Report (2016), there has been a greater increase in the number of population residing in formal dwelling within the city of Johannesburg since the year 2001. Between 2000 and 2001, almost 77% were residing in formal dwellings, by the year 2011 this number has increased to 81.5%. In addition, the number of households residing in shacks and not backyards has decreased by 8 228 form atleast 125 750 over the period of ten years meanwhile the number of households living in shacks instead of backyards has decrease to 9% in 2011 from 13.1% in 2001 (Gauteng Dept of Human Settlements, 2015). According to Census (2011), the city of Johannesburg has recorded a database of 180 informal settlements across various regions of the city.

### 6.2.4 Transportation challenges

The city of Johannesburg is faced with numerous mobility challenges. There are key public transport interventions and implementation introduced such as Gautrain system (project invented provincially) and Bus Rapid Transport (Rea Vaya) system (project led by the city), they both play an important role in a new era of inclusive mass public transit between regions of the Gauteng province and at city-wide level. However, the utilization of these modes of transport is relatively low as compared to other existing modes of transport such as the minibus taxi system which consume 45% of the city's commuters. Even thou the minibus taxi industry is proven as unreliable, unstable and normally associated with violence, criminal activities and use of poor quality of routes. This effect has resulted in 28% of the residents using their private cars with aorund 4% to 0.5% people using Rea Vaya BRT or metrobus as well as Gautrain (Turok, 2014). In this regard the city's sector for transport continues to lead with 38% in terms of carbon emission as compared to other sectors including the industrial sector with 28% and residential sector with 26%.

### 6.2.5 Unemployment in the city

Despite efforts of growth over the past ten years and the city of Johannesburg's status as the economic engine of the national economy adding to 16% of the country's GDP, the city economy still show traits of unequal city economies in the world. Formal employment have not matched the standard of the GDP growth, given that only 12% of formal job opportunities were traced in the city and currently the city's unemployment rate is at 32.7% with youth unemployment estimated to be above 40% (City of Johannesburg IDP, 2020).

Based on figure 6.2.5 above, it is shown that unemployment rate in the city of Johannesburg in 2019 was estimated at 26.5%, which has increased with 3.19% in a period of one year from 2018. The unemployment rate in Johannesburg is relatively low as compared to the provincial rate of Gauteng. In 2018, South Africa recorded unemployment rate of 27.18% which shows an increase of 3.59% from 23.60% recorded in 2008. Meanwhile, currently unemployment in Johannesburg is recorded at 32.5% in the year 2021.

## 6.3 The implications of adopted spatial planning and development systems in the City

The city of Johannesburg first development its Growth and Development strategy in the year 2006 as a strategy for long-term development path for the city. During this time other strategies were in place such as Joburg 2030, Human Development Strategy (HDS), City safety strategy and the Integrated Transport Plan. Currently, the city development the Joburg 2040 Growth and Development Strategy which provides an opportunity for the city to consolidate all the spatial planning and development systems into a single cross-city strategy. This strategy also serve as a guideline to the conceptual foundation of the five-year Integrated Development Plan of the city.

The Growth and Development strategy, 2040 is an effective strategy that seeks to identify the type of the society that the city aspires to attain by the year 2040 (City of Johannesburg, 2011). Nevertheless, The

Joburg Growth and Development Strategy 2040 is a contemplate for medium-term, strategic and spatially-oriented plans of housing, infrastructure, transport sectors and service delivery. Furthermore, this city Growth strategy does not delegate/outline the functions, operational activities and institutional powers. On the other hand, it directs a set of strategic guidelines that shape the five-year city IDP together with other supporting medium-term plans.

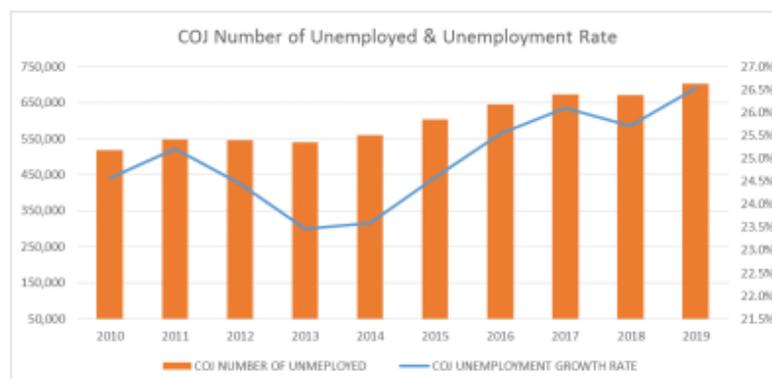


Figure 6.2.5: Unemployment Rate in Johannesburg. Source: City of Johannesburg IDP (2020/21)

The city of Johannesburg Spatial Development Framework 2040 (SDF) is known as an adopted city-wide spatial policy document that outlines the main city challenges and spatial development opportunities derived within the city, sets out a spatial vision of the metro and identifies the strategies to achieve the visions set by the city. This spatial policy document advocates for transformation zones which include the areas that are prioritised for investment to deal with future urban intensification, urbanisation and urban growth. The transformation zone also outlines areas where the development of informed spatial plans and visions will be prioritised, especially previously spatially disadvantaged areas such as townships.

The SDF emphasis the strengthening of the metropolitan core employing various measures such as Inner City Transformation Roadmap, Transit-oriented Development, Inner City Housing Implementation Plan and improving on the opportunities of the City centre as a congested economic hub of the city and addressing arising challenges such as fragmented spatial development, criminal activities, lack of affordable social housing, delayed service delivery etc. This strategy is based on developing a compact precincts of inclusive mixed use development densification surrounded by public transit and economic opportunities. In addition, the implications of this strategy is to support support economic nodes in the Inner city through different interventions such as investment programmes in engineering infrastructure and social facilities (Ebrahim, 2017).

The Corridors of Freedom strategy as envisaged in the Joburg 2040 Growth and Development strategy prioritize measure of consolidating development and urban growth opportunities around the current and future transport nodes, which are mobility spine to the city starting from the Corridors of Freedom integrating Soweto (South Western Township), through the Central Business District to Sandton (along the Louis Botha Ave and Empire-Perth) and also integrating Turffontein into the CBD. This strategy enhance the focus towards the Transit-Oriented Development nodes such as Rea Vaya (Bus Rapid Transit), PRASA and Gautrain stations. The vision of the corridors of freedom is to transform the entrenched patterns of settlements within the metro which have placed the majority of the citizens to the outskirts of the city, where there are no economic opportunities, access to adequate housing, jobs and growth. This strategy aims to increase the norm of people-oriented city where the needs community needs, comfort and socio-economic well-being are at the core planning of the city.

## 7 CONCLUSIONS AND RECOMMENDATIONS

Spatial planning and development systems shape the urban built environment, on the other hand, the built environment dictates the extent to which cities are sustainable, productive, inclusive and well developed (Harrison & Todes, 2015). This study is centred around assessing the efficacy of spatial planning and development systems in improving the living conditions of the society in the city of Johannesburg, throughout the study the city space was examined closely as the epicentre of understanding the state of the city in terms of the status-quo of quality of life, service delivery, land use planning and development

strategies that are applicable to the city. However, the spatial configurations of the city have been altered by various dimensions of development such as inclusivity, finances, governance, productivity and sustainability. Using various methodologies of data collection, i.e interviews, questionnaires, desktop tools, observations and others; the study realised the immediate urban challenges which require greater attention in the city such as addressing urban sprawl, exclusion, development fragmentation, unemployment, transport issues, proliferation of informal settlements and inadequate service delivery. Therefore, the city need to change the perception of solo-driver in the functions and activities that inform spatial change, there is a need for collaboration across various stakeholders in making decisions of the space as well as development.

The Joburg 2040 Growth and Development Strategy provided an initiative of Transit-Oriented Development (TOD) through the Corridors of Freedom programme, the TOD strategy has the capabilities to consolidate and transform zones around the inner city that requires spatial redress and justice through integrating the peripheral, poor settlements/townships with mixed-use, nodal development of industries where the economic and social opportunities exist. The findings of this study reveals that the land use in the City of Johannesburg is predominantly assigned for residential, industrial, business, commercial, recreational etc, which are nodal development requirements to promote economic growth, improved quality of life and facilitate sustainable development. The Land-use management and spatial planning approaches in the city should facilitate a direction for prioritising human well-being, economy, residential activities and investments.

There is an urgent need to apply measures and empowering instruments that enable participation of the urban communities in finding solutions to their urban challenges through active engagements with the city officials and other relevant stakeholders. In order to address these urban challenges of urban sprawl, proliferation of informal settlements, lack of connectivity, high urbanization rates and poor service delivery; there is a need to reflect on the effectiveness of the current spatial planning and development legislative frameworks and strategies, identify their critical gaps and progress in terms of achieving the desired society and urban development in the city (Integrated Development Framework, 2016).

To improve the standards of living in the city, attention should be given to spatial policies that drives the development of infrastructure, economic growth and social inclusion. This can be attained by making sure there is an adequate public participation in decision-making of developments in their space, also foster relationship between the informal and formal sectors of economy to boost the economy and livelihoods of the urban poor. High urbanisation rates and Proliferation of informal settlements can be dealt with by decentralizing small-scale activities to the outskirts such as manufacturing activities.

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