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South Africa's construction of a developmental state? The case of the Gautrain mega-project

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South Africa's construction of a developmental state? The case of the Gautrain mega-project.



A research report submitted to the Faculty of Humanities at the University of the Witwatersrand in partial fulfilment of the requirements for the degree of Master of Arts in Development Studies.

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Johannesburg, June 2020.

Declaration

I declare that this research report is my own unaided work. It is submitted in partial fulfilment of the requirements for the degree of Master of Arts in Development Studies at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other examination or degree at any other university.



Nicola Doyle, 1252588
15 June 2020.

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A final thank you to my parents for their unwavering support throughout my degree.

Abstract

This research report assesses how the South African state has employed public sector investment projects to achieve developmental goals, using phase one of the Gautrain mega-project (2000-2012) as a case study, and bearing the imminent development of phase two – named Gautrain Two – in mind, subject to approval by National Treasury. The study is framed from a developmental state perspective. It does not, however, take a traditional, industrial or trade policy approach to the developmental state. Rather, it updates the developmental state model to mean the formation of meaningful economic partnerships between different levels of the state and the private sector, and the provision of infrastructure that serves a public good. The Gautrain was built through a public-private partnership between the Gautrain Management Agency, a subsidiary agency of the Gauteng Provincial Government, and Bombela Concession Company. The study finds that, despite initial contestation surrounding exorbitant costs, social exclusion and construction impacts raised by political entities and civil society groups, the Gautrain project brought important economic and social benefits to the Gauteng city region. These include employment creation, land use and commercial benefits, contribution to gross domestic product and reduced greenhouse gas emissions. Further, the proposed expansion of the train network in Gautrain Two demonstrates the Gautrain's aspiration to meet the transport demand of all social classes in Gauteng. The study concludes that the Gautrain is an example of a developmental state project led by a provincial arm of the South African state from which others can learn. The study employed qualitative research methods of document analysis and supplementary interviews.

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Acronyms

ANC	African National Congress
AsgiSA	Accelerated and Shared Growth Initiative-South Africa
BBBEE	Broad-Based Black Economic Empowerment
BCJV	Bombela Civil Joint Venture
BEE	Black Economic Empowerment
BRT	Bus Rapid Transit
CBD	Central Business District
CEO	Chief Executive Officer
COSATU	Congress of South African Trade Unions
DoRA	Division of Revenue Act
EIA	Environmental Impact Assessment
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution
GMA	Gautrain Management Agency
GNU	Government of National Unity
GPG	Gauteng Provincial Government
ITMP25	25-Year Integrated Transport Master Plan
MEC	Member of the Executive Council
MERG	Macroeconomic Research Group
MITI	Ministry of International Trade and Industry
NATMAP	National Transport Master Plan
NDP	National Development Plan
NGP	New Growth Path
NIMBY	Not in My Backyard

PFMA	Public Finance Management Act
PPP	Public-Private Partnership
PRASA	Passenger Rail Agency of South Africa
RDP	Reconstruction and Development Programme
SACP	South African Communist Party
SARB	South African Reserve Bank
SEM	Senior Executive Manager
TOD	Transit Oriented Development
UK	United Kingdom
US	United States

Chapter One: Introduction to the Project

INTRODUCTION

> "The Gautrain project will actively promote a range of government objectives, such as tourism, job creation, small and micro enterprise development, private sector participation and investment, and black economic empowerment" (Shilowa, 2006: para. 10).

The Gautrain Rapid Rail Link (hereafter Gautrain, or Gautrain project) was the first high-speed urban rail in South Africa, and Africa, built through a public-private partnership (PPP) with Bombela Concession Company (hereafter Bombela) – a consortium of private companies from Canada, France and South Africa (Smith, 2010: para. 3). It was originally conceived by the Gauteng Provincial Government in 2000 as a way to relieve growing traffic congestion in the country's business hub of Gauteng (Gautrain Management Agency, 2019a). Yet, the project was given a host of indirect developmental objectives to meet that looked to aid a larger project of national economic transformation and redistribution (Thomas, 2013: 77). The statement above, issued by then-Premier of Gauteng Mbhazima Shilowa at the 2006 launch of the train's construction, reveals these grand objectives.

This study assesses how the South African state has employed public sector investment projects to achieve developmental goals, using the first phase of the Gautrain project as a case study, and bearing in mind the imminent approval of the expansion phase, Gautrain Two. The study recognises that the Gautrain is an initiative of the provincial government and thus reflects the state at a particular level outside of central government. However, the developmental impact achieved through the train by the Gauteng Provincial Government remains primarily publicly-led and engages additional state levels and numerous stakeholders in the private sector. This renders the Gautrain project unique in its ambition, extent, finance and impact. It, therefore, holds lessons that can be applied by other levels of the South African state to various large scale developmental projects. Since 1994, South Africa has declared its dedication to construct a developmental state locally. The study situates the Gautrain within the developmental state literature, and aims to understand the intentions, rationale and planning behind the Gautrain to further look at its developmental outcomes vis-à-vis the declared state commitment to developmentalism.

The study is framed from a developmental state perspective. The traditional developmental state model originated in East Asia among the late industrialising countries and advocated for the introduction of certain industrial and trade policies to build a strong, capable state that prioritises key economic sectors to reap economic development and growth outcomes. This model is useful as a frame of reference, but it is somewhat dated and requires revitalisation (Williams, 2014: 2). This study updates the developmental state model for a broader understanding in two ways – first, it looks below the national level alone to different levels of the state, and second it understands state intervention as indirect intervention through the formation of economic partnerships and the provision of public goods. Thus, although the construction of infrastructure has long-been a part of developmental states, the infrastructure serves a public good by providing transport from which the larger population is able to benefit (Sabol & Puentes, 2014: 3). Developmentalism remains at the heart of the updated model and a strong, capable state endures, but there is no longer a divide between public and private. The state, or alternate arms of the state, will engage the private sector meaningfully and in a joint venture they will produce public goods that create developmental outcomes for citizens. Thus, in the updated model of developmentalism, the nature of the public-private relationship is different as the two sectors are in partnership. The role of the South African state, in this case the Gauteng Provincial Government, in public infrastructure, such as the Gautrain, is therefore the entry point to the case study. Literature spanning the traditional developmental state model to recent understandings, alongside literature on the political economy of South Africa, South African policy developments and industrialisation will be included for background and context.

THE GAUTRAIN RAPID RAIL LINK PROJECT

The Gautrain is an initiative of the Gauteng Provincial Government (GPG), under former Gauteng Premier Mbhazima Shilowa, enacted through the Gautrain Management Agency (GMA) created in 2006 in terms of the GMA Act (Act 5 of 2006). The Gautrain was built in response to increasing vehicle ownership and traffic congestion in Gauteng, especially on the Ben Schoeman Freeway, due to urban population growth of 1.7 percent per annum (Gautrain Management Agency, 2019: 3). It was also built to assist Gauteng accommodate the 2010 FIFA World Cup and present the province as infrastructurally modern, forward-thinking, and competitive. It is 80 kilometres of rapid rail that connects Tshwane to Johannesburg and Johannesburg to OR Tambo International Airport.

The Gautrain was built through a public-private partnership (PPP). After an initial planning and bidding phase between 2000 and 2006, and signoff from then-Minister of Finance Trevor Manuel, the project tender was awarded to Bombela Concession Company: an international consortium comprised of Bombardier (Canada), Bouygues Travaux Publics (France), Murray & Roberts (South Africa), Strategic Partners Group (South Africa), and RATP Développement (France) on a 19.5-year concession agreement with the Gauteng Provincial Government (du Plessis, 2010: 3). The GMA remains responsible for the operation, governance, management and sustainability of the train, and ultimately acts on behalf of the government to ensure the train meets transport objectives outlined in the various policy documents. The train also carries significant soft power for Gauteng province. It is the first high-speed urban transport system in South Africa, and has presented itself as a brand that "unlocks the ambition of Gauteng residents and their upwardly mobile aspirations" (Gautrain Management Agency, 2007: 1). The Gautrain remains a salient symbol of Gauteng's services-driven economy, prestige and ambition as a globally competitive city region.

The Gautrain Management Agency is planning to expand the Gautrain's reach across Gauteng city region to service more lower-income areas, calling the expansion Gautrain Two (Hlatshaneni, 2019: para. 9; Venter, 2015: para. 4). These plans reinforce the project's unique ambition, extent, finance and potential impact. Gautrain Two was announced in January 2019 and a feasibility study has since been conducted. The GMA is now awaiting approval by National Treasury. The expansion rests on a predicted population increase and subsequent rise in traffic congestion in Gauteng and the so-called 'cost of doing nothing', alongside the opportunity to service areas unserved by any rapid public transport (BRT or Metrorail). Gautrain Two will build 19 new stations and add 150 kilometres of rail to the Gautrain network across Randburg, Roodepoort, Little Falls, Soweto, and Lanseria Airport over the next 25 years in five phases of construction. The expansion is further supported by the need to provide sustainable transport solutions as increased greenhouse gas emissions from automobiles contribute to global warming and subsequent climate change (APHA, 2018: 1; Shapiro et al., 2002: 14; World Bank, 2017: 36). Improving the effects of travel on the environment has become a global imperative.

RESEARCH RATIONALE AND SIGNIFICANCE

The South African government has declared its commitment to building a democratic developmental state in various documents since the late 1990s in order to diversify the economy and bolster human capabilities to combat the triple-threat of unemployment, poverty, and inequality in a changing world (National Planning Commission, 2012; Presidency, 2008; South African Government, 1998, 2010). Given this, there is a risk of viewing the developmental state as a panacea for all socioeconomic ills without recognising the requisite lengths of state capacity and political will for real success. Constructing a successful, enduring developmental state requires more than an expression of interest (Edigheji, 2010: 2).

South Africa's economic shift from one geared around mining and manufacturing to one around services, notably finance, has materialised in the choices of recent infrastructure projects by the public sector (Bhorat & Rooney, 2017).[1] In 2001, mining constituted 12 percent of South Africa's gross domestic product (GDP), manufacturing 15 percent and financial services 17 percent (Bhorat & Rooney, 2017: 3). In 2014, mining as a proportion of GDP fell by one third to eight percent, manufacturing fell to 12 percent and financial services increased to 22 percent – occupying the highest proportion of the economic sectors. In addition, during this period 145 000 jobs were lost in the mining sector but 840 000 were added to the financial services sector (Bhorat & Rooney, 2017: 3). This shift in the nature of work means more South Africans are moving to urban areas to find economic opportunities – according to the latest *State of South African Cities* report, approximately 78 percent of the country's population resides in cities or towns, and a mere 14 percent lives beyond a 20-kilometre radius from a city or town (SACN, 2016: 33). Furthermore, 42 percent of South Africans choose to settle in one of only four city regions (Gauteng, Cape Town, eThekwini, Nelson Mandela Bay) and these grow by 2.9 percent on average each year (SACN, 2016: 34). South Africa's economic shift from rural to urban, manufacturing and mining to services reflects my choice of a developmental perspective on the state. The Gautrain project is a public light-railway that connects key business nodes in Johannesburg and Tshwane to the airport, spanning Gauteng city region (Gauteng Provincial Government, 2007: 4). The decision of the state to opt for a low density, passenger train system over heavy, freight railway speaks to the state catering for the abovementioned economic shift (Thomas, 2013: 77).

[1] See Polanyi (2001) for useful historical context of the economic shifts.

The first train between OR Tambo International Airport and Sandton Station, met with immense national pride, ran just three days before the opening of the 2010 FIFA World Cup, and construction on the remainder of the network was officially completed in 2012 (Smith, 2010: para. 2). While the Gautrain was successfully built, relieves traffic and remains well-maintained, it was extremely costly and received widespread criticism that it serves only high-income households in Gauteng (Akoojee, 2015: 17; Smith, 2010: para. 2; Thomas, 2013: 86). Gautrain Two, the expansion project currently awaiting approval by National Treasury, is a new phase of the train's development story that offers an opportunity to take stock, reflect, and implement relevant changes to the Gautrain model that can address the critiques. With lessons learned, in Gautrain Two the Gauteng Provincial Government, the Gautrain Management Agency and Bombela are looking to extend the physical reach of the Gautrain project to areas across the Gauteng city region that have not been serviced in the first phase. Their intention to truly cement the Gautrain as a means to meet important developmental goals is striking and worthy of study. Looking at the Gautrain through the developmental state lens allows me to assess capabilities of the state at the provincial level to do so. Herein lies the significance of my study.

RESEARCH QUESTION(S)

This study responds to the research question: *What is the Gautrain's developmental role?*

The study is informed by the following questions:

- What are the state's core developmental goals?
- How does the state envision infrastructure development, such as the Gautrain, in relation to broader developmental goals?
- What are the rationale, objectives, strategy and implementation plans of Gautrain Two?
- How do its rationale and objectives tie into its mega-plan?
- What has been the usage of the Gautrain?
- Has the Gautrain met the expectation of planners?
- What is the direct and indirect impact on job creation from the Gautrain?
- Have there been transfers of skills through the Gautrain project?
- What criticisms were raised in response to the Gautrain, and by whom? How did the Gautrain respond?

- Was the public-private partnership an effective approach to the Gautrain project?
- Do the objectives of Gautrain Two break from, or build on, the outcomes of Gautrain One?

CHAPTER ORGANISATION

This research report is divided into seven chapters. Chapter Two offers a *Literature Review*. It begins by looking at the state's role and function in the local economy underpinned by the obligation to 'catch up' and transform the economic structure, and introduces the traditional developmental state model that arose in East Asian economies in the 1960s as a means to achieve catch-up. The chapter continues by outlining the South African political economy and the prospects for the developmental state model to flourish in South Africa so as to grasp the study's context, followed by a section on the critical nature of public transport in cities, public transport mega-projects and the use of public-private partnerships (PPPs) to realise them.

Chapter Three comprises the *Methodology* that is applied in the study, namely a qualitative research methodology employing mixed methods of document analysis and semi-structured interviews. It explains the project researched, the justification behind the research design above, the process for data collection and analysis, and makes ethical considerations in conclusion.

Chapter Four presents findings on the *State's Vision for and Role in the Gautrain Project*. It begins with an overview of the macroeconomic policy changes in South Africa since apartheid's end in 1994 and the consequent era of democracy to inform the reader of relevant background. The chapter then presents the plans, goals, costs and immediate achievements of the Gautrain Management Agency, taking a state-centric approach to assess the case study. The chapter then looks at the PPP delivery mechanism and concludes thereafter.

Chapter Five contains findings on the *Economic Impact of the Gautrain*. Through the five salient themes of transport impact, employment outcomes, land use benefits, contribution to gross domestic product and environmental impact, the chapter argues that the train is developmental. It begins by outlining popular conceptions surrounding the benefits of public transport using pertinent literature and international examples. It moves onto an overview of

the transport sector in Gauteng city region for context on the locus of study, followed by a look at the economic impact of the Gautrain under the abovementioned themes.

Chapter Six comprises findings on the *Social Impact of the Gautrain*. It begins by offering background on the subject of transport-related exclusion on the basis of cost which leads into a consideration of which areas and classes of riders in Gauteng are serviced by the Gautrain. The chapter includes major critiques lodged against the Gautrain, the Gautrain Management Agency's response to these and a presentation of Gautrain Two – the proposed 25-year, 150-kilometre expansion to the train network. The chapter argues that the Gautrain aspires to be socially impactful through its aim to meet the transport demand of all social classes in Gauteng. The GMA is learning from past mistakes and adapting to achieve this social impact in Gautrain Two.

Chapter Seven is the *Conclusion* based on the findings presented in Chapters Four to Six of this research report. It brings together all data collected and analyses made throughout the study and concludes that the first phase of the Gautrain project was developmental in that it contains important economic and social impacts for the city region of Gauteng. While the Gautrain project was not without its flaws, it serves as a useful example of how state-led infrastructure projects, even below central government level, hold potential developmental benefits that extend beyond brick-and-mortar. Other levels of the South African state can learn from the Gautrain case study.

Chapter Two: Literature Review

INTRODUCTION

The state's role and function in the economy has been at the centre of development scholarship since the beginning of capitalism, looking at nation states rapidly 'catching up' to a degree of capitalist development set by the global North (Hirschman, 1981: 2). Literature on the subject is vast and diverse; literature in relation to developing countries dates back to the 1950s. Broadly, there has been a shift from modernisation theory (Eisenstadt, 1966; Lipset & Solari, 1967) during the early Cold War to the rise of critical political economy, including that of dependency theory from the global South (Dos Santos, 1970; Frank, 1967) and world-systems theory (Wallerstein, 1974). Both posit a hierarchy of core (developed) over periphery (underdeveloped, dependent on core) that reinforces gross power disparities in the global economy. The degree of state involvement has fluctuated across all categories: from an intensive state in the developmental era to a withdrawal of the state in favour of neoliberal markets, to a reinvigorated state compelled by global inequality. Recently, in some countries the state's role has shifted to consider capital and society in a highly financialised world – the literature certainly urges this as inequality rates rise (Williams, 2014: 5).

Early development scholars contend that redistributive and welfare objectives naturally follow the process of catching up, but this has been widely critiqued as it is not seen as possible in the current economic conditions (Fioramonti, 2013; Rostow, 1956). Moreover, history has evidenced that transforming the economy is not automatic – it necessitates the state's building of technology, seen in Britain, Germany and the US (Gerschenkron, 1962; List, 1885). Conversely, late industrialisation in East Asia entailed importing overseas technology, assimilating it, adapting it and improving it (Amsden, 1992; Wade, 1990). This is what countries in Africa and Latin America seek to emulate, only half a century later.

This chapter presents academic literature relevant to this study – the role of the state in economic development in post-apartheid South Africa, through the lens of the developmental state. The chapter is organised around three central themes in the literature: a) the developmental state from an international perspective; b) policy development and industrialisation in South Africa, and what necessitates state intervention; c) public transport in terms of transport's role in the economy and transport mega-projects.

THE DEVELOPMENTAL STATE

> "Almost everyone agrees that the state has a role to play, but there is little agreement as to when and how it should act. Perhaps [because] state intervention is a complex phenomenon involving many contentious issues" (Chang, 1994: 7).

The developmental state[2] is most synonymous with the role of the state in economic development. Politically, the developmental state prioritises state legitimacy and state capacity to adopt developmental policies, starting from the point of a desire for high growth (Fine & Jomo, 2006: 103; Williams, 2014: 2). Being a developmental state is a deliberate act of the state, motivated by a threat or compulsion, to redesign itself (Kohli, 1994: 579). An early form of the developmental state 'model' is offered by Chalmers Johnson (1999) in his investigation into Japan's successful development, in particular zooming in on the Japanese Ministry of International Trade and Industry (MITI) titled *MITI and the Japanese Miracle*. Johnson's model comprised an expert, meritocratic state with strong political will that was able to target specific industries through the establishment of an intra-state organisation, working in a market-led Japanese economy but recognising national development priorities (Johnson, 1999: 37-39).

The original developmental state model described above has been expanded by other scholars. In his seminal work, Evans asserts that the right question is not 'how much' state involvement but 'what kind' (Evans, 1995: 10). Acknowledging states are diversely structured, Evans argues that those with 'embedded autonomy' – a paradoxical concept of a strong, Weberian-type bureaucracy that is autonomous but 'embedded' in society to allow for functional state-society negotiation and engagement – are able to achieve successful industrialisation (Evans, 1995: 227). Freund supports this notion, blatantly stating "a developmental state will involve a deeply embedded partnership between the state and at least parts of capital in pursuit of common projects leading to economic growth" (Freund, 2018: 214). However, the state must lead the way. Rodrik too asserts that both public and private sectors have imperfect information which produces industrial policy as a process of discovery through the embedded autonomy structure (Rodrik, 2004: 3). Similarly, Chibber[3] contends that India failed to build strong,

[2] The developmental state was named by Chalmers Johnson in his study of Japan's Ministry of International Trade and Industry (MITI) (Johnson, 1999: 33).

[3] Vivek Chibber's study *Locked in Place* assessed the relative failure of the Indian state under Jawaharlal Nehru to reach developmental status and transform India into an 'industrial dynamo'.

reciprocal relations between the state and societal actors (local capitalists) which paralysed the state's agenda and cast India aside from developmental scholarship thereafter (Chibber, 2003: 85-110). Scholars like Johnson, Evans, Freund, Rodrik and Chibber provide insight into the genesis of the developmental state concept and how it has changed over time. The politico-economic structures of traditional developmental states provide a good foundation for the more recent debate, and the analysis of the Gautrain case study thereafter.

Other scholars of the developmental state are primarily concerned with rectifying economic policy so that the market imperfections created by the neoliberal Washington Consensus are addressed (Fine & Jomo, 2006). The Washington Consensus is a laissez-faire paradigm that has dominated the global stage since the late 1980s and is wholly contrary to the developmental state. Responding to the inequities created by the Washington Consensus, Chang contends that instead developmental industrial policy can be used to promote economic transformation – where the free hand of the market struggles – because industrial policy is rooted in learning (Chang, 1994: 74). Building on this argument in a later work, Chang demonstrates that by thrusting the Washington Consensus onto the Third World, rich countries remove the very mechanism they used to develop (industrial policy) and so 'kick away the ladder' and halt catch-up for other developing countries (Chang, 2002: 125-142). Similarly, Amsden notes that industrialisation for 'the rest'[4] occurred because learning, skills and capabilities to innovate, execute and produce were fostered (Amsden, 2001: 1-13). The learning period demands reciprocal control mechanisms[5] which consequently "transform the inefficiency associated with government intervention into collective good" (Amsden, 2001: 8). Instead of 'getting prices right', as the neoliberal school contends, Amsden argues late industrialisers developed by 'getting the control mechanisms right' and 'getting prices wrong' to minimise state failure and ensure profitability (Amsden, 2001: 11).

Williams (2014) contends the developmental state remains relevant in the twenty-first century and continues to play a central part augmenting development; but the traditional model approach offered by Johnson and others has changed. Rather, in the twenty-first century there are four conditions with which the developmental state must reckon, including: i) a shift from

[4] 'The rest' refers to non-members of the Global North that were able to industrialise to international standards in mid-technology industries in the twentieth century.

[5] Reciprocal control mechanisms are processes that allocate subsidies to firms in return for their fulfilment of redistributive, monitored objectives.

manufacturing-based to knowledge-based economies; ii) domestic politics and the role of democracy; iii) ecological limits, highlighting the need for sustainability; and iv) growth that considers human development, rule of law, social equity (Williams, 2014: 23-26). Mkandawire is equally nuanced, arguing the so-called 'weakness and overextension' and 'interference with smooth markets' in African developmental state analyses neglects an historical approach (Mkandawire, 2001: 294). The African developmental state *is* possible, but it requires a keen examination of how political actors, societies, and institutions are organised for it to have any impact on the continent (Mkandawire, 2001: 310). Amin sets a foundation for this, making explicit the need for countries to 'delink' from emulating global norms and models from the capitalist system that, when applied to the local context, may be harmful and foster underdevelopment (Amin, 1987: 435). Delinking for countries does not mean autarky – it means governments thinking twice about succumbing national development strategies to the trends of globalisation (Amin, 1987: 435). Amin implores the leadership of countries striving to develop to be critical and rational, and consider their local context (Amin, 1987: 436).

The developmental state changed over time as it enters the twenty-first century. The traditional model has widened to consider new dominant economic sectors, democracy, ecology and human development. States cannot simply apply the model to their countries directly and wait for an economic miracle – consideration of local factors and thoughtful adaptation of the developmental state to the local context is important.

POLICY DEVELOPMENT AND INDUSTRIALISATION IN SOUTH AFRICA

The Political Economy of South Africa

> **"**What will be made of the developmental state [in South Africa] remains open and to be contested but that the notion has arisen at all reflects both progress and potential" (Fine, 2007: 12).

Drawing from the success of developmental states in East Asia, as noted above, South Africa has announced its intention to build a developmental state (South African Government, 1998). But what about the functioning of the state, the structures of the economy and the accumulation of capital that make scholars like Bond (2008), Ediheji (2010), Naidoo (2006) and Satgar (2014) so sceptical of this intent? South Africa has a unique history of institutionalised oppression during apartheid that has manifested into unique political economy and labour

patterns today. This section reviews literature from apartheid to date to understand what developmental obstacles South Africa currently faces that infrastructure projects, such as the Gautrain, might attempt to tackle. These are essential local circumstances for the reader to fully appreciate the developmental angle of the Gautrain case study.

Terreblanche's major historical analysis of economic relations in South Africa details how imbalances of power between dominant settler groups and exploited indigenous people are embedded in the country's social fabric since Dutch colonisation in 1652 (Terreblanche, 2002). This systematic exploitation has created an unequal nation in terms of income distribution, opportunities and property that endures today despite the transition to democracy (Terreblanche, 2002: 19). Gelb agrees, calling the legacy of problems facing South Africa in the 1990s "an economic crisis [with] a long and depressing list" (Gelb, 1991: 1) that contains massive unemployment, deindustrialisation, and growing poverty. These understandings reveal why restructuring the South Africa economy is imperative. Padayachee asserts that South African policymakers post-1994 must roll-out black economic empowerment and industrial policies, and re-insert the country into the global economy (Padayachee, 2005: 549). Yet, the African National Congress (ANC) government has tried transformation policies, faced challenges and an increasing class gap has emerged (Terreblanche, 2012: 22). Ashman, Fine and Newman question the practical significance of these policies, albeit recognising the 'interventionist ethos' on which they sit (Ashman et al., 2014: 53).

The historical configuration of the South African economy has been famously described by Fine and Rustomjee as a Minerals-Energy Complex (MEC), which denotes "not merely [a] core set of industries and institutions but a system of accumulation" (Fine & Rustomjee, 1996: 10). The MEC-model means South Africa's economy is uniquely organised around the production of coal-fuelled electricity and mining activities, predominantly in gold but recently in other metals like platinum (Fine & Rustomjee, 1996; Sharife & Bond, 2012). The MEC had a ripple-effect across the national economy that, historically, made industrialisation possible but fostered accumulation in a small mining or foreign elite (Fine & Rustomjee, 1996: 11). The uneven relationship between the South African state, finance and industry that exists in the MEC is continually renewed, despite abandoning the apartheid national project on which it was built and constructing a democratic state under the ANC (Sharife & Bond, 2012: 295). Uneven patterns of accumulation persist and the ANC is faced with a stagnant and highly unequal economy that is now understood as a barrier to society's development (Hart & Padayachee,

2013: 55; Sharife & Bond, 279). These economic patterns render the formal labour market incapable of absorbing new entrants to reduce unemployment, which keeps poverty and inequality levels high (Padayachee, 2005: 550). The MEC configuration of South Africa's past has created a vicious cycle of unequal capital structures that will continue into the future unless the macroeconomy is restructured and real transformation can take place (Terreblanche, 2002).

Prospects for a South African Developmental State

South Africa's potential as a development state has been considered by various scholars (Bond, 2008; Edigheji, 2010; Fine, 2007; Freund, 2018; Naidoo, 2006; Satgar, 2014; Swilling et al., 2016, 2017; Tshishonga & de Vries, 2011). Bond calls the developmental state project in South Africa "a combination of neoliberalism and unsustainable mega-project development" (Bond, 2008: 8) that distracts the central government. He asserts that the developmentalist rhetoric of the Zuma state contained opposing interests of crony capitalists, widespread corruption and "crazy pseudo-Marxist theories of semi-peripheral capitalism" (Bond, 2008: 22). Conversely, Freund (2018) adopts a more historical lens. He contends South Africa has been a nascent developmental state throughout most of the twentieth century, to which he offers an interpretation for the next century. According to Freund, 1976 is the year "the developmental state impetus starts to become so difficult to discern that [the] paradigm really ceases to work as a plausible way of grasping state and capital together in South Africa" (Freund, 2018: 191). Afterwards, the then-white South African state was pushed to relocate national economic activities, largely in textiles, to the 'Bantustans'[6] in line with policies of racial segregation, and further place a greater national imperative on security as a result of international sanctions, leading to increased military spending (Freund, 2018: 191). These two actions became the state's primary concerns, and ultimately limited the potential for South African manufactures to thrive on a global scale post-1994.[7] In the final days of apartheid, the famous MEC was once again relied upon, albeit not necessarily through gold exports, to counteract booming foreign disinvestment (Freund, 2018: 192). Here, the state pursued a 'market-oriented money policy' by targeting inflation but seriously restricting developmentalism in consequence (Freund, 2018: 200). Freund concludes that the 'enclosure' of reliance on the MEC in democratic South Africa – reinforced by pronounced parastatals, large organisations like the Industrial

[6] Bantustans were a policy of apartheid during the mid to late 20th century referring to partially self-governing areas set aside for black South Africans to reside. The word roughly means 'black homeland'.
[7] Protectionism in South Africa was dismantled in 1994, and local industries suffered thereafter.

Development Corporation, and the historical shift after 1976 described above – impedes developmentalism (Freund, 2018: 214). For Freund, the developmental state in South Africa can only be realised "with transformed or new state institutions and new forms of industrialisation" (Freund, 2018: 221).

Edigheji (2010), Naidoo (2006) and Tshishonga & de Vries (2011) all note the requisite administrative lengths to reach developmental status in South Africa. Satgar argues that the ANC has declared itself a developmental state and additionally adopted a 'green economy' lens in an attempt to 'green' state ideology and practice (Satgar, 2014). However, despite this noble state discourse, South Africa remains "structurally locked into a globalised development path" (Satgar, 2014: 127) which limits true ecological commitments and a resultant green state. Swilling, Musango and Wakeford (2016) contend that for South Africa to embody a 'just transition' in the globalised, post-2008 era – one of a dual obligation to human welfare and environmental sustainability – and implement accelerated development like other late industrialisers, a more nuanced comprehension of the post-apartheid political settlement and ensuing power dynamics is required. Similar to Fine and Rustomjee (1996), Swilling, Musango and Wakeford (2016) maintain the experience in South Africa departs significantly from that in East Asia because of the way the state is configured. South Africa will only be developmental and undergo a just transition "if the politics comes right, that is, a socio-political regime emerges that aligns the underlying power configuration of interests" (Swilling et al., 2016: 665). The policy responses will emerge thereafter. However, in a separate paper Swilling, van Breda, van Zyl and Khan (2017) show that since 1994 South Africa has increased its expenditure commitments to social and economic services but, paradoxically, the poverty rate has increased. Instead of blaming the macroeconomy, the authors argue the blame rests on "the complex and challenging task of institutionalising developmental state institutions" (Swilling et al., 2017: 4). This includes human capacity constraints, costs, deadlines and project delivery within intricate state arrangements. Simply spending more on developmentalism does not guarantee improvements – in some cases of dysfunctional institutions, it creates worse outcomes (Swilling et al., 2017: 6).

In South Africa, industrial policy has failed to produce infrastructure for the public good and instead built up a cluster of industries rooted in the MEC and heavily endorsed by the state – raw and semi-processed minerals, platinum, diamonds and gold, aluminium, coal, steel, and iron. The economy tends towards financialisation that produces a "particular combination of

short-term capital inflows and a massive long-term outflow of capital as major 'domestic' corporations [choose] offshore listing and to internationalise their operations" (Ashman et al., 2011: 56). This has created an infrastructure deficit, a kind of jobless growth and persistent poverty pitched alongside a rising new class of black elites.

During apartheid, the prohibition of full participation in the economy for most South Africans resulted in great wealth, income, education and employment disparities that endure today, and necessitate a dire economic transformation for the country to ensure long-run sustainability (Standing, Sender, & Weeks, 1996; Terreblanche, 2012). Notwithstanding social welfare policies, black economic empowerment (BEE) is a government transformation programme that targets raising the number of black owners and managers with a real stake in South Africa's economy, thus decreasing income inequality (DTI, 2003: 15). BEE effectively looks to change accumulation patterns in South Africa and create a nationally committed capitalist class that developmentalism requires. But, BEE has been met with criticism for its failure to foster black capitalists with strong national interests, instead breeding a small, very wealthy black elite (Acemoglu et al., 2007; Patel & Graham, 2012; Southall, 2016). Still, the BEE programme is complex to administer and difficult to get right. It rests on collaborative governance between stakeholders, namely government, civil society (predominantly trade unions), and the private sector (Hamann et al., 2008: 1). It also presumes that big business in South Africa will willingly contribute to the public good (Hamann et al., 2008: 1). The Gautrain Management Agency and Bombela would have followed a transformation agenda akin to BEE to ensure the Gautrain project is developmental. BEE partnerships would have been formed with key stakeholders on the project and transformation outcomes would have been considered throughout the train's planning, procurement, construction and operation phases. However, given BEE's shortcomings explained above, the BEE agenda within the Gautrain project is not the most pertinent form of developmentalism, nor the only way to be developmentalist. This research report will demonstrate that the Gautrain brought social and economic benefits outside of BEE.

PUBLIC TRANSPORT

The Critical Role of Public Transport in an Urban Economy

People are increasingly moving into cities around the world which places more pressure on urban services, finances, and environments as a result (Bouton et al., 2014; Pojani & Stead, 2017; Gwilliam, 2002). Public transport is formally defined by Statistics South Africa as "all transport services for which passengers made payment" (Stats SA, 2015: xiii), understood as transport that services the sector of the population not using private vehicles. A larger urban population heightens the need for responsive public transport systems in particular, and places increased demand on existing transport networks. Thus, getting urban transport right is vital to securing a sustainable, resilient and liveable urban future (Pojani & Stead, 2017: 1).

Urban areas are defined by dense environments containing many people, activities and structures (Small, 2008: 507). In this setting, public transport is assessed for its "ability to cope with density while moving people and goods" (Small, 2008: 507). Even in small and intermediate cities, public transport remains an important factor (Kühn, 2002; Pojani & Stead, 2015). Urban transport is complex by nature. Urbanism in Africa aggravates these complexities exponentially through a population with low purchasing power, limited government capacity and informal transport services that dominate the market (Pojani & Stead, 2015: 174). Some African countries suffer a legacy of fragmented and incomplete transport networks that are costly to operate and poorly serviced (Gwilliam, 2011: 3). However, transport challenges in urban settings are perverse: as cities grow in size and wealth, challenges tend to worsen – in megacities like Lagos, for example, transport congestion has become a defining feature (Pojani & Stead, 2017: 4). Consequently, African public transport systems require planning and investment to mitigate challenges. South Africa boasts a substantial national rail network of 468 stations and 3 180 kilometres of track that was built during apartheid, called Metrorail, but it has since dilapidated into ailing train lines and aged rolling stock with ongoing safety concerns of theft and vandalism (Metrorail, 2020; Venter, 2019). Metrorail is owned and operated by the state-owned enterprise Passenger Rail Agency of South Africa (PRASA). PRASA is heavily subsidised by the national government but it has faced considerable institutional problems, like mismanagement and corruption allegations, and experiences continual difficulties managing the Metrorail service (Weiner, 2018: para. 4). As such, Metrorail passengers complain of late, unsafe and overcrowded trains (Weiner, 2018: para. 4).

Despite the challenges of urbanisation and urban transport systems detailed above, the benefits of public transport are evident. There is a positive correlation between public investment in physical infrastructure (roads, tunnels, bridges) and private sector production, profits and investment to promote economic growth (Aschauer, 1990: 14). Bhatta & Drennan (2003) illustrate economic benefits swell to include improvements in output, productivity, house prices, jobs and real wages and travel time. Public transport is a channel for redistribution. Cities like Curitiba, in Brazil, demonstrate innovative public transport systems that are well-integrated with land use patterns produce direct mobility and traffic benefits, and indirect socioeconomic benefits for human welfare, the environment and the economy (Friberg, 2001; Lejda et al., 2017; Rode et al., 2014; Shapiro et al., 2002; 1998; Stjernborg & Mattisson, 2016; Wilcox et al., 2014). However, the experience of Curitiba stresses the importance of clear technical, political and economic planning and decision-making for transport projects, alongside the public and private sectors working effectively together (Rabinovitch, 1992: 71-73).

The South African public transport industry includes three primary transport modes: a traditional commuter rail system and new high-speed railways like Metrorail or the Gautrain; the subsidised and unsubsidised commuter bus industry; and a thriving 16-seat minibus taxi network (Walters, 2014: 4). In Gauteng province, public transport commuters face challenges of long commuting distances, low and infrequent service levels, time delays, traffic congestion, and driver road rage (Chakwizira et al., 2018: 58). Thus, implementing public transport systems that are accessible for and inclusive of varying income groups in a city is a factor to consider (Church et al., 2000; Currie et al., 2009; Lucas, 2012; Power & Wilson, 2000; Preston & Rajé, 2007; Rose et al., 2009). A smart, cost-efficient and user-friendly transit oriented development (TOD) plan that makes use of intermodal transport modes (taking a taxi to board a train to get to work) will address some of the challenges mentioned above (Banister, 2007; Chakwizira et al., 2018). There are prospects for intermodal transport planning across all spheres of government in Gauteng (Schoeman, 2014: 3). Moreover, city planners will look to design sustainable transport systems that incorporate TOD and intermodality. Sustainable transport comprises effective land use and steady funding through strategic investments (Kennedy et al., 2005: 393). For Gauteng to achieve 'sustainable transport' status, "a permanent shift in modal choice [needs] to be made, [and] genuine transport provision – in the form of buses and trains – will need great improvement" (McKay et al., 2017: 41). This shift will reduce the public's reliance on cars and opt for higher density train and bus options over the minibus taxi.

Additionally, it will reduce the harmful emissions from cars that remains a major contributor to climate change – providing benefits of cleaner air and water quality, and better public health (APHA, 2018: 2). This environmental initiative further supports the need for cities to move away from dependence on (fluctuating) oil imports (Cooper, 2007: 11). Herein lies the entry of the Gautrain into Gauteng's transport picture.

Embarking on Transport Mega-Projects

Large infrastructure projects, falling under the 'mega-project' umbrella, have been implemented in emerging cities around the world on the premise they produce widespread economic benefits for the urban society and environment (Brenner, 1998; Kennedy et al., 2014; Priemus & Wee, 2013). The injection of investment and the resultant transport infrastructure brings greater accessibility to transport for the local population, an improved public transport user experience and decreased traffic congestion – it is a public good (Kennedy et al., 2014; Priemus & Wee, 2013). Potential indirect benefits include access to employment opportunities, improved spatial planning, and multiplier effects on economic growth through consumer trading (Gospodini, 2005; Mohmand et al., 2017; Oosterhaven & Knaap, 2003). Still, transport mega-projects come with a myriad of obstacles that impede the realisation of these benefits. Notably, many have grossly exceeded budget plans and been late on delivery targets, causing excessive cost overruns for the arm of government delivering them (Cantarelli et al., 2013; Locatelli et al., 2017). Further, many projects have been tainted by complex project planning and governance structures between stakeholders that lengthen delays and cause widespread uncertainty, especially amidst external shocks (Salet et al., 2013; Short & Kopp, 2005; Sturup, 2009). It is also unclear whether, despite the obstacles, transport mega-projects *per se* are able to produce the indirect benefits to local economies that were promised (Mohmand et al., 2017: 63).

Bond and Ndlovu (2010) provide a detailed account of the mega-project process in South Africa – while relating to the electricity and water sectors, it holds lessons for transport. The authors open with the question "how addicted is the South African elite to the pursuit of gargantuan development disasters?" (Bond & Ndlovu, 2010: 94) and continue by claiming mega-projects do not echo the state's commitment to the developmental state, but rather mirror "the power of capital and rich South Africans" (Bond & Ndlovu, 2010: 107) in a neoliberal paradigm. Opposition from a strong civil society is necessary throughout project design and

implementation to ensure it meets developmental goals, and is ultimately worth the time, money and effort spent by the state (Bond & Ndlovu, 2010: 109).

In the neoliberal age, marrying the 'public' and 'private' on the grounds of collaboration and partnership, named the public-private partnership (PPP), is a common delivery mechanism for mega-projects like the Gautrain. In fact, the PPP is often touted as a practical solution to deliver large infrastructure projects as the burden is shared between parties, alleviating the pressure on government, and the partnership agreement keeps parties in check and ensures construction and development goals are met (Koppenjan, 2008; Miraftab, 2004; Mitchell-Weaver & Manning, 1991; Siemiatycki, 2011). Nevertheless, once condemned by the press and in public opinion, the PPP is gaining traction. Governments internationally are turning to the model for their development, procurement and financing needs (Grimsey & Lewis, 2007: 171; Roehrich et al., 2014: 110). The shared burden between public and private sectors, the hallmark of the PPP model, has proven to maintain a high quality of construction in various projects worldwide (Ho, 2006: 678; Stainback & Donahue, 2005: 292). PPPs further contain a strong value for money argument as they control overspending by the public sector and third parties – deemed the largest factor for increased prices in a project – especially in the procurement phase (Eadie et al., 2013: 153; van den Hurk, 2018: 282). There are various designs for the model of PPP itself, including concession contracts, joint ventures, management contracts and partial and majority divestitures (Gwilliam, 2011: 147). There are also multiple forms of procurement within the PPP structure, at government discretion, because "there are no hard and fast rules as to what situations work best for PPPs" (Grimsey & Lewis, 2007: 171). Diverse PPP rail projects in East Asia teach us valuable lessons for cross-subsidisation, improved information flows, better integration of the partnership and economies of scale (Bae & Joo, 2016; Chang & Phang, 2017). The Gautrain project was realised through a public-private partnership and provides a case study to interrogate the benefits and detriments for the South African government, the project partners, the country's citizens and local economy. There are a number of possible points of contestation within the PPP arrangement between the Gautrain Management Agency and its private sector partners – and no doubt both parties had contrasting viewpoints on the extent of developmentalism the Gautrain project would achieve.

CONCLUSION

Literature from the traditional developmental state in the mid-twentieth century to modern day efforts for its revitalisation reminds us that the developmental state concept remains relevant today, albeit somewhat changed, to study the role of the state and state intervention in developing economies. This is accompanied by an appreciation for the importance of sound project management, a clear developmental strategy and a strong civil society for a successful state-led project. The literature in this chapter further points to South Africa's tough past and the requisite socioeconomic transformation agenda that the country's government has set out to achieve. In fast-growing urban areas, public transport projects that combine a public good intention with private sector financing and expertise in a PPP, like the Gautrain, present an opportunity to meet developmental ends. Additionally, well-designed, intermodal public transport systems bring alternate benefits like reduced travel time, employment opportunities, improved land use and spatial planning, less greenhouse gas emissions, and a rise in commercial activity.

Chapter Three: Methodology

INTRODUCTION

This chapter offers a discussion of how the research was implemented. It begins by looking at the research design process, guided by the aims, rationale and research questions applied to a case study of the Gautrain Rapid Rail Link. The study makes use of a qualitative methodology with mixed methods of document analysis and semi-structured interviews for rich and in-depth material to understand the Gautrain project. The document analysis component serves as the primary research method while the interviews supplemented the former. A description of the data collection process follows, including insights into the challenges faced and how these were resolved to safeguard the standard, validity and ethics of the research report. Ethical considerations conclude the chapter.

RESEARCH DESIGN

The research utilises a case study method. A case study involves investigating a single subject, event or setting with the clear objective to describe and explain oftentimes complex phenomena (Berg & Lune, 2017: 170). It allows the researcher to isolate the scope of their research but also make comparisons to other cases if required. The findings of the case study can additionally be scaled to imply it is "illustrative of something larger" (Berg & Lune, 2017: 170). In this sense, a case study can be both descriptive of the single case or tend towards a generalisable theoretical concept (Berg & Lune, 2017: 171). The case study presented in this research report is descriptive. I sought to describe and assess the Gauteng Provincial Government's approach to the Gautrain through a developmental lens. The study was isolated to the planning and building phases of the train starting in 2000 and 2006 respectively, and the subsequent developmental outcomes. The second, expansion phase of the Gautrain called Gautrain Two, albeit not yet built, was considered in the study too as it gives an indication of what the future of the Gautrain might look like. Gautrain Two reflects valuable learnings from the first phase and holds new potential developmental implications for the Gauteng city region subject to approval by National Treasury. The outcomes of this study could be applied to different city regions across Africa as a possible area for future research by others with the resources and expertise to do so. This new research could deepen our understanding of rail projects and their impact on the growing populations and changing economies of African cities.

A qualitative research design approach was chosen for the study. Qualitative researchers collect open-ended data with the intent of connecting significant relationships between factors within the area of study that denote larger trends, using methods of interviews, focus groups, participant observation or document analysis (Tracy, 2013, 29). A qualitative research design is most suited to this study on the Gautrain project for reasons drawn from Creswell (2009) and Tracy (2013). It permits the researcher to study documents pertaining to the case study, in this instance the Gautrain project, including books, academic journal articles, official policy documents and relevant green/white papers, and grey literature,[8] providing a more textured understanding of the project (Creswell, 2009: 14). I sought to incorporate a balance of documents authored by the South African government and members of the private sector to present data from both sides of the coin so to ensure a well-rounded study that avoids biases. Second, a select number of respondents with in-depth, practical knowledge was chosen for open-ended interviews, allowing me to gain personal insights on the Gautrain's developmentalism. Interviews of this nature favour depth over breadth, differing from quantitative research designs that produce vast but superficial datasets (Tracy, 2013: 229). Achieving depth in the data collection phase assures more nuanced analysis in the report writing phase, and produces a more reliable study – which reveals the "stability and consistency of a researcher, research tool, or method over time" (Tracy, 2013: 228).

RESEARCH CONCEPT AND PROCESS

The study aims to discover the developmental impact of the Gautrain and thus understand what benefits state intervention – through the formation of public-private partnerships and the provision of enduring infrastructure that is a public good – might bring. The study hopes to illuminate the role of the state to achieve developmental outcomes, especially in South Africa where development challenges persist. It is grounded in literature surrounding the developmental state.

My interest in public transport and the Gautrain in particular was sparked when I attended high school in Parktown in early 2008 and school activities were interrupted by Bombela's construction on the Gautrain nearby. I recall a resultant outcry by the public in Gauteng,

[8] Grey literature means "research that is either unpublished or has been published in a non-commercial form" (University of New England, 2020). Some examples of grey literature are newspaper articles, conference proceedings, newsletters, or theses.

followed by a reassurance from the Gautrain Management Agency that the current disruption would be worth the finished product, highlighting a promise of socioeconomic outcomes. This memory remains entrenched in my mind. Growing up in Johannesburg, I have always been concerned by the lack of safe and reliable mass public transport options across the Gauteng city region and welcomed the opportunity to study a flagship transport project, like the Gautrain, and how this might realise developmental impacts.

After the proposal phase of the study, I identified some gaps in the literature review and decided to include literature on transport and PPPs. Feedback from the proposal's reader suggested grey literature, specifically newspaper articles relevant to the Gautrain, be included in the study to enhance the quality of the document analysis. The research themes of the study, contained in Chapters Four, Five and Six, were obtained through a rigorous desktop research exercise and supplemented by insights gained during the interview process.

DATA COLLECTION

Under the umbrella of qualitative research, I chose data collection methods of document analysis and supplementary semi-structured interviews. I conducted a critical evaluation of the documents I sourced to ascertain their quality and whether any author or content biases were present, as "rigorous evaluations of the external and internal value of the data ensure valid and reliable information" (Berg & Lune, 2017: 164). Any documents that did not fit the criteria were not used in the study. This was an important task because the reliability of the data will directly impact the quality of the study. On the other hand, I acknowledge that the interviews are subjective discussions with individuals who work with or for the Gautrain and so they fall into the category of "good data, not about the topic, but about how people think about the topic" (Berg & Lune, 2017: 67). I made sure to cross-check any facts learnt in the interviews with documents or verified websites, and quote the respondents accurately in the research report. Herein the validity and reliability of the interviews were safeguarded.

Document Analysis

Document analysis involves sourcing and studying books, journals, websites, policies, newspapers, brochures, or pamphlets that are publicly available through the libraries or the Internet (Tracy, 2013: 83). "Documents furnish background on history, information about

rules, policies, and basic facts and figures" (Tracy, 2013: 83) that elucidate important context to the study, act as a foundation to build the arguments, provide insights to the research questions, and allow the researcher to familiarise themselves with nuances of the study ahead of the interviews.

The majority of the document analysis process occurred from March to November 2019 prior to the interview phase of the study. I used the University of the Witwatersrand Library resources, websites operated by the South African government and subsidiary agencies like the Gautrain Management Agency, and various media archives to source documents for the study. I developed a systematic way to store the documents by creating thematic folders on my laptop, for example one folder titled 'Transport-Related Exclusion Documents', and I constructed a newspaper article database on Excel with columns 'Publication'; 'Date'; 'Article Title'; 'Author'; 'Link'. This allowed me to access the documents with ease and refer back throughout the study if necessary. I found sourcing the documents to be a relatively straightforward exercise given the resources available through the University of the Witwatersrand. However, some challenges were faced. Firstly, the information needed was vast as documents are the primary source on which the study is based. I experienced difficulties tracking down documents that were not in the University of the Witwatersrand Library database, and I noticed that the number of peer-reviewed journal articles written on the Gautrain was limited. This forced me to rely on documents obtained outside academia, such as policy documents or grey literature in the newspaper article database. The newspaper article database in particular acted as a sounding board to keep abreast with news developments on the Gautrain, verify historical information, and understand the public reception to the train over time. Secondly, I noticed that grey literature may lack the neutrality and academic rigour of journals which may skew the research findings. But, through the respondents at the Gautrain Management Agency, I was able to obtain sound internal documents that filled the gap in the documents. I acknowledge that it is near impossible to source all relevant documents and find a balance between state and private sector authors, nevertheless I attempted to do so by exhausting my search options within the allocated time period.

Qualitative Interviews

A qualitative interview is a data collection method that "provides opportunities for mutual discovery, understanding, reflection, and explanation, and elucidates subjectively lived

experiences and viewpoints from the respondents' perspective" (Tracy, 2013: 132). Qualitative interviews were chosen for this study on the Gautrain because they add richness, depth, and interesting personal insights to the document analysis – which might risk being one-dimensional if used alone. In this way, interviews are a supplementary data collection method for this study but by no means less important than other methods employed.

I found that the respondents directed me to useful documents that I missed and pointed out important nuances in the documents themselves, proving the value of the interviews. The interview process occurred between November and December 2019. I started by identifying a list of potential respondents across the transport sector in Gauteng and related to the Gautrain in particular. This included individuals from the following organisations: the Gautrain Management Agency; Bombela; the Department of Roads and Transport at the Gauteng Provincial Government; and individual experts from media houses and in research capacities on public transport. Because the interviews act as a supplementary data source, and after discussions with my supervisor, I decided to approach fourteen potential respondents across the organisations in mostly senior technical or political positions who would possess the requisite knowledge to speak to the research topic and thus provide beneficial insights for the report. I initially thought the response rate would be low due to the respondents' seniority in their organisations, and so the relatively high number of fourteen was chosen to accommodate this. I approached the potential respondents via email with a request to seek their permission to partake in an open-ended interview with me, the researcher, that would last approximately one-hour. In the email, I explained the purpose of the study, how responses would be utilised in a research report, and allowed the respondents to choose a suitable time and location for the interview. These actions were taken to ensure the respondents would feel comfortable throughout the interview process and positively engage with me as a result. Furthermore, I explained that the respondent's name and title could remain anonymous upon their choosing.

Of the fourteen potential respondents approached, six responded positively, three responded negatively and five did not respond. I was tenacious by following up on the initial interview request in case the potential respondents were out of office, the email went to junk mail or it was overlooked for other reasons. Of the three negative responses, reasons cited include two respondents who, in their professional capacities, felt they were ill-suited to answer questions on the topic of research and one respondent who did not have time in his busy schedule. Unfortunately, while there were six positive responses, only four interviews eventually

materialised. This was due to the fact that one respondent had unexpected travel plans outside South Africa for the duration of the interview period and into the new year, and thus became unavailable to meet for an interview. The second respondent instructed me to liaise with his secretary to schedule a meeting, but his secretary was unresponsive to email communication and rarely answered the telephone and so we failed to pinpoint a date and time for the interview despite repeated attempts. These challenges notwithstanding, the four interviews provide enough supplementary information to make for a rich and in-depth research report. The final interview respondents were as follows:

1. Barbara Jensen Vorster, Senior Executive Manager (SEM): Communication and Marketing, Gautrain Management Agency
2. Ismail Vadi, former Member of the Executive Council (MEC) in the Gauteng Provincial Government: Department of Roads and Transport
3. Siyamthanda Ndlakuse, Specialist: Commercial Contracts Management and Economic Development, Gautrain Management Agency
4. Tshepo Kgobe, Senior Executive Manager (SEM): Technical Services, Gautrain Management Agency.

The interviews were conducted using a list of roughly twenty, semi-structured questions across key themes to steer the interview, maintain the flow of conversation and aid the researcher obtain essential information to answer the research questions. I found the interviews generally followed the question list, but digressed at times if the respondent shared a longer story or anecdote drawn from personal experience. Overall, the interviews were a positive exercise that enhanced my research and communication skills, and added value to the final research report.

DATA ANALYSIS

Data analysis entails a "careful, detailed, systematic examination and interpretation of a particular body of material in an effort to identify patterns, themes, assumptions, and meanings" (Berg & Lune, 2017: 182). The data analysis process involved myself, as the researcher, gathering the qualitative data obtained from the various documents and through interviews to construct a research report comprised of three chapters that present the research findings, analysed in relation to previous studies, and one chapter that offers a conclusion of the findings (Berg & Lune, 2017: 206). Owing to the broad nature of the topic of study, I found

the data analysis phase challenging. I got significantly waylaid trying to make sense of the information I had gathered and structure it in a coherent manner in the appropriate chapters. Furthermore, a strong, well-woven argument of the Gautrain as developmental was severely lacking in my first draft of the research report, meaning the data analysis component was relatively weak and the research question was not fully tackled.

The difficulties in data analysis revealed above were eventually overcome by the researcher deliberately choosing to step away from the writing process briefly in order to gain perspective. During this hiatus, I compiled a list of pertinent questions to answer in the data analysis sections of the study, including 'what do I want to argue in each chapter?' and 'what data do I require to do so?'. Asking these rudimentary but tough questions allowed me to strip away all of the excess information I had obtained throughout the entire research process and drill down to what is essential for each chapter. Once achieved, I felt a clearer sense of direction and purpose in each chapter and could continue with the writing process thereafter. As Berg and Lune agree, "distance from their own writing frequently allows authors to see their presentations from a different perspective" (Berg & Lune, 2017: 217). The brief writing hiatus was an important step in my personal research journey.

ETHICAL CONSIDERATIONS

The study assessed the developmental impact of the Gautrain project using a mixed methods approach of document analysis and semi-structured interviews. Documents do not pose ethical concerns as they have been published for public use. The subject matter – the Gautrain – was not particularly sensitive nor were the respondents vulnerable persons, nevertheless ethical considerations were made during the interview process to "do no harm, avoid deception, get informed consent, and ensure privacy and confidentiality" (Tracy, 2013: 243). Each respondent received an email containing an invitation letter that described the study and explained the motives behind contacting them. The respondents gave their consent for the interview in writing, and were given the choice of date, time and location for the meeting with the researcher. The respondents were asked their permission for the interview to be recorded and for their name and title to be used in the research report. All respondents agreed.

An electronic version of the final research report will be sent to the four respondents who kindly participated in the study.

Chapter Four: The State's Vision for and Role in the Gautrain

INTRODUCTION

South Africa has undergone a series of significant macroeconomic policy changes since the dawn of democracy in 1994. This chapter begins by describing the shifts in ambitions and capacities of the South African state. Following this, it presents the plans, goals, costs and immediate achievements of the Gautrain experienced by the Gautrain Management Agency, a subsidiary agency of the Gauteng Provincial Government. In doing so, this chapter takes a state-centric approach to a study of the Gautrain and provides insight into how the role of the state in the project was informed, envisioned and has materialised in reality, vis-à-vis national policy guidelines. A detailed assessment of the public-private partnership between the Gauteng government and the private sector is undertaken in the chapter as it makes up the delivery mechanism of the Gautrain project and represents a cornerstone of the success (or failure) of the project itself. By drawing on policy documents, articles in the public domain and interviews, this chapter sets up an important point of analysis around the possibilities of constructing a developmental state through state-led mega-projects like the Gautrain.

SHIFTS IN PLANNING AND INTERVENTIONS OF THE MODERN SOUTH AFRICAN STATE

In 1993, under the helm of a liberation struggle led by the African National Congress (ANC), South Africa emerged from a violent, segregated past to greet a non-racial democratic future. The ANC then had a skeletal economic policy vision for South Africa, at best – the party simply sought a state-led approach to alleviate the legacies of apartheid (Habib & Padayachee, 2000: 245). As such, leading academics loosely linked to the ANC alliance assembled as the Macroeconomic Research Group (MERG) and crafted a document to provide a detailed framework and way forward for the country during this turbulent time (MERG, 1993). The MERG document was never formally published, but it was used to focus the ANC's mandate and later inform ANC policy in the early days of democracy (Hirsch, 2005: 54). The document recognises apartheid as "the violent enforcement of white privilege through racial segregation" (MERG, 1993: 4) and notes the list of social and economic inequalities resultantly prevalent across South African society. From this, a 'sea change' in economic policy is put forth comprising direct intervention by the South African state to remedy sectoral imbalances in the

economy, and a reallocation of government expenditure towards skills for improved human resources (MERG, 1993: 7).

The MERG document lists eight 'building blocks' for transformation of the South African economy, namely: a) fiscal policy, particularly increasing public sector investment; b) balanced monetary and exchange rate policy; c) provision of basic social and physical infrastructure in schooling, housing, electrification and health services; d) active labour market interventions in human resources, wages and infrastructure; e) a viable land redistribution programme; f) better competition and trade policies in key industries (largely mining); g) greater controls on an already-liberal financial sector; h) and finally, a slim, well-coordinated, transparent and efficient state that leads to "serve the purposes of a developmental state, in addition to being democratic" (MERG, 1993: 16). Here, the MERG document makes a distinct reference to the developmental state. In a dedicated chapter to the role of the state, the MERG document details the need for "a strong private sector interacting with a strong public sector" (MERG, 1993: 268), with dynamism and growth led by private enterprise while the South African state shapes economic development for the necessary redistribution of national wealth, income and power. This would occur in two phases, an early public investment-led phase from 1993 to 1999, followed by a sustained growth phase between 1999 and 2004. The document calls the configuration of the state 'strong but slim', emphasising the importance of wisely nurturing state resources within the public institutions, which admittedly was not the case during apartheid – and which the ANC government sadly inherited (MERG, 1993: 273).

While MERG was a bold attempt at essential economic restructuring for South Africa, it ended chaotically with critics calling it "uneven and schizophrenic" (Nattrass, 1994: 220), arguing it straddles Keynesianism and pro-market policies which drives down investor confidence and expels capital. The document also assumes that developmental policies enjoying success in East Asia decades prior will perform the same when applied to South Africa in the 1990s (Nattrass, 1994: 356-357). MERG principles never become official ANC policy because of the argument that the ANC, under leaders Nelson Mandela and Thabo Mbeki, was thrust into the international spotlight and felt compelled to abandon MERG for a heavy shift right, favouring South African corporate interests in mining and the heavy-handed Washington Consensus institutions instead (Freund, 2013). This rightward-shift is evident in the ANC's sudden move from the Reconstruction and Development Programme to the Growth, Employment and Redistribution strategy, discussed below.

Following and almost simultaneous to MERG, the leftist leaders within the ANC, then-members of the Government of National Unity (GNU), connected with the Congress of South African Trade Unions (COSATU) and the South African Communist Party (SACP) to devise the Reconstruction and Development Programme (RDP), originally serving as an election manifesto and then published as a government white paper in November 1994 to be recognised as the 'base document' (Hirsch, 2005; Parliament of the Republic of South Africa, 1994). RDP stressed a commitment to transformation across "every level of government, every department and every public institution" (Parliament of the Republic of South Africa, 1994: 4) and perceived transformation as a complete redesign of activities in the system, buoyed by active partnerships between the state, labour, business and civil society. It was divided into five interrelated sections that each focused on a programmatic theme, including addressing basic needs and strengthening South African human capital towards realising the overarching RDP (Parliament of the Republic of South Africa, 1994: 8-9). Notably, both RDP and MERG cautioned against hasty privatisation of state assets like the De Klerk-era had pursued (Habib & Padayachee, 2000). The RDP was greeted with a positive public reception and even labelled a "blueprint for a productive social democratic haven" (Hirsch, 2005: 59) by some. It was driven by more popular leaders within the ANC alliance than the academics who led MERG, hence its acceptance as official policy. Yet, it failed to stick, and "by the time the final version of the RDP was accepted, it was not the radical document many argued and some still believe today" (Padayachee & Sherbut, 2011: 640). RDP reflects political rhetoric for transformation rather than the so-called 'blueprint' for meaningful structural change that was envisioned (Habib & Padayachee, 2000: 251; Hirsch, 2005: 59).

As the GNU settled into the job, it formally codified its national economic policy in June 1996 under the title 'Growth, Employment and Redistribution: A Macroeconomic Strategy' (GEAR) – informed by two prior documents released by the big business and union arms,[9] and with contributions from a team of technical experts affiliated to a variety of universities (Habib & Padayachee, 2000; Padayachee & Sherbut, 2007). Although RDP objectives were cited, the GEAR strategy signals a marked shift away from earlier structuralist policies towards "a competitive outward-oriented economy" (Department of Finance, 1996: 1) driven by investment and exports. Importantly, it does not list reducing inequality as an objective (Weeks,

[9] These were the February 1996 publication of 'Growth for All' document by the South African Foundation and the Labour Movement's 'Growth and Equity' document.

1999; 798). Instead, GEAR strongly advocates the neoclassical model which embodies privatisation of state assets, deregulated markets, and ample fiscal restraint through downscaling social services (to rely on the private sector) and augmenting tax collection – as fiscal expansion is deemed "only a short term boost" (Department of Finance, 1996: 3). Unlike MERG, the GEAR strategy makes no direct reference to the developmental state. Instead, it calls on the state to 'build a bridge' between South Africa's dire economic situation and the potential-filled international system, and growing annually in competitiveness (Department of Finance, 1996: 2).

GEAR also pushes for a coordination of economic policy between government and its 'social partners', namely business and labour (Department of Finance, 1996: 2; Hirsch, 2005: 100). However, the strategy was assembled in secret without public debate and hurriedly released – Mandela called it 'beyond discussion' (Freund, 2013: 15). Critics maintain GEAR adopts the principles of the International Monetary Fund's neoliberal structural adjustment programmes, notorious for damaging African economies in the 1980s, thus proving a "substantive abandonment of the RDP" (Adelzadeh, 1996: 67). Going deeper, Adelzadeh argues the GEAR strategy is simply the 'analytically flawed' South African Reserve Bank (SARB) model, which echoes the Normative Economic Model under De Klerk during the final apartheid years (Adelzadeh, 1996: 94). The design of the SARB model is unable to create employment or produce an equitable distribution of income (Adelzadeh, 1996: 92).

In practice, GEAR failed to realise the real macroeconomic transformation it promised, particularly in terms of jobs and investment, although inflation was lowered to single digits and the budget deficit was clearly reduced (Habib & Padayachee, 2000; Hirsch, 2005). Further, economic growth trundled along at well below the strategy's target of an average 4.2 percent between 1996 and 2000, pinned to high interest rates and an overemphasis on deficit reduction (Weeks, 1999: 809). According to Freund (2013), GEAR's positive legacy is providing political stability during the complicated GNU and establishing a platform for future policy endeavours. In 2000, the South African fiscus entered an expansionary phase in vital social services and infrastructure development (Hirsch, 2005: 108). This was confirmed in the 2001 budget announcement by Minister of Finance Trevor Manuel, which took a more Keynesian stance and pushed a more active state (Padayachee & Valodia, 2001: 71). In 2004, the Broad-Based Black Economic Empowerment (BBBEE) Act was passed into law, amending earlier versions of employment equity. Alongside a BBBEE strategy paper, the Act sought to

transform the labour market regarding race, gender, skills, and access to finance utilising a 'balanced scorecard' system (Parliament of the Republic of South Africa, 2004: 9-10; DTI, 2003: 5). Importantly, BBBEE is applicable to procurement, in particular the allocation of contracts to companies with black-owned and women-owned components (Hirsch, 2005: 212).

Some years later in February 2006, Deputy President Phumzile Mlambo-Ngcuka (under President Mbeki) launched the Accelerated and Shared Growth Initiative-South Africa (AsgiSA) as the "*national shared growth initiative*, rather than the 'government's programme'" [original emphasis] (The Presidency, 2006b: 2). It was devised by a group of stakeholders on the back of a strong (albeit unbalanced) growth period for the country, and informed by a Millennium Development Goal set in 2004 to halve the poverty rate by 2014. AsgiSA claims six 'binding constraints' should be overcome for its achievement: a) a volatile and overvalued currency; b) an inefficient logistics system; c) skilled labour in short supply; d) restricted competition; e) red-tape barriers for small enterprises; f) weak state competence (The Presidency, 2006a: 4-6). AsgiSA's performance cannot be properly evaluated because Mbeki's presidency ended prematurely in 2007, and the initiative was then superseded by the New Growth Path (NGP) under new President Jacob Zuma (Mosala, Venter, & Bain, 2017: 334).

The NGP names South Africa's main hurdles of employment, inequality and poverty, but "places jobs and decent work at the centre of economic policy" (Department of Economic Development, 2011: 2) and contends that infrastructure is the base through which to inject these jobs. It allows government to regulate markets, induce private investment and support knowledge- and capital-based sectors, and seeks better governance attained through a monitoring and evaluation system (Department of Economic Development, 2011). The NGP directly references the developmental state to "minimise costs for businesses except to support transformation" (Department of Economic Development, 2011: 61) and the state to avoid becoming "hostage to market forces and vested interests" (Department of Economic Development, 2011: 62). Here one can see structuralism intertwined with hints of a free market ideology. The NGP did not disappear as much as form the basis for the seminal National Development Plan to follow, but its impact in isolation is difficult to assess (Mosala et al., 2017: 335).

The most important macroeconomic planning tool from the ANC during Zuma's tenure is the National Development Plan (NDP), released in 2012 and adopting a long-term vision to 2030.

The NDP is a dense document that arose from many in-depth interviews, research and consultations led by a cohort of 26 expert commissioners attempting to solve South Africa's obstinate socioeconomic challenges since 1994 (National Planning Commission, 2012). As a plan, it acts as a high-level strategic framework to steer the choices and actions of policymakers and so it runs alongside existing policy, like AsgiSA. By 2030, the NDP aims to eliminate income-induced poverty, create 11 million jobs, reduce the Gini coefficient from 0.69 to 0.6, develop an inclusive economy, and boost the capacity of a corruption-free state (National Planning Commission, 2012: 34). Six priorities to attack the root causes of inequality and poverty are listed and building a capable developmental state sits at number five – although this version does not see the burden rest on government alone; it requires an active citizenry that holds leaders to account in a 'developmental union' (National Planning Commission, 2012: 27). There is political buy-in to the developmental agenda, better coordination across state departments and cleaner state-owned enterprises in the South African developmental state (National Planning Commission, 2012: 407–443). Moreover by 2030, the NDP seeks public infrastructure investment to occupy 10 percent of GDP, financed through loans, PPPs, tariffs or taxes and concentrated in the critical sectors of energy, transport and water (National Planning Commission, 2012: 34). The resultant infrastructure must see real benefits to South Africa's productive sectors through forwards and backwards linkages, and enhance labour, not displace it. It must also consider factors of sustainability and resilience to natural disasters (National Planning Commission, 2012: 34). The NDP was received with mixed reviews, however it stands as the vision statement to which all government projects adhere (Mosala et al., 2017: 335).

When Jacob Zuma ascended to power, the ANC was resolutely split into two camps that grappled between personalities, allegiance to the party, power and access to state resources in "an infant democracy" (Gumede, 2008: 271). The state was fragmented. Additionally, Zuma's cabinet grew dramatically from 26 ministers under Mbeki to 35, and Mbeki's 10 deputy-ministers to Zuma's 37 – into a 'bloated' state which thereafter "took a decidedly virulent and clientelist turn" (Naidoo, 2019: 577). It is well-known that Zuma's eight-year presidency was marred with widespread corruption that undermined the values of the country's constitution and became institutionalised in a case of 'state capture', spearheaded by the influential Gupta

family (Chipkin et al., 2018; Myburgh, 2017).[10] Corruption is a social process as much as it is economic – it involves the formation of a new elite class through networks of patronage fostered via strong political factions in both the formal and informal sectors (von Holdt, 2019: 2). But notably, corruption is a mechanism of class formation, it is not inevitable with class formation. The corruption that emerged during Zuma's tenure developed into a 'capturing' of and control over the primary political functionaries of the South African state that influence decision-making, national policy and regulations (Labuschagne, 2017: 54). It ran much deeper than the Zuma-Gupta relationship alone – some even argue it began promptly post-1994 through transformation strategies like BEE (Madonsela, 2019: 113; von Holdt, 2019: 12). In October 2016, then-Public Protector Thuli Madonsela released a 355-page report titled *State of Capture* after an investigation into the phenomenon, which brought heightened public attention. Thereafter a Commission of Inquiry into State Capture was launched in 2018 and chaired by Deputy Chief Justice Ray Zondo (February, 2019; Public Protector, 2016). The Zuma state was already operationally oversized, fragmented and difficult to manage. State capture weakened the state to the point of dysfunction: no longer able to exercise control over decision-making capacities or resource allocations due to manipulating external agents – in this case, the Gupta family – pulling the strings (Labuschagne, 2017: 57). The South African state could not self-correct thus impeding "the ability and constitutionally confirmed duties of the state in a society in desperate need of assistance" (Labuschagne, 2017: 65). Post-Zuma and in the hangover of state capture, South Africa is attempting recovery from the depths of damage to the state and its assets.

It is apparent that the South African state has experienced shifts in policy interventions since the end of apartheid. Post-1994 began with leftist inclinations like MERG and RDP, and moved towards the free-market approach of GEAR that emulated trends in the international community like prioritising privatisation and market deregulation, liberalising exchange rates, and austerity on spending for social services. GEAR's laissez-faire approach failed to achieve structural transformation. Post-GEAR, the state introduced a series of policies including AsgiSA and the NGP that did not come to fruition as Mbeki resigned and Zuma entered the era of state capture. From all this policy fluctuation, the National Development Plan is the enduring and fundamental document of modern South Africa that remains a planning tool and sounding

[10] State capture here means an individual's "efforts to shape the laws, policies, and regulations of the state to their advantage by providing illicit private gains to public officials" (February, 2019: 3). This process occurs through overt or clandestine channels and drains the monetary resources of the state.

board for development projects during its term. Still, changes in the functioning of the state since apartheid, from Mandela to Mbeki to Zuma and after, have resulted in a weakened and fractured state with a confused agenda across the various administrations. This has produced blurred developmental objectives, especially in large and complex state projects like the Gautrain, and raises concerns surrounding the capacity of the state to complete such projects. The Gautrain is a useful case for assessment of the consequences of these shifts in South African state policy.

THE GAUTRAIN PROJECT

Project Overview

Undertaking infrastructure development projects, like the Gautrain, is a recurring theme across the varying presidencies post-1994, albeit materialising in different ways. The history, trials, and successes of the state in which the Gautrain project exists have been established above. This chapter will now present an overview of the goals, costs and achievements of the train itself so to understand the state perspective – what it envisioned for the project and where it ended up. This will provide a nuanced understanding of how the state perceives itself as the Gautrain enters its next phase of planning and development.

The Gautrain is a large scale transport infrastructure project spearheaded by the Gauteng Provincial Government (GPG) through its subsidiary agency, the Gautrain Management Agency (GMA), and a PPP concession contract with local and international companies (du Plessis, 2010: 62). It is thus a unique mega-project enacted through the provincial arm of the state. The Gautrain consists of 80 kilometres of high-speed rail using 24 four-coach trains that connect Johannesburg to Tshwane and Johannesburg to OR Tambo International Airport, spanning 10 link stations, 15 kilometres of tunnels and 10.5 kilometres of viaducts (du Plessis, 2010: 62). The GMA was formed according to the GMA Act 5 of 2006, which detailed the agency's governance and functioning as a provincial public entity to direct, coordinate and supervise the Gautrain project, including drafting project objectives, controlling finances, handling the relationship with concessionaires and overseeing the train's integration with other transport services (Gauteng Provincial Government, 2006: 4). The GMA sits under the GPG's Department of Roads and Transport and so the Department's MEC is the agency director.

However, the GMA functions as a private company with its own board and management team (Gauteng Provincial Government, 2006: 4).

The Gautrain was announced by Gauteng Premier Mbhazima Shilowa in February 2000 as one of the region's ten Spatial Development Initiatives, falling under the Blue IQ Project (van der Merwe et al., 2001: 3). Blue IQ hoped to elevate Gauteng's competitive advantage by prioritising mega-projects in tourism, transportation and value-added manufacturing thus pursue R100 billion worth of investment and create over 100 000 jobs in a decade (Brand South Africa, 2002: para. 3). The Gautrain would be the first modern, metropolitan rail system of its kind – making the project uncharted territory for the Gauteng Provincial Government that carried relatively high risks. As such, expert input was sought from Khuthele Projects (project management), Arcus-Gibb and Lebone Engineering (engineering), Ledwaba Mawai (legal) and APS Plan Africa (spatial planning), among others, in April 2000 to comment on the project's planning and implementation (van der Merwe et al., 2001: 2). Thereafter, an Inception Report was published in June 2000 that provided project scope and concept, potential train routes and a business case analysis. Once approved, the project rolled into the next phase of system design (route alignment and station placing, land use factors, cost calculations) and needs assessment (market research and revenue estimations) which was presented to the Provincial Cabinet in September 2000 and approved in January 2001 with minor changes to the route (van der Merwe et al., 2001: 2). Kagiso Financial Services conducted the financial feasibility study for the train, and in early September 2001 an Investors' Conference was held in Sandton to kickstart the tendering perusals. The project was formally approved in February 2002 when the 'Request for Prequalification' went public, resulting in responses from ten prequalified bidders and a shortlist of two: Bombela Concession Company (Pty) Ltd. (Bombela) and Gauliwe Consortium (Akoojee, 2015: 13-14). After a long period of deliberation, on 2 July 2005 Bombela was announced as the preferred bidder and awarded the contract for 19.5 years (Masango, 2005). The nature of the concession agreement within the PPP and the procurement proceedings will be discussed later in the chapter.

Official construction on phase one of the Gautrain began in September 2006, and the first public trip was taken in June 2010 between the airport and Sandton, just before South Africa hosted the FIFA World Cup (van Wyk, 2010: para. 1).

Approaching a project of this scale, the Gautrain Management Agency held lengthy discussions and input meetings with an array of public committees at all levels of the state, aligning to the consultation and cooperation obligations of the GMA Act. These included:

- National Department of Transport
- PPP-Unit of the National Treasury
- Gauteng Department of Transport and Public Works
- Gauteng Department of Finance and Economic Affairs (where Blue IQ sits)
- Gauteng Department of Development Planning and Local Government
- Gauteng Department of Housing
- Gauteng Department of Agriculture, Conservation, Environment, and Land Affairs
- Johannesburg Metropolitan Municipality
- Tshwane Metropolitan Municipality
- Ekurhuleni Metropolitan Municipality
- South African Rail Commuter Corporation
- Spoornet (van der Merwe et al., 2001: 3).

In addition, the GMA continuously engaged with various external funders and contractors, international governments and metropolitan cities, and other stakeholders.

Over the period of the Gautrain's planning and implementation, relevant South African transport policy has changed. The Gautrain is underpinned by the following government documents across its various stages, discussed in order of publication date. *The Urban Transport Act 78 of 1977* was established during the apartheid era and endures into democracy to lay the roadmap for urban transport in terms of funds, areas, advisory, preparation, connection and implementation (Department of the Prime Minister, 1977: 2). This is an historical document that sets the tone for the technicalities behind transport projects in urban areas but is not relevant to the developmental issues facing South Africa today as it was written in 1977. The *National Land Transport Transition Act 22 of 2000* is relevant for land transport systems at all levels of government to ensure their services meet certain ethical visions, planning criteria and performance targets to transform the transport system in South Africa (The Presidency, 2000: 17-18). This Act echoes the transformation agenda of the Gautrain and would have been highly informative to the train's original conception as it was published the same year, 2000. The *National Land Transport Act 5 of 2009* builds on the Act in 2000 but is

written in a post-GEAR context, thus includes a more solidified emphasis on reforming national land transport systems in particular to enable transformation (The Presidency, 2009). This includes the establishment of planning authorities and special ministries within municipalities, and a National Public Transport Regulator group within the Ministry of Transport that, impartially, supervises public transport, upholds and reproduces standards, and allocates operating licenses (The Presidency, 2009: 38).

The *Gauteng Transport Infrastructure Act 8 of 2001* serves to consolidate the legal framework for infrastructure projects concerning all modes of transport within Gauteng province – roads and highways, railway lines, parking areas, bridges, tunnels, traffic control centres, etc. (Department of the Premier, 2001). The Gautrain project would have to guarantee that it is compatible with existing transport systems to attain a well-integrated transport mix across Gauteng and achieve one of its strategic objectives, explained later in the chapter. Further, the Act guarantees that the construction of the Gautrain does not block public use of other transport modes as this would be counterproductive to an agenda of developmentalism (Department of the Premier, 2001: 4). The *Integrated and Sub-Sector BBBEE Charters of Transport* makes certain the entire rail industry value chain encourages economic growth and contributes to the transformation mission enshrined in the BBBEE Act (Department of Transport, 2008). This is fundamentally developmental in its nature, although given the drawbacks of BEE mentioned in Chapter Two, the Gautrain Management Agency would do well to integrate this with other development policies for the rail industry.

The *Gauteng 25-Year Integrated Transport Master Plan (ITMP25)*, written in 2013, stands as the most critical policy relevant to the Gautrain, especially for the expansion of the train into Gautrain Two. It takes stock of the current transport reality in the Gauteng city region and makes predictions of the population, economy and transport growth for the region over the next 25 years (Department of Roads and Transport, 2013: 2). The ITMP25 then sets out the 'cost of doing nothing' (leaving the transport system unchanged which continues to prioritise private vehicles) versus 13 short-term step-changes over the next five years that will allow economies of scale in the transport sector for the following two decades (Department of Roads and Transport, 2013: 2). The ITMP25's step-changes focus on using strategic model transfer nodes and interchanges along public transport corridors of Tshwane to OR Tambo International Airport to Johannesburg, Midrand and then Tshwane (in a triangle), with rail as the system's backbone (Department of Roads and Transport, 2013: 10). The ITMP25 does not replace other

policies; it runs alongside them in a complementary manner. The Gautrain would have engaged the ITMP25 heavily to make a case for Gautrain Two and consistently used it a key reference if public criticisms of the train arose. This is because the ITMP25 proves the necessity of a transport solution for Gauteng through a developmentalist lens in terms of sustainability, economic growth and life quality for Gauteng residents (Department of Roads and Transport, 2013: 3). This developmentalism is a cornerstone of the Gautrain project.

The *Revised White Paper on National Transport Policy* is a more current policy document that sets out to achieve an inclusive transport system in South Africa to move people and goods, providing "equitable and reliable access for all in an economically and environmentally sustainable manner to advance inclusive growth and competitiveness" (Department of Transport, 2017a: 1). The Policy argues the necessity of key players in the transport industry working together in a constructive manner for sustainable developmental objectives, thus informing the Gautrain Management Agency's need to engage transport stakeholders (Department of Transport, 2017a: 7). The *National Rail Policy Draft White Paper*, albeit in draft form, details the importance of the rail sector in the South African economy yet its inability to contribute to transport tasks due to its current state of dilapidation. This reference largely applies to the Metrorail system. That being said, the Paper credits the Gautrain for introducing "novel railway concepts to the country [that] established a role model for South African authorities that have no prior experience of implementing a greenfield rail project" (Department of Transport, 2017c: 13). The Paper seeks to elevate rail from its current state to partner with or compete against other forms of transport in South Africa in two ways: by investing in rail infrastructure; and by improving the institutional arrangements of rail entities (Department of Transport, 2017c: 2). This means the Paper is pushing public transport solutions in both isolated and integrated ways, proving its commitment to developmentalism.

The *National Transport Master Plan 2050 (NATMAP 2050)* offers a high-level plan for the country's transport system that is "comprehensive, multimodal, integrated and dynamic, and provides a sustainable framework not only for implementing transport, but also for providing infrastructure and service" (Department of Transport, 2017d: 3). The NATMAP 2050 holds a range of strategic themes for the future of transport that incorporate an inclusive spatial vision, responsiveness to the needs of growing passengers, safety, reliability, and affordability, and environmental preservation. These are infused with an unmistakeable developmental agenda. For freight transport, the NATMAP 2050 focuses on the capacity constraints that impede future

development of the service: infrastructure, equipment (such as carts), personnel and simultaneous improvement of freight institutions (Department of Transport, 2017d: 4). The document lays out short-, medium- and long-term priorities for South Africa's transport sector that make up 'NATMAP Vision 2050' (Department of Transport, 2017d). It is necessary to note that the NATMAP 2050 is a *national* policy document that emanates from the national Department of Transport, and so tends more towards a framework recommendation. Given the Gautrain is a provincial project, it would consult the NATMAP 2050 to inform its developmentalism and ensure the train aligns with transport conversations at the national level. But, the ITMP25 takes precedence over the NATMAP 2050 in practice.

Finally, the *Green Transport Strategy for South Africa: 2018-2050* takes a people-centred approach that aims to reduce the current and future effects of transport on national carbon emissions and ensure the sector aids environmental development goals. This comes in light of the fact that in 2018, direct greenhouse gas emissions arising from fuel use within South Africa's transport sector accounted for 10.8 percent of total emissions – a considerable contribution to climate change (Department of Transport, 2018: 5).

Given the Gautrain is a public project that will draw from the provincial fiscus, it is also subject to various financial policy documents including the *Public Finance Management Act 1 of 1999 (PFMA)* and the *Division of Revenue Act (DoRA).* From 2012, any developments on the train will comprise the ideologies and vision for 2030 laid out in the NDP, detailed earlier in this chapter.

Rationale and Objectives of the Gautrain

The Gautrain is not merely a public transport project; it occupies a vital developmental role for the province. The policy documents of GEAR and AsgiSA affirmed this, arguing transport infrastructure projects, like the Gautrain, are able to unlock longstanding structural constraints on the growth of economies (Gauteng Provincial Government, 2007: 6). The Gautrain's CEO, Jack van der Merwe, decisively stated in the project concept document that the Gautrain is "primarily a project aimed at economic development, growth and job creation. Its secondary aim is to alleviate traffic congestion on the existing roads" (van der Merwe et al., 2001: 5). Given the project's delivery of public transport in Gauteng, it also serves an important environmental preservation purpose – private cars, for example, consume three times more

energy and emit triple the amount of carbon dioxide per passenger than rail (van der Merwe et al., 2001: 6). Furthermore, taking a train is better for the environment than taking a bus (van der Merwe et al., 2001: 6).

The Gautrain's routes were conceptualised on the basis of a growing population in Gauteng,[11] rapid urbanisation and increased pressure on the province's roads system, especially the severely congested Ben Schoeman Freeway that connects Johannesburg and Tshwane (Gautrain Management Agency, 2019a). Between 2000 and 2005, population growth led to an additional 450 000 vehicles on Gauteng's roads, and 7 000 additional vehicles on the Ben Schoeman Freeway alone (Gauteng Provincial Government, 2007: 4). Existing public transport systems across Gauteng were faltering under the escalating demand and required substantial upgrading – it was believed that the introduction of a modern railway system could considerably ease the strain. The Gautrain station design targeted urban areas that required rejuvenation and restructuring, thus meeting the demands of the National Land Transport Act (Andrew & Thoms, 2012: 41). Further, although it was conceived independently by the GPG, the Gautrain project was not conceived to exist in isolation. Integration with existing (albeit faltering) and planned public transit services is a major goal – so "each station location was selected and specified by the Province with the objective of passengers being able to conveniently utilise different modes of transport" (Andrew & Thoms, 2012: 42), like bus rapid transit and minibus taxis. Finally, the Gautrain sought to provide a safe public transport option that minimises the numbers of fatal accidents on Gauteng's roads, thus saving lives and mitigating the heavy economic accident burden on the province.[12] Using user benefit models developed by Hatch[13] and modelled on the United Kingdom's Crossrail system, the Gautrain saves an estimated R1.3 million per year on costs associated with fatal accidents (Gautrain Management Agency, 2019: 22). This is derived from users who have switched private cars for the Gautrain.

[11] Between 2001 and 2007, Gauteng's population growth was 21 percent resulting in a net migration influx of nearly 500 000 people during this period (Gauteng Provincial Government, 2007: 4).
[12] Gauteng accounts for one quarter of all fatal accidents in South Africa, costing the province R4 billion per annum (van der Merwe, Negota, & van Zyl, 2001: 6).
[13] Hatch is a rail and transit analytics company based in the UK with expertise developing a variety of models for rail systems across the world.

The Gautrain project was formally conceived to achieve four strategic objectives, listed below (Gauteng Provincial Government, 2007: 6):

1. Facilitate development through an integrated public transport system, using feeder and distribution systems to the Gautrain.
2. Achieve direct and indirect employment and thus meet socioeconomic development targets through strengthened development nodes, integrated land use, well-planned corridors and value capture around the stations.
3. Improve accessibility and mobility in the corridor, and therefore foster tourism in Gauteng.
4. And finally, drive South Africans to use public transport through a state-of-the-art service in South Africa.

These strategic objectives are developmental because they align with the goals set out in the various development policies relevant to the Gautrain, outlined previously in this chapter. The National Land Transport Transition Act and the updated National Land Transport Act would inform the first strategic objective, namely the Gautrain's consideration of an integrated, restructured public transport system that services people of varying classes, ages, genders, or professions in an equitable and inclusive manner. Further, the strategic objective exists to certify that the Gautrain does not exist in isolation – it must be included in a functional public transport mix for the Gauteng city region. The first strategic objective links to the third strategic objective, and the two reinforce each other nicely. An integrated transport system employs feeder and distribution systems, and is accessible to local and international people alike to promote travel and tourism. The second strategic objective is developmental in its nature and echoes the sentiments of the BBBEE Charters of Transport, the ITMP25, the NATMAP 2050, the Revised White Paper on National Transport Policy, and the Green Transport Strategy for South Africa. These policies, alongside the Gautrain's second strategic objective, undergo a process of assessing the historical and developmental trajectory of the transport sector in South Africa, and Gauteng more specifically, and resultantly placing a sustainable development solution at the forefront. The policies and objectives recognise the dire need for employment to be created, ecology to be considered, redress to occur and socioeconomic goals to be met. The fourth strategic objective essentially aims to encourage more people in Gauteng to opt for public transport. This aligns with the objective set out in the ITMP25, the NATMAP 2050 and the National Rail Policy Draft White Paper. As large, bustling, commercial urban areas like

Gauteng grow each year, encouraging residents to choose public transport over private cars and thus reduce traffic congestion is vital. The three policies recognise this, while the fourth strategic objective discovered the way to attract public transport users is by providing high quality, world-class services like the Gautrain.

From the four strategic objectives above, this research report centres on an assessment of the Gautrain project's achievement of the second one. While the other strategic objectives are important to contextualise the objectives of the train and understand what accompanies a large scale transport project, this research report spotlights the Gautrain's developmentalism, outlined in Chapter One, which is encompassed in the socioeconomic development targets of the second strategic objective.

The Role of the Gautrain Management Agency (GMA), the Gauteng Provincial Government (GPG) and Bombela

The Gautrain Management Agency's directive is "to manage, coordinate and oversee the Gautrain project" (Gautrain Management Agency, 2018b: para. 1). The GMA's responsibilities are extensive, including productive management of the Concession Agreement, coordination of stakeholders (such as potential investors), integration with other transport services, all the while protecting state interests (Gautrain Management Agency, 2018b: para. 3). The GMA's mandate is such that it aims to achieve the strategic objectives discussed on the page above. Having a dedicated agency that solely works on the Gautrain project guarantees a higher likelihood that the strategic objectives will be achieved in reality. The agency is developmental because it adheres to internal key performance indicators that include specific socioeconomic development targets. It has five, ten and fifteen year reviews that involve wide-ranging stakeholder engagement and response, and the agency is subject to an internal audit and one by the Auditor General of South Africa to assure adequacy in management and internal controls (Gautrain Management Agency, 2019b: para. 2).

Given the GMA runs the technical operations and daily management of the Gautrain, the Department of Transport and Roads in the Gauteng Provincial Government guides the GMA in terms of overarching policy, high-level project conceptualisation, purpose and political buy-in to the train. This is the formal state layer of the Gautrain project, and perhaps the most important as the train employs public funds and thus requires political sign-off for new

decisions, expansions or changes to the project. Ismail Vadi, the former MEC for the Department (November 2010-May 2019), shared:

> "the MEC's role is largely political. We had a Gautrain political committee that was comprised of the MEC for Transport, Finance and Local Government, and relevant others – it could be activated within 24 hours if there was an emergency" [interview, 27/11/2019].

Formally, the political committee mentioned above was created on 29 August 2001 at a special GPG meeting with the sole task to foster 'political buy-in' across the Gauteng political landscape that was openly hostile to the newly-proposed Gautrain concept (Akoojee, 2015: 16). It included those listed by Vadi, alongside the Director General of the Province, the Premier's legal advisor and GMA CEO Jack van der Merwe. Once its mandate was achieved, the committee's role extended to approving procurement processes, monitoring procurement, governance and management of the train, and building good public relations around the project (Akoojee, 2015: 16). The committee serves to oversee development of the train and respond to crises quickly and accurately upon their occurrence. It is a vital cog in the train's operations.

The Concessionaire, Bombela, "holds a 19.5-year concession to design, build, part-finance and operate the Gautrain project" (Gautrain Management Agency, 2018a: 1), comprising 5.5 years to build and 14 years of train maintenance and operations. Bombela is made up of the following sub-companies (Akoojee, 2015: 15):

- Bombardier Transportation: French-Canadian manufacturer of rolling stock, and the effective lead member of the Consortium occupying a 25 percent shareholding overall.
- Bouygues Travaux Publics: French contractor occupying a 25 percent shareholding overall.
- Concor Holdings (Pty) Ltd., Basil Read (Pty) Ltd. and Murry & Roberts Ltd.: South African civil engineering construction companies, occupying a 25 percent shareholding overall.
- Strategic Partners Group: BBBEE partners consisting of a wide variety of black-owned companies, occupying a 25 percent shareholding overall.
- RATP International Développement: French operator of the Paris Metro, France, sub-contractor for operations.

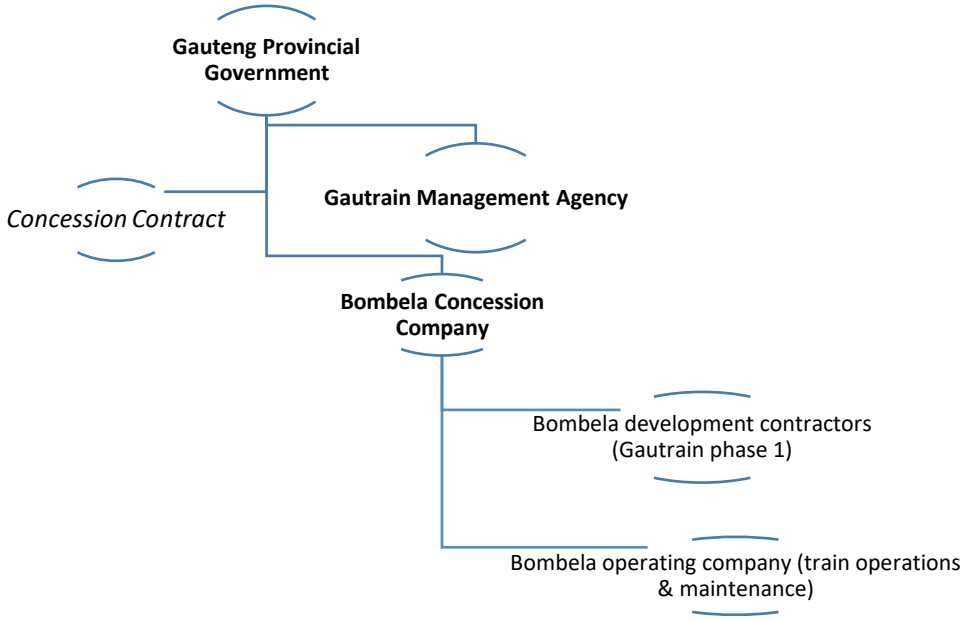
The contract with Bombela takes the form of a public-private partnership, as has been stated previously, which is monitored by the GPG/GMA in accordance with the Concession Contract, National Treasury's PPP Manual (discussed below) and international best practice. The next section in this chapter looks at the PPP structure in more detail. Bombela is tasked with sourcing and managing its own contractors for all the necessary train parts in an integrated solution approach to the project-build (Gautrain Management Agency, 2018a: para. 1). It must further maintain the train system once it is up and running, and can be credited with bringing the tunnelling technology, known as the Tunnel Boring Machine, into South Africa for the first time in history (Akoojee, 2015: 39). The state and its extension agency GMA are thus tasked to monitor the Concession Contract to ensure it is upheld and objectives are delivered upon. Siyamthanda Ndlakuse is a specialist in Commercial Contracts Management and Economic Development at the Gautrain Management Agency and engages with Bombela regularly regarding the contract. During her interview she shared:

> "We have learnt that it is important to draw up a Concession Contract that is very rigid and flexible at the same time. That means definitions within the contract are clear and we follow systems of reporting and monitoring, but simultaneously the contract is able to accommodate changing politics and changes in South African legislation. This process requires innovation from the GMA" [interview, 19/11/2019].

The contract agreement reflects a developmental design because it outsources the construction, procurement and daily operations of the Gautrain to the private sector while maintaining oversight and executive decisions at the state level. This is a more efficient and less burdensome design for state structures and state financing than having the Gautrain Management Agency fully operate the train. For example, through the GMA's oversight, Bombela and its sub-contractors have spent approximately R128 million boosting employee skills during the Gautrain's construction phase and R59 million to date on capacity building and training programmes for operational staff (Gautrain Management Agency, 2019: 14). On this note, Tshepo Kgobe who runs the Technical Services at the GMA told me a touching story of the Gautrain drivers, saying "many arrived at the Gautrain over a decade ago with just a Matric certificate, then through the training system they moved onto train drivers, and now they are train managers" [interview, 19/11/2019]. The Gautrain can boast structures that aid development of its staff to progress within the organisation, which reflects an organisational

ethos that is developmental. The overall management of the Gautrain is illustrated in the flow diagram below:

Diagram 1: Overall management structure of the Gautrain project (Akoojee, 2015: 16).



Project Costs

The total project cost, according to the PPP contract that was signed by National Treasury on 26 September 2006, was set at R25.2 billion with a fixed scope, price and period of 54 months' construction (van der Merwe, 2008: para. 2). The only way this figure could change would be if South Africa's consumer price index rose above the level forecast by the South African Reserve Bank, under which circumstances the Gauteng Provincial Government would have to cover the difference (van der Merwe, 2008: para. 3). However, R25.2 billion was not originally the cost of the project. In 2000, the cost had been estimated at a much lower R7 billion but the Environmental Impact Assessment (EIA) requirements, rising house prices and the need to account for value-added tax during construction had pushed up the cost to R12 billion by 2002 (PMG, 2005: 3). By 2005, this had risen to R20 billion, and thereafter it was assured that the estimated cost was unlikely to rise again because it was a fixed lump sum contract (PMG, 2005: 3). However, the cost rose again by R6.2 billion to a final total of R26.5 billion by completion (Venter, 2016: para. 1).

Financing of the Gautrain was made possible through funding agreements with lender banks, Rand Merchant Bank and Standard Bank, and the agent bank, Nedbank (Akoojee, 2015: 15). Bombela also had a 20 percent agreed upon stake to part-finance the train, and the private sector invested approximately R3.9 billion in capital costs (PMG, 2005: 2). Forty nine percent of the remainder was derived from the National Treasury through the Division of Revenue Act (DoRA), and the rest from the provincial Medium Term Expenditure Framework and provincial borrowing from the national government (The Presidency, 2013: 37). In 2006, federal funding of R7.1 billion was set aside for the construction phase of the train, according to the Minister of Finance's budget speech and the DoRA (Centre for Public Impact, 2016: para. 6).

The train was built at a total cost of R26.5 billion, approximately R1.3 billion over the agreed upon budget in the PPP contract (Gautrain Management Agency, 2019c; Venter, 2016). Bombela was reportedly paid R26.5 billion by the Gauteng Provincial Government for construction of phase one, (BizNis Africa Press Release, 2014: para. 14). The Construction Industry Development Board was responsible for skills development, which included the Gautrain Management Agency spending R1810 million on procurement from and sub-contracting to BEE firms and purchasing R1030 million in South African materials, plant and equipment (Rego, 2009: para. 7).

Moreover, there is an annual 'patronage guarantee cost' of an initial R1 billion, changing each year depending on the previous year's performance, that is built into the PPP contract and borne by the Gauteng Provincial Government. This cost was included in the contract to ensure the concessionaire is guaranteed by the state even if the Gautrain's projected ridership numbers are not met – especially during the crucial first nine months of operation (Fombad, 2014: 83; ITDP, 2002: 3). Vadi explained, "this ridership guarantee was a safety net implemented years ago when the project was new – now that it is successful, there is no need to have this" [interview, 27/11/2019]. Vadi believes this cost should be reconsidered for the development of Gautrain Two so to alleviate the financial burden on the state going forward. However, in the 2018/2019 financial year, the GMA paid R1.67 billion in the form of a patronage guarantee to Bombela because ridership numbers were below medium-term projections (Gautrain Management Agency, 2019: 123). The GMA explained that recent socio-political instability in South Africa, including minibus taxi strikes, conflicts between e-hailing services and metered taxis, had caused ridership numbers to fluctuate (Gautrain Management Agency, 2019: 41). If

the patronage guarantee cost is abandoned, as Vadi suggests, the Gautrain's ridership numbers should remain steady or rise.

THE PUBLIC-PRIVATE PARTNERSHIP

South Africa sits at the forefront of African rule of law and policy, ranking fifth in the region on the World Justice Project's *Rule of Law Index* for 2019 (World Justice Project, 2019: 134). The country boasts some cutting-edge policy documents – the PPP Manual (issued in terms of the Public Finance Management Act) is the first of its kind in the world. Assuming the popularity of PPPs to deliver public project, the PPP Manual serves to "systematically guide public and private through the phases of the regulated PPP project cycle for national and provincial government, unlocking policy and providing procedural clarity" (National Treasury PPP Unit, 2004: 1). Encoded in the 444-page Manual are nine modules that encapsulate the PPP process from start to finish: 1) South African regulations for PPPs; 2) code of good practice for BEE within PPP; 3) project inception; 4) feasibility study; 5) procurement (numbers 4, 5 and 6 all making up the project preparation period); 6) managing the PPP agreement; 7) auditing; 8) accounting treatment; and 9) project finance (numbers 6-9 making up the project term phase) (National Treasury PPP Unit, 2004). PPP financing is centrally governed by the Public Finance Management Act 1 of 1999 (PFMA), which is a founding finance policy to ensure public money is spent wisely with visible outcomes. Within the jurisdiction of the PFMA, PPPs must comprise "targeted public spending, principally on outputs to agreed standards; leveraging private sector finance and efficiencies; and allocating risks to the party best able to manage them" (National Treasury PPP Unit, 2004: 40). The PFMA denotes that PPPs, like other public projects, are subject to parliamentary enquiries in the case of financial mismanagement. The PPP Manual and the PFMA are important guiding documents for projects implemented through PPP mechanisms. They keep the management, finance and legality of the projects in check, especially when taxpayer money is concerned, and ensure the PPP promotes the developmental agendas that come with state-led projects like the Gautrain.

The Gautrain PPP has been reported largely as a success (Akoojee, 2015; Breytenbach, 2015; Railway Gazette International, 2019). It is drawn up between Bombela on the one hand and the Gautrain Management Agency, acting on behalf of the Gauteng Provincial Government, on the other, rendering it a PPP between a subsidiary agency of the provincial level of the state and a private entity. Tshepo Kgobe, SEM of Technical Services at the GMA shared, *"*you don't need

a PPP *per se*, what you need is a solid contract and a knowledgeable state that can understand, monitor and comply with the terms of the contract" [interview, 19/11/2019]. The Gautrain project has strong, qualified management teams in both the Gauteng Provincial Government and the Gautrain Management Agency who work in close collaboration towards clearly assigned responsibilities. The outgoing GMA CEO Jack van der Merwe, for example, led the Department of Public Transport, Roads and Works in Gauteng from 1995 to 2004, headed the Provincial PPP Unit and is a transport expert by training, proving he has ample experience and skills to spearhead the GMA and implement the PPP successfully (Centre for Public Impact, 2016: para. 11). There is also an Independent Certifier associated specifically to the Gautrain whose job it is to determine whether the project's milestones have been achieved (Fombad, 2014: 78). The sound capability of the GMA to understand and monitor the PPP process, such as when a dispute arose between the GMA and Bombela that was resolved quickly and effectively by the GMA, allows the risk of building and operating the Gautrain to be transferred to the private sector without the provincial state losing control (Fombad, 2014: 78). This is developmental as it engages both public and private sectors constructively, transparently and decisively towards the construction and delivery of a public infrastructure project, and ultimately a public good (Sabol & Puentes, 2014: 3). This illustrates that both sides, often pitted against each other, are able to form strong partnerships and work successfully together.

The hallmark of the PPP is to engage and participate with many stakeholders – essentially any person or organisation with a legitimate interest in the project – throughout the process, such as government, citizens, trade unions, contractors, media, among others. For example, once the PPP project plan has been finalised, planners will approach communities affected and present the project in churches, halls or local forums (Sabol & Puentes, 2014: 21). This gives ordinary citizens the opportunity to read, understand, vet and shape the deal and thereafter voice their opinions in public dialogue sessions (Sabol & Puentes, 2014: 21). This process allows diverse voices, considerations and objections to be taken into account, arguably a developmental process of the PPP to deliver a considered, well-planned project. The Gautrain's EIA process illustrated this – it was more than a two-year process with over 700 stakeholder meetings, managed by the GPG (Fombad, 2016: 1205). From the provincial state perspective, Ismail Vadi shared his view on the PPP, "the PPP is a success story because we got the partnership right. As such, it built confidence in the state to complete large infrastructure projects" [interview, 27/11/2019]. Another success area of the PPP is the penalty system, which Vadi mentioned "Bombela did not like, but they were held up by the contract!" [interview, 27/11/2019]. If

Bombela, the concessionaire, does not perform according to its agreed upon milestones and meet certain socioeconomic objectives, there is a strict penalty system written into the PPP agreement. This is an accountable state implementing a sound penalty system stipulated by the contract and monitored by the GMA as a subsidiary agency. It retains control in the hands of the state. As Siyamthanda Ndlakuse described:

> "At monthly assessments, if Bombela is non-compliant then the GMA levies a penalty against them. There is also a point of non-conformance at which the contract will be terminated – this has never happened, but we ensure that the PPP process is very strict so that it is successful" [interview, 19/11/2019].

In 2008, the Gautrain's PPP contract was recognised twice on the international stage, proving the PPP's success acknowledged by experts outside South Africa. The Gautrain won the 'Best Global Project to Sign' award for its engineering and project expertise, and the 'Public Private Finance' award which rendered it the technical best PPP in the world that year in terms of financial management (Fombad, 2016: 1204). After the Gautrain was built, it won the 'Global Air Rail Alliance Award' (2013, 2014) for customer service excellence and received a Bronze for 'Launch of a New Service' (2010) (Gautrain Management Agency, 2016: 13).

However, the PPP process has not all been smooth sailing. There has been a series of rather public disputes between the Gauteng Provincial Government and Bombela, which resulted in the public sector suffering financially. First, the GPG paid R1.3 billion in a private settlement in 2016, which included R980 million to the Bombela Civil Joint Venture (BCJV) (Omarjee, 2016: para. 1-2). Then an additional R294 million over two years was paid to the BCJV for the Sandton Station and the John Vorster and Jean Avenues bridges due to 140 private individuals lodging a delay and disruption claim against the Gautrain that temporarily halted construction of the bridges, costing the BCJV greatly (Omarjee, 2016: para. 8). The dispute with the claimants was resolved but delay reparations to the BCJV had to be paid. Additionally, the Gautrain was criticised for its absence of proper public consultations and legislative debates during the tender process, ahead of its choice of Bombela (Fombad, 2014: 70). Issues of transparency surrounding the tendering process and cost estimates were further raised by the opposition party, the Democratic Alliance, who "lamented that too much has been done in secret" (Fombad, 2014: 71). However, according to Fombad, oftentimes not every aspect of the PPP is disclosed because it is deemed "too technical for ordinary citizens to understand and

assess" (Fombad, 2016: 1205). As the next phase of Gautrain Two begins, the 19.5-year concession contract will come to an end in 2025 after which it can either be renewed or terminated. Through experiences in the first contract, the Gautrain Management Agency has learnt where it went wrong and how it might improve as it drafts the contract for Gautrain Two. For one, the financial split between public and private within the PPP structure may need to be amended for a more sustainable financial arrangement for the provincial state. Kgobe revealed:

> "We have seen one of the shortfalls of the PPP is that the state assumes a bigger chunk of the investment. In this next phase, we are looking for the private sector to contribute 30-50 percent so that it is less burdensome on the state. We now have proof that the Gautrain has a tangible impact on citizens, we have the socioeconomic development report, we have benchmarking data, and we know the mechanisms that function and have a long-run effect. We can leverage these to construct a more fair contract and attract investors." [interview, 19/11/2019].

The GMA, armed with data from the Gautrain's initial construction since 2006, is retrospective, reflective and open to new ways of structuring the PPP going forward into the new contract so that the state (and taxpayer money) is better off financially. This demonstrates the GMA's intent to place the provincial state, its wellbeing, and its developmental agenda at the heart of the negotiating process, demonstrating the agency's commitment to developmentalism.

CONCLUSION

South Africa has undergone various macroeconomic policy shifts since the fall of apartheid in 1994 and the rise of democracy from MERG to RDP, GEAR, AsgiSA, NGP and after, which has produced a confused state with blurred ambitions and dubious capacities. This becomes especially pertinent when undertaking large scale transport projects. As such, the South African state chose to structure the Gautrain according to a public-private partnership contract with Bombela, the concessionaire, using the Gautrain Management Agency as a subsidiary agency. This arrangement has proven successful in transferring the risk associated with building and operating the train to the private sector but retaining an important contractual penalty system so that control and oversight remains in the hand of the state. A high quality and well-functioning Gautrain with proven developmental benefits is the direct result of this PPP arrangement.

Chapter Five: Economic Impact of the Gautrain

INTRODUCTION

Public transport projects encompass far more than simply the delivery of brick-and-mortar infrastructure; they present opportunities for economic development outcomes to be achieved. This chapter discusses the economic impact of the Gautrain Rapil Rail Link through five salient themes of transport impact, assessed through ridership numbers; employment outcomes; land use benefits and commercial activity surrounding the train stations; contribution to GDP and latent environmental impact. It begins by presenting the economic benefits of public transport followed by a useful overview of the transport sector in Gauteng city region – the locus of study – and then an analysis across the five themes under the economic impact umbrella. This chapter seeks to demonstrate that public transport projects, like the Gautrain, are developmental through their recognised benefits to the economy and the citizens engaging in economic activity. These will only become more pertinent as city populations swell.

ECONOMIC BENEFITS OF PUBLIC TRANSPORT

It is a longstanding belief that public transport is an essential investment for the economy, environment and citizenry of global cities. A seminal 2002 report published by the World Bank titled *Cities on the Move* affirmed that "economically, transport is the lifeblood of cities; and in most countries including developing countries, cities are the major sources of national economic growth" (Gwilliam, 2002: 1). More than half of the global population lives in cities, and by 2030 this will reach 60 percent, approximately 5 billion people (Bouton et al., 2014: 1). In the Gauteng city region alone, the official census population was 12.3 million in 2011 and is expected to rise to 18.7 million by 2030 (Gautrain Management Agency, 2019: 2). The number of megacities – cities with over ten million inhabitants, classified according to the United Nations – is doubling over the lifetime of the current generation (Gwilliam, 2002: 11). Megacities are increasing in emerging markets, like South Africa (Stewart et al., 2014: 11). As in-migration occurs and urban areas rapidly densify, especially across Africa, challenges of congestion and complexity arise, and oftentimes poor people are pushed into inner-city slums or to the city peripheries as the price of land rises (Gwilliam, 2002: 12).

Public transport is defined by "its ability to cope with this density while moving people and goods" (Small, 2008: 507). It can manipulate the economies of scale in dense, urban areas, and frequently as a result transportation becomes cheaper when carrying high passenger volumes. Developing at higher densities, through public transport for example, makes use of land more efficiently to further capitalise on economies of scale (Rode et al., 2014: 11). Here, for sprawled cities like Johannesburg, transportation can contribute to transforming the physical space, which in turn impacts the way human activity is organised and the built environment is structured (Yago, 2003: 171). Aspiring towards density is recommended, as dense cities are inclined to have higher GDP per capita and higher productivity levels (Rode et al., 2014: 1). However, density may bring risks of transport overcrowding and ramped up construction costs in built-up areas (Small, 2008: 507). Still, notwithstanding these higher costs, public investment in transport infrastructure, including highways and mass transit systems, leads to stimulated economic activity in the private sector, which results in higher profitability and additional investment in the future (Aschauer, 1990: 1). Thus, there is a direct correlation[14] between state-led transport infrastructure spending and private sector growth, rendering the former an economic priority for governments alike (Aschauer, 1990: 2). Research has further proven that there are other benefits of public capital, like cleaner environments, saved travel time, and improved safety, that are not contained in conventional growth measures but comprise considerable contributions elsewhere (like economic welfare) (Eisner, 1991: 47). Transport-related activities also constitute a significant portion of total employment and value addition in developed and developing markets. In the United States, approximately US$1 billion spent on public transport infrastructure generates over 36 000 jobs (Rode et al., 2014: 16). Furthermore, there are proven poverty reduction benefits from public transport "both indirectly through [the] impact on the city economy and hence on economic growth, and directly through [the] impact on the daily needs of the poor" (Carruthers, Dick, & Saurkar, 2005: 1).

In sum, public transport can deliver the following economic benefits for a better functioning city: i) alleviate urban congestion; ii) facilitate productivity and opportunity by moving skills, labour and knowledge within and across markets; iii) contribute to increased income, employment and real wages in the city (Bhatta & Drennan, 2003: 294); iv) cause property values to rise; v) and improve air pollution as a consequence of less private vehicles on the

[14] Importantly, correlation does not mean causation.

roads (TTF, 2010: 2). State-led investment in public transport is an investment for the development of the city that carries these well-defined developmental benefits, and thus can be deemed a developmental state project. This is where the conception of the Gautrain as a developmental transport project lies.

Within the developmental benefits of the greater public transport described above, rail-based transit systems play an integral part. They produce less congestion than road-based systems and are able to reach far away areas in a short space of time – like those residents living on the city periphery (Gwilliam, 2002: 12). Under the 'right conditions', rail transit can flourish and see powerful benefits for cities – but these 'right conditions' include "serious traffic congestion, a permission regulatory environment, and frequent and reliable transit services" (Cervero, 2009: 1). The question is whether rail transit is generative or redistributive such that the investment creates *new* and real growth for the region, thus generative, or whether the growth is simply relocated from one area in the region to another, known as redistributive (Cervero, 2009: 2). There is a strong positive correlation between public transit investment and regional income, and a moderately strong correlation between the former and GDP (Cervero, 2009: 2). Thus, rail transit has proven to be *both* generative and redistributive: rail is supported by urban density in cities like Hong Kong, London, New York City, however there has been a marked impact on services and knowledge-based industries thanks to the presence of rail (Cervero, 2009: 2). A rail system is both a prerequisite and a response to a level of urban density in a city – the two are co-dependent. And in rapidly growing urban areas, rail investment is able to crowd-in real estate investment that brings economic activity and employment opportunities along with it (Cervero, 2009: 3). However, urban railways are extremely costly to build and operate, and therefore should not be undertaken lightly. They can burden a city's fiscus – a rigorous and careful examination of the railway project's feasibility, cost-analysis, and sustainability is recommended before construction begins (Gwilliam, 2002: 15). This will ensure the developmental benefits of the project are not overshadowed by its potentially inflated costs. Yet, it is important, too, to remember that "public transport investments are not commercial projects, [they] are an investment for improved functioning of the urban economy" (Marsay, 2018: 15). Public transport projects will never provide investors with the level of return that private, solely profit-driven projects do as it is not in their nature to do so. As such, public transport projects require clear technical planning and delivery processes to ensure they are constructed as efficiently and cost-effectively as possible, like international examples have demonstrated (Rabinovitch, 1992: 63). In short, public transport projects, specifically rail, carry

hefty developmental benefits for cities and their citizens that extend beyond solely monetary value. These benefits will prove valuable in the long-run as cities look to become more sustainable.

TRANSPORT IN THE GAUTENG CITY REGION

The Gauteng city region is a concept that arose in the early 2000s to denote the 'footprint' within the boundaries of Gauteng province. It also embodies a meaning of coordination between metro and district within the province, as well as economic activity that occurs on a daily basis – the movement and settlement of people, and the economic and ecological patterns thereof (Greenberg, 2010: 19). The Gauteng city region allows for flexible governance as the boundaries between municipalities in the province become more blurred (Greenberg, 2010: 19). Gauteng province, in which the city region falls, contained more than one quarter of the South African population in 2019, approximately 15.2 million people (Stats SA, 2019: 5). In 2001 nearly two decades prior, this figure was estimated at 8.8 million, approximately 21 percent of the then-national population (Stats SA, 2019: 16). Since 2016, Gauteng province has experienced an inflow of approximately 1 643 590 migrants for work, education, family or other reasons, constituting the largest in-migration stream in South Africa ahead of the Western Cape and Kwa-Zulu Natal (Stats SA, 2019: 5). This means that the Gauteng city region hosts the largest share of the country's population and is growing faster than any other city region nationwide. Given the immense demand placed by this expanding population, and within the thinking of the city region concept, the Gauteng Provincial Government has identified three objectives to take the Gauteng city region forward: a) emphasising the growing urban economy as a precondition for development; b) recognising the spatial location of economic growth increasingly focuses on city regions; c) motivating that Gauteng "meets the preconditions and characteristics of becoming a globally competitive city region" (Greenberg, 2010: 20). These objectives are underpinned by the functional interconnection and overlapping of housing locations, transport systems, service infrastructure, environmental management and ultimately economic development (Greenberg, 2010: 21). A well-structured form of governance to administer these services across the city region must be accompanying.

Gauteng is a vast city region with a low penetration of mass public transport, and it is increasing both demographically and geographically over time. This low-density urban sprawl has roots in the racialised spatial planning techniques of the apartheid era (McKay, Simpson, & Patel,

2017: 35). Thus, post-apartheid cities are spatially unequal and inefficient. The result is a city with a dual spatial nature: "an elite class living in 'developed' areas of the city using cars, while in the poorest areas people use a combination of travelling by foot, bicycle, minibus taxi, bus, commuter train, and sometimes cars or trucks" (Thomas, 2013: 84). A spatial arrangement of this nature means most city residents are forced to travel far for work, education, and healthcare purposes, meaning transport costs occupy a significant share of many household incomes which resultantly aggravates income inequality in the city region (McKay et al., 2017: 35). A 2015 survey administered by Statistics South Africa found that the majority of South Africans rely on varying forms of public transport which costs them approximately R214 billion per annum (Stats SA, 2015: 2). In Gauteng alone, nearly 30 percent of the population spends between 10 and 20 percent of their monthly household income on public transport while just under one third of the population spends more than 20 percent per month (Stats SA, 2015: 32). Furthermore, over half of the Gauteng population spends more than 20 percent of their monthly household income on public transport solely *to get to work daily* [emphasis added] (Stats SA, 2015: 51). Minibus taxis remain the dominant mode of public transport in South Africa, but the survey revealed that trains are on the rise especially in Gauteng.

It is hard to change an entrenched history of urban sprawl across the Gauteng city region and challenge residents' reliance on taxis, but "an extended rapid rail network would go a long way towards integrating disparate locations into an economically functional unity" (Marsay, 2018: 1). Given Gauteng's economic, demographic, and geographic contexts, it is clear that investment in public transport brings a host of economic benefits that render the project developmental. Moreover, rail has proven to be the most developmentally beneficial form of public transport, albeit costly if not properly managed. The Statistics South Africa survey in 2015 revealed that the Gautrain project sparked an interest in trains in Gauteng, especially for work-related travel, as more residents become upwardly-mobile and opt for safer, more efficient transport (Stats SA, 2015: 2). Hence, if the economic impact of the Gautrain can be shown clearly, this interest may rise.

ECONOMIC IMPACT OF THE GAUTRAIN

> "If it were not for the economic development angle of the Gautrain that exceeded our expectations, we would not have been able to pull the project off" – Barbara Jensen Vorster, Gautrain Management Agency [interview, 13/12/2019].

In 2019, the Gautrain Management Agency (GMA) authored an important report titled *The Economic and Social Impact of Gautrain* which brought together all available data and analyses on the economic impact of the Gautrain from 2006 to date (Gautrain Management Agency, 2019c). This report will be used as a key source document for the section below supplemented by insights from supporting documents.

The transport impact of the Gautrain is evident. In 2013, the *Mail&Guardian* published a special report on the state of South Africa's transport sector, saying "while there may be some reservations about whether or not South Africans will leave their cars at home for the commute, the success of the Gautrain has shown that many are prepared to do just that" (Oxford, 2013: para. 3). The *Mail&Guardian* argued that the Gautrain exemplifies an exciting infrastructure project that is changing the system design and use of public transport through changed public behaviour – people opting for trains over private vehicles. The GMA data confirms this. By 2015, the Gautrain posted close to 60 000 individual journeys per day and more than 1.4 million per month (Gautrain Management Agency, 2019: 21). In total, 98 million trips have been taken during the Gautrain's lifetime – which has been calculated by the GMA to equate to R78 of economic benefit per trip. This saves an average of 22 minutes daily from sitting in traffic congestion, roughly equal to R69; it reduces the cost of being in a fatal car accident by R5; and it saves R4 worth of emissions in carbon dioxide (Gautrain Management Agency, 2019: 21). It is estimated that the Gautrain replaced 21 300 car trips per day across Gauteng – these commuters riding the Gautrain instead of driving reduce their carbon footprint by 52 percent per trip (Centre for Public Impact, 2016: para. 4). The above data demonstrates the Gautrain has made a marked impact on the transport picture in the Gauteng city region. For traffic, economic, or environmental reasons, Gauteng residents are choosing to take the Gautrain daily, and in doing so they are aiding the city region's development.

South Africa is in a crisis of unemployment. The latest official unemployment rate is 29.1 percent meaning 6.7 million South Africans eligible to work are currently not employed (Stats

SA, 2020: 19). But unemployment in South Africa has been a problem for many years. In 2005, the unemployment rate was 26.7 percent (Stats SA, 2006: 10). Various levels of the state acknowledge this crisis and look for ways to address it. At the provincial level, Premier Shilowa addressed a crowd enthusiastically in 2005, a year before the Gautrain was launched, pointing out that "the project will not only resolve many of the transportation problems in the areas it serves but will stimulate economic growth, development and job creation" (Akoojee, 2015: 11). The contents of Shilowa's many speeches throughout his term reveal an ongoing and stated commitment to employment creation and capacity development by the Gauteng state through the Gautrain project, especially for historically disadvantaged individuals,[15] women and young people (Akoojee, 2015: 29). In the construction phase, the train provided 35 000 direct jobs of which 3 800 were for women and 29 900 for historically disadvantaged individuals (Gautrain Management Agency, 2019: 12). Thereafter in the operational phase, 10 900 jobs have been created worth approximately R12 billion salary deliverance and an additional 61 000 jobs through supply chains to the Gautrain (Gautrain Management Agency, 2019: 10). For context, from July 2018 to July 2019, 78 000 jobs were created *across the entire South African economy* including sectors of financial services and retail trade (Dludla, 2019: para. 8). If the Gautrain had been built during this period, a simple calculation proves that it would have contributed more than 30 percent of entire South African employment addition and elevated the total number of jobs created nationally to 113 000. The Gautrain has been instrumental in creating short- and long-term jobs for people in a country that is plagued by perpetual unemployment, especially among the younger generation. If it continues along this trajectory, and if construction on Gautrain Two is approved, direct and indirect jobs will likely be created thus adding to employment in South Africa's crisis-context and aiding the country's developmentalism.

One highly visual economic impact of the Gautrain is the commercial and real estate growth surrounding the train stations. Research on the introduction of transport infrastructure services, like a train station, to an area has proven to increase the emergence and value of property within a one-kilometre radius for residential areas and 400 metres for commercial spaces (Arnold et al., 2017: 186). This occurrence, known as transit oriented development (TOD), includes moderate to high-density mixed-use developments at strategic locations near the rail. If

[15] Historically disadvantaged individuals are South Africans who fall into population groups that were not offered franchise and thus disadvantaged by policy enacted in the apartheid era. This includes people from Black, Coloured, and Indian population groups.

implemented correctly, TOD can reduce urban sprawl, improve the relationship between employment and housing as people are able to live closer to their workplace, and contribute to more sustainable livelihoods (Arnold et al., 2017: 186). TOD can also boost local businesses and attract new ones, given the increased footfall in the area, leading to increased property and land values (Arnold et al., 2017: 186). In the case of the Gautrain, there was indeed a strong correlation between the station and the commerce surrounding it. Since 2010, commercial floorspace around the stations has increased by 1.6m^2 and median sales in these spaces have increased for offices by 45 percent and for retail by 32 percent. Residential floorspace around the stations has grown by over $138\,000\text{m}^2$ (Gautrain Management Agency, 2019: 78). Between 2006 and 2015, the Sandton Station saw an average 63 percent increase in the prices of properties within a one-kilometre radius of the Gautrain station (Arnold et al., 2017: 189). In Rosebank, the influence of the Gautrain station extended to a three-kilometre radius that saw an increase in overall property prices by 36 percent (Arnold et al., 2017: 192). This is consistent with the growing number of real estate development projects along Jan Smuts in Rosebank, Dunkeld, Dunkeld West, and Craighall. Interestingly, in the Midrand area west of the Midrand Station there was a considerable spike in the number of deed transactions in 2007 – a year after construction on the Gautrain Midrand Station began (Arnold et al., 2017: 194). This indicates the Gautrain had an influence on the property sales in the Midrand area close to the station, likely offering residents in Midrand an opportunity to travel to work in Sandton or Pretoria with ease. The Gautrain has therefore had a positive impact on property prices and commercial activity across Gauteng which supports the development of the provincial economy. Because the connection between transport infrastructure and sales activity or property price improvements is not guaranteed, Siyamthanda Ndlakuse admits that the GMA did not expect such success around the Gautrain stations. But, the GMA will springboard on this past success and write it into the planning of Gautrain Two. As such, she hopes to "use the Gautrain to impact new areas knowingly and intentionally" [interview, 19/11/2019].

Lastly, the Gautrain continues to support the growth of the Gauteng economy well beyond its construction phase. Using return on investment models developed by UK-based company Hatch, the GMA has calculated that during a typical year of operation the Gautrain adds R6.64 billion to Gauteng's GDP which is 0.55 percent of annual GDP (Gautrain Management Agency, 2019: 80). For every rand spent on the Gautrain's original construction, around R3.7 economic benefit has been delivered to the province over a decade thereafter (Gautrain Management Agency, 2019: 80). The Gautrain procured R1.2 million worth of South African

materials and equipment for its construction, and contributed R70 million to small, medium and micro enterprises the year construction began (Akoojee, 2015: 31). 29 percent of the total procurement was from BEE-approved companies and 18 percent of the sub-contracts were directed towards BEE contractors (Akoojee, 2015: 32).

CONCLUSION

The economic impact of the Gautrain is seen through five salient themes of transport impact, employment creation, property value and sales activity increases, contribution to provincial GDP and latent environmental impact. The Gauteng city region is a vast urban area with a low penetration of mass public transport that is increasing both demographically and geographically over time. This is crucial to comprehend in order to grasp the socioeconomic situation into which the Gautrain entered. The economic impact of the Gautrain demonstrates the train's developmental worth and its potential positive effect on transport, employment, improved land use and the economy in Gautrain Two.

Chapter Six: Social Impact of the Gautrain

INTRODUCTION

When embarking on large infrastructure projects like the Gautrain, it is imperative to consider that people will be choosing, riding and interacting with the eventual transport mode on a daily basis. Thus, the project's interaction with and effect on people in the society is an important lens of assessment for any developmental transport project. This chapter looks at the social impact of the Gautrain. It will begin by outlining literature pertaining to public transport through a class lens, including the issue of 'transport-related exclusion' on the basis of cost, which will lead into a consideration of who the Gautrain services in terms of riders and areas across Gauteng. The chapter will turn to the major critiques lodged against the train by different political entities and civil society groups followed by a look at the Gautrain Management Agency's response to these critiques in the form of Gautrain Two – a 150-kilometre proposed extension of the train network across lower-income areas in Johannesburg, including Soweto and Roodepoort. This chapter will argue that the Gautrain aims to service people across all classes in Gauteng and serious efforts to expand its reach are being taken by the train management to fully realise this goal. In this way, the Gautrain remains developmental as it learns from the past and plans for the future to become a train for all.

PUBLIC TRANSPORT THROUGH A CLASS LENS

It is one thing for a government to provide public transport, but it is another to ensure that transport fits the needs' profile of the public for whom it is intended to ensure the project is worth the expenditure, time and effort. This issue, known as 'transport-related exclusion', assesses how public transport projects might exclude particular individuals or communities based on their current income, poverty or resource levels to the extent that an inaccessibility arises and thus a transport disadvantage is created (Lucas, 2012: 106). Notably, the concept of transport-related exclusion is broad and multidimensional – it extends beyond a poverty lens to include multiple categories of social exclusion (Lucas, 2012: 108). For the purpose of this research report only cost exclusion will be assessed – that is, the high monetary costs of travel. Cost exclusion was chosen for assessment because there is clear data available on South African transport fares, public income levels and resultant transport costs as a percentage of monthly income. Further, cost exclusion is the most pertinent lens in the South African

situation because of the income inequality that exists between members of the population who use public transport. With this understanding, transport-related exclusion is described as public transport being "so costly that people forego opportunities for employment, education and/or social participation" (Rose et al., 2009: 192) in cities predominantly designed for cars. Resultantly, transport is often subsidised by the state with two ends in mind: a) the delivery of basic mobility for all people in the society, especially those falling in the category of transport disadvantaged, and thus avoid transport-related exclusion, and b) the delivery of an effective transport solution which forces people to substitute their private cars for public transport, thereby reducing reliance on the former (Giuliano, 2005: 63). This reduced car use serves broader social and environmental goals, as has been discussed in the previous chapters. Rail transit has been emphasised as the most sustainable and attractive form of public transport to meet these two intended ends (Giuliano, 2005: 63).

General research suggests that for riders bound by the cost of their transport choice, hence transport disadvantaged, the quality and accessibility of transport services available to them is limited (Giuliano, 2005: 69). These individuals make multiple trips on public transport to reach one destination – an arduous and prohibitive process that involves multiple ticket payments (Rose et al., 2009: 199). As a result of this process, attitudinal data suggests high levels of dissatisfaction with public transport services among low-income households (Giuliano, 2005: 63). Contrariwise, government spending on public transport solutions is high but misdirected, because "part of the cost is often poor service for those who rely on transit the most" (Giuliano, 2005: 69). Public transport policymakers at national, provincial and local levels can do better to understand the nuances behind transport-related exclusion to better serve the transport disadvantaged segment of the population. This will guarantee well-spent, insightful transport solutions for the benefit of both riders and policymakers, and the society at large.

SOCIAL IMPACT OF THE GAUTRAIN

> "One of the main challenges during the project was how to demonstrate impact. We had to ask ourselves how people were calling the Gautrain project elitist when it is changing people's lives on the ground. So, we had to change perceptions of the train" – Tshepo Kgobe, Gautrain Management Agency [interview, 19/11/2019].

Train Routes and Fares

Of the working-age population,[16] there were 16.4 million employed people in South Africa at the end of 2019 and 6.7 million unemployed (Stats SA, 2020: 1). Of this employed group, the average salary sits at R6 400 per month and nearly one third of working people earn less than the national minimum wage of R3 500 per month, legislated on 1 January 2019 (National Treasury, 2016: 7; Times Live, 2019: para. 1). Seventy percent of the working population earns below R6 570 – the 'living wage', or income amount required to live a dignified quality of life (Times Live, 2019: para. 4). These figures connote that the bulk of South Africans are not earning high incomes to be able to afford transport options like the Gautrain, and they are likely looking for ways to cut their expenses for example, if a more affordable transport option arises. In this sense, a lot of South Africans are transport disadvantaged and may be excluded from public transport on the basis of cost. Chapter Five outlined the proportion of monthly income residents in the Gauteng city region spend on public transport, especially the high transport costs on the way to work. As a reminder, this figure was 57 percent of residents in Gauteng spent more than 20 percent of their monthly income to get to work in 2015 (Stats SA, 2015: 51). The same survey by Statistics South Africa discovered that minibus taxis were the most expensive public transport mode for 2015 at an average monthly cost of R254, followed by trains and then buses (Stats SA, 2015: 54). For the journey to work in particular, again taxis appear the most expensive transport mode at an average monthly cost of R561 per capita followed by buses and then trains at R402 (Stats SA, 2015: 55). Yet, taxis remain the most popular mode of public transport[17] for workers across South Africa and in Gauteng, especially those in low-income households (Stats SA, 2015: 22). Most recent data from the Department of Transport suggests that an estimated 68.8 percent of South African households using public transport daily employ taxi services, followed by 21.2 percent commuting on buses and 10

[16] People between the ages of 15 and 64 years. There are an estimated 38.6 million working-age South Africans (Stats SA, 2020: 1).
[17] This excludes workers choosing to walk or drive in a private vehicle.

percent taking trains (Department of Transport, 2017b: 23). This could be the case because taxis are more flexible by providing a door-to-door service to commuters, running more frequently and covering a larger footprint than the Gautrain. Taxis can be hailed by riders on many main roads or highways and taken to a wide range of popular destinations across Gauteng, whereas the routing on the Gautrain network is limited to ten fixed stations (Joubert et al., 2001: 5). Riders on the Gautrain have to reach the Gautrain station first, most likely via a taxi or private vehicle, and then board the train. This raises a concern on the route design of the Gautrain and its impact on ridership.

The original routing of the Gautrain primarily targeted car users travelling between Johannesburg and Tshwane on the Ben Schoeman Freeway in an effort to reduce congestion and limit the travel time between the economic nodes to 40 minutes (Joubert et al., 2001: 1). According to the TomTom 2019 Traffic Index**,** Johannesburg is ranked 121st out of the 416 cities covered by the Index with a 30 percent congestion level, suggesting that a normal trip in a car in Johannesburg will take 30 percent more time on average due to traffic congestion (TomTom International, 2019). The Index predicts Johannesburg residents spend an average of 154 hours each year, the equivalent of 6 days and 10 hours, sitting in traffic. Thus, the Gautrain's objective was to mitigate the congestion on the Ben Schoeman Freeway in Johannesburg through the introduction of a high-speed rail. There is no historical data for Johannesburg according to the TomTom Index but GMA records suggest congestion was high when the train was built and predicted to increase by seven percent each year (Jensen, 2014: 86). Second, the route between Tshwane, Johannesburg, and OR Tambo International Airport was intended to attract international travellers to a world-class train system and provide a strong connection to the host of hotel, conference and business services on offer in the Sandton area (Joubert et al., 2001: 4). This was especially important as South Africa was preparing to host the FIFA World Cup in 2010. The primary stations in the first phase of the Gautrain are thus Johannesburg CBD (Park Station), Tshwane CBD (Pretoria), OR International Airport and Sandton, indicating the triangular mode of the project conception. The secondary stations were pinned as Centurion, Hatfield, Kempton Park, Marlboro, Midrand, Rhodesfield and Rosebank (Joubert et al., 2001: 5). The routes span North-South Gauteng and East-West Gauteng to an extent, but further expansion westward is available – the Ekurhuleni Metropolitan Council has indicated, too, the need to expand the OR Tambo link eastward to maximise catchment there (Joubert et al., 2001: 3). See the aerial diagram of the Gautrain network below:

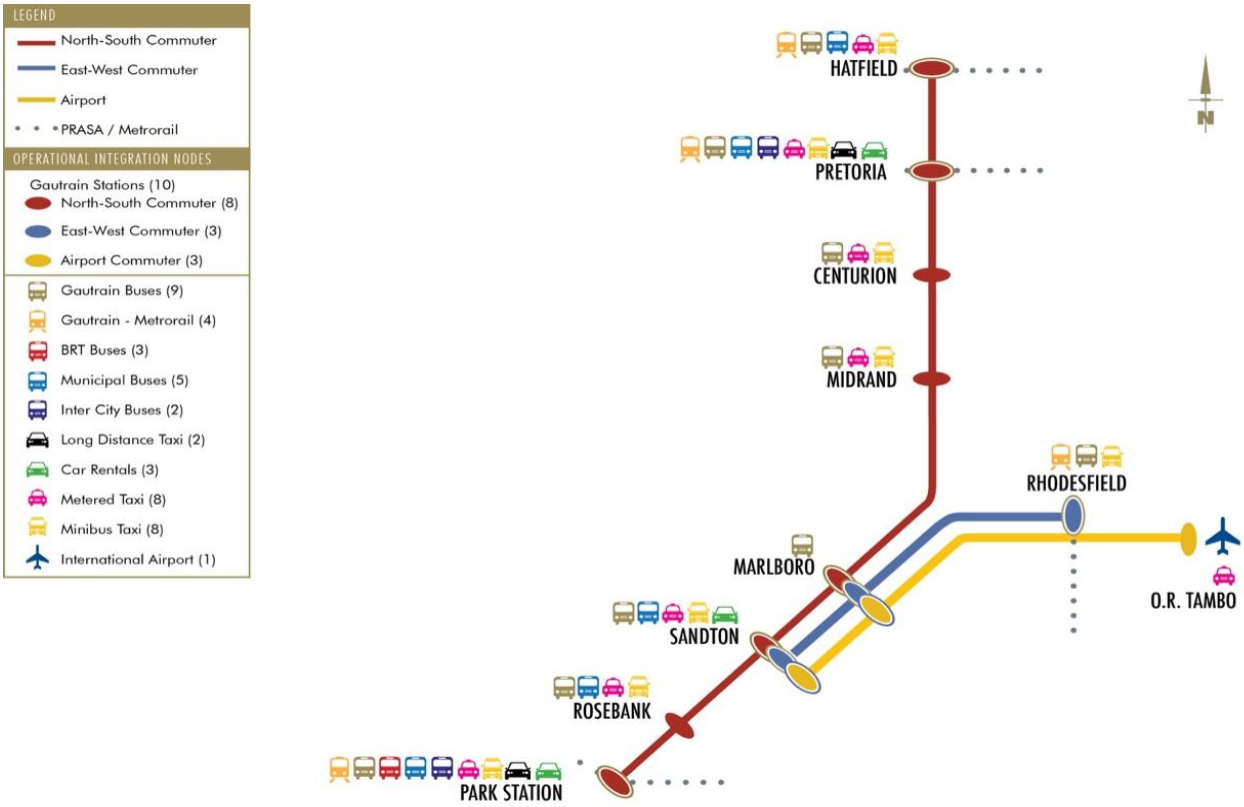


Diagram 2: Gautrain Rapid Rail Network across Gauteng (Gautrain Management Agency, 2019).

The spatial planning behind the ten stations held intentions that were three-fold: a) to enhance growth and development in new areas affected by the rail; b) to connect people and jobs, and improve accessibility; and c) to promote the redevelopment and revitalisation of the central business districts (CBD) (Joubert et al., 2001: 2). The sign-off on the Gautrain stations was a lengthy and intricate process that involved international review, internal research by the GMA and local public participation. The stations were placed in so-called 'important places' across Gauteng that were scored and weighted according to catchment based on current population estimates, ranked accordingly and chosen as a final station thereafter (Joubert et al., 2001: 3). The weighting took into account gross residential density as a variable (Donaldson, 2005: 56). The final stations could easily welcome a feeder system of buses or taxis and be served by an extension of the rail network in the future. The section above reveals that it is not a simple case of extending the Gautrain network across the vast city region of Gauteng to serve the highest number of people possible. Considered planning, testing, and benchmarking assessments were undertaken by the Gautrain Management Agency to maximise the stations' benefits across a range of development indicators, including connecting people to work opportunities, which comprises a social impact. Park Station and Sandton Station were placed in Johannesburg's

two CBDs where a large number of workers spend their days. Importantly, the Sandton and Marlboro Stations are easily accessible to residents in Alexandra township over the Grayston Drive pedestrian and cycle footbridge. The Midrand Station is in close proximity to Ivory Park, Tembisa, and Rabie Ridge townships which permits these residents to access Sandton in nine minutes via the Gautrain (Gautrain Management Agency, 2019: 4). Finally, Rosebank suburb has become a hub of businesses, office spaces, shopping malls and new properties that encompasses new jobs and thriving commercial activity, arguably growing as a result of the Rosebank Station (Cloete & Mushongahande, 2014: 192). While the Gautrain stations are fixed and will never offer the flexibility of a mobile taxi service, their locations across Gauteng city region have been chosen deliberately with support from sound research by the GMA. They have allowed residents to access employment opportunities more easily, therefore are socially impactful. The strategic placement of the stations further offers the prospect of expanding the train network in a western or eastern direction, indicating a new development phase of the Gautrain that will be argued later in this chapter.

The Gautrain ticket fares have changed over time. A useful comparison was done by *Business Tech* newspaper between the fares in 2011 and 2019 (Business Tech, 2019) In 2011, a single trip from Park Station to Hatfield Station, for example, cost R49 and in 2019 this was R81. Pretoria to Sandton was R43 in 2011 and R67 in 2019, and Sandton to OR Tambo was R105 in 2011 and R165 in 2019. There are bulk ticket options available for regular commuters like a monthly pass that offers 44 single trips between two pre-selected stations. In 2019, a monthly pass between Park Station and Hatfield Station, for example, cost R3 030 which equates to approximately R69 per trip – R12 cheaper than the single trip above (Gautrain Management Agency, 2019: 2). The Pretoria to Sandton monthly pass, another popular route, cost R2 506 which is roughly R57 per trip, R10 cheaper than the single version (Gautrain Management Agency, 2019: 2). Tshepo Kgobe explained the Gautrain's fare structure during his interview, "the ticket price is comprised of a boarding fare and a fare per kilometre. The state provides a subsidy for the train's operation; however it still has to recover initial capital and repay its loans" [interview, 19/11/2019]. Here we learn the pricing model set by the GMA is not random – even though the train is built by the state and subsidised to an extent, there are financial obligations that must be met and the sales of tickets to Gautrain riders is one way to do so. The airport trip is understandably inflated because it is intended for international tourists and businesspeople who are able to afford a plane ticket. Furthermore, a simple calculation reveals that over the eight-year period the Park Station-Hatfield trip increased by 65 percent; the

Sandton-Pretoria trip increased by 56 percent; and the Sandton-OR Tambo trip increased by 57 percent. These appear significant in sum, but they mean an average price increase of 7.4 percent each year. This is slightly higher than the average national inflation rate of five percent over the last eight years, and less than other products including electricity, wine, breads and cereals (Business Tech, 2019b). The Gautrain fare structure is arguably substantiated by the GMA's need to breakeven to continue operating the train successfully, and the ticket price increases reflect national averages and are in fact less than other products.

Still, for someone earning R6 400 each month, R67 for a single ticket is a substantial amount. Even if regular commuters opt for the bulk option in a monthly pass which lowers the price of a single ticket, a calculation reveals people would spend 47.3 percent of their income on an upfront payment for the Gautrain from Park to Hatfield or 39.1 percent from Pretoria to Sandton. Both scenarios are steep once-off payments that most South Africans cannot afford. As such, the Gautrain's high prices and their exclusion of residents from low-income households drew widespread criticism from South African political players. The Congress of South African Trade Unions (COSATU) persistently argues the train fares are too high – in 2012, just two years into the Gautrain's operation, COSATU called for the fares to be lowered to make the system more accessible for all (Eyewitness News, 2012). In 2014, COSATU spokesperson Patrick Craven released a statement arguing "we cannot design luxury systems for those who can afford them, while our people wait in queues at the taxi ranks and train stations" (Craven, 2014: 2). COSATU's concerns reflect those of a greater South African work force. The GMA proposes to address the price issues raised by COSATU with the introduction of a targeted pricing mechanism for low-income households in Gautrain Two. This will be explained later in the chapter.

Public Reception and Major Critiques

As soon as the train was announced by Premier Shilowa in 2000 and throughout the planning phases, critics raised their voices in objection. In 2002, the Gautrain Management Agency held nearly 700 public meetings as part of their environmental impact assessment (EIA) procedure, "all of which were volatile and reflected highly negative opinion" (Jensen, 2014: 86). The backlash in these meetings came predominantly from ward councillors and community liaison forums who argued that construction on the Gautrain would cause major upheaval to the daily life of residents living, working and attending school, a campaign that became known as 'Not

in My Backyard' (NIMBY). NIMBY concentrated on the proposed Pretoria CBD and Hatfield corridor of the Gautrain, and centred on 400 residents' apprehension towards having a rapid-rail run through their so-called 'backyards' and potentially destroy the social fabric of a stable and long-term community environment (Donaldson, 2005: 59). Concerns included the vibrations from the trains and how these would be controlled, how compensation payments to residents would be made, and how property values would change (Cox, 2002: para. 8). These residents chose to attend the EIA public consultation meetings in protest and went to the extent of displaying "boorish behaviour and theatrical-like portrayals of what the impact would be to persuade the EIA consultants" (Donaldson, 2005: 59). NIMBY was exacerbated by the fact that the EIA process for the Gautrain was substantially delayed due to the project's complexity, but eventually a draft version was completed in late 2002 (Czernowalow, 2002: para. 1). After the train was built, a study found that the precast concrete barriers mounted alongside the Gautrain's tracks act as an absorptive barrier that keeps noise levels from the train to less than 65 decibels (Beer, 2011: 72). Prolonged exposure to noise at 85 decibels or above will cause hearing loss – proving the Gautrain remains in a healthy noise range (CHC, 2020: para. 1). Ground-borne vibration occurs only if the train exceeds a speed of 140km/h, which the study found did not occur in the Pretoria CBD and residential Hatfield (Beer, 2011: 73). Thus, there was no ground-borne vibration in those areas.

The contestation from the NIMBY campaign spurred bad media coverage of the Gautrain and heightened public anger so much so that 2002 became the worst media perception year recorded in the Gautrain Management Agency's history – that "Gautrain was faced with a crisis before construction had even started" (Jensen, 2014: 86). An urgent media relations strategy had to be devised by the GMA to resolve the crisis swiftly which involved regular media monitoring, relationship building with 19 key print journalists, a special segment on *Carte Blanche*[18] to communicate the world-class public transport experience envisaged by the GMA and controlled briefing sessions and media conferences kept to a bare minimum (Jensen, 2014: 89). Barbara Jensen Vorster, in her capacity as SEM of Communication and Marketing for the GMA, was at the forefront of the backlash to the Gautrain and resultant media strategy from the start. She recalls:

[18] *Carte Blanche* is an influential television programme in South Africa hosted by Derek Watts that covers local topical issues.

> "People opposed the train after its announcement, and it was a difficult time. There were multiple public battles ongoing and transport experts who were dead set against the train, and a very fickle media. But you can fault on process, you can never fault on content. We knew that we were doing the right thing, we knew that the product would speak for itself. And in the end, we won the war" [interview, 13/12/2019].

The most substantial political criticism of the train came from Jeremy Cronin, a member of the South African Communist Party (SACP) and then-Deputy Minister of Transport. On 8 November 2005 during a parliamentary meeting in the Gautrain's approval phase, Cronin accused the train of potentially becoming a 'white elephant'[19] in the South African transport landscape if it did not prove economically viable, and expressed vehement concerns surrounding the arrangement of the PPP and the burdensome patronage guarantee paid by the Gauteng Provincial Government (PMG, 2005: 2). Moreover, Cronin stressed the need to incorporate the Gautrain into an integrated spatial plan for Gauteng province and ensure it meets sustainability targets (PMG, 2005: 3). A year later, Cronin reaffirmed his belief against the train arguing it would initially bring jobs during the construction phase, however maintenance costs would eventually be carried by South African taxpayers, adding to their already-burdensome tax obligations (Fin24, 2006). The Transport Portfolio Committee released a document in November 2005 following the parliamentary meeting that supports Cronin's view. The Committee stated it "cannot lightly give approval for such a costly project that will be directed at the wealthier upper segments of the market in the wealthiest province, against the background of such pressing needs" (Transport Portfolio Committee, 2005: 1). The rising cost of the Gautrain project, the public-private financing model and the potentially exclusive nature of the train concerned the Committee, in contrast to the immense development challenges facing the majority of South Africans daily. The Committee, echoing Cronin, argued that for the Gautrain to be financially viable, it would have to structure the PPP in a specific way, guarantee long-run ridership and attempt to minimise the ongoing ridership guarantee paid by the provincial government (Transport Portfolio Committee, 2005: 2). The GMA was tasked to address these concerns fully if it hoped to gain approval to construct the Gautrain.

[19] A white elephant refers to a building object (in this case) that cannot be disposed of and wherein the object's cost, particularly maintenance-related, outweighs its usefulness. Thus, it is considered exorbitant but without value to society.

To do this, the Gautrain Management Agency had to embark on a serious lobbying effort that was grounded in the promised social and economic impacts of the Gautrain. This involved engaging an array of stakeholders such as the Department of Agriculture, Conservation, Environment and Land Affairs, engineers and railway consultants, Eskom for the power supply, Bombela as the concessionaire, led by the demonstrated political commitment by then-Premier Shilowa using his political reach (Centre for Public Impact, 2016: para. 6). In her interview, Jensen Vorster explains the strategy of the GMA during this stressed time:

> "We always put the Gautrain project in the developmental context, the big picture, because it is not solely an engineering or transport project but can bring real impact to communities, areas, the province. We maintained excellent media relations and had a few key political leaders on our side to get the political buy-in we needed. It was the best of times, it was the worst of times – the effort behind the scenes was immense, but I won't ever find another experience like that" [interview, 13/12/2019].

Jensen Vorster, Shilowa and the GMA's work paid off and the train was approved. In June 2010, Cronin issued the safety permit and operating license certificate to Bombela to authorise the first Gautrain ride. In his speech that day, he noted that "these massive investments serve to illustrate the need to build a viable, reliable, and efficient transport system which will in turn play a critical role in the overall development of the country" (Cronin, 2010: 2). Cronin concluded with the handover, saying "viva Gautrain, viva! Above all, viva public transport, viva!" (News24, 2010: para. 2) – an interesting remark for someone so ardently opposed to the train at the start. Cronin demonstrates that the GMA, through strong stakeholder engagement, was able to argue successfully the case for the Gautrain embedded in the socio-development benefits the train would bring to the city region of Gauteng. Their argument was convincing and evidence-based, rooted in benchmarking exercises and feasibility studies to the best of their ability. As Tshepo Kgobe commented in his interview, "it is about the state being able to articulate the *why*" [original emphasis; interview, 19/11/2019].

Political Symbolism

Another critique of the Gautrain centred on the argument that the train was a shallow legacy project for Mbhazima Shilowa, the former premier of Gauteng responsible for its announcement and pioneering during the early days of development. After the initial concept

announcement in 2000, the Gautrain was colloquially dubbed the 'Shilowa express' in recognition of the premier's advocacy role and the public perception that the Gautrain was his 'pet project' (News24, 2003: para. 3). This metaphor continued throughout the early 2000s until Shilowa's resignation in 2008. According to Shilowa, the Gautrain encompasses "the choice of a world-class transport mode whilst pursuing international best practices, and it is the world's second biggest rail public-private partnership" (Shilowa, 2006: 3). The mega-project status of the Gautrain would bring international recognition and prestige to Gauteng province and the man who leads it. Consequently, Shilowa's political legacy would forever be associated with the project. Shilowa further argued the Gautrain would "take us closer to our goal to make Gauteng a 'smart' province and is critical to Gauteng's success as a global city region" (Shilowa, 2006: 3). Here, Shilowa's desire to pioneer high technology, state-of-the-art solutions on an international stage is evident. The argument follows that the political symbolism surrounding a project will override the necessary utilitarian or rational considerations of the project in a particular context (Thomas, 2013: 90). As such, the argument is that Shilowa's emphasis on the size, prestige, modernity and internationalism of the Gautrain outweighs pertinent and lucid social considerations. But, Shilowa focusing on these factors is not an isolated incident. Gauteng province and even South Africa carries political symbols – the former long-trademarked as a 'world-class African city' that fuses commerce, history and diverse cultures, while the latter holds aspirations to be recognised as a leader of Africa and a global player (van der Westhuizen, 2008: 346). For city planners, it is only expected that a mega-project like the Gautrain acquire an icon-like status in Gauteng province and for Shilowa, a politician in nature, to jump on the bandwagon (van der Westhuizen, 2008: 349). The difference here is that the Gautrain was not an empty political project but delivered real developmental impact for people on the ground.

After working closely with Shilowa to realise the Gautrain and getting to know him on a personal basis, Barbara Jensen Vorster has a different take on the matter. She admires Shilowa for his bravery, assertion and personal belief in the meaning and impact of the project:

> "In the early stages, all the politicians involved knew that the chances for them to cut the Gautrain ribbon were very slim because of its long-term nature. They were fighting a real battle [against the public backlash] for a project that they won't get the glory for. Shilowa took a political risk because he believed in the Gautrain. No politician would have the guts to do that today" [interview, 13/12/2019].

Jensen Vorster's sentiments are supported by Ismail Vadi reflecting on his commencement as the MEC for Roads and Transport, "I had no role to play in the original conception of the project, and I was appointed at a time when the project was just completed. I had the honour of cutting the ribbon but others before me had done all of the hard groundwork to get to that point" [interview, 13/12/2019].

Placing himself as the face of the Gautrain, and in the face of heightened public backlash, posed a real risk to Shilowa's political career if the project proved a failure. But, learning that his belief in the developmentalism of the Gautrain was the major driving force behind his advocacy efforts highlights the fact that the train extends beyond a mere political symbol. It is a developmental project of the Gauteng Provincial Government worth defending and preserving.

GAUTRAIN'S RESPONSE TO ITS CRITICS – GAUTRAIN TWO

The next expansion phase of the Gautrain project, known as Gautrain Two, is in the process of gaining approval from requisite government departments. Reliable information on the expansion is available through Gautrain Management Agency slideshow presentations and interviews only.

The feasibility presentation for Gautrain Two set a requirement that the project "be managed in such a manner that it is institutionally and commercially structured to attract interest, support, and private sector participation" (Kgobe, 2018: 10). This takes the learnings from Gautrain One and reflects on them productively as the expansion process commences. Tshepo Kgobe, who was responsible for drafting the presentation for Gautrain Two, alluded to these learnings:

> "We aim to be a knowledgeable state that understands, monitors, complies and adapts to change. In Gautrain Two, we want to achieve systematic, deeper, socioeconomic benefits through mechanisms that actually function and have a long-run effect but are not overburdensome to the state" [interview, 19/11/2019].

Gautrain Two plans to be implemented in multiple phases: the first will be an extension towards Soweto in a westward direction going from Sandton to Olievenhoutbosch via Randburg, Cosmo, Fourways and Sunninghill in one direction and from Sandton to Jabulani via Randburg,

Cosmo, Little Falls, and Roodepoort. The line plans to be extended in another phase from OR Tambo to the east of Gauteng including Midfield. The next three phases will include an extension of the north-south corridor to Irene and Tshwane East, and following an expansion of the east-west corridor outside the airport line starting in Lanseria in the west and passing through Cradle, Cosmo, Fourways, Sunninghill Olievenhoutbosch, Samrand, Hazeldean and Mamelodi. This line further plans to go via Sandton and extend to East Rand Mall and Boksburg in the east of Gauteng. A diagram of the proposed extension can be found below:



Diagram 3: Proposed expansion of the Gautrain Rapid Rail Network across Gauteng – Gautrain Two (Kgobe, 2018: 37).

Gautrain Two plans to be phased over 25 years with a capital expenditure cost of R111 billion, subject to availability of funds (Kgobe, 2018: 34). Like Gautrain One, the stations of Gautrain Two were mapped according to catchment areas of gross residential and employment densities and thus hold the highest transport demand, and founded on the basis of the 'cost of doing nothing' – a scenario where the vehicle population in Gauteng will grow from 3.9 million to 8.6 million over the next 25 years if current trends continue (Kgobe, 2018: 25). The station locations of Gautrain Two extend to lower-income areas across Gauteng such as Cosmo, Roodepoort, Mamelodi, among others. Many of these are townships or mass housing

developments run by the Gauteng Provincial Government that house people who commute into Johannesburg CBD, Sandton or Pretoria each day. Thus, the route expansion in Gautrain Two proves the Gautrain Management Agency is looking towards being more transport inclusive and accessible for all, which means people may opt for the Gautrain over a minibus taxi. Most interestingly, Gautrain Two plans to introduce a sophisticated tiered pricing model that caters to varying income levels in Gauteng better than presently. "We will have to either reduce the boarding fare and keep the fare per kilometre the same, or reduce the fare per kilometre and keep the boarding fare the same", shared Kgobe [interview 19/11/2019]. The model looks to target, quite plainly, areas in the expanded network like Roodepoort or parts of Soweto with lower-income households. This means a trip from Little Falls to Randburg will be substantially cheaper than a trip from Sandton to Pretoria CBD. According to Kgobe, the model is still being tested and calibrated because it relies on a heavier investment share from the private sector within the PPP to be efficacious than in the previous phase. The Gauteng Provincial Government simply cannot afford to implement it on their own especially during the current economic climate. But, the intent behind the tiered pricing model suggests the GMA is thinking about the strains placed on the Gautrain's riders: what their monthly income is, what fraction they spend on public transport, and how the train fares might be structured more inclusively to attract more transport disadvantaged people. In this respect, the Gautrain is a developmental project with a social impact objective for the future of Gauteng. Gautrain Two can be viewed as a meaningful response to the critiques above raised by Cronin and the Transport Portfolio Committee, COSATU and others.

CONCLUSION

As the data from economic, social and environmental effects suggests the Gautrain project is socially impactful and thus developmental. While it experienced public backlash initially in the form of a Not in My Backyard campaign in Tshwane, being labelled a 'white elephant' by influential parliament members, varying cost and pricing criticisms, and the idea that the train is simply a shallow legacy project, the Gautrain Management Agency has addressed its critics time and again with clear strategy, strong stakeholder engagement, and evidence-based research underpinned by the lasting developmental impact of the train. Gautrain Two, albeit in the approval phase, signifies the GMA's self-reflection on what worked and what did not since 2000, and proves its continuing commitment to social impact.

Chapter Seven: Conclusion

In recent years, the structure of the South African economy has shifted from a mining and manufacturing foundation to one that centres on financial and knowledge-based services (Bhorat & Rooney, 2017). This has seen more South Africans moving into cities and urban areas to find economic opportunities than ever before – a migratory pattern that places pressure on the delivery of urban services by provincial levels of government, including sustainable, intermodal public transport systems (Pojani & Stead, 2017). Still, the country remains stuck in a debilatating triple-threat structure of high unemployment, poverty and inequality levels since the end of apartheid in 1994 despite well-intentioned transformation policies by the state. Building a capable, democratic developmental state has been a declared commitment of the South African government since the 1990s, drawn largely from the successful examples of the East Asian late industrialisers but updated for the modern era (South African Government, 1998; Williams, 2014). The developmental state lens presents an opportunity for the South African state at various levels to form meaningful working partnerships with private sector stakeholders and provide large scale infrastructure developments that will contribute to the public good, and aid the much-needed national transformation agenda.

This study assesses how the South African state has utilised public sector investment projects to achieve developmental goals, using the first phase of the Gautrain mega-project as a case study. It situates the Gautrain within the developmental state literature, and aims to understand the intentions, rationale and planning behind the Gautrain vis-à-vis the declared state commitment to developmentalism. The study poses the research question: what is the Gautrain's developmental role? It lists a series of research sub-questions to aid an adequate response to the research question posed above. The Gautrain is a 150-kilometre rapid rail link mega-project that was built in the Gauteng city region – a vast urban area with a low penetration of mass public transport that is increasing both demographically and geographically over time (Greenberg, 2010). The Gautrain was developed by the Gautrain Management Agency, a subsidiary agency of the Gauteng Provincial Government, in a public-private partnership with Bombela Concession Company. Project conceptualisation started in 2000 and resultant construction ran in two phases until 2010, just before South Africa hosted the FIFA World Cup (Smith, 2010). An expansion of the Gautrain network into eastern and western areas of Gauteng city region, called Gautrain Two, has been planned by the GMA and is currently awaiting

approval by National Treasury. This presents an opportunity for the GMA to reflect on the first phase of the train, learn from past mistakes and make requisite changes.

The study employs a qualitative research methodology with mixed methods of document analysis, the primary research method, and semi-structured interviews acting as a supplementary research method. Together, these ensure a nuanced and in-depth understanding of the Gautrain project in relation to developmentalism in South Africa.

The research shows that the first phase of the Gautrain saw a developmental impact on the city region of Gauteng – the locus of study. Firstly, the marked economic impact of the Gautrain is seen through five salient themes of transport impact, job creation, rising property values and commercial activity, contribution to Gauteng's GDP and latent environmental impact. Gautrain Management Agency calculations reveal the Gautrain has generated R78 of economic benefit per trip, saving its passengers an average of 22 minutes in traffic congestion per day and limiting the risks of being in a fatal accident (Gautrain Management Agency, 2019: 21). Further, the Gautrain saves R4 worth of greenhouse gas emissions that would have a negative effect on the environment – by switching from private vehicle to rail, Gautrain commuters reduce their carbon footprint by 52 percent per trip (Centre for Public Impact, 2016: para. 4). In the context of South Africa's extraordinary unemployment crisis, with the current unemployment rate at a high of 29.1 percent, the Gautrain created 35 000 direct jobs during construction, 10 900 jobs during the operation phase and an additional 61 000 jobs indirectly through supply chains (Gautrain Management Agency, 2019: 10-12). Many of these positions were filled by South African women and historically disadvantaged individuals. Through the concept of transit oriented development, the Gautrain enhanced commercial activity and positively influenced property prices in areas surrounding the stations, especially notable in Rosebank (Arnold et al., 2017: 189). The Gautrain added R6.64 billion to Gauteng's GDP, and contributions to the train are felt by the province for at least a decade (Gautrain Management Agency, 2019: 80). It is evident that the Gautrain has supported the growth of Gauteng's economy beyond the construction phase well into operations, proving the economic impact and thus developmentalism of the project.

Secondly, the study considers the social impact of the Gautrain to access lower-income areas across the Gauteng city region. Public transport seeks to include all classes within a society, otherwise it is deemed committing 'transport-related exclusion' (Lucas, 2012). Soon after its

announcement, the Gautrain experienced backlash from South African political entities and civil society groups in this regard. Notably, Jeremy Cronin from the SACP called the project a 'white elephant' and argued the project costs were exorbitantly high and would not bring about any intended economic benefits, followed by members of COSATU, such as then-spokesperson Patrick Craven, calling for a reduction in the rising train fares to cater for all South Africans looking to enjoy public transport (PMG, 2015; Craven, 2014). Additionally, during the public consultation phase of the PPP the Not in My Backyard campaign was lodged against the GMA by residents in Pretoria and Hatfield. The campaign argued that train construction and operations would create vibrations and noise, and destroy the social fabric of the nearby communities, and took to the public meetings during the environmental impact assessment process to voice the argument (Cox, 2002). Despite these contestations, the Gautrain Management Agency managed to craft a successful public relations campaign that won over its critics. The route and tiered pricing model encompassed in the Gautrain Two plans demonstrates the GMA is committed to building inclusive and accessible rail transport for all South Africans that is socially impactful.

The Gautrain Rapid Rail Link project is by no means perfect. But, viewing it from a developmental state perspective, as this study does, reveals how state-led infrastructure projects in sound and equal partnership with private sector stakeholders hold potential developmental benefits that serve the public good. Other levels of the South African state can learn from the Gautrain case study.

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