LINKING ECONOMIC DEVELOPMENT AND SPATIAL PLANNING IN SOUTH AFRICA: A CASE STUDY OF STATE-MARKET RELATIONS IN CAPE TOWN

Submitted in partial fulfilment of the requirements for the degree of Masters of Commerce in Applied Economics: Economic Development Specialisation

Lisa Higginson (HGGLIS001)

Supervisor: Professor Anthony Leiman

February 2016

ABSTRACT

In South African cities institutional practices and market forces are seen to reinforce spatial divisions. This dissertation reflects on the relationship between location fixed resources, market forces and state intervention and how the interaction of these factors influence urban spatial outcomes. It first develops the underlying economic theory that could inform good planning practice and then illustrates how state-market relations have had an impact on urban spatial outcomes in South Africa's recent history. These insights are then used to describe the spatial development of Cape Town and identifies ineffective and counterproductive interventions and illustrate how economic theories and concepts can be used to inform good planning practice. It concludes with the direction for further research and collaboration between economists and planners to improve planning and policy making in South Africa's cities.

PLAGIARISM DECLARATION

COMPULSORY DECLARATION:

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people has been attributed, and has been cited and referenced.

Signature: ……Signed by candidate…. Date: ……15/02/2016……

ACKNOWLEDGMENTS

This dissertation would not have been possible without the guidance and help of my supervisor, Anthony Leiman. Thank you for your endless patience.

CONTENTS

1. INTRODUCTION

1.1 Background

The location and distribution of economic activity is a central part of the process by which economic growth and wealth creation occurs (Krugman 1991; Martin and Sunley 1996). It is increasingly recognised that economic growth and development tends to be distributed unevenly across space and production tends towards agglomeration in a few places. The gap between poor and prosperous regions has not narrowed as predicted by the convergence thesis of development economics and the role of cities in growth and development processes, at local, regional, national, and even global scales, is becoming increasingly important (Jacobs, 1969; Romer, 1986, 1989; Krugman, 1999; Naude & Krugall, 2004; Glaeser, 2012). The need to understand the process by which cities emerge and develop is becoming more acute as economies expand and mature, and urban problems intensify.

Ancient cities emerged as innovations in agriculture allowed for the production of surplus of food which formed the basis of early exchange and freed up labour for non-agricultural activities (Clarke, 1950; Taylor, 2012). The availability of new power sources and the invention of the steam engine in the early eighteenth century, initiated the industrial revolution leading to large scale factory production, and with it the extension of trade, and skills specialization (Allen, 2006). The uneven distribution of raw materials coupled with transport costs tended to favour the concentration of industry in certain locations, as predicted by models of comparative advantage. The expanding industrial labour force required housing close to factories, as well as other services which could only be efficiently provided in urban areas. Industrial towns and cities grew, and complementary economic sectors expanded to meet the rising demands of local inhabitants and firms. While in some respects the industrial revolution was seen as a transition that marked a permanent improvement in the living standards, unplanned urbanisation resulted in overcrowded settlements, and a host of problems, including crime, disease and hunger (Button, 1976).

These problems became more severe as urbanisation rates continued in excess of the capacity of the economy to absorb additional labour, to such an extent that without state intervention, the momentum of the industrial revolution would be undermined. In the early 1800s a number of policies were introduced to combat the direct impacts of urbanization and industrialisation giving rise to progressive movements, and the emergence of urban planning.

For the most part developed nations have established a fairly stable population and the urban challenges facing planners revolve around meeting the needs of existing inhabitants in an increasingly volatile global economy (Button, 1974). Developing countries, on the other hand, are urbanising rapidly and the urban challenge is to generate sufficient growth to meet the needs of a increasing flow of migrants into cities through the provision of housing and social facilities and the creation of urban economic employment opportunities (Overman and Venables, 2010).

In South Africa, the urban population has increased from 35% in 1951 (Vacchiani-Marcuzzo, 2005 in Turok, 2011: 3) to 63% in 2011 (Stats SA, 2011) and could reach 77% by 2050 (UN, 2012). The decision to remove influx controls without first addressing key issues such as land tenure, housing provision and employment, resulted in rapid, unplanned urbanisation and the establishment of overcrowded, inefficient informal settlements on the outskirts of towns and cities. The policy response has been largely driven by the objectives of spatial transformation through spatial planning and policy, with an emphasis on housing and transport (Sinclair-Smith & Turok, 2012).

Insufficient consideration of how the urban economy contributes to the process of redistribution through tax revenue for public expenditure and employment creation is seen to have had significant impacts on urban growth and urbanisation prospects (Bhorat & Kanbur, 2006). Poorly planned developments can have long lasting effects on urban form and function due to the path dependence of social, economic and political structures. Ineffective or counterproductive interventions waste public resources that could be better utilised elsewhere, the need to understand the theoretical basis for planning and to ground discussion about policy innovations on theory and empirical evidence is crucial (Sinclair-Smith & Turok, 2012).

Historically, and globally, urban policy and planning approaches have been heavily influenced more by engineering, architecture, urban design and planning than by economics or social sciences (Nathan et al, 2014). However, cities are social and economic systems, in which market forces, governed by the interaction of the individual decisions of economic agents, determine the nature of urban spatial outcomes. The degree to which market forces are constrained, encouraged or shaped in urban policy and planning strategies, remains an important factor in determining the evolution of urban form (Geyer et al, 2011). Similarly, in some cases, of which apartheid spatial planning is an obvious example, ideologies can determine the urban form, which often results in considerable costs to society (Bertaud, 2000; Cheshire et al, 2012; Cheshire, 2009).

Just like cities and urban studies have experienced a resurgence of interest, economic theories and concepts are increasingly being recognised as valuable tools for understanding and solving urban problems (Cheshire et al, 2014). Whereas traditional neoclassical explanations for the uneven distribution of economic activity across space emphases comparative advantages based on physical characteristics and resource endowments, more recent theories, building on theories from location theory, spatial competition, development economics and other contributions, emphasise instead the role of market forces in the spatial development of places, leading to divergence in growth paths (Redding, 2010). Given the focus of these theories, it is surprising that economists have, to date, contributed very little to the design, implementation and evaluation of urban policy.

Disciplinary divisions are in part responsible for the skewed focus of post-apartheid spatial intervention (Sinclair-Smith and Turok, 2012), but these may be more perceived than real, and based on misperceptions, rather than fundamental differences. More recently, it has become clear that both planners and economists have a role to play in the formulation and evaluation of urban policy, as planners and policy makers are becoming increasingly aware of the importance of understanding markets forces and their impacts on urban form and function and the interaction with proposed interventions (Turok, 2012; Watson, 2002; Todes, 2008). The urban economy provides both tax revenues for public expenditure and jobs for people. Poorly planned developments and ineffective or failed policy interventions waste public resources that could be better utilised elsewhere.

In many developed countries, approaches to urban policy and planning have changed significantly to incorporate changing trends in political ideologies and economic structures, resulting in more market driven or mixed approaches. Planners in the new South Africa have struggled to balance economic growth and social development, an objective stressed in successive economic development plans and strategies. The existing tools used in urban policy and planning have had limited success in achieving desired social and economic outcomes. These dynamics provide a strong motivation for rational and evidence-based spatial planning decisions.

1.2 Research question

In light of this, this thesis aims to explore the applicability of economic theory and models to the understanding of the urban economy to inform urban policy and planning in South Africa. The following questions arise:

- Which are the most important theories and concepts from economics for understanding South African cities?

- To what extent, and in what ways, can the state intervene in spatial urban development, through planning and policy across different spheres?
- How has the interaction between market forces and policy intervention shaped the development of South African cities?
- How can economic theories and concepts be incorporated into the design, implementation and evaluation of urban planning and policy in South African cities to improve outcomes?

The complex networks and feedback loops that exist in cities, necessitate the broad scope of this dissertation and specificity is sacrificed in order to build and present a deeper understanding of how cities work.

1.3 Theoretical framework

The international literature concerning urban economics, planning and urbanisation has grown rapidly and over the past few decades, and urban theorists have made some progress in their attempts to analyse the multiple and complex socio-spatial origins of economic structures, and how the spatial location of economic activities, people and amenities relate to the local, regional and national economy, however, the review of the literature failed to identify a single framework for analysing the numerous urban spatial challenges and the implications for economic growth and development.

Richardson (1973) argued that the complexity of urban systems has prevented the formation of a general theory of the urban economy. Storper's (2010) view is that the interaction of unique, context and place specific forces that determine spatial economic development can neither be modelled nor examined analytically and warned against attempts to do so. Great proximity generates an abundance of externalities, often exacerbated by widespread affluence and the presence of technology. High degrees of production specialisation, particularly in light of information costs, further contributes to the emergence of interdependencies that are difficult to analyse using traditional tools and models.

Nevertheless, complexity should not prevent the development of theories. Social science, as the study of complex human interactions cannot be examined in the same way as natural science. Different theories can illuminate different aspects of problems facing planners. Understanding the microeconomic foundations of urban problems is a key step to gaining insights that lead to effective and innovative policy responses.

The theory review draws from an extensive body of literature with origins in international trade theory, urban economics, location theory, geographical economics, development economics and

growth theories, to gather insights on the influence of market forces, on urban spatial development. The role of planning is examined in terms of two key functions; the regulation of markets and spatially targeted investments to rebalance, and facilitate economic growth.

The third function of planning, is the provision and management of public goods which involves the determination of the optimal level of public goods provision and by extension, the optimal local tax level. In general, local authorities finance public expenditure through property taxes (or rates), central government grants, revenues from certain services, external or international funding and loans. Numerous studies have been conducted in this regard (Brueckner, 1979, 1980; Selod and Zenou, 2003; Stiglitz, 1977). Most of these face significant challenges in the measurement of the impacts of different levels of services and facilities and as a result, many concluded that it is essentially a political decision. Samuelson (1954) demonstrated that the market system was not capable of determining optimal allocations and that some form of voting or signalling would be required.

In light of this, the emphasis is on the first two functions, which tend to have much greater economic significance.

1.4 Structure

Chapter 2 presents an overview of the key theories and models from economics that are relevant for urban planning. The chapter is roughly divided in two. The first section focuses on the factors that influence the spatial distribution of population and economic activities in cities drawing from traditional location theories, urban economics and geographical economics to illustrate the influence of market forces. The section is structured around the growth, nature and performance of cities. The second section provides the economic rationale for intervention on the basis that markets fail to allocate resources efficiently in urban areas. On the basis of this, the section explains the economic approach to urban policy and planning using selected economic tools.

To answer the second research question, Chapter three reviews the laws, policies and regulations related to urbanisation and urban economic structure, implemented in South Africa before, during and after apartheid.

Chapter four examines urban spatial policies and plans in the City of Cape Town and traces the local impacts of national and local policies, and the interaction of these interventions with market forces.

Chapter five present an overview of the findings of this study.

Chapter six concludes with a discussion of the limitations of this study, as well as suggestions for further research.

2. HOW DO URBAN ECONOMIES WORK?

The study of cities in economics, which is primarily interested in individual location decisions presents problems of great, indeed increasing complexity. Yet the need to understand the problems of location and the space economy is becoming more acute as economies expand and mature and urban problems intensify.

This section attempts to explain how urban economies work drawing on theories from different branches of economics.

2.1 The growth of cities

Cities generally grow in their capacity for economic production and population size as nations urbanise (Annez & Buckley, 2009). The rate of population growth depends on natural growth rates and population movements, which are influenced by economic conditions, amongst other factors such as weather and security.

Urbanisation and the social problems associated with unplanned urban expansion was a key concern in the wake of the industrial revolution. For the most part developed nations have established a fairly stable population and the urban challenges facing planners revolve around meeting the needs of existing inhabitants in a volatile global economy (Button, 1974).

Developing countries in Africa, on the other hand, have been experiencing unprecedented urbanisation rates. In these countries, the accelerated growth of urbanisation has amplified the demand for key services which are not being properly addressed. This transformation was to some extent, caused by the post-independence macro-economic policies by some countries that incentivised urbanisation (Todaro, 2000). These policies include the encouragement of large-scale capital intensive industries in large cities in order to create jobs. Coupled with policies relating to agriculture subsidies which keep food prices low for urban consumers at the expense of farmers and rural consumers, it is evident why there exists such rapid rural-urban migration (Hove, Ngwerume & Muchemwa, 2013; World Bank, 1989). The initial investments in the private sector which created the rapid urbanisation through intimal employment has resulted in an increased demand for social services which is not being met. Hove *et al.* (2013) suggest the private sector will be unlikely to invest further, until these conditions are met; which causes stagnant employment and an eroding tax base for addressing the increased service demand. However, research on how to appropriately address the urbanisation process includes many different theories.

Early development theorists like Rostow (1960) described the urbanisation process as a transition that occurs through a number of stages of economic growth, beginning with a traditional society that undergoes technological change and results in urbanisation.

Lewis (1954) formalised this idea in the context of surplus labour that was assumed to be available in most developing countries. His theory followed the traditions of neoclassical growth theory, where savings are reinvested into capital which leads to growth; however, the focus of the model was how the labour market would drive growth. Basically, the model is based on a two sector economy, the traditional (subsistence) and the modern capitalist sector. Lewis assumed that surplus labour exists in the rural areas where many workers are involved in traditional subsistence activities with negligible marginal productivity. Labourers in the modern sector, on the other hand are productive, using reproducible capital and earn incomes based on their marginal product. As such, a wage differential exists between the sectors, such that subsistence labour would migrate to the more productive sector which would expand further as profits are reinvested in capital. The transition would occur in two stages, separated by a "Lewisian" turning point. In the first "labour abundant" stage, there would be rapid migration to the capitalist sector. Eventually, the surplus labour is exhausted and removing additional labourers would be to the detriment of the subsistence sector. Since there are fewer subsistence workers, their wages increase, since their wages are determined by the average product. Workers are less willing to move to the capitalist sector as the wage differential diminishes and as a result industry must increase wages to attract workers. At higher wages, profits are lower and capital accumulation slows resulting in lower economic growth. A number of studies have been conducted in South Africa on wages and unemployment (Kingdon and Knight, 2004; 2005; 2006).

The insights from the Lewis model were tested extensively in different contexts with mixed results. Knight (2007) applies the Lewis framework to examine labour market progress in China and South Africa, two labour abundant countries in which urbanisation controls and measures have been implemented in the past. He finds that although the model provides insights on certain aspects of the development and urbanisation process in these two countries, the relative price mechanism of the theoretical model, which they attribute to government price intervention and trade policies fails in practise. For instance, changes in agricultural prices have been determined more by the reduction of government price interventions and by trade liberalisation (Knight, 2007).

Several extensions and modifications of Lewis's original model have emerged, the best known being Fei and Ranis (1961), who incorporated the role of agriculture in boosting growth of the industrial sector into their extension of the Lewis model by adding a third growth phase. The first phase is

similar to the Lewis model, in that surplus labour in the agricultural sector leads to migration of idle workers to the more productive industrial sector. As workers leave the subsistence sector, the average product of each labourer increases since fewer workers are doing the same amount of work, thereby increasing agricultural productivity and wages in the sector.

A further criticism of the Lewis model is that it assumes that migrants make rational decisions based on perfect information. This implies that the process by which subsistence workers shift to urban industrial sectors would continue only until the surplus labour is fully absorbed, signalled by the market through wages. The experience of several developing countries, where rural-urban migration continued despite increasing urban unemployment cast serious doubt on the applicability of the Lewis Model to the urbanisation process.

The Todaro model is described as an “economic behavioral model of rural-urban migration” (1969:138), which represents a realistic modification and extension of the simple-wage differential approach implied by both Lewis (1969) and Fei & Ranis (1961). The model assumes that the decision to migrate is determined by the expected rural-urban wage differential based on the perceived probability of obtaining employment in the urban sector. The expected wage differential has a time component, since the probability of finding work varies with time. As a result who remain unemployed are unlikely to rural areas because they believe that there is still a chance of finding employment in the future.

Todaro (1969) and Harris and Todaro (1970) proposed policies to divert migration from crowded areas by creating opportunities and providing services in rural areas. They believed that bringing "bright lights of the city" to the country-side would be a more effective strategy for addressing “overurbanisation” and noted that measures that improve urban living conditions, in the absence of improvements in rural areas would induce further in migration.

The Harris-Todaro model was developed to analyse the impacts of migration constraints, including shadow price policies, direct migration controls and mixed strategies. Overurbanisation, had become a serious concern and by 1977 and 113 out of 119 developing countries surveyed by the UN considered the distribution of their population unacceptable. Further, they found 94 countries that had adopted some form of policy aimed at population movements (Todaro and Stilkind, 1981) although the success of these policies was mixed (Simmons, 1981).

The difficulty of imposing migration restrictions is that in most cases the rural poor are simultaneously “pushed’ to the cities by declining local opportunities and “pulled’ by expectations of higher income and access to services along with a number of non-income factors like crime and

social cohesion (Todaro and Harris, 1970; Natrass, 1983). The tension between these forces emphasized the importance of considering rural poverty and urban growth simultaneously in order to devise policies that would benefit society as a whole (Todaro and Stilkind, 1981).

These models are all based on Ravenstein's (1889) "push-pull" process whereby unfavourable conditions in one place "push" people out, and favourable conditions in an external location "pull" them out. Dual sector models ignored the role of the informal sector in the urbanisation process. Fields (1975) addressed this and hypothesised that the decision to take up informal employment, would influence the likelihood of finding formal employment since those in the urban informal economy (UIS) are assumed to have less time to search for jobs. Fields (1990) further advanced this notion by distinguishing between temporary and permanent employment in the UIS, where temporary employment was generally taken up by those searching for work, and permanent employment was the result of a conscious decision to work in the informal rather than formal sector.

One of the key limitations of the standard urbanisation and migration models from development economics is that they fail to incorporate the dynamics (i.e. preferences of labour force and the exclusion of the informal sector) of the urban economy into the analysis.

2.2 The nature of cities

The rise in the number, size and significance of cities inspired a great deal of interest across academic disciplines in the nature of cities and the distribution of economic activities and households in urban areas. While planners tended to focus on the structure of cities, made visible by their built form, economists, have studied the underlying market forces that influence the spatial distribution of economic activities and households.

Essentially, cities are social and economic constructs (Jacobs, 1961). They exist because of the way in which they encourage specialization, and facilitate the exchange of ideas and knowledge through social interaction (Cheshire & Sheppard 2012). The urban form is determined by the interaction of individual economic decisions, which are in turn, influenced by natural and manmade geographical features.

- Households make choices about whether to move, and if they move, where to locate, driven by utility maximisation.
- Businesses make similar decisions, driven primarily by profit maximisation.

- Developers choose which sites to develop or redevelop and into what use
- Governments invest in infrastructure, and make decisions about where investment should be focused.
- Governments also place constraints on development in the form of controls, regulation and incentives

The interaction between these individual or group decisions, is facilitated by markets. Markets emerge spontaneously from the interaction of decision makers and decision outcomes, based on willing buyers and sellers, establishing prices for goods and services that provide key incentives and signals. Competitive and efficient markets require the free flow of information, the protection of property rights, managed or negligible externalities, and enforcement of contracts. In cities, where multiple stakeholders exist in close proximity, these conditions may not always be met, and interventions are required to coordinate and facilitate transactions towards socially optimal outcomes.

The logical structure for the presentation of these theories is based on two leading concepts; location fundamentals, and what are termed in the literature as second nature geographies which include forces which drive agglomeration and dispersal of households and economic activities.

2.2.1 Location fundamentals and distance

Locational fundamentals theory relate physical and economic characteristics of locations to the form and function of urban areas. Here the traditional Ricardian theories based primarily on land, are extended to incorporate a more detailed description of location specific characteristics at different scales including transport costs, amenities and activity specific characteristics that make some locations more attractive than others for different types of economic activities.

2.2.1.1 Land Use and Rent

Adam Smith, in *The Wealth of Nations* (1776), hypothesized that the physical geography of a region could influence its economic performance. He claimed that the levels of rent were dependent on the intensities of land use and that both rent and land use varied with distance from a point of maximum access (Blaug, 1985:49). Ricardo (1809) is credited with the first clear and comprehensive analysis of land rents, following insights from Smith. Ricardo's law of rent states that the rent of a land site is equal to the economic advantage obtained by using the site in its most productive use,

relative to the advantage obtained by using marginal land for the same purpose, given the same inputs of labour and capital (Blaug, 1985:88).

One of earliest formal land use models was developed by von Thunen (1826) who first considered the importance of transport costs in the determination of the spatial distribution of different land uses around a central market place. Unlike Ricardo, von Thunen believed that transport costs would consume some portion of land rent, which implied that distance was also an important factor in location decisions. Land use patterns that emerged in the economy through competitive markets for goods, labour and land would form a system of concentric rings of production around the central market, determined by the land rents and transport costs associated with different land uses (Blaug, 1985:616). The key result of the model is that rents vary inversely with distance from the markets, decreasing smoothly with distance from the centre, representing the trade-off between rent and transport costs, a concept that was revisited by Alonso (1964) and applied to cities and residential locations. In some cases, this results in a concentration of more wealthy households in the city centre, with poorer households confined to cheaper land on the periphery (ie Paris and Cape town), while in others, the opposite is true, where inner city areas are inhabited by the poor in (ie Detroit, Durban and Johannesburg) which gave rise to numerous extensions and application of the standard model, by incorporating amenities, industrial externalities, physical geography and other factors. These are discussed in Section **Error! Reference source not found.**.

2.3.1.2 Industrial location

Early theories, of which Weber (1909) is most well-known, were concerned with location decision facing an industrial firm looking to minimise production costs. Initially, he argued that transport costs were the most important determinant of a firm's location choice, and, in order to maximize profits, the firm would choose the location that minimized total transport costs where these were determined by the costs of transporting inputs and outputs (Blaug, 1985:627).

The transport costs were based on the "material index", that is, the ratio of weights of inputs to the final product. Using this logic, Weber considered that in general, production could be divided into weight gaining and weight losing activities. Weight gaining activities would aggregate several inputs leaving heavier individual outputs (e.g. soft drink bottling plant) while weight losing activities would have heavier inputs leaving a residual waste and a lighter output (aluminium smelters). The result of these ideas is that firms with similar material index would generally locate in the same area, leading to localization economies and thus agglomeration. Weber later considered that the firm would have to consider labour costs and the costs and benefits of locating close to other firms and industries.

The result was that in some situations, firms would have an incentive to locate in areas other than those determined strictly by transport costs.

As an example, consider a labour intensive firm that locates in a sparsely populated area that is close to the source of raw materials required for production. The firm will likely save on transport costs of raw materials but may have high wages to attract workers to the area. If the additional cost of labour exceeds the saving in transportation costs, the firm would be better off in an alternative location, closer to a pool of labour. The ability of decision makers to accurately weigh up the relative costs and benefits of different locations to make trade-offs is difficult to predict, and the logic of the model may not always be realised.

Hoover (1971) provides an illustrative synthesis of these various factors, with examples.

Process Characteristics	Orientation	Examples
Physical weight loss	Input	Smelters, Sawmills
Physical weight gain	Output	Soft drink bottling, manufacture of cement blocks
Bulk loss	Input	Compressing cotton into high density bales
Bulk gain	Output	Manufacturing containers; sheet metal work
Perishability loss	Input	Fish processing
Perishability gain	Output	Newspaper (and job) printing; baking bread
Fragility loss	Input	Packing of goods for shipment
Fragility gain	Output	Coking of coal
Hazard loss	Input	Deodorizing captured skunks
Hazard gain	Output	Manufacturing explosives; distilling moonshine whisky

Table 1: Types of input oriented and output oriented Activities (Adapted from Hoover, 1971:47)

While this shows the range of decision criteria, based on different types of activities, which implies that firm location decisions, in this case for industrial activities, are difficult to generalise, it does point to some predictable factors that can be used to determine the location potential of different areas, for different uses.

One criticism of Weber' theory was that it was devoid of price analysis and market structure. That is, his theory did not consider any endogenous determination of the prices of inputs and outputs. Partly for this reason, his industrial location theory was not sufficiently appreciated by economists in later periods who ascribed this limitation to the historical constraints on economic analysis where, neither

the non-competitive theory of markets nor game theoretic approach to interactive behaviour was well-developed (Fujita, 2010).

2.3.1.3 Market area

Central place theory (CPT) sought to develop a framework for understanding the distribution and size of various settlements. In the flat landscape of southern Germany, Christaller (1933) noticed that settlements of similar sizes were roughly equidistant. To explain this observation he defined a central place or a large city were a number of higher order goods and services are provided (like electronics) surrounded by number of smaller centres where lower order goods and services were provided (ie daily consumables – groceries, newspapers etc). He then defined different goods in terms of two criteria; the range, which was how far consumers would travel to purchase the good, and the threshold, which is the minimum size of the market required to produce the good. Given the assumption that consumers will travel to the closest supplier of a particular product different firms would choose locations with adequate reach in the market.

Using this logic, a system of settlements of different sizes would emerge, with a single large city in the centre, surrounded by numerous smaller settlements described by a lattice of nested hexagons. These patterns conform to observations of modern settlements and cities like Cape Town where the city centre provides specialized goods and services to the greater Cape Town metropolitan areas while smaller nodes like Muizenberg or Wynberg serve as the central place for a smaller market area. Hall and Hite (1970) used CPT to delineate economic areas in South Carolina based on commuter patterns. They suggested that the framework provides a useful approach to regional and local planning. The logic of central place theory is evident in urban planning in South Africa, from as early as the National Physical Development Plan's (1975) rationalization of the spatial economy through the identification of functional areas. The concept of growth and development nodes linked to transport networks in modern urban spatial planning also follows this logic.

Like the previous theories, the model is based on the assumption of a featureless plain which disqualifies the inclusion of location specific factors in the determination of location patterns. This includes physical endowments, and economies of scale introduced by Marshall (1890). Fujita (2010) notes that while intuitively appealing, CPT does not fit the description of economic theory which seeks to explain how patterns emerge through the interaction of various individual decisions. In reality market structures play an important role in the determination of spatial patterns, a feature which was largely ignored in CPT.

2.3.1.4 Spatial Competition and market structures

Separate from these theories, since it is not always considered to fall within location theory, was the contribution made by Hotelling (1929). The motivation for his study was the observation that economic theory had failed to acknowledge the role of location in its models of competition. In the context of this review, the value of his contribution is seen as introducing market structures and competitive theories to location theory. He used location to explain why some consumers will continue to support sellers despite differences in prices. His model, based on a linear representation of location, included the cost that buyers would incur travelling to and from the seller's business premises.

This was the central assumption of CPT, that consumers would minimize transport costs by travelling to the closest supplier, but there was no indication of how prices might vary between different sellers in different locations. Based on Sraffa's (1926) observation that a market is subdivided into regions within each of which the seller is in a "quasi-monopolistic" position, customers will choose a supplier based on prices and transport costs. Thus, if the price asked by the closest supplier is much greater than that asked by sellers of the same product at a further location, the consumer may choose to trade with the further producer if the price difference is greater than the cost of travelling the additional distance). Knowing (or predicting) that consumers behave in this way, firms are likely to choose locations that maximize market share, which results in clustering of firms in a particular area.

One of the key criticisms of this intuitive model is that the linear structure failed to represent reality effectively (Fujita, 2010). Salop (1979) responded to this criticism by developing a circular model, more representative of actual settlement patterns, but still limiting in its spatial representation of areas. The logic is basically the same except that firms are arranged on a circle where each is equidistant from the other and firms can choose only whether to enter or not, based on the interaction between transport costs, population density and fixed production costs. This is an important result, particularly for policy makers seeking to promote density and "live, work, play" lifestyle choices, since in both the linear and circular models, consumers base consumption decisions on prices and transport costs, where movement patterns and car ownership play a crucial role in understanding the distribution of certain economic activities, particularly retail and services. For example, a densification strategy that promotes mixed use development on the basis of local residents purchasing from local outlets, should consider price comparisons and transport costs, as residents may choose to travel to other locations if doing so represents a cost saving, or a better variety of products. What is omitted from the model, is the location decision of households, who

may choose to locate in an area with better facilities, as shown in later models from urban economics.

A common thread in these theories was the trade-off between transport costs and other factors (rent, amenities, market access). Historically, transport costs were a key factor in the spatial allocation of economic activity. Advances in transportation technology have had a significant impact on the spatial distribution of economic activities in the modern world. While the historical significance of transport costs in location decision is uncontested, there is some debate about the importance of transport costs in the present time. Some predicted that lower transportation costs would reduce the importance of strategic firm location decisions. This has not been the case as cities have grown in size, number and importance in the modern economy. Proximity to other firms and labour sources in cities is seen to yield additional benefits to firms. The next strand of location theory is concerned with these agglomeration forces.

2.2.2 Increasing returns and the New Economic Geography

Blaug (1985) reviewed Marshall's (1890, 1891) contribution to the study of the impacts of scale and location on the costs of production. Economies of scale exist when average production costs decrease as scale and size increases, which at the time, had been ignored by other theorists. Marshall is attributed with the following key sources of scale economies that lead to agglomeration of economic activities:

- A pooled market for skilled workers with industry specific competencies (pooling)
- The availability of non-tradable and intermediate inputs provided by local suppliers (sharing)
- Transmission of ideas that lead to increases in productivity (knowledge spillovers)

Scitovsky (1954) distinguished between "internal" and "external" economies of scale, where internal economies are the cost savings brought about by increased production of the individual firm and external economies result from decreasing average costs that comes about with increase in production of the industry as the number and size of firms increase. The source of internal economies, are that firms benefit from specialisation and mass production in locations with access to larger markets. External economies, would benefit the industry as a whole as the goods and services required would become cheaper, at the time, due to lower transport costs.

External economies result in location decisions that depend on the location of other firms and lead to agglomeration. An important distinction that needs to be made is between pure or technological external economies, which affect the technological relationship between factors of production, and

pecuniary external economies, transmitted through the market through price effects. Knowledge spill overs are technological external economies, where ideas and technologies shared across firms change the production function. These effects are independent of size and can exist in perfectly competitive markets. Pooling and sharing are examples of pecuniary external economies, where the production function remains unchanged by the average costs of each individual firm decrease Brakman et al, 2009).

Marshall's analysis tended to focus on the externalities between firms in the same industry. Hoover (1948) recognised that some of these effects could operate across a number of industries if the skills, inputs, intermediate services and production structures were similar. In light of this, external economies were further classified as urbanisation economies (between firms in different industries), and localisation economies within a single industry.

A number of authors have expanded on Marshall's work exploring reasons why firms may choose to concentrate in geographical areas. Firms may choose to locate near consumers to reduce costs of transporting final goods to the market, as in Weber (1909). Access to larger consumer markets can also lead to internal scale economies where production costs are reduced as a result of specialisation. Larger markets often have better public services since there are economies of scale in the provision of certain public facilities, as well as thresholds for particularly expensive factors like airports (Button 1975). The role of linkages has also been explored, particularly in the context of clusters (Porter 1990), which are equivalent to localisation economies (Overman and Venables, 2010).

Table 2 below summarises the different types of internal and external scale economies with examples.

<table>
<tr><td></td><td colspan="3">Typology of scale economies</td><td>Example</td></tr>
<tr><td rowspan="3">Internal</td><td colspan="2">Pecuniary</td><td></td><td>Being able to purchase intermediate inputs at volume discounts</td></tr>
<tr><td colspan="2" rowspan="2">Technological</td><td>Static</td><td>Falling average costs because fixed cost of operating plant</td></tr>
<tr><td>Dynamic</td><td>Learning to operate a plant more effectively over time</td></tr>
<tr><td>External</td><td>Localisation</td><td>Static</td><td>Shopping (forward linkages)</td><td>Shoppers are attracted to places where there are many sellers</td></tr>
</table>

			Adam Smith specialization	Outsourcing allows both upstream input suppliers and downstream firms to profit from productivity gains because of specialization
			Marshall labour market pooling	Workers with industry specific knowledge and skills are attracted to locations where there is greater concentration of firms
		Dynamic	Marshall Arrow Romer learning by doing	Reductions in costs that arise from repeated and continuous production activity over time spill over between firms in the same place
	Urbanisation	Static	Jane Jacobs innovation	Different things are done locally provides more opportunity to learn from and adapt ideas from others
			Marshall labour pooling	Workers in an industry bring innovations to firms but the benefit arises from the diversity of location
			Adam Smith division of labour	Same as above except division of labour is made possible by the existence of many buying industries in the same place
		Dynamic	Romer endogenous growth (circular cumulative causation)	Larger markets -> higher profit -> more attractive location -> more jobs -> more labour -> larger markets
	Pure agglomeration economies			Spreading fixed costs of infrastructure over more tax payers, diseconomies arise from congestion and pollution

Table 2: Scale Economies (Worldbank, 2009:128)

A number of empirical studies have been conducted to test the strength of Marshall's theory as well as a number of additional sources of increasing returns and external economies. These include natural advantages (Kim, 1999; Ellison & Glaeser, 1999), input sharing (Holmes, 1999), home market effects (Davis & Weinstein, 1999) and rent seeking (Ades & Glaeser, 1995; Henderson, 2003).

Rosenthal and Strange (2004) surveyed the empirical literature on the nature and sources of increasing returns and they found that increasing availability of data has drastically increased the scope of studies of agglomeration forces. Overman and Puga commented on the difficulty of identifying the different sources of increasing returns in urban agglomerations due to the

"Marshallian equivalence" (2010:133) of different sources, in that they all predict an increase in productivity with agglomeration but work through different mechanisms.

More often, studies have focused on measuring whether urbanisation or localisation economies are present. Overman and Venables (2010) surveyed the literature from developed and developing countries noting that very few developing country applications are available. The key findings are summarised in Table 2.

Country	**Paper**	**Findings**
Brazil	Henderson (1988)	Localisation economies evident
China	Chen (1996)	Some localization economies
India	Shukla (1996)	Localisation and urbanisation Economies
	Mitra (2000)	Urbanisation economies Evident
	Lall et al (2003)	Urbanisation economies Localization diseconomies
Indonesia	Henderson and Kuncoro (1996)	Localization and urbanisation Economies
Korea	Lee and Zang (1998)	Localization not urbanisation Economies
	Henderson et al. (2001)	Localization and urbanisation Economies

Table 3: Developing country evidence (Overman and Venables, 2010)

Geographical economics, or the New Economic Geography as it is often referred to in the literature, seeks to explain how the interaction between location, increasing returns, imperfect competition and transport costs, in conjunction with mobility of labour and capital, leads to different spatial outcomes. The literature on agglomeration illustrates how firm location decisions depend on the actions, or expected decision of other firms. An individual firm considers these and other factors in its location decision. The reviewed studies recognised the difficulty in measuring the magnitude of different effects, and many of them sought to find evidence of either urbanisation or localisation

economies and struggled to identify the impact of individual agglomeration forces. Krugman's (1991) contribution to the literature had a significant impact on how these forces were understood and analysed.

Building on Hotelling (1929), Marshall (1890) and others, Krugman (1991) identifies centripetal and centrifugal forces that shape urban growth and development as shown in Table 4:

Centripital forces	**Centrifugal forces**
Market size effects	Immobile factors
Thick labour markets	Land rents
Pure external economies	Pure external diseconomies

Table 4: Centripetal and centrifugal forces (Krugman, 1998:3)

This "menu" of forces was not intended to be comprehensive, but rather represent what Krugman (1998) thought were key to the determination of spatial distribution. In order to conduct the analytical work that he intended, it was necessary to focus on an even more limited set of forces, and in the core model, he chooses market size effects and immobile factors based on strategic modelling considerations rather than empirical judgement.

The intuition behind the model is relatively straightforward, however, non-linearity in the equilibrium equations, combined with other features of the model make it analytically complicated (Brakman et al, 2009). The technical details are omitted here in favour of a description of the key results and policy implications.

The first result is that if for some reason, there are more firms in one region, other firms will have an incentive to locate there in order to benefit from the larger market size and the lower costs of transporting goods to customers (Brakman et al, 2009; Ottaviano, 2002). The second is that there can be multiple equilibria, where firms either all choose to locate in one region or are split between the two, the final outcome depends on the size of the market and transport costs. The equilibria can be stable or unstable, depending on whether a change in location will incentivise other firms to move. Further, equilibrium can be suboptimal, in that firms may have no incentive to move but the total costs, in the "economy" are not minimised at this distribution (Ottaviano, 2002; Brakman et al, 2009).

Accordingly, agglomeration is more likely to take place in sectors where increasing returns are

intense due to the presence of other firms, access to product markets is affordable, market areas represent individuals with strong buying power and suppliers are easily mobile, all of which contribute to lower costs of productions. The reason is that more intense returns to scale and stronger market power weaken the market crowding effect, while more mobile customers and suppliers amplify the market expansion effect. Lower trade costs reduce both market expansion and market crowding effects (Baldwin, 2003; Ottaviano, 2002). The key insights of the core model are illustrated in Figure 1.

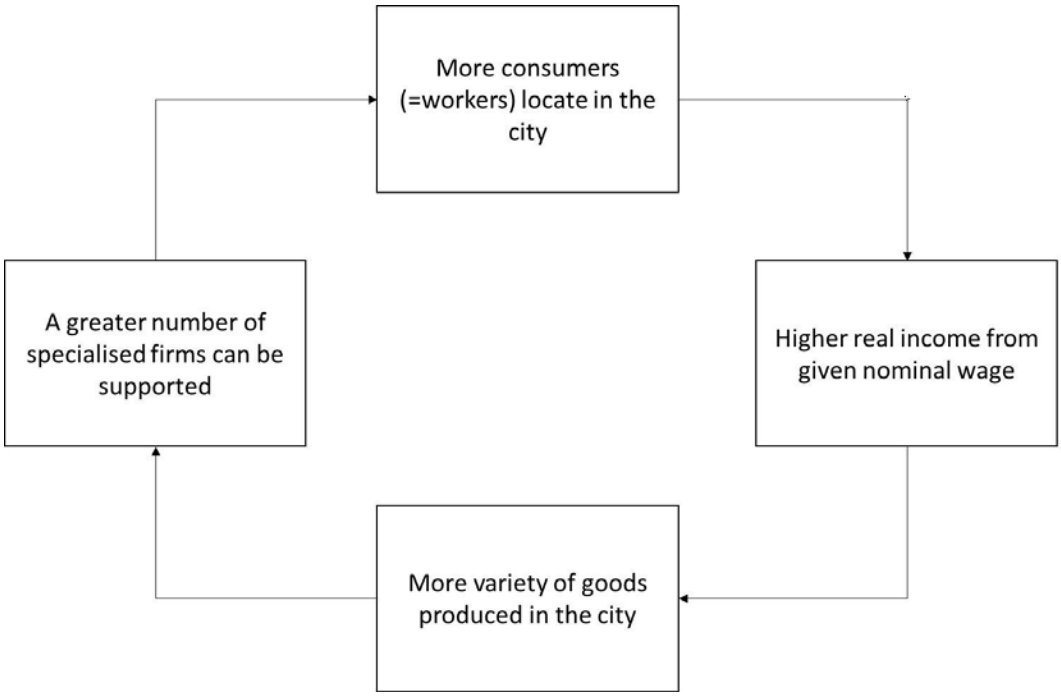


Figure 1: Circular causality in spatial agglomeration of firms and households (Fujita and Krugman, 1995:507)

Behrens & Robert-Nicoud (2011) note that the despite the proliferation of theoretical studies in geographical economics, it has failed to establish an empirical basis and the literature reveals a limited number of studies. Clipa et al, (2011) suggests that extending the theoretical framework, developing empirical research and analysing social and political implications would contribute towards the formulation of a more appropriate unified framework. Fujita et al (1999) admittedly avoid policy discussions, as does Neary (2001) who suggested that policy discussions be postponed to a later time. Ottaviano identified the main problem with existing work on the policy implications of the core periphery models as the lack of a coherent organizational framework (2002).

Baldwin et al (2003) explores the policy implications of the basic core periphery model to establish a model-grounded benchmark for more realistic extensions the insights from the basic model. The

different allocations depend on the strength of market crowding and market expanding effects (Ottaviano, 2002).

- Lock in effects, where temporary policies can have permanent effects. For example, a subsidy that makes one location more attractive could lead to full agglomeration.

- Coordination effects, where policy makers can influence the expectations about other firms location decisions

- Threshold effects, which are arguably the most important (Baldwin, 2003), imply that policy will only have an effect if measures gain a critical mass.

The threshold effect is particularly important for policy makers attempting to influence the location of firms. It implies that incentives have to be greater than the benefits from the current location which are already difficult to measure, given the number of factors that influence firm location decision. New firms initially have a high degree of mobility, but once established become more rigid. There are several reasons for this. One is that relocation can be expensive, both in time and financial measures. Firms also establish networks in their location that may be altered in a move (Brakman et al, 2009).

Although some of these insights are not new, the framework can and has been used to explain spatial patterns. Clinch and O'Niell (2009) developed a "spatial economic theory" for national spatial planning in Ireland using the core periphery model and other spatial and political concepts. They found that while this framework was useful in the analysis of spatial development patterns, it failed to incorporate social and environmental concerns. They pointed to further research to expand on the potential applications of spatial economic theories and models to public policy and spatial planning.

2.2.3 Urban economics and firm and household location decisions

The theories of urban growth and development discussed previously examined the implications of increasing levels urbanisation on the emergence and growth of cities. New growth theory emphasized the role of human capital on the growth of the urban economy (Romer 1990; Lucas, 1990; Jacobs, 2007). Up until now very little has been said about how the growth and development of cities manifests in the spatial distribution of economic activity within the city, or the factors that influence household location decisions. The introduction of household location decisions, represents a significant addition to the theories discussed thus far. A critical divide exists amongst economists,

regarding the importance of firm over household location decisions, with one side arguing that labour follows jobs, and the other arguing for the significance of the household decision first, where firms locate close to labour markets (Storper, 2013). Urban economics is a field of research that focuses, predictably on cities and applies the tools of economics to analyse urban issues.

The monocentric city model serves as the basis for most theoretical and empirical work in urban economics. Alonso's (1964) early statement of the model applies the logic of von Thünen's agricultural model in an urban context. In Alonso's version of the model, households face a trade-off between accessibility and space, where both are determined by the distance from a predetermined city centre.

The model's simple assumptions necessitated considerable modifications in order to be applicable to residential sector in which households receive utility from housing, which is built by housing producers who combine land and capital – not directly from land. Working independently but around the same time, Muth (1969) and Mills (1972) extended this model to include a housing production sector. Fujita (1989) combined these functions into a unified framework, which came to be known as the Alonso-Muth-Mill Model, or, as often described in the literature, the monocentric city model.

Fujita (1989) provides an intuitive explanation of the simple model and its results. Basically, households that move to a particular city are faced with a complex set of decisions regarding their ultimate location choice. To simplify the analysis of these choices, a number of assumptions must be made about the urban area:

- The city is monocentric, thus all jobs are located in the central business district (CBD)
- There is a dense radial transport system, that is free from congestion, and households travel only from home to their place of work. All other travel is ignored.
- Land surrounding the CBD is homogenous and reserved for residential use

In this context, the only spatial characteristic that matters is the distance from the CBD. The analytical tool used to describe a particular household's ability to pay for land under a fixed utility level (assumed in the basic model) is the bid rent function which specifies the maximum an individual is willing to pay at every location, which is assumed to be downward sloping reflecting the trade-off between rent and commuting costs.

The simple version of the monocentric city model predicts that the price per unit of housing, land values and population density will decrease smoothly from the CBD. Further, increasing income and decreasing transport costs will tend to "flatten" density gradients, leading to urban expansion or "sprawl" (McMillen, 2006:139).

The model serves as a base for most empirical studies in urban economics, and empirical testing has yielded interesting (and mixed) results. Glaeser (2007) tested the basic model using data from 187 cities in the greater Boston region and found that, while distance does explain some of the heterogeneity of land prices among cities, there are a number of other factors, often more difficult to measure amenity values that are more important in determining housing prices than distance.

The simple model has also been extended and modified in various ways, often in response to findings contrary to the simple models predictions. Several studies have shown that the predictions may not always hold true. Bertaud and Malpezzi (1999, 2003, 2014) compared density gradients across a number of cities and found that in general, the predictions hold, but in some cases, the density gradients may be inverted. Johannesburg, Cape Town, Moscow and Brasilia were examples. Others have questioned the assumption of monocentricity and developed polycentric versions of the model (Ogawa and Fujita, 1980; McMillen, 2006; Gordon & Richardson, 1996).

Rosen (1974) developed a modification of the model that incorporated amenities, which was later tested by Roback (1982) and used to analyse prices and densities between cities by allowing incomes and amenities to differ across space.

Brueckner et al (1999) present an amenity based theory of location that explain how different income groups locate within the city by comparing US and European cities. They define endogenous amenities as manmade, modern amenities that generally reflect the wealth of the city, and exogenous amenities which can be natural or historical. Glaeser, Kahn and Rappaport (2007) argue that public transportation more than housing markets explain poverty in central cities in the USA.

The urban systems approach, pioneered by Henderson (1974), introduced the important role of increasing returns in the explanation of city dynamics, focusing mostly on positive external economies of scale that are industry specific). This extension of the model allows for the analysis of urban systems and the relationship between cities simultaneously, however, in its original form, the model ignores the hinterland, preventing the analysis of migration effects.

Kelley and Williamson challenged the argument that cities will become "overurbanised" (1984:32), as predicted by Todaro and Harris (1970), and Fields (1975, 1990) on the basis that, while some of the arguments were plausible, none had been quantitatively assessed. In response they built a Computable General Equilibrium (CGE) model of development to evaluate the costs and benefits of urbanisation in the developing country context. The model combines the Harris Todaro migration mechanism, with a number of exogenous variables that are identified as key drivers of city growth, in order to simulate growth, accumulation, distribution, and city growth using data from a "representative developing economy" (1984:35). They found that rapid rates of population growth and land scarcity are not the key drivers of urban growth as predicted elsewhere. The approach here is more important than the results. Although the use of CGE models has been criticised extensively, this study was the first, comprehensive, quantitative analysis of urban growth and inspired a number of studies. The framework as applied to Indian immigration and city growth (Becker et al, 1986), and found to be relatively successful at replicating historical growth in simulations. The authors concluded then that the model could be used for future projections and policy simulations. A key limitation of the CGE approach, is that results are based on simulations, which rules out empirical testing (Brueckner, 1990).

An alternative model of third world urbanisation incorporates land markets into the Todaro Harris framework using the monocentric city model from urban economics (Brueckner 1990; Brueckner & Kim, 2001). In this framework differences in living standards between urban and rural areas encourages inmigration. The hypothesis is that urban population growth, increases urban land prices, effectively depressing urban income which reduces the differential and the incentive to migrate yielding an equilibrium city size. The results of their analysis shows that urban population growth is most rapid in countries where the differential is low, suggesting the possibility of disequilibrium outcomes.

A further insight from Brueckner and Zenou (1999) is that migrants employed in the informal sector (there is no unemployment in this model) have lower transport costs since they do not travel to the city centre, implying a flatter bid rent curve which explains why informal workers live on the periphery of cities rather than competing for central locations as predicted by the monocentric city model. These models could potentially be used to inform the urbanisation response at the city scale.

One study that is of particular relevance in this thesis, tested the impact of various government policies on urban concentration (Henderson, 1981), including the impacts of national intervention on local government decision making in which national government subsidises urban infrastructure investment in either one type of city or one particular city in an urban system. He also investigates

the impacts of minimum wage and trade policies where the implementation of such policies may affect different cities in different ways and shows how these policies can have unintended spatial consequences by favouring concentration in one or other city.

The basic insights from urban economics are summarised in Table 4, which Glaeser (2007) calls the spatial equilibrium in urban economics.

	Workers	**Employers**	**Builders**
Decision criteria	Wages	Wages	Housing prices
	Housing costs	Proximity to consumers	Physical cost of building (labour, materials)
	Transport costs	Proximity to suppliers	Physical conditions of building (land, resources, infrastructure)
	Amenities (non economic returns)	Productivity	
		Manmade or innate locational attributes	
		Land /building cost	

Table 5: Location decisions in Urban Economics (Adapted from Glaeser, 2007)

The notion of equilibrium, implies that decision makers behave rationally, face small transaction costs and have access to complete information. The area in which this is least likely to hold, is the builders equilibrium, as has been shown is studies of housing supply, particularly in the UK (Cheshire, 2009). There is also the problem of mobility for both firms and households. The criteria shown here, are not fixed in time. Changes that results from market forces, or intervention, may change quickly, while agents tend to exhibit some level of rigidity in their location choices (once made).

2.3.2 Path dependence in city growth and development

While cities take shape through the interaction of market forces and state intervention, they are often established as a result of some (potentially random) historical event or feature that made a

particular location attractive. Several modern day cities, including Cape Town, were established along trading routes between Europe and Asia in the 1600s. Others, like Johannesburg, were established following the discovery of minerals. Over time, the determinants of location have changed to reflect the characteristics of a dynamic, progressive society. Proximity to ports, fresh water and energy, once critical determinants of city locations, now play much smaller roles. The influence of location decisions are often evident long after they were made. In this way, the growth of a city is said to be "path" dependent (Martin 1999).

Path dependence is not a theory of economic growth, but the notion does focus attention on those structures, forces and mechanisms that result in self-reinforcing patterns of spatial economic development (Martin, 1999).

The existing literature on path dependence has been divided between those who argued that locational specific features (i.e., the geographical endowments of various locations) or increasing returns (self-reinforcing agglomeration) are the main determinants for the distribution of economic activity across space. In reality, there are a number of sources that lead create and reinforce spatial patterns of development, since cities construct, and are constructed by historical, social, political and economic processes (Parnell & Mabin, 1995). Table 6 shows some sources and examples of path dependence.

Source	**Features**
Natural resource based	City's development path shaped by dependence on a particular raw material (eg coal, oil, forestry products, etc),
Sunk costs of local assets and infrastructures	Durability of a city's capital equipment, and its physical infrastructures, which remain in use, and shape economic development
External economies of industrial specialisation	City's economy based on cluster(s) of specialised activity characterised by dynamic externalities and untraded inter-dependencies create a high degree of local economic 'inter-relatedness'.
Technological or innovation system	Development of a distinctive specialised technological regime or innovation system which shapes future economic

	development.
Economies of agglomeration	Self-reinforcing development based on various agglomeration externalities. Wide scope for various specialist functions and activities.
City-specific institutions, social forms and cultural traditions	Development of locally specific economic and regulatory institutions, social capital, social infrastructures and traditions, all which embed economic activity into a specific trajectory.
External linkages and inter-dependencies	Development path of a city may be shaped by those in other cities and regions, though intra-industry and inter-industry linkages and dependencies; and influence exerted by economic and regulatory policies pursued in other locations and at national level (or even beyond).

Table 6: Path dependence in city development (Martin e al, 2014:29)

Studies have attempted to test the strength of path dependence in various cities by analysing data on the spatial distribution of households and economic activity over long periods. By identifying negative or positive shocks that could alter the attractiveness of an area, and in theory result in a modified distribution, and analysing the effects, the strength, and sometimes the source of path dependence can be inferred when temporary impacts are observed. Davis & Weinstein (2002, 2008), use the war time bombing of Japan, to test whether these shocks had long-term effects on the form and function of cities that were disproportionately destroyed and find strong evidence of path dependence, but also conclude that the persistence of patterns can be attributed to multiple theories, including random growth, and increasing returns

2.3 The role of urban policy and planning

One of the main aims of spatial development planning is to achieve the optimum organisation and use of land resources in order to meet the social, environmental and economic needs of present and future generations (SACN, 2010).

In this context the objectives and responsibilities associated with urban planning, are derived from the institutional arrangements, determined by the constitutional requirement for local authorities to

play a developmental role, in addition to the traditional roles, to facilitate development and promote investment in their localities.

The existing tools employed in urban policy and planning have had limited measurable, positive effects on economic and social outcomes and in some cases, generate substantial costs to society. Nathan and Overman (2011:1) document evidence that the UK planning system:

- Increases house prices (with a regressive impact on low to middle income families)
- Increases housing market volatility
- Increases office rents
- Lowers retail productivity
- Lowers employment in small independent retailers
- May not properly assess the true social costs of brownfield versus greenfield development.

These costs need to be examined relative to the benefits of planning, or the likely outcomes in the absence of such intervention. While it may be argued that these costs are worth paying, in order to achieve other policy objectives, it is certainly not sensible to ignore them altogether. The purpose of this section is to consider the theoretical foundations of modern planning tools in the spatial economy described in the previous section, in other words, a market driven economy. Essentially, economic planning is a coordinating mechanism that substitutes factor markets and is defined as a direct allocation of resources. This is contrasted with the indirect allocation mechanism of the market, which is the overall objective of planners, although this is rarely recognised (Brooks, Donaghy & Knapp, 2012).

The role of planning in the modern economy is examined where planners are seen to perform three key functions:

- Provision of public goods,
- Regulation of markets; and the related task of
- Spatial targeting to stimulate growth in underperforming locations

2.3.1. Regulation of markets

In the free market there exists a divergence between private and social costs and benefits where some of the costs and benefits spill over onto third parties. For this discussion, the focus in on negative "pure" externalities that arise when firms and individuals are concentrated in urban areas.

Most of the traditional analysis of externalities, can be traced to the work of Pigou (1920). He identified the divergence between the marginal private interest and the marginal social interest whereby, the party receiving the social benefit does not pay for it, and the one creating the social harm does not pay for it. He argued that when marginal social costs exceed marginal private benefits, the producer of the externality is likely to overproduce. This necessitates some form of intervention, and Pigou recommended a tax placed on the offending producer, (polluter pays principle). If costs can be accurately measured, a tax could be levied such that the marginal private cost and the marginal social cost in equilibrium and the quantity of the product produced would be reduced, neutralising the externality. The type of government intervention advocated through the Pigouvian approach depends on the type of externalities they aim to remove.

A further approach to removing or limiting externalities is command and control regulation. This approach sets numerical quantity limits on activities that have external effects. The imposition of an urban edge to curb undesirable urban expansion or "sprawl" is an example of this type of regulation. The criticisms of this approach are numerous but it tends to be the most popular approach to regulation since it is perceived to be easier to implement.

Coase (1960) argued that the Pigouvian solution to an externality incorrectly focuses solely on the party causing the externality. Instead he argues that the needs of both parties should be considered when choosing a solution.

> *'The traditional approach has tended to obscure the nature of the choice that has to be made. The question is commonly thought of as one in which A inflicts harm on B and what has to be decided is: how should we restrain A? But this is wrong. We are dealing with a problem of a reciprocal nature. To avoid the harm to B would inflict harm on A. The real question that has to be decided is: should A be allowed to harm B or should B be allowed to harm A?'* (1960: 2)

In essence, Coase argued that if either of the two parties has property rights that are adversely affected by the action of the other, and there are sufficiently low transaction costs and the market is competitive, bargaining will lead to an efficient outcome regardless of the initial allocation of property. The Coase theorem suggests that the clear assignment of property rights can eliminate the need for Pigouvian taxes and subsidies where transaction costs are sufficiently low. The problem with the Coase theorem in the urban planning context is that the externalities identified in the previous section affect a large number of people making negotiation difficult. In the South African context, property rights are poorly defined in rural areas and informal settlements.

There are typically two other methods, besides taxes, in which planners attempt to reduce the level of an activity which generates negative externalities. One alternative is to implement a regulation which sets an upper-bound to the activity. Another is a compulsory proportional reduction of the activity for everybody. Alesina and Passarelli (2010) revealed that in certain circumstances, when the individuals producing a negative externality constitute a small minority, voters would choose a regulation, while a planner would choose a tax. Furthermore, the regulation the majority chooses is more restrictive than the level that the social planner would choose if forced to implement a regulation. Alternatively, if the majority enjoy the activity with the externality, majority voting would opt for a tax when a social planner would likely adopt a regulation. An overall reduction in the activity (quota) would only be implemented by the majority for a small set of parameter values and is usually dominated by a regulation or tax anyway.

Of course, there are many more examples of planning tools used in different countries. An initial point to note is that most urban externalities are studied in the context of growth or city size and shape. A small town with a static population and a fixed number of automobiles is not likely to be concerned with congestion (although it is possible). In the context of this discussion, externalities arise (or intensify) as urban areas grow in population, or where rising incomes change the behaviour of residents.

In general, planners tend to favour regulations over market based tools, often on the assumption that they are cheaper and easier to implement. This may not always be the case, particularly when regulations are not effective. Rolling out public transport, to relieve congestion is one example, where the costs of the programme are not balanced with the benefits when individuals continue to rely on personal vehicles for mobility. In this instance congestion taxes may have a greater impact, as individuals choose to use public transport when private mobility becomes prohibitively expensive.

2.3.2. Spatial targeting

In the presence of externalities, which tend to increase in magnitude with increasing city size and density, policies are often implemented to influence the spatial distribution of amenities, households and economic opportunities. The justification for these policies is that an urban area's particular form imposes diverse economic costs and benefits and has implications for its economic success (Gordon & Richardson, 2012). The common area based approach utilised by government to target these policy initiatives is referred to as spatial targeting. Todes (2013) suggests that within spatial policy, a distinction can be made between targeting a place; targeting people; and "integration" (ie. linking lagging and leading areas).

The notion of the aforementioned area based approach, refers to the act of spatially targeted investment or support for development in "leading" and "lagging" areas. "Leading" areas refer to locations which exude rapid economic growth and usually include leading economic sectors. Alternatively, "lagging" areas refer to those which are less favoured by the market. After identifying which areas are either lagging or leading, one must identify the latent advantages they may have and how to exploit them. The constraints that limit or inhibit investment and economic development must also be identified and a plan to reduce them must be established. These components of spatial targeting can prove challenging (Todes, 2013). There may be many explanations as to why certain areas are "lagging". Isolated location, poor infrastructure and a high rate of low skills levels represent basic development obstacles, while area reputation, image and stigma pertain to non-cognitive restraints. In theory the latter may be easier to address. Theories and concepts from urban economics could be used to better inform spatial targeting strategies, as is shown with the ECAMP tool, discussed in Section 4.

The precise form that spatial targeting takes at the city scale, tends to focus on nodes and corridors, identified as areas of high land use intensity (nodes) or links between areas of economic significance, where employment clusters exist, with higher density residential areas, where significant movement patterns exist currently, or identified as strategic links for future spatial development (corridors). These planning concepts are evident in the spatial plans reviewed in Section 4. There are, however, examples of spatial targeting at the national scale, which follow the same basic principle, of identifying underperforming or high potential locations and focusing investments in social and economic infrastructure in these areas. The notion of spatial targeting was strongly recommended in the National Development Plan (2012) as a mechanism for rebalancing the economy in South Africa.

The key challenge for planners is the implementation of strategies, where private developers are required to align their investment decisions with spatial plans. In some cases, by seeking statutory

approval of plans and frameworks, planners attempt to dictate spatial patterns of development through development controls, while others try to guide development by less forceful means, trying to persuade private and public developers to change their attitudes and behaviours to align with their thinking (Turok, 2001). In both instances, concerns have been raised with regards to the appropriateness of these actions, given that planners tend not to have formal training in economics, nor do they have financial stake in the success or failure of development projects. Further concerns are raised about the appropriateness of this response, where the World Bank asserted that

Economists, by comparison, have developed theories of balanced (Nurkse, 1953; Rosenstein Rodan, 1943) and unbalanced (Hirschman, 1969) growth, generally applied to regions. Proponents of balanced growth argue that the state needs to make large investments in a number of industries simultaneously to drive development in underperforming regions.

Myrdal's theory of circular cumulative causation (1957) expanded this idea further. He argued that once an area establishes a critical mass of economic, or industrial activity, backward and forward linkages ensure that more firms will want to invest in the locality and more labour will want to work there, in a self-reinforcing cycle, much like Krugman (1991), although with less detail on the mechanism through which this occurs. Alternatively, a shock or event that causes a single firm to go out of business, causes unemployment in other firms, which reduces incomes, and demand for goods and services, which leads to further unemployment and so on. In this way, Myrdal denied the existence of equilibrium or balanced growth. In other words, he would have argued against spatial targeting. He introduced the notion of "backwash effects" (1957:27) in which expansion in one area will have a negative effect on another as labour and capital shift from less attractive regions, to expanding regions resulting in declining cycles as these forces reinforce themselves. "Spread effects' on the other hand, suggest that expansion in one area can have positive spill over effects into surrounding areas.

Hirschman (1969) refuted the balanced growth hypothesis on the basis that where resources are scarce, particularly true in poor, developing countries, government should concentrate on a few "strategic" sectors rather than the entire economy. He believed that "*[i]f a country were ready to apply the doctrine of balanced growth, then it would not be underdeveloped in the first place" (1969:55)* and prescribed unbalanced growth as the principal strategy for development. This notion of unbalanced growth was revisited by World Bank (2009). The report argues that increasing economic concentration in urban areas through strategic investment in areas with high potential, facilitating capital and labour mobility and encouraging regional and global integration will drive development. The report fails to engage with the negative consequences of urbanisation and the

challenges that rapid population growth in urban areas creates for planners and policy makers, and again, points to the need to understand the size and nature of trade-offs that are present in these types of policy decisions.

2.4 The performance of cities

The performance of cities is often framed using traditional economic indicators, such as Gross Value Added (GVA), investment (private and public), unemployment, poverty measures or access to services. There are also measures of competitiveness and specialisation and ease of doing business. To some extent, economic performance is a function of geographical factors. The Worldbank stresses the impact of three dimensions of development; density, distance, and division (2009), where the relative importance of each varies with geographical scale. Increasingly, it is becoming clear that the spatial characteristics of urban areas influence, and are influenced by city performance. This section looks at three particular measures of urban form that are often cited in the literature, and help to explain why some policies seek to attain optimality in urban form, along the lines of city size, density and shape.

2.4.1 City size

The issue of city size and its relationship to growth has long held a fascination for urban analysts. The key relationship between city size and the costs and benefits of location is that economies of scale exist only up to a certain size, thereafter, the costs of agglomeration exceed the benefits. The point at which these costs and benefits are equalized is often referred to as the optimal city size, beyond which, the forces of agglomeration would diminish and firms and people would migrate out of the city until equilibrium was re-established, consequently new cities would develop at the rate of population growth such that city equilibrium would be maintained along the economic expansion path (Henderson, 1974). Anas (1992) introduced the role for policy by showing that in a growing laissez-faire economy, the optimal time when the large cities should be decentralized into new settlements is missed because such timing requires collective migration to the same place by many self-interested agents. The coordination problem means that cities grow too large and the benefits of agglomeration are reduced in the presence of negative externalities. Similarly, Arnott (1979) investigated a theory of urban size in terms of scale economies, transport costs, congestion and the provision of services and asks what the minimum level of intervention might be to achieve optimal size. The notion of optimality is problematic, particularly due to the circular linkages present in urban systems but it is possible to estimate efficient city sizes given available resources, current

economic conditions, and the capacity of the state to provide services based on its ability to collect revenue from rates and taxes.

Capello and Camagni (1999) presented a critical review of theoretical works on city size and conclude that the influence of urban size exists and is important, but cannot be efficiently assessed without overcoming some of the limitations imposed by the theory, whereby size alone cannot be separated from other features that influence city performance. It is not a problem of optimal city size, but of efficient size, which largely depends on what the city produces and how the city's population is involved in its productive activities.

Krugell (2003) examined whether South Africa's cities were too small, which he hypothesised would be the case given the historical focus on urbanisation controls. This was based on Zifp's Law[1] that the distribution of city sizes in an urban system forms an ordered hierarchy. He found that in general, cities may be too small, or that Johannesburg is too big.

The problem with applying general concepts around city size to South African examples is that the balance between positive and negative consequences of city growth is generally based on the assumption that migrants are absorbed into the economy. In fact, much of the literature from modern spatial economics and new growth theory specify that skills are essential to drive growth (Lucas, 1980). Urbanisation of poverty, when poor unemployed rural dwellers move to cities and remain unemployed poses a challenge for city planning.

2.4.2 Density

There is a growing body of evidence that suggests that larger and higher density urban areas experience higher levels of productivity and growth. This is because of the scale economies discussed previously. The relationship between density and development is difficult to measure the because of the complexity and feedback effects of agglomeration economies (Rosenthal and Strange, 2004). Nevertheless, theory and evidence presented above suggest that there are benefits to concentration which implies that some level of density is likely to be beneficial, which is in essence the reason why cities exist.

Densities vary markedly across countries and within them. Bertaud and Malpezzi have conducted a number of studies, comparing population density gradients and other associated measures across increasing numbers of cities in countries with unique characteristics (1999, 2003, 2014). Included in

[1] Zipfs Law is the observation that the city size is inversely proportional to the city's rank among all cities (see Gabaix, 1999)

the study are cities in South Africa, Russia and Korea in which stringent urban regulations were expected to have distorted spatial outcomes and find that the density gradients in these cities, are not always counter to the model predictions. Similarly, some cities have inverse density gradients for other reasons, than unusual historical political processes.

An important point to make is that higher densities do not automatically lead to higher levels of productivity. The increasing returns and external economies of scale discussed previously are influenced by proximity in different ways. The benefits of shared inputs, or the provision of economic infrastructure require much greater proximity than say knowledge spill overs. Labour market pooling is also an example in which close proximity might not necessarily lead to or require high levels of concentration and locating in the same general area, or even city may suffice. The preference for face to face contact may imply that it makes most sense for a financial services firm to share the same building as those who provide legal services.

Post-apartheid urban policy has often sought to increase densities in order to resolve some of the spatial inefficiencies inherited from the past. Few of these interventions seem to have yielded the desired results, and subsequent interventions have employed similar measures to promote densification in certain areas.

One problem with densification, not unique to South Africa, is that it is generally not favoured by the public, who prefer to make their own choices regarding their location and living conditions. This is particularly a problem when it comes to the provision of social housing. It has already been established that higher densities are better suited to public transportation systems. Higher density settlements also require less land, which means that developers can acquire better located land for housing projects. On the flipside, high density, homogenous low income settlements are often associated with crime and social problems. This was first recognized by Jane Jacobs (1961) who argued for higher density, diverse settlements.

The argument for density takes on two key issues. The first is that higher densities reduce the costs of services provision. The second considers the reduction of transport costs by reducing the distance between where people live and work. In the monocentric city model from urban economics, it is assumed that all economic activity takes place in the central business district and thus optimal household location, particularly for those who spend large proportions of their income on transport, is close to the centre. Under the Post-Fordist spatial order cities are no longer the location of mass production that employs large number of unskilled workers. Rather, cities, like Cape Town increasingly rely on sectors that employ highly skilled workers to perform specialized tasks.

Msulwa and Turok (2012) investigate the impact of density on development in South Africa where density facilitates the transmission of external scale economies and increasing returns to scale. Using data from Global Insights data on the 237 local municipalities in South Africa in order to test the relationship between average density in 1996 and the average growth rate over the period from 1996 to 2010. Explore different dimensions of density, identified by Rosenthal and Strange (2004).

They found no statistically significant relationship between density and growth in general but limited evidence of commercial farming areas and for municipalities dominated by community services sectors, which they noted was contrary to theoretical predictions. A further test examines the influence of human skills on local economic growth and found that the results were more robust than for density. The conclusion they draw is that spatial proximity may not automatically contribute to economic growth and consider how spatial distortions from apartheid planning may have some effect on the result.

While density is certainly linked to the agglomeration forces discussed previously, the density argument in planning discourse is often framed in relation to costs savings in the provision of social housing, public transport and other municipal services. The question of residential and employment density in urban areas has implications for infrastructure provision (e.g. transportation), the environmental effects of conurbations, and the productive and income-generating abilities of an area. When higher densities are achieved for residential, industrial, commercial and mixed use areas, negative externalities increase in intensity. Efforts to promote densification should consider both the positive and negative impacts of these strategies

2.4.3 Optimal urban form

City size and density and the balance between the costs and benefits of urban population growth is particularly important in rapidly urbanising countries, since in many cases, and for various reasons migrants are not absorbed into the urban economy. The skills mismatch hypothesis is one of the key issues. The gap between a large and increasing low-skilled pool of excess labour and the demands of skills-intensive, fast-growing services industries leads to high levels of urban unemployment. Migrants with low (or no) income and low levels of skills have only minor impacts on market size effects and innovation that drive economic growth in expanding cities. There is a deep connection between economic growth that provides the resources for improving wellbeing and distribution outcomes (Sinclair-Smith & Turok, 2012). The urbanisation-economic growth connection implied by the new growth theories and investigated by Black and Henderson (1999) who argue that the

urbanisation-development link depends crucially on skills and innovation. There is a growing body of literature that examines how the spatial organisation of a city can exacerbate unemployment and deteriorate income of the poor as larger proportions of personal income is spent on transportation. The role of space in reinforcing or overcoming welfare challenges is receiving increased attention in policy debates (Borat and Kanbur, 2006). The spatial mismatch hypothesis argues that physical distance between households and employment opportunities increased unemployment as distance both discourages job search (Davies and Huff, 1972) and the ability of individuals to find jobs that pay high enough wages to cover transport costs. Long commutes also have social costs where individuals spend increasing proportion of their time away from home and their social and family responsibilities. In South Africa, segregation also has an impact on welfare and unemployment (Rospabe and Selod, 2006), which was also the finding of Jacobs (1969) who emphasised the importance of diversity in urban settlements.

The notion of optimal urban form, allows for a range of acceptable sizes and densities, since the key objective is to reduce the distance between places of work, residence and leisure. This can be achieved through decentralisation of economic activities, so long as this aligns with the spatial distribution of households, with the appropriate skills to find employment in nearby economic clusters.

2.5 Summary

Cities are complex, in that they accommodate diverse populations and economic activities, with difference preference and requirements, in close proximity. This proximity is one of the foundations of city existence and development, but it also leads to a host of urban problems, and market failures that necessitate. The objective of this section, was to reflect on different aspects of different theories that develop a deeper understanding of cities from the perspective of economics, and illustrates the role of planning, in the development of prosperous and resilient cities. This approach is deemed appropriate given the complexity of urban studies, but there is the possibility, that by drawing from too wide a range of theoretical positions, it becomes impossible to derive a useful framework, against which urban problems and policies can be understood and analysed. Nevertheless, the review here, importantly highlights some of the determinants of firm and household location decisions, and dispels some of the misconceptions about economics, and the way in which economics develop theories to explain phenomena, that are not strictly bound to traditional views.

3. THE SPATIAL DEVELOPMENT OF SOUTH AFRICAN CITIES

The theoretical overview, illustrates the breadth of market and economic forces, through individual decisions that interact to influence the form and function of cities. Similarly, government policies and strategies, implemented across scales can affect urban areas directly through targeted interventions, or indirectly, often the result of unforeseen consequences of sectoral, or spatially blind policies. Identifying the impacts of government decisions on urban spatial structure is not an easy task. Urban and spatial policy in South Africa has seen several changes over time from colonial influences, through grand apartheid and more recently, attempts to reverse inefficient structure inherited from the past. The urban policy agenda is broad and complex and, like policy in other areas, generally seeks to meet multiple objectives simultaneously, making analysis and evaluation difficult (Parsons, 1995).The aim of this section is to introduce the key policy problems and proposals in order to assess the extent to which the economic concepts discussed in the previous chapter explain urban spatial development and inform urban policy and planning in South African cities, with an emphasis on Cape Town.

This chapter is structured around three key periods in history, with a separate discussion on the transitional period where apartheid plans and policies came into conflict with the prevailing social movements and economic conditions in the country. Thus, the sections are divided as follows:

- The Settler-colonial period and urban segregation
- The Apartheid city
- The transition period
- The democratic, post-Apartheid city

The structuring elements for each subsection, are the key interventions designed and implemented which had intended or unintended consequences for the spatial development of the city. Thus, the review aims to recreate a timeline of sorts, highlighting the interaction between location fundamentals, market forces and state intervention. For each intervention, this deliberately selective review seeks to explore the following:

- The prevailing economic conditions and the perceived problems targeted by policy
- The nature and rationale of the intervention (either stated or implied) including any economic analysis or assessment used to inform policy decisions

- The outcome and impacts of the intervention (perceived or realised)

While regional or provincial government plays a role in urban development, the review here focuses on national policies and their local impacts, predominantly metropolitan urban development planning and policy. It should be noted that in this particular study, the case study is Cape Town, a large metropolitan municipality with strong spatial and urban planning capabilities. In smaller municipalities, where capacity is limited, provincial government is likely to play a larger role.

3.1 The Settler-colonial period and urban segregation

Prior to 1652, most of Southern Africa was occupied by nomadic farmers and hunter gatherers. The arrival of Dutch settlers under the leadership of Jan van Riebeck and the Dutch East India Company (VOC) marked the first permanent settlement in the area. The Cape of Good Hope had been identified by the VOC as a strategic location for a supply station for passing ships between Europe and Asia, and the Mediterranean climate was thought to be well suited for the settlement of Europeans (Hobart-Houghton, 1974).

The growing demand for supplies and the need for labour to run the supply station would attract a steady stream of European emigrants over time however, for the most part, urbanisation rates were relatively stable (Dewar et al, 1982), characteristic of a traditional society (Hobart-Houghton, 1974) until the arrival of the British in the early 1800s. These settlers brought new ideas of organised society learned from their experience in the early years of the industrial revolution.

Colonial settler economies in South Africa were initially based on pre-capitalist mercantile interests ad subsistence activity, were later progressively underpinned by capitalist market exchange (Davies, 1981). The discovery of diamonds in Kimberley in 1865 followed by gold in the Witwatersrand in 1886 resulted in drastic structural change to the South African economy which would drive the capitalist development of the future, an 'event' described by Hobart Houghton as "an economic revolution" (1974:13) and resulted in transformations that draw similarities with those experienced during the industrial revolution. The mines and secondary industries established to support mining activities generated an unprecedented demand for labour stimulating rapid industrialisation and urbanisation around Kimberley and the Witwatersrand. The increased concentration of economic activity and labour further drove industrial expansion in the area as supporting industries were established to meet the higher demand for goods and services (Hobart Houghton, 1974).

The availability of cheap native labour was crucial to the profitability of the mines (De Kiewiet, 1941). At this time agricultural productivity in the homelands remained relatively high and the lifestyle offered to migratory workers who were housed in tightly regulated single sex hostels on the urban

periphery, was perceived to be poor, and consequently, the voluntary labour system failed to secure an adequate supply of labour (Dewar et al, 1982). Recognising that the allure of wage labour was insufficient the state formulated a number of policies and established various commissions and committees to investigate how best to deal with the "Native Question". The result was a series of laws designed to deprive Africans of their land and on this basis, enslaved them on white farms, in factories and on the mines.

The Glen Grey Act of 1894 was arguably one of the key legislations that established the foundation for race based spatial segregation (Wolpe, 1972). The Act was drafted by Cecil John Rhodes, and based on the findings of two commissions previously set up by the colonial government. The first was Cape Commission on Native Laws (1883) focused on the matter of land tenure, and the advisability of a system of local self-government for native territories. The second was the Glen Grey Commission (1893) mandated to; investigate the nature and condition of land tenure and the productive capacity of African occupied lands, as well as to explore the possibility of consolidating locations; disposing of vacant land and to establish the wisdom of granting individual title to Africans. The basis for the investigation was the eruption of friction between African and white farmers in the Glen Grey district (Wolpe, 1972; Bouch, 1993).

The recommendation were rejected in favour of individual tenure on smaller, plots, in a 'one man, one plot' policy in most of the Transkei, constraining the expansion of African commercial farming on anything but a small scale (van Schoor, 1986). In addition to the provisions for land tenure, Rhodes introduced the labour tax "to stimulate them to work" (1894:12) but effectively forced large numbers of Africans to leave the area and find work on farms or other forms of employment outside the Glen Grey District.

The 1913 Native Land Act further advanced the segregation ideology with laws that prevented Africans from owning land in urban areas. The Act decreed that Africans could only own or rent land in certain parts of the country, which at the time represented approximately 7,3% of South Africa's total land area. Further, the Act made provision for the appointment of a Commission which was to identify additional areas for the occupation of Africans only, within which they would be allowed to acquire or hire land to accommodate the growing population. However, despite completing its report in 1916, there was no increase in the size of the Scheduled Areas until the promulgation of the 1936 Native Trust and Land Act. This ordinance stipulated that the reserve land, enlarge to approximately 13.6% of the total area of the then South Africa although this was not actually achieved (Wolpe, 1972). These and other more indirect policies and laws (Mabin, 1991, 1992) paved the way for the subsequent creation (during the apartheid era), of the 'Bantustan' or 'Homelands' to

which Africans could be confined and isolated from 'White South Africa'. This piece of legislation, which aimed to regulate and severely restrict the acquisition of land by Africans, had far-reaching socio-economic and political consequences, much of which are still being felt today. Dewar et al (1982) identified the following key impacts:

- Closing the free market for land soothed white fears of competition in agriculture and direct black political power, which was potentially related to the amount of land held by Africans
- It reduced black squatters and sharecroppers on white farms to labour tenants, dependent on wages
- It ensured a reliable flow of highly flexible migrant black labour by creating an impoverished and landless mass dependent on wage employment

Having laid a secure economic foundation in the legislation of the Mines Act, the Labour Recruiting Act, the Land Act, the Factories Act, the Wage Act and the "civilized" labour policy, the government built up a complicated system of social, economic and political segregation, reinforced by spatial separation of different groups.

Urban areas were expanding rapidly, while the conditions in the homelands were deteriorating as resources were being exhausted due to overpopulation. The lack of skills, combined with the depletion of resources, absence of capital and access to transport infrastructure contributed to the poor state of the homelands and it became apparent that the reserves were failing to produce enough food to sustain their populations, pay taxes and debts or purchase necessities (De Kiewiet, 1946:201). Despite increasing restrictive law being implemented, migration rates increased leading to increasing concerns about the integration of blacks into white, urban areas.

The Natives (Urban Areas) Act No 21 of 1923 legislated on a broad front to regulate the presence of Africans in the urban areas. It gave local authorities the power to demarcate and establish African 'locations' and licenced hostels on the outskirts of White urban and industrial areas, and to determine access to, and the funding of, these areas, by implementing pass laws and other restrictive measures (Davies, 1981).

The abundance of cheap black labour, which was the intended consequence of the various measures, resulted in increasing unemployment and poverty of unskilled white working class communities. In order to solve the "poor white problem", new regulations were enforced, driving black workers back into the rural areas (Frankel and Brookes in Brookes et al, 1930:131).

Contradictory laws imposed during this time had significant impacts on urbanisation and the development of South Africa's towns and cities. Between 1923 and 1950 increasingly restrictive laws and policies were implemented, re-emphasising the requirements for segregation of race groups through mobility and influx controls and other measures.

3.2 Apartheid period

By the time of the national elections in 1948, the conditions in the homelands had deteriorated even further, and increasing migration pressure was threatening to derail the efforts of the outgoing government to maintain political, economic and social supremacy of white South Africa.

The National Party won the election on the basis of their programme of "apartheid" understood at the time to mean "the separate development of the various racial groups", although the concept had, at the time not been clearly defined (Hobart-Houghton, 1957).The National Party passed a series of laws which put the first phase of apartheid into effect, though much of the flavour of apartheid policy was already in place, as discussed above.

The cornerstone of the Apartheid programme was the Group Areas Act, passed in 1950, to systematise the grand design of physical separation of the races. Extending the provisions of the Native Land Act and its revisions and additions, it specified separate residential areas for the different racial groups and called for the forced relocation of black communities living in 'white' areas to designated areas. The Group Areas Act followed the Population Registration Act (No. 30) of 1950, which provided the basis for separating the population of South Africa into different races.

In that same year the Government appointed the Tomlinson Commission to advise on how apartheid should be put into practice. The report, published in 1954, was intended to provide the "evidence base" for segregationist policy (Hobart-Houghton, 1974). It argued against the establishment of border areas, and recommended that the decentralization policy should aim to attract investment in the reserves through state funded investment, including the provision of physical and social infrastructure (Hobart-Houghton, 1974). The rationale for opposing stimulation of border areas was that this would hinder Black skills formation and entrepreneurship. Essentially, the Tomlinson recommendations, much like Todaro's, argued that the best way to reduce rural urban migration was to create better opportunities in the rural areas (1979).

The recommendations of the report were taken lightly by Verwoed and the NP who favoured investment in growth points located on the border of black reserves and homelands (Hobart Houghton, 1974; De Wet, 1989). From about 1960 a number of concessions and incentives were

used to encourage relocation of manufacturing firms into growth points in order to stem integration of blacks into urban areas that was becoming an increasing concern as industrial and commercial expansion in cities required a larger supply of cheap unskilled workers, an urban pull factor. Many of these incentives were seen to be inadequate (Dewar et al, 1982) and a number of amendments or additions were made to the incentives package. When these efforts failed to halt black urbanisation the state sought more direct restrictions.

The 1967 Physical Planning Act imposed restrictions on the number of black workers that urban firms could employ. Firms that wanted to employ more black workers would have to relocate to the border areas or growth points. Inadequate infrastructure in the growth points and homelands, political instability and the reluctance of (current) workers to move from urban areas hampered the effectiveness of the decentralisation policy. Louwenberg and Kaempfer also note that the incentives favoured capital intensive technologies which contradicted the key objective of the policy, which was to create economic opportunities outside of the urban areas to stem in migration (2001:202).

In 1975 the apartheid government implemented the National Physical Development Plan (NPDP), guided by the notion that:

> *The increase in population and the unrestrained concentration of people in certain cities has given rise to numerous social and physical problems and are matters of growing concern throughout the world… On the other hand, the depopulation of rural areas also demands government action and makes necessary to apply measures which affect the spatial distribution of economic activities and thus population distribution' (1975:7)*

Essentially the plan acknowledged that the focus on decentralisation ignored the reality that cities and growth poles would continue to attract people to urban areas, regardless of policy (as predicted by urbanisation models) and thus national planning should aim to develop other areas throughout the country in an attempt to promote more balance urban growth (1975:7).

This new focus was informed by international studies conducted in the post war period that showed that "there is a relationship between the rate of national growth and development and the rate of concentration of economic activities" (1975:9). This relationship would, in the absence of intervention, result in a hierarchy of cities of different sizes where larger cities grow at the expense of smaller cities which contribute progressively less to national growth over time.

To prevent this from happening, which would essentially cause further expansion of large cities, the plan divided the country into regional units (for planning purposes), and identified the following key features that would determine the function of different areas, and thus their rationalisation in the hierarchy:

- The nodal core with its sphere of influence
- The pattern of population distribution
- Natural resources
- Infrastructure
- Physical features
- Economic activities
- Administrative and political boundaries

The NPDP was intended to be the first step towards balanced development, and efficient resource allocation while maintaining the goal of separate development of national groups. In addition, the regional guide plans process, initiated by the Physical Planning Act of 1967, would give substance to the national objectives.

3.3 The transition period

By the mid-1980s the international opposition to apartheid had gathered momentum, and by 1986 most industrial nations had imposed sanctions against South Africa (Lowenberg and Kaempfer, 2001:110). The impact of these actions has been debated, with some arguing that they were an essential factor in the fall of apartheid, a view articulated by Nelson Mandela in his inaugural speech (Levy, 1999) and others arguing that the impetus came from private disinvestment and political opposition within South Africa. Jones and Muller (1996:296), argued that economic growth had slowed before the effects of the sanctions would have been observed (from 1974 to 1987 it averaged 1.8 percent per year, significantly lower than the 4.9% leading up to 1974). The lag between the implementation and effect of these actions, as well as the separation of different facts made it difficult to measure the precise impacts. It had become apparent that the apartheid ideology had come into conflict with the reality of a modern South Africa in which growing and irreversible urbanisation and interdependence between black and white people were inevitable and the apartheid government began to accept the permanence of black people in the urban economy and consider how the transition could be managed (Urban Foundation, 1990).

Dewar et al (1982) considered whether major centres would cope if influx controls were removed in terms of two related concerns; the rate of urban population growth and the size of cities. They questioned whether the rapid influx would exceed for any city's capacity to provide housing, jobs and services to rapidly growing urban populations, particularly since most of those living in rural and outlying areas had limited earning potential in the changing urban economy. In 1985 the presidential council was asked to advise on strategies by means of which the process of urbanisation could be ordered to best counter present social, economic and physical problems that generally result from

rapid urbanisation (RSA, 1986).

The White Paper on Urbanisation (RSA, 1986) refers to government policies implemented previously in respect to urbanisation to improve to quality of life of South African citizens making reference to the recommendations of the Tomlinson Report, and an earlier report compiled by the Social and Economic Planning council in 1942, aimed at initiating decentralization policies, which became the focus from the 1960s onwards. It was acknowledged that these measures had failed to address the problems of "excessive" concentrations of population and economic activities in large urban areas. This justified the implementation of the National Physical Development Plan, which was, according to the white paper, intended to promote orderly urbanisation by indicating where different population groups would live and work.

The goal was to eventually achieve free movement for all, but in the interim, to identify land and areas within the group areas where migrants could settle and where commercial, industrial and social development could take place. The focus was still on "balanced distribution" and a regionally differentiated approach. The approach was guided by the principle that Consumers should pay for services and facilities, and standards and regulations for housing would be adapted to financial constraints.

Based on assessments of arguments for and against lifting influx controls, the White Paper recommended that controls be lifted and replaced by an urbanisation strategy to promote orderly urbanisation however, no such strategy was put in place (RSA, 1986). National government argued that local authorities should manage the urbanisation process, while national government would provide guidelines and make recommendations to be developed further. Concerns were raised around the perceived gap between the objectives and implementation of the recommendations (Dewar et al, 1982).

In recognition of this, the Urban Foundation (UF), started working towards the formulation of a private sector proposal for urbanisation policy and strategy for South Africa. The project resulted in the preparation of ten policy documents, each the product of extensive testing and consultation (UF, 1990). Based on a developmental approach, the focus was on the imperatives of economic growth and job creation; demographic realities; the demands of growing urban population for shelter and services and emerging urban pressures and processes. Based on the findings of the consultation process, the UF came up with two key policy convictions; positive change in South Africa should focus on the country's existing cities and; interdependence and complementarity between rural and urban development should inform an integrated approach rather than the dualistic approach so often followed in the literature.

The situation in South Africa had attracted international attention, from activists, scholars and civil society. Despite the vast number of studies conducted and presented around this time, to guide the official response to the reality of racial integration and urbanisation, no clear framework or guidelines were officially implemented at this time. It seemed relatively clear that unplanned urbanisation could have catastrophic impacts on larger urban areas, yet in 1986, influx controls were lifted and, with the Group Areas Act still in place, migrants flooded the already overcrowded informal settlements on the outskirts of South Africa's largest cities.

3.4 Post- Apartheid policy

Apartheid urban planning and policy discourse was organised along the lines of spatial racial separation. During the transition period, influx controls were relaxed and the dismantling of apartheid rules and regulations was initiated. By 1994, almost all legislation which discriminated on explicitly racial grounds had been abolished: people could go about their lives, and (in theory at least) choose where they wanted to live and work, without regard for racial classification (Seekings, 2010).

During the first few years of the new democracy, the government produced a succession of policy documents, and implemented a number of policies aimed at reversing the apartheid social, spatial, political and economic structures.

3.4.1 Economic development policies

The first official response outlining the post-apartheid national development strategy was the Reconstruction and Development Programme (RDP), approved by the ANC in 1996. The central aim was to address South Africa's social and economic problems, guided by the belief that reconstruction and development, or growth and distribution, were part of an integrated process and should be pursued simultaneously (Atkinson & Marais, in Pillay et al, 2006). There was a clear indication of the need for investment in rural and urban areas recognising the mutually reinforcing nature of rural and urban development strategies. The RDP addressed "excessive growth of the largest urban centres, the skewed distribution of population within rural areas, the role of small and medium sized towns and the future of declining towns and regions, and the apartheid dumping grounds" and warned against the potential effects of inappropriate macroeconomic policy on the geographic distribution of economic activity (RSA, 1994:24). The RDP also emphasised urban issues and predicted that continuing demographic shifts may increase urbanisation to over 70% of the population by 2000 (1994) a figure that has yet to be reached in 2016.

In 1996, government adopted the Growth, Employment and Redistribution (GEAR) strategy. Essentially, GEAR was the country's macro-economic strategy, intended to provide the economic underpinning of the RDP (Rogerson, 2000). In contrast to the RDP, GEAR emphasised the role of the private sector, education and economic infrastructure in economic development. Under this strategy, central control over local development was relaxed with local authorities being forced to generate larger proportions of their own revenues and drive the development process through the delivery of public goods and services and the promotion of economic growth (RSA, 1996).

In order to implement new strategies a system of governance and institutional arrangements were established to manage the transition towards the ideals of a free and equal, non-racial society. The apartheid government had passed multiple laws, established multiple institutions and contradictory processes. These laws were fragmented across the four provincial administrations, the homelands and self-governing territories.

The White Paper on Local Government (1998) outlined restructured roles and responsibilities of local authorities to replace central development planning, which in addition to traditional roles of service provision, included facilitation and guidance of development and economic growth. The Developmental Local Government (DLG) had four basic responsibilities:

- Executing municipal powers and functions in a way which optimises the potential for social development and economic growth;
- Managing development in a manner which ensures that it is integrated (socially and spatially as well as coordinating public and private investments) and sustainable;
- Promoting democratic values institutionally and within community; and
- Empowering the poor and marginalised and building social capital by providing community leadership and vision (Government Gazette, 13/3/98).

In order to fulfil their responsibilities, all local authorities were constitutionally required to produce integrated Development Plans (IDPs) for the short medium and long term.

In 2000 the vision of developmental metropolitan areas was introduced in recognition of the integral role of large cities in addressing the country's economic, social and environmental challenges. Municipal structures were restructured to form single tier, autonomous city authorities that could focus on the integration of communities divided by apartheid spatial planning (SACN, 2012).

The 1998 White Paper on Population Policy, compiled by the Department of Social Development, which is rarely referenced in the literature, sought to address the issue of urbanisation and

migration. The report was inspired by international perspectives on population and development issues discussed at the United Nations International Conference on Population and Development (ICPD) as well as recognition that population issues had been identified in the implementation of RDP and GEAR, as "obstacles to achieving objectives" (1998). One of the overarching themes and the position of government was that policies should aim to "meet the needs of the present generation without compromising the ability of future generations to meet their needs" (1998). The white paper emphasised the "growth and structural dynamics of population relative to the growth and capacity of the economy. The document proposed two strategies:

- Increasing alternative choices to migration from rural to urban areas through the provision of social services, infrastructure and better employment in rural areas, and
- Reducing backlogs in urban infrastructure and social services

Further, the role of population growth dynamics in development policy was emphasised. Three key statements were made in this regard:

- Population policy should form an integral part of national development strategies
- The goal of development strategies should be to reduce inequality and improve quality of life for all instead of focusing on achieving demographic objectives
- Appropriate population data should inform the implementation, monitoring and evaluation of development strategies

The main objective was to integrate population factors into all policies, plans and strategies in order facilitate the response to future growth.

The National Development Plan, adopted in 2012, sets the ambitious task of eliminating poverty and reducing unemployment by 2030, recognising that South Africa has made slow progress since 1994 at achieving the objectives of the RDP. The strategies revolve around growth and jobs, education and skills and a capable and developmental state. Chapter 8 is dedicated to transforming human settlements around the assertion that "where we live and work matters" (2012: 233) and forms the basis of the spatial analysis and interpretation of the key challenges that are addressed through urban and spatial planning.

The report acknowledges that most state investment has gone into household services and there is a need to shift the focus towards developing public goods through investment in public transport, economic and social infrastructure, quality public spaces and jobs.

Although the chapter provides a clear assessment of the key challenges, the list closely resembles those that have been identified in previous policy documents and plans. The strategies proposed to deal with these challenges lack evidence of innovative thinking around international best practice or alternative tools and methods. Although the lack of progress with regards to these issues is cited, there is little evidence to suggest that studies analysing the reasons for limited impacts and review of what has and has not worked in the past. For these reasons (and others) it is debateable whether the new policy perspective will have a greater impact than those of the past, however, the shift in thinking is a valuable step, in the direction of incorporating a more rational assessment of the impacts and implications of market and economic forces on the spatial patterns of development (and vice versa). This requires an appropriate framework, to analysis impacts, based on a clearly defined set of indicators.

3.4.2 Spatial policy

The Spatial Development Initiatives (SDI) were the first decisive spatially targeted development implemented at national scale, by the ANC. established between 1995 and 1998, and developed by the Department of Transport and Department of Trade and Industry as an integrated planning tool aimed at promoting investment in underdeveloped regions of the country that had potential for growth.

SDIs were intended to drive South Africa's transition from an inward-looking import-substitution economy during the apartheid years to an export-oriented economy focusing on industrial development (Rogerson, 2002) but also played a role in addressing the spatial distribution of economic activity.

The results of the initiative have been mixed and a number of studies have attempted to measure impacts. Kok (2007) presents findings from people's perceptions about the effects if the SDIs to gauge the impact of SDIs on individual migration decisions. He finds that SDIs located in metropolitan areas were more effective at attracting people than those in remote areas. This is probably because of amenities and benefits that cities offer which are not available in newly established industrial locations. An analysis of the strength of these effects could inform future policy and investment decisions.

Naude and McCloskey (2010) examined the employment creation potential of SDIs and found that the capital required for planned projects were significant and calculated that the cost of each job was, on average R381 000. They assessed the performance (and potential) of SDIs using the insights from the core periphery model in geographical economics. Consequently they made the case for government intervention to indirectly influence firm location decisions by providing infrastructure,

promoting skills acquisition and reducing inland transport costs through investments in transport infrastructure. They further identified the lack of employment data (post 1996) as a key limitation in the study.

One of the key weaknesses of this initiative has been the failure to secure funding for the scale of infrastructure investment required and consequently, the projects have failed to spread benefits through agglomeration economies. Drawing from the economics literature, quantitative studies of the strength of various agglomeration forces could be used to determine the most appropriate course of action.

During the late 1990s a consultative process was initiated in response to the failure of earlier efforts to coordinate or guide infrastructure and development investments to areas with greater economic potential. The result was the National Spatial Development Perspective presented in draft form to cabinet in 2000 but later withdrawn after it failed to garner any support, most likely because it challenged the prevailing view that poverty alleviation should be focused mainly in rural areas where it was assumed the greatest level of deprivation was concentrated (Oranje & Merrifield, 2010).

The NSDP (2006) contains an update of the 2003 version and aimed to provide:

- A set of principles and mechanisms for guiding infrastructure investment and development decisions;
- A description of the spatial manifestations of the main social, economic and environmental trends that should form the basis for a shared understanding of the national space economy; and
- An interpretation of the spatial realities and the implications for government intervention.

The ultimate purpose of the NSDP in the South African setting is to fundamentally reconfigure apartheid spatial relations and to implement spatial priorities that meet the constitutional imperative of providing basic services to all and alleviating poverty and inequality. The perspective aimed to be “both a policy directive in terms of its methodology and as an indicative tool in terms of its content” (2000:90).

The response to NSDP was been mixed. While it successfully presented the existing spatial realities, it did little to expand on the driving forces of spatial development Emphasis is placed on the role of local and metro municipalities to implement spatial policy, however, the guiding principles of the perspective are not made explicit. The interpretation of the spatial realities is more of an overview and lacks a deeper understanding of the implications for, and of, government interventions, which

would have added more value to the framework as a guide for local policy makers and planners.

3.4.3 Urban policy

The Urban Development Strategy (UDS), adopted in 1996, and the Urban Development Framework (UDF) in 1997, elaborated on the RDP's vision of urban development. The focus was on urban reform addressing urban apartheid spatial patterns, intended to create better-performing urban areas. It was motivated by a vision of cities and towns as centres of economic and social opportunity, where people can live and work. The draft recognised increasing urbanisation rates in South Africa and, in this regard, emphasised the need to plan for continued urbanisation and urban growth on a significant scale (RSA, 1996).The five strategic action areas and elements of the strategy included:

- integrating the cities and managing urban growth through urban land policy and the urban planning system, urban transportation, and environmental management;
- investing in urban development;
- building habitable and safe communities;
- promoting urban economic development; and
- creating institutions for delivery.

The Integrated Urban Development Framework (IUDF), which is yet to be finalised and still in draft form at the time of writing, was conceptualised in response to the NDP, to elaborate on the key issues around urbanisation, urban development and "the challenges in our towns and cities". The most recent draft (2015) claims to "bring coherence to the debate surrounding urbanisation" by "going back to basics" looking at investment strategies, financial controls and funding mechanisms to address the challenges of urban and rural planning (PAGE).

Currently still in draft form emphasises the role of the urban economy, drawing from Turok (2012). He identified a number of key policy implications from his survey of the South African spatial economy, and focused on urbanisation in particular. The crucial role of planning for future urbanisation is emphasised (for the first time) through the provision of infrastructure and basic services, as well as the role of secondary cities to ease the population pressure on larger cities.

The significance and timing of the IUDF warrant a more detailed analysis than the documents reviewed in the section.

Following the proposed structure, the first question looks at the underlying social and economic

conditions that frame the strategy. South Africa's cities and towns are still affected by apartheid spatial divisions, characterised by racial segregation, poverty, and exclusion from social and economic opportunities. High levels of inefficiency and wasteful use of scarce resources (especially land and infrastructure networks) characterise the country's cities and towns. Despite significant service delivery and development gains since 1994, these spatial patterns have largely not been reversed.

Against this backdrop, the IUDF is designed to unlock development synergy that comes from co-ordinated investments in people and places, to achieve the vision of

> *Liveable, safe, resource efficient cities and towns that are socially integrated, economically inclusive and globally competitive, where residents actively participate in urban life*

Eight policy levers are identified:

- Integrated spatial planning
- Integrated transport and mobility
- Integrated and sustainable human settlements
- Integrated urban infrastructure
- Efficient land governance and management
- Inclusive economic development
- Empowered active communities
- Effective urban governance

Across these levers, the report emphasises the need for improved intergovernmental relationships and alignment, greater dissolution of powers to municipalities and metropolitan areas, improved evidence-based proactive spatial and fiscal planning, improved public participation and improved monitoring and evaluation of policies, investments and better management practices, especially with regard to capturing increasing value due to public investment.

Each lever is framed in terms of its relevance to achieving the objectives of national government (with regards to urban development) the challenges it aims to address, short, medium and long term policy priorities and the key actors required to implement strategies.

Statement of purpose is clear, and not all that different from the UDF (1997) however, the greatest challenge is the implementation, evident in the numerous and diverse actors identified for each lever.

4. MARKET FORCES AND SPATIAL PLANNING IN CAPE TOWN

The urban spatial development of Cape Town has been influenced by both policy and market forces. A number of studies have been conducted, mostly from the planning perspective, (Watson, 2003; Turok, 2001; Turok and Watson, 2001; Turok and Sinclair-Smith, 2012; City of Cape Town, 2010). This section is not intended to be an exposition of spatial economic development in Cape Town, rather it highlights key policy insights and attempts to link them to the broader national planning perspective under apartheid, and then, to consider the more recent planning concepts contained in the Metropolitan Spatial Development Framework and the Cape Town SDF 2012 and how they interact with market forces as understood by the spatial economic theories described in Chapter 2.

This case study is an attempt to illustrate how economic concepts and theories, developed in Chapter 2 could be applied to urban spatial planning in the City of Cape Town. The complex nature of the segregated city of Cape Town provides a boundless challenge for the spatial planners involved to find an optimum solution to the question of social division and racial disparity in opportunity. The vast scope of urban spatial planning precludes a comprehensive application of economic theories and concepts to all facets of the planning process. The case study presented here examines one particular element of urban spatial planning, which is the efforts to guide or encourage public and private investment into certain areas to accelerate development.

This section first explores the local impacts of national initiatives and strategies that intentionally or unintentionally influence the spatial development of the city. The second section reviews more recent spatial plans, conceived to address the legacy of the past and guide spatial development in the future, according to spatial and development principles.

The key plans and policies reviewed in the case study are shown in the table below. The emphasis is on current frameworks, so review of the guide plans are intended to provide historical context only.

YEAR	Guide Plan, strategy or framework
1975	Cape Metropolitan Guide Plan, first report, 1975
1977	Cape Metropolitan Area Draft Guide Plan
1980	A spatial development strategy for the Western Cape

1988	Cape Metropolitan Area Draft Guide Plan,
1996	Metropolitan Spatial Development Framework, Technical report
2001	Metropolitan Spatial Development Framework Redraft
2003	Metropolitan Spatial Development Framework Review
2012	Cape Town Spatial Development Framework

Table 7: Spatial planning timeline

The way that South African cities are being planned and built is changing. The Spatial Planning and Land Use Management Act, provides municipalities with far greater powers over spatial planning decisions. In addition, the review of local government infrastructure grants undertaken by National Treasury, DCoG, the Financial and Fiscal Commission (FFC), SALGA, and the Department of Performance Monitoring and Evaluation (DPME) is recommending greater fiscal decentralisation and autonomy for metropolitan authorities. These changes show promise for change in future, however, these discussions need to recognise the influence of historical processes and actions on current realities.

While it is shown that many of the features of the recent and current efforts of national spatial planning are different to those of the past, there remain a remarkable number of similarities about the identified challenges, the institutional arrangements, the assessment of spatial and economic conditions as well as the frameworks and strategies proposed (Oranje and Merrifield, 2010).

4.1 Historical development and policy

The path dependence of urban policy, manifested in the existing spatial structure of the city is an important factor in understanding the current and future challenges that urban planners face. Turok (2001) describes Cape Town as typical of South African cities, characterised by a largely monocentric structure and a well diversified economy. Until the 1950s, the city had a reasonably efficient spatial form considering its unusual physical setting. Many people lived in mixed race communities, giving the city a relatively liberal reputation. The implementation of the Group Areas Act had long lasting impacts on the social, and economic system.

These townships were built to accommodate the African and Coloured labour force needed by the city's growing economy and consisted of rudimentary rental housing, infrastructure and facilities. The shortage of accommodation meant that these areas tended to be overcrowded, and migrants

who were not formally accommodated in the designated area occupied informal settlements and "squatter camps" elsewhere in the South East. These individuals lived in precarious circumstances, fearing police intimidation and eviction from their homes (Turok, 2001).

Despite the stated intentions of national government to establish industrial activities in the border areas to provide economic opportunities outside of the urban centres, the lack of sufficient funding and infrastructure prevented this from happening. The location of these areas, relative to economic and social opportunities, created the need to establish high levels of physical mobility, imposing substantial costs on individuals, businesses and the environment through travelling time, congestion and pollution.

Prior to 1967 policy direction was provided by central government, but implemented by local city councils. In order to further strengthen the focus of government action in the country, the national government devised the concept of 'Guide Plans', which sought to ensure central government control in local planning. The Physical Planning Act of 1967, in recognition of the need for orderly spatial development to manage urbanisation, distributed powers to local or regional administration and required that they produce and follow guide plans. The Cape Metropolitan Council established a Guide plan committee in 1971 and in 1975, the Physical Planning Act was amended to give guide plans statutory force.

The early guide plans followed the traditional planning approach in which lists of objectives were accompanied by cartographical maps depicting the development vision for the area. In terms of the governance hierarchy, provincial (and local) authorities were bound by the guiding decisions taken by central government and as such, had little flexibility in their decision making. Segregation, deconcentration and decentralisation were key themes throughout, and the focus of strategies was on management of group areas, within the guidelines of national policy prescriptions..

The guide plans produced in 1975 and 1977 listed a number of objectives in relation to movement, physical resources, services, recreation, employment and governance. Higher densities compatible with maintenance of good residential conditions were emphasised, along with the need to address housing backlogs for coloured and black urban residents in predetermined locations.

Despite a clear position of the central government, in respect of deconcentration points, and the establishment of Atlantis to create employment opportunities for the Coloured population outside of the Cape Town metropolitan area, the guide plans made recommendations for the creation of

employment opportunities in Mitchell's Plain and the Cape Flats, which made more sense given the geographical separation of Atlantis and established coloured communities.

Cape Metropolitan Area Draft Guide Plan (1984), reiterated issues regarding accommodation in group area, but in addition identified the following, which reflect more general concerns about the CMA:

- Increasing urbanisation increasing pressure on open spaces and agricultural land
- Traffic congestion as a result of urban sprawl and low density
- Suboptimal location of industrial zones
- Overconcentration of activities in Cape Town CBD
- Low level of growth in metro unable to create job opportunities

With the exception of the overconcentration of activities in the CBD, these trends tend to be repeated in almost all of the spatial plans and frameworks reviewed in this case study.

The Cape Town Metropolitan Area Draft Guide Plan (1988) was prepared partly in response to the 1986 government White Paper on Urbanisation which represents a drastic change in national planning strategy. The White Paper, according to the CMC response, essentially failed to prescribe any real strategies for the management of migration in the absence of influx controls. Their concerns were as follows:

- The availability of suitable land to accommodate large number of migrants
- The creation of jobs
- Ability of local municipalities to respond to development issues
- The burden of new migrants would diminish the city's ability to drive economic growth
- Vague statements of roles and responsibilities
- Finite resources to meet infinite needs
- Local government autonomy

The implications of this were that, restrictions were placed on industrial development anywhere outside of Atlantis, the 1988 plan identified the Cape Flats as a possible secondary high order point of concentration (along with Bellville) to create employment for migrants and began to consider plans for the development of Langa, Nyanga, Gugulethu and Mfuleni to accommodate black migrants. The guiding principle was that development should promote higher densities and compaction that account for shortage of land for urban development.

The contradictions in the successive guide plans illustrate the lack of coherent planning, which resulted in haphazard, ad hoc interventions and strategies, with limited impacts. The failure to adequately address the deteriorating conditions in the townships and informal settlements lead to increasing social unrest and violent confrontations with the police and continued in migration into overcrowded, and underserviced informal settlements.

4.2 Post-Apartheid spatial planning in Cape Town

During the transition period, numerous committees and commissions were established to investigate appropriate actions and strategies to begin the process of transformation in South African cities. Recognising the need for radical change in perspective, an inclusive group of representatives from local and regional authorities, community organisations and consultants came together to prepare new proposals in the early 1990s (Watson, 1998). They acknowledged the importance of restructuring the fragmented urban system towards a more equitable and sustainable future and began preparation of the Metropolitan Spatial Development Framework (MSDF). A technical report was published in April 1996, which provided the details of the MSDF principles and the spatial framework to guide planning control processes, followed by the adoption of the draft MSDF Statutory Plan in 2000, intended to provide guidelines for the interpretation and application of the MSDF for local planners and policy makers. A redraft of the MSDF was adopted by council in 2001, and a review was undertaken in 2003.

The key spatial development trends in the city at this time are identified by Turok (2001) and MSDF redraft (2003) as:

- **Decentralisation**, involving the shift of economic activity away from the traditional CBD and towards suburban centres, where new nodes emerge
- **Deconcentration,** involving the shift of economic activity away from the traditional CBD into dispersed patterns of development

- **Northern drift,** involving the steady shift of the centre from the CBD towards the Northern suburbs, and away from the under resourced, relatively poor South-East

- **Differentiation,** involving the growing tendency for economic centres to specialise in different market segments, based on geographical location and concentration.

- **Mega projects and gated developments,** which represent opportunities for economic growth, but problems for sustainable, inclusive development in Cape Town

While some of these trends were seen to align with the MSDF goals, others were seen to reinforce spatial divisions, and consequently, required intervention to reduce social costs.

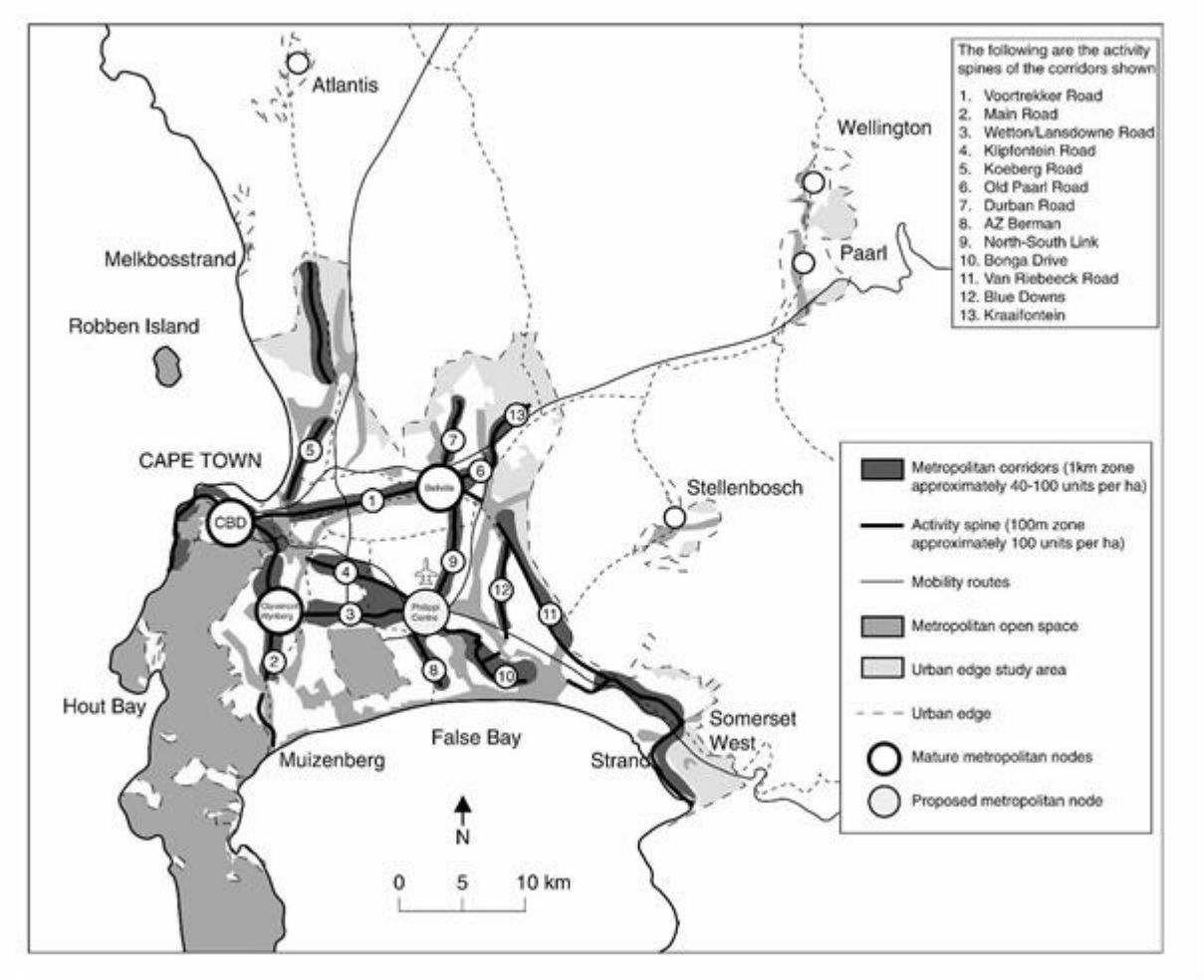
4.2.1 Metropolitan Spatial Development Framework (MSDF)

The Metropolitan Spatial Development Framework (MSDF) was drafted in the context of significant developmental and spatial challenges identified above and including sprawl, spatial mismatch of employment and residence, gated residential and commercial development and reliance on private mobility. This was seen to add-up to a fundamentally unsustainable and costly growth pattern.

Turok and Watson (2001) examine the costs of these "divergent" spatial development patterns, noting that the general response to social and economic problems have been sectoral interventions, which are poorly integrated and often contradictory. They point to the fact that dispersed settlements are much more costly to service, and that, even in high income areas, which tend to be low density, households do not pay the full cost of services and as such the government is essentially subsidising services in these areas, as well as rolling out free services in poor areas. The second cost is the operating costs of public transport, as well as road based public services (ie solid waste). Other costs include higher subsidies for public transport, required to connect households and employment areas, across great distances; and the significant proportion of time and income that is required by poor commuters to access employment. These have social and economic implications, and are thought to have negative effects on productivity, particularly when public transport fails, for technical, or political reasons. Environmental externalities and higher rates of crime in poor areas are also identified, illustrating the significant individual and social costs resulting from inefficient spatial patterns.

The MSDF envisaged a strong, dynamic Cape Metropolitan Area (CMA) which supports the needs of its people, and which seeks to fulfil their potential and optimise the opportunities of the metropolitan area (2001).

Four basic structuring elements were identified as means through which to achieve the proposed vision, goals and guidelines, illustrated in Map 1. They included the identification of urban nodes; activity corridors; and, urban edges to guide public and private investment and development, attempting to influence these to achieve spatial, social and economic equity and sustainability.



Map 1: The Cape Metropolitan Spatial Development Framework (Turok, 2001:2355)

Metropolitan Urban Nodes were defined as “centres where many activities mutually reinforce one another and where there are there are high concentrations of people” (Cape Town, 1996: 34). It was thought that the development of nodes would guide patterns of public investment and attract private investment.

Metropolitan Activity Corridors were intended to link major urban nodes by means of public transport systems supported by high density residential areas. Within the corridors mixed use development was promoted as well as concentrated economic activities and shared amenities (Cape Town, 2003).

Urban edges were drawn to represent the proposed maximum extent of the urban footprint in an attempt to limit urban sprawl, and promote densification and integration, as well as promote intensifying development and integrating urban areas.

The Metropolitan Open Space System (MOSS) was intended to preserve open spaces on the basis that they provide benefits and services to urban residents and visitors. The network of public open spaces was designed to support social, economic and ecological activities, protecting the natural environment and enhancing human settlements (Cape Town, 2001).

The urban edges and MOSS proposals were relatively uncontested, as strategies to intensify economic activity within the city and protect valuable agricultural land and open spaces. However, proposals to direct public and private investment into demarcated nodes and corridors proved to be highly contentious, particularly given the implication that the location of investment would be legally enforced through statutorisation of the plan (Turok and Watson, 20010).

Two of the most significant features of the MSDF, according to Turok (2001), were the proposal for a large new economic centre in Philippi, which lies in the underdeveloped south-east area and a major new corridor linking the south-east to the better off southern suburbs. This was the first city led attempt to rebalance the city and connect poorly located areas with clusters of economic opportunities (Turok. 2001).

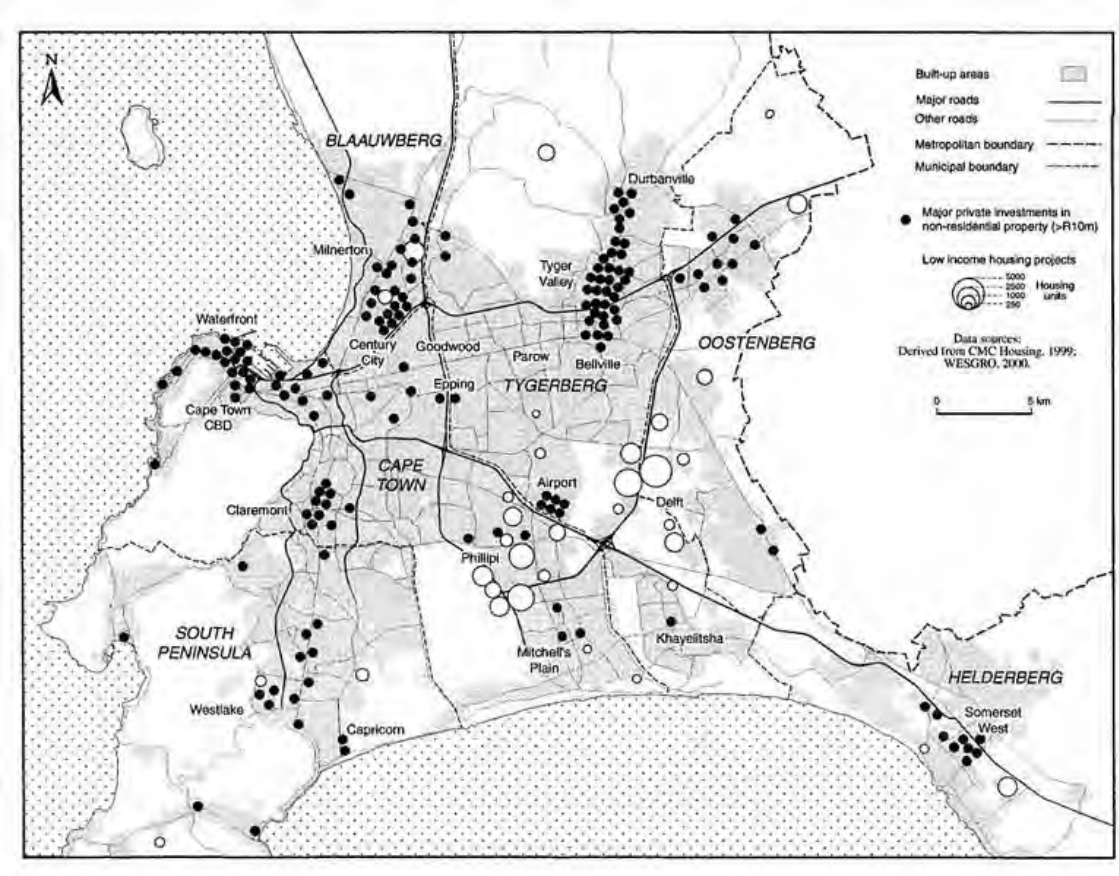
The Metropolitan Spatial Development Framework Review, undertaken in early part of 2003 (MSDF Review, 2003) provided insights into the impact of the MSDF on spatial trends in Cape Town, highlighting where strategies have been successful and where they have failed. Perhaps the key issue, from which many of those discussed below stem, is the fact that despite significant effort by the CMC spatial planners the plan was never made statutory. Key challenges and limitations were identified as follows:

- Lack of political support
- Unclear definition of what constitutes urban development;

- Insufficient arguments supporting the protection of particular land parcels;
- the demand for land for housing and how population growth will be accommodated was based on assumption rather than empirical research; and
- The assumption that implementation of an edge would lead to increased densities yet the form of subsidy housing and most private residential development precluded this (average densities remained at 11 du/ha).

The review identified the failure to achieve densification as anticipated. The reasons given were numerous and include the lack of available infill sites, preference for locations outside of the nodes and corridors; and the nature of public housing subsidies.

Further, the review found that the MSDF has had limited success in directing public and private investment spatially as it had intended to. In fact, more public and private investment has occurred outside the demarcated nodes and corridors than within them. Turok (2001) mapped the location of private and public investment, using available data from WESGRO, which admittedly has its limitations, to show the degree to which the reality has diverged from the framework.



Map 2: The location of major private investment relative to low income housing projects (Turok, 2001:2353)

The major trend that can be observed are that private investment tends to gravitate toward established nodes and corridors, while the proposed Philippi node has received very little. The MSDF identifies the development of major projects, outside of corridors and nodes (N1 City, Cape Gate and Century City as significant contributors to this trend, but there does not seem to be any doubt that the nodes and corridors may not actually be correctly identified or defined.

4.2.2 Cape Town Spatial Development Framework (CTSDF)

Since the MSDF draft, and redraft, Cape Town's population had continued to grow, particularly as a result of in-migration from rural areas. Despite the increased planning powers and control over resources, the city still faces with severe housing backlogs and pressure to deliver housing solutions at scale.

The amalgamation of the 8 local councils to form the Unicity, was a significant changed that occurred between the MSDF and CTSDF. The unicity authority has greater power, resources and scope than local government had has in the past aiming towards a more coherent spatially informed development strategy for the city (Turok and Watson, 2001). This was an opportunity for a fresh start.

Guided by the Municipal Systems Act of 2000 as well as the provincial SDF and the government of the Western Cape's law reform project, the SDF was intended to promote a more responsive, flexible (this is not made explicit) and policy driven approach to land use management with the objective of guiding spatial development to achieve the best possible outcomes for the city and its people.

In response to future uncertainty, the framework was formulated on the basis of research undertaken during the preparation process which aimed to illustrate and understand the trends and challenges that drive or impede urban prosperity. The SDF lists 25 in depth studies as well as numerous sector plans and strategies that informed aspects of the framework.

The analysis of the spatial economy (City of Cape Town, 2010) and Sinclair-Smith and Turok (2012) identified economic trends, including the shift towards the services sector and its associated economic and employment impacts. Spatial trends, include the re-emergence of the CBD as a dominant economic and employment centre, and the distribution of sectoral activity across the

metro. These trends are derived from data obtained from the RSC levy database, which was discontinued in 2006.

Strategic issues	**Existing trends and implications**	**Policy and Strategy Response**	**Strategic Impact of the SDF**	**Possible indicators**
Population and city growth	Rate of urban growth, population growth and demand	Contain and direct new growth towards suitable areas and sustainable forms	New development areas	Extent of urban sprawl
	Urban sprawl and a spread-out city	Densification and Urban Edge	Identification of potential densification areas and limits to urban sprawl	Number and location of approved building plans, rezonings and subdivisions
Natural environmental and resource capacity	Loss of biodiversity	Biodiversity strategy: biodiversity network and implementation framework	Clarification of national biodiversity targets; integration of conservation planning principles with growth management	Percentage of endangered and critically endangered Biodiversity remaining
	Poor-quality open spaces	Develop a quality metropolitan open space system (MOSS)	Linked, multifunctional open space system	Quality, quantity and accessibility of green space per capita
	Risks and impacts of global climate change	Climate change mitigation and adaptation strategies	Identification of vulnerable areas and activities to inform mitigation actions	Per capita CO2 emissions; Coastal Protection Zone/ Coastal Edge
	Loss of agricultural, rural and smallholding areas	Identify and protect priority agricultural resource areas; Urban Edge; protection of heritage resources including cultural landscapes	Productive agricultural, tourism, heritage and mineral resources are protected	Extent of urban sprawl, heritage inventory updated and integrated with forward planning and land use controls.
Spatial limits to growth	Infrastructure backlogs	Prepare 15-year Growth Management Plan	Promote compact, directed urban growth within urban edge	Residential density, urban edge amendments
	Constraints and development boundaries to future growth	Agricultural land review; biodiversity network; Urban Edge; major precautionary area	Managed, compact growth directed away from natural assets and hazards.	Urban edge amendments
	Impact of urban growth on rivers, wetlands and aquifers	Minimise urban development impacts on natural resource areas and corridors	Policies on floodlines, aquifers and river corridors inform land use management	Conformance with District SDPs
Accessibility and movement systems	Radial transport network limits growth	Citywide public transport that supports the accessibility grid	Hierarchy of integrated public transport services	Modal split: public/ private transport split; decreasing congestion
	Public transport failing to meet demand	Densification and urban edge strategies Integrated Transport Plan (ITP)	Compact city; implementation of the ITP – spatial implications	Population within 1 km of public transport; increasing patronage of public transport
Spatial Economy	Spatial economic marginalisation	Identification of economic core and linkages to address spatial economic imbalances. Promotion of small businesses.	Economic Areas Plan	Job creation accessible to or within the Metro Southeast
	Informal economy has few opportunities compared to formal economy	Inclusive and shared economic growth by directing the location and form of development to promote	Informal trading facilities provided in appropriate areas; sale or lease of City land for informal	Number of new trading sites and leases to informal traders

		informal sector opportunities; integrated public transport and land use planning	trading and small business use	
	Economic resources agriculture, tourism, heritage and mineral resources	Contain and direct new growth in and towards suitable areas and sustainable forms	Protection of tourism and heritage resource areas; identification of new tourism, heritage, nature and cultural resources, and the upgrade of certain strategic tourism precincts and resources; identification of strategic and accessible mineral resources	Number of tourism generated jobs; location of mining applications received/approved

Table 8 provides a summary of issues, trends, policy and strategy responses, strategic impacts and possible indicators for the SDF.

Strategic issues	**Existing trends and implications**	**Policy and Strategy Response**	**Strategic Impact of the SDF**	**Possible indicators**
Population and city growth	Rate of urban growth, population growth and demand	Contain and direct new growth towards suitable areas and sustainable forms	New development areas	Extent of urban sprawl
	Urban sprawl and a spread-out city	Densification and Urban Edge	Identification of potential densification areas and limits to urban sprawl	Number and location of approved building plans, rezonings and subdivisions
Natural environmental and resource capacity	Loss of biodiversity	Biodiversity strategy: biodiversity network and implementation framework	Clarification of national biodiversity targets; integration of conservation planning principles with growth management	Percentage of endangered and critically endangered Biodiversity remaining
	Poor-quality open spaces	Develop a quality metropolitan open space system (MOSS)	Linked, multifunctional open space system	Quality, quantity and accessibility of green space per capita
	Risks and impacts of global climate change	Climate change mitigation and adaptation strategies	Identification of vulnerable areas and activities to inform mitigation actions	Per capita CO2 emissions; Coastal Protection Zone/ Coastal Edge
	Loss of agricultural, rural and smallholding areas	Identify and protect priority agricultural resource areas; Urban Edge; protection of heritage resources including cultural landscapes	Productive agricultural, tourism, heritage and mineral resources are protected	Extent of urban sprawl, heritage inventory updated and integrated with forward planning and land use controls.
Spatial limits to growth	Infrastructure backlogs	Prepare 15-year Growth Management Plan	Promote compact, directed urban growth within urban edge	Residential density, urban edge amendments
	Constraints and development boundaries to future growth	Agricultural land review; biodiversity network; Urban Edge; major precautionary area	Managed, compact growth directed away from natural assets and hazards.	Urban edge amendments
	Impact of urban growth on rivers, wetlands and aquifers	Minimise urban development impacts on natural resource areas and corridors	Policies on floodlines, aquifers and river corridors inform land use management	Conformance with District SDPs

Accessibility and movement systems	Radial transport network limits growth	Citywide public transport that supports the accessibility grid	Hierarchy of integrated public transport services	Modal split: public/ private transport split; decreasing congestion
	Public transport failing to meet demand	Densification and urban edge strategies Integrated Transport Plan (ITP)	Compact city; implementation of the ITP – spatial implications	Population within 1 km of public transport; increasing patronage of public transport
Spatial Economy	Spatial economic marginalisation	Identification of economic core and linkages to address spatial economic imbalances. Promotion of small businesses.	Economic Areas Plan	Job creation accessible to or within the Metro Southeast
	Informal economy has few opportunities compared to formal economy	Inclusive and shared economic growth by directing the location and form of development to promote informal sector opportunities; integrated public transport and land use planning	Informal trading facilities provided in appropriate areas; sale or lease of City land for informal trading and small business use	Number of new trading sites and leases to informal traders
	Economic resources agriculture, tourism, heritage and mineral resources	Contain and direct new growth in and towards suitable areas and sustainable forms	Protection of tourism and heritage resource areas; identification of new tourism, heritage, nature and cultural resources, and the upgrade of certain strategic tourism precincts and resources; identification of strategic and accessible mineral resources	Number of tourism generated jobs; location of mining applications received/approved

Table 8: CTSDF summary (Cape Town SDF, 2012

The CTSDF established strategies, policy statements and policy guidelines that were intended to ensure that land use is managed consistently in line with the City's vision and spatial goals, and contributes to the achievement of the long-term metropolitan spatial structure. The following are the key strategies identified:

- Key Strategy 1: Plan for employment, and improve access to economic opportunities
- Key Strategy 2: Manage urban growth, and create a balance between urban development and environmental protection
- Key Strategy 3: Build an inclusive, integrated, vibrant city

Within these strategies, 50 policy statements were identified, accompanied by a description of the implications and requirements for intervention, the policy guidelines, and related legislation and policies. These statements and responses vary in detail but two key responses are evident. The first is the promotion of the compact, sustainable city through the implementation of a densification

strategy. The second is to guide investments towards “appropriate” locations to address spatial mismatch of employment, and promote the development of clusters. These are essentially the same strategies promoted in the MSDF, albeit, in this case, providing further detail.

4.3 Current trends and strategies

To date, there is no evidence of comprehensive review of the CTSDF, despite repeated statements that the plan would be flexible and respond to changing conditions. The lack of robust evaluation exacerbates problems by failing to recognise ineffective, or counterproductive measures, in a timeous way, in order to revise or revisit the framework.

The lack of reliable data at the local scale as well as limited tools and methods for analysis has been cited as one of the key reasons for this failure, however, this section draws on the spatial representation of relevant data, provided by a new research and policy support initiative, launched by the City of Cape Town in 2014. The Economic Areas Management Programme (ECAMP) tool, still in its early stages, tracks and assesses the market performance and long-term growth potential of over seventy business precincts across the metropolitan region, giving users insight into local business dynamics, opportunities and inefficiencies which can be used to inform an appropriate area-based strategy and practical local interventions.

According to Rabe et al (2015), the rationale for developing the tool, was the need for evidence based, data driven tools, to inform certain aspects of planning, particularly spatial targeting. The process was based on two key theoretical propositions; one, that performance of areas is usually reflected in the property market (property prices tend to be lower in underperforming areas); two, that location attributes (both natural and manmade) play an important role in supporting and growing economic activity. Drawing from location theory, firm location decisions are determined by specific internal requirements, including access to markets, and land rent. Depending on the nature of business, or specific operating structures, firms then make trade-offs between different locations. Internal and external economies of scale lead to concentrations of firms in certain areas. The data from ECAMP are assumed to be the most up to date reflection of development trends in the metro area.

Inferences of the determinants of these patterns can be complicated by the fact that the performance of areas, is reflected in property prices, which requires that property markets function properly, the rents associated with different locations reflect the location potential, and that firms

have perfect, or complete knowledge and information available to make rational trade-offs (Rabe et al, 2015).

The diagnostic tools are useful to illustrate trends, challenges and potential to city officials, but the spatial representation of the data will prove invaluable to researchers interested in the city. The fact that the tool is live, and can be updated as soon as new data becomes available, makes it a much more useful tool than the SDF, which tends to be out of date, before it is even approved, since much of the data gathering happens long before this time, and often, data sources used are outdated.

It is very difficult to show the significance of this data on paper, since each layer is separated, thus not easily transferred into a single image. In the absence of a review of the CTSDF, it is unclear how this tool with influence planning strategies in the future, however, there is scope for more meaningful analysis of the spatial economy, and the development of a framework, against which interventions can be evaluated, based on an understanding of the likely impacts.

5. DISCUSSION

The numerous commissions and advisory boards established by the government during and before Apartheid, intended to provide the rationale and evidence required to implement policies would suggest that active steps were taken to understand the social and economic impacts and implications of decisions made during this time. However, it appears that often, the more fundamental details were ignored both from the Tomlinson report, and the Glen Grey commission findings. This is not to say that the findings of the report, which generally supported the broad motives of the governing authorities, were the result of unbiased economic analysis, which is highly unlikely, given the documented criticisms of the consultative processes and composition of the commissions (which were generally all white), but the point here, is that during this time, policies were implemented, despite evidence to show how, or why, they might fail to meet their stated objectives.

The motives, and intentions of these policies and laws, was to maintain economic, and political dominance of the white minority, over other racial groups, through physical, or spatial separation and to deprive these groups of their ability to sustain their livelihoods by removing their land tenure and imposes taxes that forced the unskilled workforce into underpaid labour on the mines, in factories and on farms.

The failure of these policies eventually forced the apartheid government to accept the permanent urbanisation of all race groups illustrate the strength of the market in the determination of urban spatial form and function. This can be understood in terms of the push pull urbanisation models discussed in Chapter 2. The conditions in the rural areas, and opportunities in urban areas simultaneously pushed and pulled individuals from rural to urban areas, and attempts to stem this movement were not strong enough to halt migration altogether.

The decision to lift influx controls before establishing a comprehensive urbanisation strategy, guiding urban authorities how to make land available to migrants, in an orderly manner to facilitate the provision of services has had, and will continue to have significant effects on the spatial landscape of cities. Once settled, it is socially and politically difficult to move residents in order to build more suitable accommodation. Further, the high density of informal settlements, means that it is not possible, to accommodate families in formalised housing, in the same location as they currently reside. This inevitably has to involve the displacement of some families, which will certainly lead to dissatisfaction, and unrest. If housing policy had been designed according to some of the insights

from urban economists, housing provision could have allowed for more flexibility, and allowed residents to make certain trade-offs, within the limitations that exist. For example, between small apartments in high rise (or at least multi-storey or terraced) blocks closer to the city, or larger homes, on single plots on the periphery.

In the post-apartheid period, policy design and implementation is much more complex, balancing the needs and expectations of a diverse population, sustaining economic growth and driving development by transforming the spatial landscape through spatial planning and policy. While the overall objectives of these policies and plans differed from those pursued by the colonial and apartheid leaders, the tools and mechanisms employed to achieve desired aspects have not changed significantly. These tools have had limited measurable positive impact on the economic and social outcomes, and based on the findings of international studies, are likely to have resulted in unforeseen negative impacts, although these have rarely been addressed or measured locally. The administrative costs of compiling plans and strategies can also be significant, so ineffective policies should be identified and reviewed, as a matter of urgency.

Analysing past events and policies, when the outcomes are known, it may be tempting to assume that poor outcomes could have been avoided by applying different approaches. The reality, is that at the time, during the design process, even with improved analytical tool and methods, certain outcomes may still not have been anticipated, given that policies and plans are implemented in complex, dynamic systems. There is a great deal of uncertainty with long term planning, and many forces at play that lie beyond the control of local policy makers. Although this study asserts that some of this uncertainty can be reduced through more integrated approaches that carefully identifies connections from policy to market impacts, or from market or individual behaviour and outcomes to policy effectiveness, there are no fail safe solutions.

The information presented here, in this exploratory study, shows promise for improved planning approaches. The lack of suitable data at appropriate scale has been an obstacle to meaningful analysis of trends and impacts. A number of recent studies used the Regional Services Levy database to extract spatial development patterns in Cape Town, but since it was discontinued in 2006, this data are now outdated, and of limited use. The launch of ECAMP presents an opportunity for further research. The benefits of the tool will become ever more important over time, if revisions and updates, maintain and collate historical data, to extract trends and changes that result from unexpected events, economic shifts and state intervention. This will provide the basis for analytical testing of a variety of models, including those from economics, presented in this dissertation.

In addition to the data now available on the ECAMP portal, this study finds that primary research, through household surveys (either new or amendments to existing) could further the understanding of individual or household preferences for location and its associated attributes, to inform policy makers of potential impacts of policy decisions, and help to develop policies which result in the best possible outcomes. This, it is believed, will reduce opposition to some of the interventions that have been derailed by the public.

The complexity of this topic is acknowledged, based on the experience of conducting this research and the findings and conclusions from similar exercises cited in the literature. A comprehensive review of appropriate tools and models for the evaluation of policies and interventions is needed.

A further recommendation, that arises from this dissertation, is for economic tools and concepts to be applied at a smaller geographical scales, where additional factors that impact spatial development can be better understood, rather than trying to accommodate multiple, sometimes opposing forces, as it required when conducting research at a broader scale, like metropolitan areas, where populations and economic activities display a great deal of heterogeneity. The following recent or current projects could serve as suitable starting points for this type of analysis:

- WESCAPE – a comprehensive assessment of the potential social and economic costs and benefits, to be evaluated against concerns about sprawl and encroachment into agricultural land and natural open space
- Urban renewal in Mitchells Plain and Khayelitsha – review of impacts to date, and an assessment of barriers to private investment
- The Cape Town Densification strategy – review of impacts to date and an assessment of the barriers to achieving higher residential densities in prescribed areas
- The Cape Town incentives policy – a specific study analysing the impacts of the UDZ, considering the effectiveness of different types of incentives (financial and non financial) as well as the appropriate size of incentive required to induce private investment.

There are several other potential applications, at different scales, as shown by the small but growing body of literature, dominated by a handful of researchers at the University of the North West. More research is required to fully understand the potential of different approaches and methodologies, applied in different contexts, both in terms of scale and location.

The broader challenges, associated with urbanisation and the limited means to absorb migrants, as well as the urban poverty paradox, whereby efforts to improve living conditions of the poor lead to further in migration, is more complex, and it is not likely that the economic theories and concepts will be able to make a significant contribution to intervention in this regard. The decision to lift influx controls without securing an appropriate urbanisation strategy, and the continued migration into overcrowded and underserviced settlements. According to the urban models (and in some respects those from geographical economics), migration should cease when the costs outweigh the benefits. The conditions in urban informal settlements are so poor, that one would assume that a life of subsistence in rural areas would be better than remaining unemployed in poor living conditions. However, by addressing the factors that prevent the establishment and development of economic and employment centres in lagging areas, may help to attracts more investment, and achieve a more balanced distribution of economic activity, that reduces the pressure on the state in terms of transport subsidies and the ever increasing pressure to provide housing is more suitable locations.

According to urban models, rents are higher for land located close to economic opportunities, and therefore the market tends to work against providing such land to low-income groups. Inadequate access to well-located urban land has immediate and long-term economic and social implications not only for the poor themselves, but also for the sustainability and efficiency of the overall urban environment, and for the overall social fabric of the city (Urban Landmark, 2008).

The first step, with regards to housing, is to define and identify which locations may be more appropriate. This study finds frequent references to the CBD as the key employment cluster, but in reality, the changing structure of the economy, means that the activities currently located in the central area, and implicitly, best suited to central locations are geared to business services and other activities that require highly skilled labour.

A better understanding of movement patterns and the nature of the spatial and skills mismatch, which can only be understood through primary data collection, surveying household would shed light on this issue. The transport system may play a role, if it is the case that many poor workers travel into the CBD, only to make use of the extensive transport interchanges, leaving the CBD again, to their final destinations, either in the suburbs, or in the industrial areas in the north and west of the CBD.

6. CONCLUSION

This dissertation presented concepts from economics that illustrate how market forces influence the spatial development of cities by reviewing theory and evidence from the international literature, and highlighting the small but growing body of research that has recently emerged in South Africa, in response to the call from local planners and policy makers for a better understanding of urban spatial economies, to improve the current planning approaches and methods. Those who identified this as an area for further research, did not specify how or where these insights could be applied or employed. For this reason, this study took a broad approach, identify concepts from a number of strands of the literature, and highlighting their relevance or potential applications to different aspects of planning. Since spatial outcomes are determined by the interaction between market forces, government policy and historical processes, the next section reviewed key urban, spatial and development policies and strategies to describe the urban spatial development of South Africa, from the perspective of economics, drawing from the theoretical review. These insights were then applied to the City of Cape Town, where local plans seek to guide spatial development to balance social, economic and environmental wellbeing.

The review found a number of economic theories and models that have been developed over time, to explain the location choices of firms, in particular, but also households. The sheer number of applications and extensions of the basic models, suggests that there is scope for the applications of these models in South African cities, despite their "unusual" characteristics, but the lack of a suitable framework for analysing and assessing urban problems, is likely to prevent widespread acceptance of economic theory in planning processes, since the adoption of individual concepts and insights may have limited support from planners, policy makers and city officials.

The path dependence of city growth is evident in the urban spatial development of South African cities in general, and Cape Town in particular. The review showed that most policies and plans, implemented since 1994, have had limited impact on the spatial development of the city, and in many instances, similar strategies have been proposed to address similar problems despite these strategies having failed to yield significant results in the past.

There is little evidence to suggest that policy makers have altered their approach to planning, in light of the recognition that a better understanding of market forces could improve the effectiveness of urban policy. There appears to be some resistance, based on misperceptions about economics that has prevented a fruitful spirit of collaboration between the disciplines. This dissertation has

attempted to dispel some of these notions and show that incorporating economic insights into planning approach, is not a shift toward market driven urban development, but rather an acknowledgement that market forces influence spatial development, and attempts to halt or redirect them without understanding how they work, is a futile exercise. Economic theory can help policy makers design appropriate incentives that are likely result in better alignment between public and private sector investment.

Linking planning and economics in the design and implementation of policy does not imply a shift in focus, or altered objectives. It is acknowledged that in many instances (ie protection of the environment, social and spatial justice and equality), markets fail to yield optimal outcomes. Where economics can add a great deal of value to planning in South Africa, is in the evaluation of interventions, which would lead to more effective policy. Economics has well established models and methods that can be used to test proposals, evaluate trade-offs, measure impacts, identify ineffective or counterproductive interventions and balance costs and benefits (both social, economic and financial) of different policy options.

This is likely to have a significant impact on future planning, where in some instances, overly conventional thinking and the persistence of outdated and ineffective tools and methods, are being repeatedly implemented, in similar contexts, with similarly poor results.

In conclusion, there is no right way to understand cities. Theorists focus on different aspects of the nature of cities to base their understanding and recommendations for policy. Formulating effective policy to address complex problems is a considerable challenge for planners and policy makers. From the perspective of economics, this dissertation argues that urban policy could be improved by building a better understanding of economic forces to inform policy design, and employing economic models and methodologies to assess outcomes to identify and review ineffective interventions.

7. REFERENCES

Ades, A.F. and Glaeser, E.L. (1995). Trade and circuses: Explaining urban giants. Quarterly Journal of Economics 110, 195-227

Alesina, A. F., & Passarelli, F. (2010). *Regulation versus taxation* (No. w16413). National Bureau of Economic Research.

Alonso, W. (1964). Location and Land use : toward a general theory of land rent. Harvard University Press, Cambridge, Mass.

ANC (1994). The RDP: Reconstruction and Development Programme. Johannesburg

Anas, A. (1992). On the birth and growth of cities: Laissez-faire and planning compared. Regional Science and Urban Economics. Volume 22, Issue 2, June 1992, Pages 243–258

Annez, P. C., and Buckley, R. M., (2009). Urbanization and growth: setting the context. *Urbanization and growth* 1 (2009): 1-45.

Arnott, R. (1979). Optimal city size in a spatial economy. Journal of Urban Economics 6, 65-89.

Alonso, W. (1964). Location and Land use: toward a general theory of land rent. Harvard University Press, Cambridge, Mass.

Atkinson, D. and Marais, L. (2006). Urbanisation and the future of the urban agenda in South Africa, Pp 21-49. In Democracy and Delivery: Urban Policy in South Africa. Edited by U.Pillay, R.Tomlinson and J Du Toit. HSRC Press, Pretoria

Becker, C.M., E.S. Mills and J.G. Williamson (1986). Modelling Indian migration and city growth, 1960- 2000, Economic Development and Cultural Change 35: 1-33.

Bertaud, A. (2000). The costs of utopia: Brasilia, Johannesburg and Moscow. European Network for Housing Research, Gävle, Sweden: 26-30.

Bertaud, A. and Malpezzi, S. (1999). The spatial distribution of population in 35 World Cities: The role of markets, planning and topography. The Center for urban land and economic research, The University of Wisconsin

Bertaud, A., & Malpezzi, S. (2003). The spatial distribution of population in 48 world cities: Implications for economies in transition. *World Bank Report*.

Bertaud, A. and Malpezzi, S. (2014). The spatial distribution of population in 57 World Cities: The role of markets, planning and topography. Draft Report

Bewley, T. F.. (1981). A Critique of Tiebout's Theory of Local Public Expenditures. *Econometrica*, *49*(3), 713–740.

Bhorat, H. and Kanbur, R. (2006). Poverty and Policy in Post-apartheid South Africa. HSRC Press, South Africa

Black, D. and Henderson, J. V. (1999). A Theory of Urban Growth, Journal of Political Economy, 107, 252-284.

Bond, P. (2002). Confronting fragmentation: Housing and urban development in a democratizing society. University of Cape Town Press, Cape Town.

Bond, P. (2003). The degeneration of urban policy after apartheid , in: P. Harrison, M. Huchzermeyer and M. Mayekiso (Eds) Confronting Fragmentation: Housing and Urban Development in a Democratising Society, pp. 40-56. Cape Town: University of Cape Town Press

Bouch, Richard. (1993).Glen Grey Before Cecil Rhodes: How a Crisis of Local Colonial Authority Led to the Glen Grey Act of 1894". *Canadian Journal of African Studies / Revue Canadienne Des Études Africaines* 27

Brakman, S., Garretson, H. and van Marrewwijk (2009). The New Introduction to Geographical Economics. Cambridge University Press

Brookes, E. H, Currey, R. F. Herbert Frankel, S. Haarhoff, T. J. Hofmeyr, Jan H. Rheinallt Jones, J. D. . Ramsbottom, W. H and Schreiner, O. D. (1930). Coming of Age : Studies in South African citizenship and politics. Cape Town : M. Miller Ltd

Brueckner, J. K., (1979). Property values, local public expenditure, and economic efficiency, Journal of Public Economics 11, 223-245.

Brueckner, J.K., (1996). Welfare gains from removing land-use distortions: an analysis of urban change in post-Apartheid South-Africa. Journal of Regional Science 36, 91 – 109

Bruekner, Jan K. (2001). Urban sprawl: Lessons from Urban Economics. Papers on Urban Affairs 2001, Brookings-Wharton, Gale & Pack editors, 2001

Brueckner, J.K., Zenou, Y. (1999). Harris-Todaro models with a land market. Regional Science and Urban Economics 29, 317-339.

Brueckner, J.K., Kim, H.-A. (2001). Land markets in the Harris-Todaro model: A new factor equilibrating rural-urban migration. Journal of Regional Science 41, 507-520.

Brueckner, J.K., Selod, H. (2009). A theory of urban squatting and land-tenure formalization in developing countries. American Economic Journal: Economic Policy 1, 28-51.

Brueckner, J.K. (2001). Urban sprawl: Lessons from urban economics. In: Gale, W.G., Pack, J.R. (Eds.), Brookings-Wharton Papers on Urban Affairs, Brookings Institution, Washington, D.C., pp. 65 89. R. Solow, Congestion costs and the use of land for streets, Bell Journal, 4, 602]618, Ž .1973 .

Brueckner,J. K., and D. Fansler. (1983). The economics of urban sprawl: Theory and evidence on the spatial sizes of cities. Review of Economics and Statistics 55: 479-82.

Brueckner, J. K., J. F. Thisse, et al. (1999). Why is central Paris rich and downtown Detroit poor?: An amenity-based theory. European Economic Review 43(1): 91-107.

Button, K.J. (1976). Urban Economics: Theory and Policy. MacMillen.

Cape Metropolitan Council (1996). Metropolitan Spatial Development Framework: A Guide for Spatial Development in the Cape Metropolitan Functional Region: Technical Report. Cape Metropolitan Council.

Cape Town city planning (1986). White paper on urbanisation, 1986: comments from the city of Cape Town

Capello and Camagni (1999). Beyond Optimal City Size: An Evaluation of Alternative Urban Growth Patterns

Cheshire, P. (2009). Urban land markets and policy failures. Land Use Futures discussion papers, Foresight, Department for Business Innovation and Skills, London, UK.

Cheshire, P., Leunig, T., Nathan, M., & Overman, H. (2012). Links between planning and economic performance: Evidence note for LSE Growth Commission.

Cheshire, P. C., Nathan, M., & Overman, H. G. (2014). Urban economics and urban policy: Challenging conventional policy wisdom. Edward Elgar Publishing.

Cheshire, P., and Sheppard, S. (2002). The welfare economics of land use planning. Journal of Urban Economics 52, 242-269.

Christaller, Walter. Die zentralen Orte in Suddeutschland. Jena: Gustav Fischer, (1933). (Translated

(in part), by Charlisle W. Baskin, as Central Places in Southern Germany. Prentice Hall, 1966.

Ciccone, A., and Hall, R. E. (1996). Productivity and the Density of Economic Activity. A.E.R. 86 (March 1996): 54–70

Ciccone, A. (2002). Agglomeration effects in Europe. European Economic Review, 213-227.

City of Cape Town, (2010). Draft Analysis of the Cape Town Spatial Economy: Implications for Spatial Planning.

City of Cape Town, (2012). Cape Town SDF Statutory Report, Cape Town

Clark, C. (1951). Urban population densities. Journal of the Royal Statistical Society. Series A (General) 114(4): 490-496

Clinch, J. and O'Niell, E. (2010). Applying Spatial Economics to National Spatial Planning. Regional Studies 43 (2), 157-178

Coase, R. (1960). The Problem of Social Cost. Journal of Law and Economics 3 (October): 1–44.

Conley, J. P., & Konishi, H. (2002). Migration-proof Tiebout equilibrium: existence and asymptotic efficiency. *Journal of Public Economics*, *86*(2), 243-262.

Davies, R. J. (1981). The spatial formation of the South African city. *GeoJournal*, *2*, 59-72.

Davies S. and D. Huff (1972). Impact of ghettoization on black employment, Economic Geography, 48, 421-427.

Davis, D. R., & Weinstein, D. E. (2001). *Bones, bombs and break points: the geography of economic activity* (No. w8517). National Bureau of Economic Research.

De Kiewiet, C W. (1941). A History of South Africa, Social and Economic. Oxford, England: Clarendon Press

Dewar, D. and Watson, V. (1982). Theories of urbanisation and national settlement strategy in South Africa. Urban Problems Research Unit, University of Cape Town

De Wet, Chris. (1989). Betterment Planning in a Rural Village in Keiskammahoek, Ciskei. Journal of Southern African Studies, vol. 15, no. 2, pp. 326–345.

Duranton, G. and H. G. Overman (2002). Testing for localisation using micro-geographic data. London School of Economics Working Paper

Duranton, G. (1998). Labor specialization, transport costs, and city size. Journal of Regional Science 38 (4): 553– 73.

Duranton, G., and H. G. Overman. (2005). Testing for localization using microgeographic data. Review of Economic Studies 72 (4): 1077– 106.

Duranton, G., and Puga, D. (2004). Micro- foundations of urban agglomeration economies. In Handbook of regional and urban economics, vol. 4, ed. V. Henderson and J.- F. Thisse, 2063– 117. Amsterdam: North- Holland.

Ellison, G., and Glaeser, E. L. (1997). Geographic concentration in US manufacturing industries: A dartboard approach. Journal of Political Economy 105 (5): 889– 927.

Fields, G S (1975). Rural-Urban Migration, Urban Unemployment and Underemployment and Job-Search Activity in LDCs', Journal of Development Economics, vol 2, no 2, pp 165-87

Fields, G. (1990). Labour Market Modelling and the Urban Informal Sector: Theory and Evidence, in: D. Turnham, B. Salomé, and A. Schwarz (eds.) The Informal Sector Revisited, Paris: OECD.

Fingleton, B. (2006). The new economic geography versus urban economics: an evaluation using local wage rates in Great Britain. *Oxford Economic Papers*

Fujita, M. (1989). Urban Economic Theory: Land Use and City Size, Cambridge University Press

Fujita, M. (2010). The Evolution of Spatial Economics: From Thünen to the New Economic Geography, *Japanese Economic Review* 61(1), pp. 1–32.

Geyer, H. S., Geyer, H. S. Jr., du Plessis, D. J. and van Eeden, A. (2011). Recent morphological trends in metropolitan South Africa. CRUISE Research Report, Stellenbosch

Glaeser, E. L. (2008). Cities, agglomeration and spatial equilibrium. Oxford: Oxford University Press.

Glaeser, E L.; Kallal, H. D.; Scheinkman, J.´ A.; and Shleifer, A. (1992). Growth in Cities.'' J.P.E. 100 (December 1992): 1126–52.

Glaeser, E. L., Kahn, M. E., & Rappaport, J. (2000). *Why do the poor live in cities?* (No. w7636). National Bureau of Economic Research.

Glaeser, E.L. (2007) The economics approach to cities. NBER Working Paper No. 13696

Gordon, P. and Richardson, H. W. (1996). Beyond polycentricity: The dispersed metropolis, Los Angeles, 1970-1990. Journal of the American Planning Association, 62:289-295.

Harris, J.R. and Todaro, M.P. (1970). Migration, unemployment and development: A two-sector analysis, American Economic Review, 60, 126- 142

Helsley, R. W., and Strange, W. C. (1990). Matching and Agglomeration Economies in a System of Cities.' Regional Sci. and Urban Econ. 20 (September 1990): 189–212.

Henderson, J. V. (1974) The Sizes and Types of Cities. A.E.R. 64 (September 1974): 640–56.

Henderson, J. V (1981). the impact of government policies on urban concentration. Journal of urban economics 12, 280-303 (1982)

Henderson, J. V. (2003). The Urbanisation Process and Economic Growth: The So-What Question, Journal of Economic Growth, 2003, 8, 47-71.

Hirsch, W. (1973). Urban Economic Analysis. McGraw-Hill

Hirschman, A. (1958). The Strategy of Economic Development, New Haven, Yale University.

Hobart Houghton, D. (1957). The significance of the Tomlinson report Africa South vol. 1 (2) p. 13-21

Hobart Houghton, D. (1974). The South African economy. Oxford University Press

Holmes, T.J. (1999). Localization of Industry and Vertical Disintegration. Review of Economics and Statistics. 81(2):314-325.

Hoover, E.M. (1948). The Location of Economic Activity. New York: McGraw Hill.

Hove, M., Ngwerume, E.T. & Muchemwa, C., (2013). The Urban Crisis in Sub-Saharan Africa: A Threat to Human Security and Sustainable Development. *Stability: International Journal of Security and Development.* 2(1), p.Art. 7. DOI: http://doi.org/10.5334/sta.ap

Hutt, W. H. (1964). The Economic of the Colour Bar: A Study of the Economic Origins and Consequences of Racial Segregation in South Africa. London: Institute of Economic Affairs.

Jacobs, J. (1969). The Economy of Cities. New York: Vintage.

Jacobs, J. (1961). The Death and Life of Great American Cities. New York: Vintage

Jones, S. and Muller, A. (1992). The South African Economy, 1910-90, St. Martin's Press, New York, 1992.

Kelley, A.C. and Williamson, J.G. (1984). What drives third world city growth? Princeton, NJ: Princeton University Press

Kim. S. (1999). Regions, Resources and Economic Geography: Sources of U.S. Regional Comparative Advantage, 1880-1987. Regional Science and Urban Economics. 29:1- 32.

Kingdon, G. and Knight, J. (2004). Unemployment in South Africa: The nature of the beast, World Development, 32, 3: 391-408.

Kingdon, G. and Knight, J (2005). Unemployment in South Africa, 1995-2003; Causes, problems and policies, Economic and Social Research Council, Global Poverty Research Group, GPRG-WPS-010 Working Paper, forthcoming in Journal of African Economies.

Knight, J. (2007). China, South Africa and the Lewis Model. Paper prepared for the WIDER workshop Southern Engines of Global Growth: Focussing on Growth Experiences of China and India, to be held in Beijing on January 12-13, 2007, as part of the WIDER project on Southern Engines of Global Growth: China, India, Brazil, and South Africa.

Kok, P. (2003). The impact of spatial development initiatives on recent/past migration in South Africa. HSRC Press

Krugell, W. (2014). The Spatial Persistence of Population and Wealth During Apartheid: Comparing the 1911 and 2011 Census, ERSA Working Paper 459.Krugman, P. (1991). Increasing Returns and Economic Geography. Journal of Political Economy, 483-499.

Krugman, P. (1991). Geography and trade. Cambridge, MA: MIT Press

Krugman, P. (1998). What's New About New Economic Geography? Oxford Review of Economic Policy, 7-17.

Krugman, P. (1999). The role of geography in development. *International regional science review*, *22*(2), 142-161.

Lewis, W. A. (1954). 'Economic Development with Unlimited Supplies of Labour', The Manchester School, vol. 22, no. 2, pp. 139-191.

Levy, P. (1999). Sanctions on South Africa: What did they do? Economic Growth Center discussion paper no. 796

Lipton, M. (1989). The Challenge of Sanctions. South African Journal of Economics, December 1989, 336-361

Lowenberg and Kaempfer. (1998). The Origins and Demise of South African Apartheid : A Public Choice Analysis. Ann Arbor: University of Michigan Press, 1998. 284 pp. Bibliographical references and index. $57.50 (cloth), ISBN 0-472-10905-7.

Lucas, R. (1980). On the Mechanics of Economic Development. J. Monetary Econ. 22 (July 1988): 3–42. Marshall, Alfred. Principles of Economics. London: Macmillan, 1890.

Marshall, A. (1890). *Principles of Economics*, London: Macmillan.

Martin, R. (1999). The new 'geographical turn' in economics: some reflections. Cambridge Journal of Economics, 23

Maylam, P. (1995). Explaining the Apartheid city: 20 years of South African urban historiography, Journal of Southern African Studies 21,1 (March), pp.19- 38

Mazumdar, D.(1976). The Urban Informal Sector, World Development, Vol.4, No.8,pp. 655-679.

McAllister, PA. (1989). 'Resistance to 'betterment' in the Transkei: a case study from Willowvale District.' Journal of Southern African Studies, vol. 15, no. 2, pp. 346– 368.

Mills, E. S. (1972). Studies in the Structure of the Urban Economy. Baltimore: Johns Hopkins Press.

Msulwa, R. and Turok, I. (2012). Does Density Drive Development? Urban Transformation Research Report, Johannesburg: Wits University.

Muth, R. (1969). Cities and Housing. Chicago: University of Chicago Press. Myrdal, G. (1957) Economic Theory and Underdeveloped Regions, Harper and Row

Myrdal, G. (1957). Economic Theory and Under-developed Regions. London: Duckworth.

National Planning Commission. (2013). National Development Plan Vision 2030.

Natrass, N. (1983). The Dynamics of urbanisation in South Africa. Working paper no. 2. Development Studies Unit. University of Natal, Durban

Naudé, W., (2008). Is there a spatial mismatch in South Africa's metropolitan labour market? Cities, 25(5), pp.268–276.

Naude, C. M., & McCoskey, S. K. (2000). Spatial Development Initiatives and Employment Creation: Will They Work. *Trade and Industrial Policy Secretariat (TIPS) DTI September*.

Naudé, W.A. & Krugell, W.F. (2003a). Are South African cities too small? Cities: The International Journal of Urban Policy and Planning, 20(3): 175-180.

Naudé, W. A., & Krugell, W. F. (2003b). An inquiry into cities and their role in subnational economic growth in South Africa. *Journal of African Economies*,*12*(4), 476-499.

Naudé, W.A. & Krugell, W.F. (2005). The geographical economy of South Africa. Journal of Development Perspectives. 1(1): 85-124.

Nurkse, R. (1953). Problems of Capital Formation in Underdeveloped Countries. Oxford: Oxford University Press

Oranje, M. and Merrifield, C. (2010). National spatial development planning in South 1Africa 1930-2010: An introductory comparative analysis. Town and Regional Planning 56, 29-45

Overman. H. and Rice (2008). Resurgent Cities and Regional Economic Performance. SERC policy paper no 1.

Overman, H., and Venables, A. (2005). Cities in the Developing World. London: Centre for Economic Performance Discussion Paper

Parnell, S. and Mabin, A. (1995). Rethinking urban South Africa. Journal of Southern African Studies 21(1) 39–61.

Parsons, W. (1995). Public Policy: An Introduction to the Theory and Practice of Policy Analysis. Edward Elgar Publishing

Pigou , A. C. (1920). The Economics of Welfare. London: Macmillan.

Porter, M.E. (1990). The Competitive Advantage of Nations. New York: Free Press, MacMillan.

Rabe, C., McGaffin, R., & Crankshaw, O. (2015). A diagnostic approach to intra-metropolitan spatial targeting: Evidence from Cape Town, South Africa. *Development Southern Africa*, *32*(6), 726-744.

Ravenstein, E. G. (1889). The Laws of Migration. *Journal of the Royal Statistical Society*, *52*(2), 241–305. http://doi.org/10.2307/2979333

Rausser, G. C., & Roland, G. (2010). Special Interests Versus the Public Interest in Policy Determination. *The Political Economy of Agricultural Price Distortions*, 105-25.

Redding, S. J. (2010). The empirics of new economic geography. *Journal of Regional Science*, *50*(1), 297-311.

Rhodes, C. J. (1894). 'Speech to the House on the Second Reading of the Glen Grey Act', in F. Verschoyle, (1900) Cecil Rhodes: His Political Life and Speeches, 1881-1900.South Africa:Chapman and Hall, limited, pp. 371 – 390.

Roback, J. (1982). Wages, rents, and the quality of life. *The Journal of Political Economy*, 1257-1278.

RSA (1986). White paper on urbanisation. Department of Constitutional Development and Planning

RSA, (1998). White Paper on Local Government, Department of Provincial and Local Government, Pretoria.

RSA, (1998). Population Policy White paper. Gazette No. 399-19230, Notice No. 1930 of 1998, Ministry for Welfare and Population Development, Pretoria

RSA, (1995). Urban Development Strategy, Department of Housing, Pretoria. Available online: http://polity.org.za/polity/govdocs/rdp/urban1.html

RSA, (1995b). Urban Development Framework, Department of Housing, Pretoria.

RSA, (1995). Development Facilitation Act (Act 67 of 1995). Office of the Presidency, Pretoria

RSA (2003). National Spatial Development Perspective. Policy coordination and Advisory Services

Rodrik, D. (2007). One Economics, Many Recipes, Princeton University Press

Rogerson, C (2002). Spatial Development Initiatives in South Africa: Elements, Evolution and Evaluation. *Geography* Vol. 87, No. 1 (January 2002), pp. 38-48

Romer, P. (1986). Increasing Returns and Long-Run Growth. Journal of Political Economy 94 (October): 1002-37.

Romer, P. (1989). Human Capital and Growth: Theory and Evidence, National Bureau of Economic Research *Working Paper 3173*.

Rosen, S. (1974). Hedonic prices and implicit markets: product differentiation in pure competition. *Journal of political economy*, *82*(1), 34-55.

Rosenstein-Rodan, P. (1943). Problems of Industrialization of Eastern and South-eastern Europe. Economic Journal 53 (210-11): 202-11.

Rosenthal, S. and Strange, W. (2001). The Determinants of Agglomeration, Journal of Urban Economics 50(2): 191-229.

Rosenthal, S., and Strange, W. (2003). Geography, Industrial Organization and Agglomeration. The Review of Economics and Statistics, 377-393.

Rosenthal, S. and Strange, W. (2004). Evidence on the Nature and Sources of Agglomeration Economies. Handbook of Regional and Urban Economics, 2119-2171

Rospabe, S. and Selod, H. (2006) Does City Structure Cause Unemployment? The Case of Cape Town, in: BHORAT, H. AND KANBUR, R. (Eds.) Poverty and Policy in Post-Apartheid South Africa. Cape Town: HSRC Press, pp. 262-287.

Ruhiiga, T. M. (2014). Urbanisation in South Africa: A critical review of policy, planning and practice.

Salop, S. (1979). Monopolistic Competition with Outside Goods. The Bell Journal of Economics, Vol. 10, No. 1 (Spring, 1979), pp. 141-156

Scitovsky, T. (1954). Two Concepts of External Economies. Journal of Political Economics, 62 (1954), pp. 143-151.

Seekings, J. (2010). Race, class and inequality in the South African City. Centre for Social Science Research, Cape Town.

Simmons, A. (1981). A review and evaluation of attempts to constrain migration to selected urban centres and regions. Population Studies No. 75; ST/ESA/SER.A/75

Sinclair-Smith, K. and Turok, I. (2012). The changing spatial economy of cities: An exploratory analysis of Cape Town. Development Southern Africa Vol. 29, No. 3, September 2012

Sraffa, P. (1926). The laws of returns under competitive conditions. Economic Journal, 36: 535–50. Reprinted in G. J. Stigler and K. Boulding (eds) Readings in Price Theory, 1953, London: Allen and Unwin, pp. 180–97.

Stiglitz, J. E., (1977). The theory of local public goods, in: M. Feldstein and R. Inman, eds., Economics of public services (Macmillan. New York) 274-333.

Storper, M. (2009). Local Economic Development: Some cities develop more than others: Specialisation, human Capital, Institutions. CAF Working Paper

Storper, M (2010). Why do regions develop and change? The challenge for geography and economics. Journal of Economic Geography (2011) 11 (2): 333-346

Storper, M. (2013). Keys to the City: How Economics, Institutions, Social Interaction, and Politics Shape Development, Princeton: Princeton University Press.

Tiebout, C. M. (1956). A pure theory of local expenditures. Journal of Political Economy 64: 416-24.

Todaro, M.P. (1969). A model of labour migration and urban unemployment in less developed countries, American Economic Review, 59, 138- 148.

Todaro, M. and Stilkind, J. (1981). City bias and rural neglect: The dilemma of urban development, The population council, New York

Todes, A. (2008). Rethinking Spatial Planning, Town and Regional Planning, 53, 10-14.

Tolley, G. S, Graves, P.E and Gardner, J.L (1979). Urban growth policy in a market economy. Academic Press

Turok, I. (2001). Persistent polarisation post-apartheid? Progress towards urban integration in Cape Town. Urban studies, 38(13), 2349-2377.

Turok, I. (2012). Urbanisation and Development in South Africa: Economic Imperatives, Spatial Distortions and Strategic Responses. Urbanisation and Emerging Population Issues. Working Paper 8, IIED, London

Turok, I., & Watson, V. (2001, April). Divergent development in South African cities: strategic challenges facing Cape Town. In Urban Forum (Vol. 12, No. 2, pp. 119-138). Springer-Verlag

United Nations, Department of Economic and Social Affairs, Population Division. (2012). World Urbanization Prospects: The 2011 Revision.

Urban Foundation (1990), Policies for a New Urban Future Series, Johannesburg.

Van Schoor, W. P. (1986). The origin and development of segregation in South Africa. Cumberwood: Apdusa.

von Thünen, J.H. (1826), Der Isolierte Staat in Beziehung auf Landschaft und Nationalökonomie. Trans. By C.M. Wartenberg (1966) Von Thünen's Isolated State. Oxford: Pergamon Press.

Watson V (2002). Change and Continuity in Spatial Planning: metropolitan planning in Cape Town under political transition. Routledge, London and New York

Weber, A., & Friedrich, C. J. (1929). Alfred Weber's theory of the location of industries.

Webster, (1998). Public Choice, Pigouvian and Coasian Planning Theory. Urban Studies, Vol. 35, No. 1, 53 75, 1998

Weitzman, M. L. (1974). Prices vs. quantities. The review of economic studies, *41*(4), 477-491.

Wheaton, W. C. (1998). Land use and density in cities with congestion. Journal of Urban Economics 43: 258-72

Wolpe, H. (1972). Capitalism and cheap labour-power in South Africa: from segregation to apartheid 1. Economy and society, 1(4), 425-456.

World Bank. (2009). World Development Report 2009: Reshaping Economic Geography. Washington DC: The World Bank.