

# NATIONAL PUBLIC TRANSPORT SUBSIDY POLICY

**Second Draft** 

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## **CONTENTS**

Ch	hapter Description	Page
LIST	ST OF TABLES	III
LIST	ST OF FIGURES	IV
PRE	REAMBLE	1
LIST	ST OF ABREVIATIONS	2
<u>1</u>	INTRODUCTION	3
<u>2</u>	AN OVERVIEW OF THE POLICY AND LEGISLATIVE ENVIRONMENT RELATING TO	PUBLIC TRANSPORT 8
<u>3</u>	AN ANALYSIS OF THE FUNDING OF TRANSPORT SYSTEM IN SOUTH AFRICA	13
<u>4</u>	POLICY SCOPE	20
<u>5</u>	PROBLEM STATEMENT	22
<u>6</u>	POLICY GUIDELINES	33
<u>7</u>	INTERNATIONAL LESSONS	35
<u>8</u>	POLICY STATEMENTS	41
<u>9</u> SEC	THE SOUTH AFRICAN MACRO-ECONOMIC PERSPECTIVE WITH REFERENCE TO TOTAL AND HOUSEHOLDS	THE TRANSPORT 49
10		60
11		62
12		67
13	CONCLUSION	70



# **LIST OF TABLES**

Table 1.1: High-level description of various public transport funding sources in South Africa	7
Table 7.1: Notable public transport subsidy lessons on subsidies from selected countries	38
Table 8.1 Transport system performance benchmarks	42
Table 9.1: Household expenditure nationally as well as at provincial level since 1993	55
Table 10.1: Subsidy allocation framework	61



## **LIST OF FIGURES**

Figure 1.1: Illustration of the fragmented nature of the public transport network in Gauteng Province	6
Figure 3.1: Department of Transport budget relative to national government budget1	3
Figure 3.2: Public transport investment trends in the Department of Transport's budget1	4
Figure 3.3: Snapshot illustration of transport funding for 20181	5
Figure 3.4: Annual number of passengers carried by passenger rail services from 1980 to 2018	6
Figure 3.5: Trend of annual number of passengers carried by subsidised bus services over the period 200 to 2018 per province	
Figure 3.6: Geographical distribution of rail subsidy beneficiaries1	8
Figure 3.7: Geographical distribution of bus subsidy beneficiaries1	8
Figure 5.1: Aggregated proportional split of household expenditure on transport2	4
Figure 5.2: Household transport expenditure profile across income deciles2	:5
Figure 5.3: Weekly household expenditure on the different modes of transport2	:5
Figure 5.4: Indicative unit costs of various transport modes2	:7
Figure 5.5: Relative total cost of transport modes to society2	:7
Figure 5.6: Accessibility of different public transport modes2	9
Figure 5.7: Relationship between roughness index and bus operating costs	0
Figure 5.8: Subsidy allocation priority in terms of social, economic and environmental objectives3	2
Figure 9.1: Percentage share of income for passenger transportation using current price data5	0
Figure 9.2: Percentage share of passenger journeys (actual numbers)5	0
Figure 9.3: Rand per passenger journey5	1
Figure 9.4: Transport, storage and communication subsidies and incentives as percentage of total paid by	)у :2



Figure 9.5: Transport and communication services as percentage of GDP at Constant 2010 prices	53
Figure 9.6:Transport, storage and communication: Government subsidies; incentives and capital tr	ansfers
received	54



#### **PREAMBLE**

This policy is founded on the principle of sustainability, in that every Rand of expenditure paid for public transport must set in motion a better life for both present and future generations. Capital subsidy is required to accelerate the elimination of structural backlogs that characterise much of the country's public transport system. Operational subsidies are required to provide relief to the poor in order to accelerate social inclusion. The administration of subsidies must be based on sound transport plans that optimise the use of limited resources and promote accountability. The policy does acknowledge that transforming the public transport system is a relatively long journey; but which requires focused and phased interventions.



## **LIST OF ABREVIATIONS**

AFC	Automatic Fare Collection
BRT	Bus Rapid Transport
DBE	Department of Basic Education
DORA	Division of Revenue Act
GDRT	Gauteng Department of Roads & Transport
FIFA	Federation Internationale de Football Association
GDP	Gross Domestic Product
ITP	Integrated Transport Plan
IRPTN	Integrated Rapid Public Transport Networks System
ITS	Intelligent Transport System
МВТ	Mini-Bus Taxi
MEC	Member of Executive Council
MRE	Municipal Regulatory Entity
NDOT	National Department of Transport
NLTA	National Land Transport Act (Act No.5, 2009)
NLTTA	National Land Transport Transition Act
NMT	Non-Motorised Transport
NPTR	National Public Transport Regulator
NPTSP	National Public Transport Subsidy Policy
PRASA	Passenger Rail Agency of South Africa
PRE	Provincial Regulatory Entity
PTISG	Public Transport Infrastructure and Systems Grant
PTNG	Public Transport Network Grant
PTOG	Public Transport Operations Grant
SANTACO	South African National Taxi Council
SATS	South Africa Transport Service
TRP	Taxi Recapitalisation Programme



#### 1 INTRODUCTION

- 1.1 This NPTSP responds to the following fundamental questions, namely:
- 1.1.1 Should public transport in South Africa be subsidised? and
- 1.1.2 If so, how and what are the mechanisms to be put into place to subsidise public transport?
- 1.2 The NPTSP is the product of extensive engagement with the public and relevant stakeholders (the schedule of Stakeholders engagement sessions and actions has been attached as Schedule 1 to the Policy document). It addresses conflicting views which assist in reaching a compromise that will best address South Africa's growing and changing passenger transport needs. The NPTSP is also a product of a critical engagement of the history of public transport and subsidy practices in South Africa. This policy creates a broad framework for addressing these challenges and to positively and proactively shapes the future of transport in South Africa.
- 1.3 At its core, the NPTSP aims to contribute to the creation of a sustainable public transport system, and contribute meaningfully to the national drive to realise Sustainable Development Goals, namely:
- 1.3.1 Goal 1: End poverty in all its forms everywhere;
- 1.3.2 Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture;
- 1.3.3 Goal 3: Ensure healthy lives and promote well-being for all at all ages;
- 1.3.4 Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all;
- 1.3.5 Goal 5: Achieve gender equality and empower all women and girls;
- 1.3.6 Goal 6: Ensure availability and sustainable management of water and sanitation for all;
- 1.3.7 Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all;
- 1.3.8 Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all;
- 1.3.9 Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation;
- 1.3.10 Goal 10: Reduce inequality within and among countries;
- 1.3.11 Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable;
- 1.3.12 Goal 12: Ensure sustainable consumption and production patterns;
- 1.3.13 Goal 13: Take urgent action to combat climate change and its impacts;



- 1.3.14 Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development;
- 1.3.15 Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss;
- 1.3.16 Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels; and

# 1.3.17 Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development.

- 1.4 The key to the sustainability of a public transport system is a responsive ITP. An ITP must promote mobility that reduces consumption of natural resources. It must also be based on minimal input costs, while achieving the desired mobility goals of society and support the reduction of spatial imbalances that create inequitable access to opportunities and improves the affordability of transport services, especially for low income households.
- 1.5 The policy itself is crafted in a manner that emphasises ease and speed of implementation. Linkages with other enabling plans and policies are duly identified. The policy is also responsive to rapid changing needs in the transport environment.
- 1.6 The NPTSP takes account of the following key points:
- 1.6.1 South Africa is one of the most unequal societies in the world. The legacy of the apartheid state policies continues to bear disproportionate cost burden to most households, and household transport costs in particular are regressive. State sponsored public transport services were generally not designed to contribute to improved quality of life but to serve the apartheid state economy. Dismantling this legacy will require concerted effort from the democratic state.
- 1.6.2 Public transport is a critical aspect of South African society and plays a fundamental role in a developing economy.
- 1.6.3 The 1996 White Paper on National Transport Policy was the blue-print from which many policies, strategies and plans emerged and constituted an overarching policy for South Africa's approach to public transport. In 2015, the NDOT embarked on a project to review and revisit transport policy in order to be responsive to the ever-changing needs of South African society. The resultant 2021 White Paper on National Transport Policy has revised the 1996 policy framework to demonstrate government's commitment to reflect on its activities and to take corrective action in line with national and international developments. The 2021 White Paper on National Transport Policy is therefore foundational for this policy. The 2021 White Paper on National Transport Policy requires that a subsidy guideline should be developed and provide appropriate models for its implementation and a costing, and further that it must be founded on the principles of user targeting, equity and sustainability in the medium to long-term. This policy is limited to land-based passenger transport.
- 1.6.4 This policy document prevails with regard to issues pertaining to public transport subsidy.
- 1.6.5 Whilst the policy is binding on all three spheres of government in so far as it relates to Section 85(2)(b) of the Constitution, it is implemented in line with the provisions of Cooperative Governance (Chapter 3 of the Constitution).



- 1.6.6 The NPTSP focuses specifically on the Government's role in funding public transport. It provides a detailed outline of the policy parameters, goals and procedures to be implemented in administering Governments subsidy of public transport.
- 1.7 Background Review of Public Transport subsidy in South Africa
- 1.7.1 The background review of the public transport development in South Africa is highly cross-referenced with its funding in general and the subsidy regimes applied by the Government over time, hence it is somewhat impossible to review public transport and subsidies independently. The following are the public transport subsidy-specific observations from its origins until present in South Africa:
- 1.7.1.1 The South African subsidy regime was born out of some of the key policy fundamentals of apartheid i.e. spatial planning, low wages and segregation. This in many ways created the foundation for a mode / service specific approach rather than an integrated transport system and the lack of modal integration remains a hallmark of our current transport system.
- 1.7.1.2 During the apartheid era in South Africa, the then government used public transport, and specifically commuter bus services, to facilitate its separate development policies. These policies meant that many communities were located far away from commercial metropolitan areas where they worked, often separated by a highway or industrial area as a "buffer zone". Commuting costs from these far-flung areas would be prohibitively high and so the government intervened to heavily subsidise bus operations. The costs to government in propping up the bus commuter industry was further increased because of the costs multiplication effect caused through the provision of parallel services of bus transport for different racial groups.
- 1.7.1.3 Rail passenger and bus services were operated by the South African Transport Services (the SATS), which had been formed in 1910 from the South African Railways and Harbours. Both rail passenger and bus services were loss making and propped up by the government. The SATS would cross-subsidise public passenger transport services using the profits from freight transport services. By the end of the 1970s rail passenger services operated at an enormous loss.
- 1.7.1.4 The 1996 White Paper provided that bus services would be put out to competitive tender but it subsequently proved to be financially untenable for the prevailing government budget, as bids were high and would require far higher levels of funding from government, which deemed it as unsustainable. The process stalled after a court case in the Western Cape where Golden Arrow Bus Services took the NDOT to court for failing to meet the requirements of the NLTTA that stipulated that services had to be put out on tender based on public transport plans. The additional challenges related to the substantially higher costs of a competitive tendering system and the concerns of labour on job security and wage levels.
- 1.7.2 The planning and funding framework for public transport in South Africa is highly fragmented which in turn complicates integrated service delivery. Figure 1.1, for example, illustrates the fragmented approach to public transport network governance in the Gauteng Province. To a great degree the funding framework follows fragmentation in the planning and administration of public transport which have been institutionalised across the three spheres of Government.



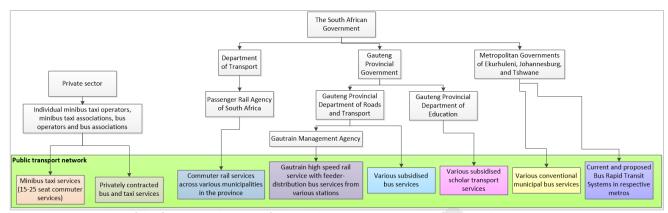


Figure 1.1: Illustration of the fragmented nature of the public transport network in Gauteng Province

1.7.3 The different funding sources for public transport, operational subsidies and capital projects applicable across the Government levels are set out in Table 1.1.



Table 1.1: High-level description of various public transport funding sources in South Africa

Funding source	Description
Public Transport Operations Grant (PTOG)	<ul> <li>Conditional grant in terms of the division of revenue.</li> <li>Purpose of the grant is to "supplement funding towards public transport services provided by provincial departments of transport".</li> <li>The funding results from a nationally assigned function to provinces.</li> </ul>
Public Transport Network Grant (PTNG)	<ul> <li>A specific-purpose allocation to municipalities in terms of the division of revenue.</li> <li>Purpose of the grant is to "provide for accelerated construction and improvement of public transport and non-motorised transport infrastructure forming part of a municipal integrated public transport network, and further support the planning, regulation, control, management and operations of fiscally and financially sustainable municipal public transport network services".</li> </ul>
Taxi Recapitalisation Programme (TRP)	<ul> <li>A specific project financed by the Department of Transport, which results from the recommendations of the National Taxi Task Team and adopted in 1998 by Cabinet to recapitalise the minibus taxi industry. At the time, the objective of the programme was to renew the taxi fleet in the country and facilitate the local manufacturing of a purpose-built vehicle.</li> <li>Funding is in the form of providing a scrapping allowance to qualifying operators.</li> </ul>
Scholar transport subsidies	<ul> <li>Subsidised transport services for learners in terms of the National Learner Transport Policy.</li> <li>The services are funded by Provincial Basic Education Departments and/or Provincial Transport Departments.</li> </ul>
Municipal bus subsidies	<ul> <li>Legacy shortfall-based subsidies paid to municipality-owned operators by the municipalities from municipal funds.</li> <li>Municipalities also provide capital subsidy to the municipality-owned operators through the purchasing of fleets and associated equipment.</li> </ul>
Provincial bus subsidies	Operational bus subsidies (largely legacy based) paid to bus operators by provinces from their provincial equitable share.
Provincial rail subsidies	<ul> <li>In the case of Gauteng Province, an operational shortfall subsidy paid by the provincial government, as part of a concession agreements for the Gautrain Rapid Rail Link Project, inclusive of rail and feeder bus services.</li> <li>Gautrain is considered a project in terms of the provincial Gautrain Management Agency Act (Act 5 of 2006).</li> </ul>
PRASA operating subsidies	Transfer funding made available by the Department of Transport to the Passenger Rail Agency of South Africa (PRASA) to mainly subsidise PRASA passenger rail operation in metropolitan areas, as well as Mainline passenger rail services to a lesser extent.
PRASA Capital subsidies	Transfer funding made available by the Department of Transport, largely for the PRASA rail modernisation programme, inclusive of rolling stock, signalling, and security.



# 2 AN OVERVIEW OF THE POLICY AND LEGISLATIVE ENVIRONMENT RELATING TO PUBLIC TRANSPORT

- 2.1 The following are key pillars of a sustainable integrated planning process of a targeted community:
- 2.1.1 Socio-economic development;
- 2.1.2 Spatial / Land-use development;
- 2.1.3 Transportation System development;
- 2.1.4 Economic development;
- 2.1.5 Environmental protection
- 2.2 All five pillars of sustainable planning are greatly inter-related and the design of any major developmental proposal and/or intervention would cause a chain effect in the functioning of a community. Hence, the development of sectorial policies, strategies and legislation require adequate considerations of anticipated outcomes if the proposed measures are implemented.
- 2.3 The review of the policy and legislative environment in relation to the development of this policy was based on the consideration of prevailing policies and legislation in the five key developmental spheres i.e. Social, Economics, Environment, Spatial Planning and Transport (the schedule of the key documents considered in relation to this policy development attached as Schedule 2).
- 2.4 The development of the NPTSP has been fundamentally rooted in the 2021 White Paper on National Transport Policy. The NPTSP is therefore aligned with the following White Paper strategic objectives for public transport:
- 2.4.1 Promote safe and secure, reliable and sustainable public transport that addresses user needs, including those of commuters, learners, targeted categories of passengers (pensioners, the aged, children, pregnant women, persons with disabilities, tourists) and long-distance passengers;
- 2.4.2 Provide an appropriate and affordable standard of accessibility to work, commercial and social services in urban and rural areas, and limiting walking distances to public transport to less than approximately one kilometre in urban areas;
- 2.4.3 Ensure that public transport is affordable for all commuters in relation to their disposable income:
- 2.4.4 Improve the attractiveness of public transport and NMT to commuters over the use of private car travel, with the aim of increasing the proportion of commuters utilising public transport and NMT instead of private cars;
- 2.4.5 Provide universal, centralised information for all modes of public transport to assist public transport users and ensure that public transport is integrated in respect of information, scheduling, routing and integrated ticketing systems;
- 2.4.6 Provide appropriate institutional structures, which facilitate the effective and efficient planning, implementation, management, funding, regulation and law enforcement of the



- public transport system, devolved to the lowest competent level;
- 2.4.7 Ensure sustainable, streamlined and dedicated funding for public transport infrastructure, operations and law enforcement at the lowest competent level;
- 2.4.8 Foster a stable investment environment in the public transport industry;
- 2.4.9 Promote and implement a system of competition for the market, related to public transport routes or networks based on operating licenses, concessions and negotiated and tendered contracts, with all public transport operators registered as formalised commercial entities, bound by the regulations pertaining to their operating licenses;
- 2.4.10 Empower and assist disadvantaged operators to participate meaningfully in the public transport system;
- 2.4.11 Ensure that operators become economically viable, requiring the minimum financial support; and
- 2.4.12 Promote acceptable and fair labour practices in the public transport industry, and foster human resource development.
- 2.5 Due consideration has been given to the policy proposals contained in three other national transport policies i.e. Non-Motorised Transport Policy Draft of 2008, Learners Transport Policy of 2015 and Rail National Policy Draft White Paper of 2017.
- 2.6 The NDOT has also developed several Transport Strategies and Strategic Plans since 1996 including relevant observations and recommendations regarded as key for the development of the NPTSP and the content thereof has been included in the policy development process.
- 2.7 The transport system development is intrinsically linked to the other key national development pillars hence the NPTSP development has thoroughly considered and included observations and recommendations of other key sectorial National policies and strategies drafted and adopted in the prevailing planning cycle of the National Government.
- 2.8 The key considerations gathered from the above-referenced policies, strategies and plans relevant to the development of the NPTSP have been presented in Tables 1 to 6 and attached as Schedule 3 to the policy document.
- 2.9 The summary and interpretation of the key considerations is outlined as follows:
- 2.9.1 The 2021 White Paper on National Transport Policy:
- 2.9.1.1 the legacy of apartheid policies have long lasting implications on the developmental planning in South Africa and the state of disintegrated and ineffective functioning of spatial land-use development and by extension the transport system is at heart of it
- 2.9.1.2 the national transport policy provides a broad framework for the development of sustainable transport systems through integrated transport planning
- 2.9.1.3 there is a clear requirement for additional funding for public transport including operating subsidies to support the most vulnerable communities and support their living standard and attainment of basic rights



- 2.9.1.4 there is a recognition that rail transport is the backbone of the transport system across the country though there is a dire need to transform the institutional set-up and eradicate the prevailing subsidies based on the 'deficit finance system' approach
- 2.9.1.5 there is a recognition that the minibus-taxi industry is one of the key public transport service providers and recommendation for its full regulation and formalisation through the provision of adequate financial and technical resources to position the mini bus taxi industry to enter into contractual relationships with Government
- 2.9.1.6 dedicated and consolidated funding channels need to be established to streamline and optimise public transport funding
- 2.9.1.7 the Provincial and local spheres of Government must assume their roles and responsibilities with regard to the transport planning, implementation and management in line with their Constitutional and other legislative mandates
- 2.9.1.8 there is strong emphasis on the achievement of the efficiencies in the transport system and minimising the Government subsidisation of the transport operations in the long term whereas the social development objectives would have been targeted through incentive programes offered to the operators
- 2.9.2 National NMT Policy / National Learners Transport Policy / National Rail Transport Policy
- 2.9.2.1 These policies are mode and subsector specific transport policies and emphasise the fundamental challenge with regard to funding and propose specific funding approaches for infrastructure and operational requirements
- 2.9.2.2 The emphasis of the NMT policy is on the recognition of the NMT modes and provision of adequate infrastructure
- 2.9.2.3 The emphasis of the Learner transport policy is on the integration of the learner transport requirements with the prevailing mainstream public transport services as far as possible. Dedicated learner transport services should be established in areas not serviced through main stream public transport
- 2.9.2.4 The Learner Transport policy emphasises the inter-governmental alignment of the Transport and Education departments to ensure an efficient scholar transport service
- 2.9.2.5 The draft National Rail Policy recognises the role of rail transport as the backbone of the national transport system and substantial challenges of the rail passenger operations
- 2.9.2.6 There is a recognition of the infrastructure and rolling stock backlog in rail transport and that long term plans and substantial public and private funding is required to revitalise the rail transport system and establish its intended role in the economy of the Country
- 2.9.3 National Transport Plans and Strategies
- 2.9.3.1 There is a clear recognition of the prevailing issues and challenges in the public



transport system in the Country

- 2.9.3.2 All Plans and Strategies emphasise the fundamental requirement for integrated land-use development and transport planning as the basis for the preparation and formulation of effective ITP's and the development of a sustainable transport system
- 2.9.3.3 The National Transport Master Plan 2050 has identified the development of a public transport subsidy policy as one of the key requirements to stabilise the public transport industry and provide the basis for its transformation and provision of improved service and economic empowerment of the previously marginalised within the sector
- 2.9.3.4 All strategy documents also emphasise the insufficiency of prevailing public transport funding to address infrastructure and capital investment backlogs and simultaneously develop integrated systems to improve the service levels to the public transport users
- 2.9.3.5 the transport development strategies and plans recognise that rail is the backbone of the transport system in the country and fundamental to sustainable economic development plans
- 2.9.4 National Economic / Spatial / Environment Policies and Strategies
- 2.9.4.1 All sectorial development policies and strategies have a clear vision with regard to the role of the transport system development in the national growth and development aspirations. The integrated public transport systems have been emphasised as essential in particular to enable efficient and sustainable mobility options for people to fulfil their economic, educational and social activities.
- 2.10 The Constitution of the Republic of South Africa, 1996
- 2.10.1 Chapter 2 sets out the Bill of Rights enshrined in our constitution. The Bill of Rights is a cornerstone of democracy in South Africa. It enshrines the rights of all people in our country and affirms the democratic values of human dignity, equality and freedom.
- 2.10.2 The Bill of Rights applies to all law, and binds the legislature, the executive, the judiciary and all organs of state.
- 2.10.3 The powers and functions of the executive authority are provided for in Sections 83 to 102 of the Constitution. It also provides for the assignment of the functions of the executive authority to his or her cabinet.
- 2.10.4 The Provincial Executive Authority and the Provincial Legislatures are provided for in Sections 103 to 150 of the Constitution. These sections inter alia provide for the Premier of the respective Province to implement Provincial Legislation in the Provinces as well as implementing National Legislation within the functional area of the Province. In addition the Executive Authority within the Province is mandated to administer Provincial policy and any other function assigned to the Provincial Executive in terms of the Constitution.
- 2.10.5 In accordance with the devolution of authority Municipalities play a pivotal role. A municipality has the right to govern on its own initiative the local government affairs of its community. This has to be done in accordance with National and Provincial Legislation. As an example Section 152 sets out the objects of local government which are inter alia to



promote social and economic development and the provision of services in a sustainable manner. National and Provincial Governments by legislation are obliged to support and strengthen the capacity of municipalities to manage their own affairs, to exercise their own powers and to perform their functions.

- 2.10.6 Municipal public transport is a function of local Government and this is provided for in Schedule 4 of the Constitution. Schedule 5 of the Constitution provides that Provincial planning is a function of the Province.
- 2.11 The Legislative Framework for Public Transport
- 2.11.1 The legislation governing public transport in South Africa is the National Land Transport Act of 5 of 2009 (NLTA).
- 2.11.2 The purpose of the NLTA as set out in section 2 of the Act is:
- 2.11.2.1 to further the process of transformation and restructuring the national land transport system initiated by the NLTTA;
- 2.11.2.2 to give effect to national policy;
- 2.11.2.3 to prescribe national principles, requirements, guidelines, frameworks and national norms and standards that must be applied uniformly in the provinces and other matters contemplated in section 146 (2) of the Constitution; and
- 2.11.2.4 to consolidate land transport functions and locate them in the appropriate sphere of government.
- 2.11.3 A further analysis of the NLTA in relation to transport planning and funding is dealt with under Roles and Responsibilities.



#### 3 AN ANALYSIS OF THE FUNDING OF TRANSPORT SYSTEM IN SOUTH AFRICA

3.1 Figure 3.1 shows that over the period from 1987, when minibus taxis and freight transport were deregulated, to 2018, the Department of Transport's budget ranged between 1.7% (1996) and 4.1% (2015) of the national government budget. After experiencing a decline in the period 1991 to1996, the transport budget rose steadily up to the recent past. Much of the increase can be attributed to commitments made for the 2010 FIFA World Cup. Since around 2015, the national budget has not been increasing in real terms, and the transport budget has been in relative decline, albeit still much higher than it was in the past. Portfolios that attract much more funding include Social Development (around 20%), Police (about 12%) and Cooperative Governance and Traditional Affairs (about 10%), which is generally reflective of South Africa as a developmental state. Notwithstanding, it is concerning that the transport portfolio budget appears to be declining in real terms. The fragmentation of the funding, particularly for public transport as illustrated in Table 1.1, results in expenditure inefficiencies, further exacerbating the problem of the overall transport budget reduction.



Figure 3.1: Department of Transport budget relative to national government budget

3.2 Figure 3.2 depicts the composition of the Department of Transport's budget in the period 1996 to 2018. Immediately following the adoption of the 1996 White Paper on National Transport Policy, the Department increased expenditure on public transport as a proportion of its budget. However, the trend was reversed from 2002. The public transport budget has historically been dominated by passenger rail (infrastructure and operations) and bus subsidies (later referred to as public transport operations grant – PTOG). Over time, however, the public transport budget was diversified to include other modes of transport. In an effort to incentivise public transport integration, the Department started to create grants aimed at implementing infrastructure and operations that prioritise a legible integrated public transport network, which were in the form of (PTIS), (PTNG), (PTNOG). However, these grants have over time become



synonymous with investing in bus rapid transit (BRT) systems. In 2018, the BRT infrastructure, where operational in the country, collectively serviced about 65 million passenger trips. Minibus taxis have over the years attracted investment in the form of the Taxi Recapitalisation Programme, which was officially launched in 2001, and annual operational funding of (SANTACO). Notable, nonetheless, is that despite increased budget for the transport portfolio in some years, funding for public transport reduced as a proportion of the Department's budget.

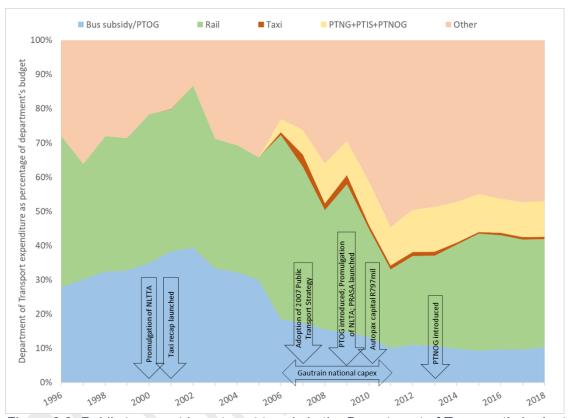


Figure 3.2: Public transport investment trends in the Department of Transport's budget

- 3.3 Transport funding across the three spheres of government is accounted for inconsistently. For example, while at a national level it is easier to distinguish between capital and operational funding, or even funding dedicated to public transport and roads, it is less so for provinces and municipalities. Nonetheless, it is estimated that in 2018, across the three spheres of government, public transport funding amounted to R37 billion, of which 48% was operational expenditure and 52% was capital expenditure. In 2018, public transport funding in South Africa amounted to 0.76% of the GDP. Figure 3.3 illustrates how this funding typically flows across the three spheres of government. In addition, Figure 3.3 shows various budgets for the purpose of the ensuing discussion.
- 3.4 Public transport funding is split 86%, 9%, and 4%, across national, provincial and local government respectively. Provinces mainly fund public transport in the form of supplementing the public transport operations grant from the national government. Provinces that mainly fund public transport (bus services) from their equitable share are the North West (typically 80% from the province), the Eastern Cape (typically 55% from the province), and Limpopo (typically 50% from the province). Other provinces range from 0% to 7% of own funding to subsidised bus services. The Gauteng provincial government funds the Gautrain train service to the tune of R1.6 billion as shortfall funding for less than planned fare revenue, which amounts to 46% of the total public transport funding from all provinces. Municipalities mainly fund public



transport in the form of financing shortfalls in municipal-owned bus services. Funding for public transport as a proportion of total provincial budget in the individual provinces ranges from 0.3% in North West Province to 3.4% in Gauteng Province. Despite being planning authorities in terms of the National Land Transport Act, and being responsible for concluding subsidised service contracts, municipalities only have direct control of 22% of total public transport funding in the country.

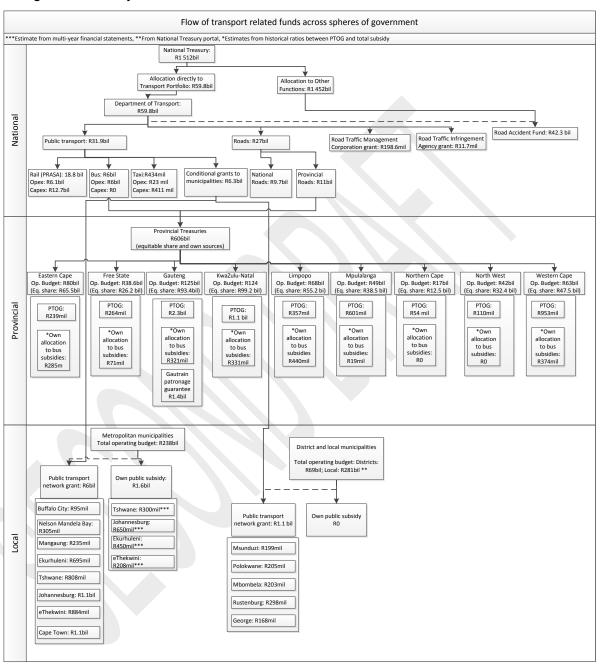


Figure 3.3: Snapshot illustration of transport funding for 2018

3.5 Across the country, rail transport typically receives 56% of total public transport funding, followed by buses at 43%, and minibus taxis at 1%. Within the national sphere of government, relative to roads, public transport attracts 54% of the funding. Of interest is also national government funding to the Road Accident Fund, which amounted to over R42 billion in 2018, which is 15% more that the total funding for public transport in the whole country. The Road Accident Fund is also projected in the 2021/22 Department of Transport budget to have an accumulated deficit of R518.7 billion by 2023/24. Generally, it is notable that direct funding for



road safety related activities across all spheres of government is significantly high. The significance of this observation is that the apparent poor management of road safety in the transport portfolio, is diverting funds from important developmental programmes. Part of funding public transport, should also be about improving road safety.

3.6 Despite increased funding for rail services, patronage has been in decline. Figure 3.4 shows that rail passenger trips have declined from a peak of 700 million per annum in 1981 to below 300 million in the recent past. The decline is particularly notable since 2009, when PRASA was officially launched, following a protracted recovery period from early 1990s. A short period of recovery from 2012 to 2014 is also notable, but did not last long. Some of the reduced patronage can be attributed to increased cases of fare evasion, given that the national rail infrastructure tends to be porous. The decline in patronage can also be attributed to the reduced capacity of passenger rail services, due to a decline in the availability of functional train sets, even though capital funding for passenger rail infrastructure has been on the increase. Moreover, the generally reported deterioration of security on passenger rail services would have also influenced a decline in patronage. Fundamentally, however, there appears to have been a structural problem with the business of PRASA since its launch in 2009.

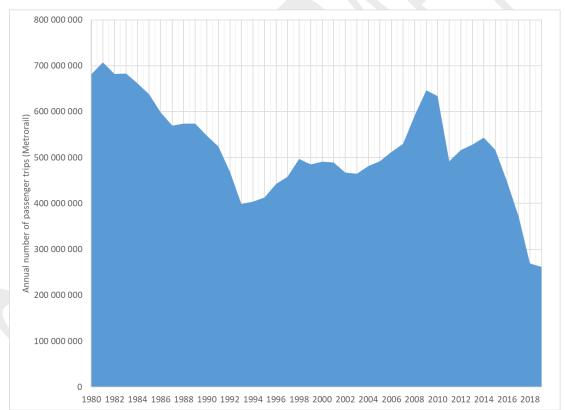


Figure 3.4: Annual number of passengers carried by passenger rail services from 1980 to 2018 1

3.7 Subsidised bus services on the other hand have experienced some marginal increase in patronage over the period 2000 to 2018, despite a notable reduction of budget allocation as a proportion of the NDOT's budget. Increased patronage was experienced in the Free State, Gauteng, KwaZulu/Natal, Mpumalanga and the Western Cape. Much of the increased patronage is likely to be associated with elevated rates of urbanisation where these services are provided.

<sup>&</sup>lt;sup>1</sup> Data obtained from historical annual transport statistics publication by the Department of Transport and Annual reports published by PRASA



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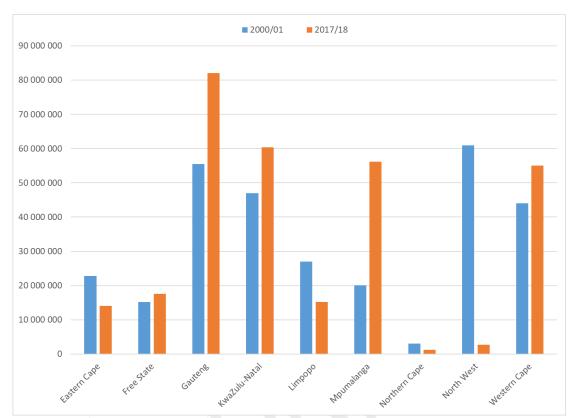


Figure 3.5: Trend of annual number of passengers carried by subsidised bus services over the period 2000 to 2018 per province <sup>2</sup>

- 3.8 Figure 3.6 shows the geographical distribution of the number of rail subsidy beneficiaries. The beneficiaries are located mainly in the metropolitan areas where passenger rail services are provided. The number of beneficiaries also tends to be concentrated in specific areas within the metropolitan areas and correlated with relatively high population densities. Apart from being historical, it is not apparent why these locations are being targeted. However, based on research work carried out by Mubiwa (2014)<sup>3</sup>, it was shown that train stations in Gauteng Province have tended to attract increased development of informal settlements, in contrast to freeways which predominantly attracted retail, industrial and office parks. Therefore, the vicinity of train stations remain an opportunity to provide upgraded human settlements for households living in informal dwellings.
- 3.9 Figure 3.7 shows the geographical distribution of the number of bus subsidy beneficiaries. While far more distributed than rail subsidy beneficiaries, they also tend to be more concentrated in particular parts of the country, especially around metropolitan municipalities and other urban areas. Also for buses, apart from being historical, it is not apparent why specific locations are targeted for bus subsidies.

Support Programme (2018).

<sup>3</sup> Mubiwa, B. 2014. Influence of transport infrastructure on urban development and mobility in the Gauteng City-Region. Doctoral Thesis, Energy Studies, University of Johannesburg, South Africa.



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<sup>&</sup>lt;sup>2</sup> Data obtained from historical annual transport statistics publications by the Department of Transport as well as National Treasury's Cities Support Programme (2018)

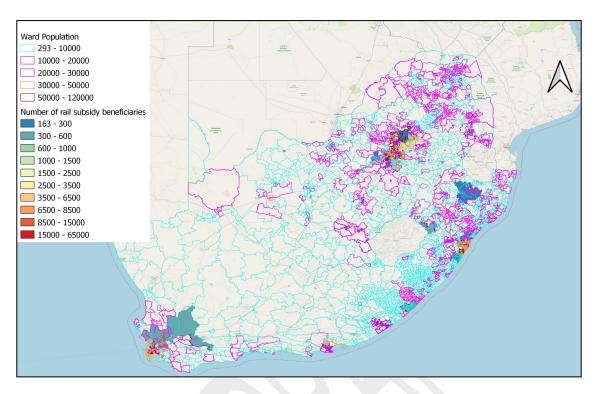


Figure 3.6: Geographical distribution of rail subsidy beneficiaries

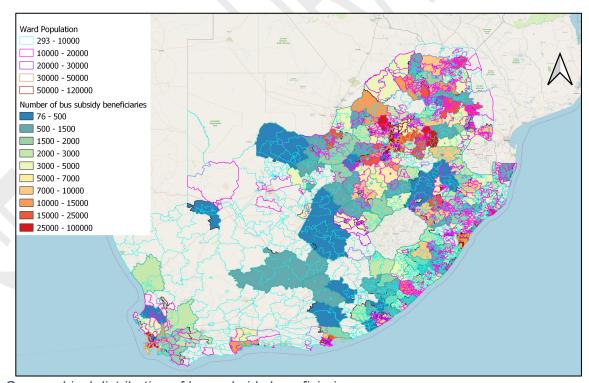


Figure 3.7: Geographical distribution of bus subsidy beneficiaries

- 3.10 The above observations lead to the following summary interpretations:
- 3.10.1 public transport funding, both capital and operational, across all spheres of government, has been accounting for about 2% of the national budget. It is also worth noting that expenditure on road safety in general is more than expenditure on public transport, notwithstanding the



- inherent benefits accruing to road-based public transport. Overall, public transport funding accounts for about 0.8% of GDP.
- 3.10.2 public transport funding across the three spheres of government is defined in terms of modes of transport and is generally disjointed.
- 3.10.3 rail and bus services, particularly rail, feature prominently in the public transport budget. Minibus taxis receive relative little funding whilst BRT-type services have attracted disproportionately more funding relative to the passengers being carried among the two modes / services.
- 3.10.4 despite increased population and associated travel demand, patronage on subsidised services is generally in decline.
- 3.10.5 it appears therefore that increasing funding for public transport alone will not necessarily increase patronage. The actual service design, including aspects relating to service quality, would be necessary.
- 3.10.6 public transport financing should be accompanied by governance controls to ensure that every unit of expenditure generates commensurate value in terms of patronage.



#### 4 POLICY SCOPE

- 4.1 Public transport is defined in the NLTA as "a scheduled or unscheduled service for the carriage of passengers by road or rail, whether subject to a contract or not, and where the service is provided for a fare or any other consideration or reward, including cabotage in respect of passenger transport as defined in the Cross-Border Act".
- 4.2 Subsidy is defined in the NLTA from both demand and supply perspectives. From a demand perspective it means "a situation where passengers are provided with financial assistance to be able to afford services that they could not otherwise afford or where services are subsidised for other reasons, for example to encourage public transport usage, relieve traffic congestion, or to support land use and transport integration". From a supply perspective (subsidised service contract), it means "an agreement between a contracting authority and an operator to operate a service provided for in an integrated transport plan and in terms of which the operator receives direct or indirect financial support in terms of a tendered contract". Contextually, therefore, public transport subsidy in South Africa is a financial relief extended to public transport users and/or operators, for both scheduled and non-scheduled services, in order to achieve predetermined system objectives.
- 4.3 In terms of the 2021 White Paper on National Transport Policy government pays subsidy in order to achieve transport system goals. The policy specifically indicates that government "will contribute to the financing of services which are socially necessary, in a transparent manner. This could be in the form of appropriations, grants or subsidies to achieve an equitable distribution of resources, or as an incentive to provide services which are desirable in a broader social context, such as to promote public transport. In the longer term Government will seek a reduction in the cost to the state of the subsidisation of transport operations, predicated on a more effective and efficient public transport system being developed." One interpretation of this policy statement is that subsidisation is considered an interim measure and intended to reduce over time on the basis of having effective and efficient transport system. Another interpretation is that value for subsidy funds will be higher for the same subsidy level, as a result of efficiency gains, thus reducing the subsidy per unit of output.
- 4.4 The White Paper considers subsidy to be among other forms of mechanisms for financing transport services and infrastructure.
- 4.5 With regard to transport infrastructure, the White Paper identifies three categories, namely:
- 4.5.1 Infrastructure for social access, requiring government funding or subsidy;
- 4.5.2 Infrastructure suitable for indirect user charging, e.g. fuel levies, license fees, tax on fares; and
- 4.5.3 Infrastructure suitable for private sector investment, e.g. toll roads.
- 4.6 The White Paper also recognises that there are other forms of subsidy offered to private transport users e.g. parking. In this regard, the policy states that "unrestrained car usage and subsidised car parking will be contained through the application of policy instruments which could include strict parking policies, access restrictions for private cars, higher licence fees, road pricing or area licensing. Restraint on private car usage will however not be implemented independently of improvements in the quality of public transport."
- 4.7 The White Paper also states that measures will be introduced to empower and assist disadvantaged operators to participate meaningfully in the public transport system.



- 4.8 The White Paper requires every contracted public transport vehicles and those that receive a government subsidy to be universally accessible. It further states that incentives will be considered for non-contracted public transport operators to enable them to cater for the needs of persons with disabilities.
- 4.9 The White Paper makes provision to substantially increase funding for the taxi recapitalisation programme to enable re-fleeting and to meet maximum vehicle age requirements. It also makes provision for scoping assistance to the minibus taxi industry to consolidate individual operators into companies operating fleets of taxis on behalf of shareholders.
- 4.10 The White Paper promotes the establishment of priority lanes for buses and taxis in order to reduce travel times and encourage the use of public transport.
- 4.11 Inherently, it appears that the overarching national transport policy considers the following to be justifiable reasons for providing subsidy:
- 4.11.1 warranted by Integrated Transport Plans (ITPs) and in the case of rural municipalities by Rural Integrated Transport Plans (RITPs).
- 4.11.2 welfare considerations, including incentives to cater for the rights of persons with disabilities. This is also recognised in the White Paper for Social Welfare and White Paper on the Rights of Persons with Disabilities.
- 4.11.3 promotion of public transport.
- 4.11.4 assisting small, medium and micro enterprises, including minibus taxi operators and small bus operators to participate in the provision of subsidised services.
- 4.12 The White Paper offers some approaches on how subsidy should be administered and implemented, including that:
- 4.12.1 funding should be channelled through a single contracting authority at the lowest appropriate level of government.
- 4.12.2 transport authorities should consult with communities in order to define transport needs and to determine what the communities can afford, prior to pricing the services. These consultations are also expected to help identify "target recipients of mobility support".
- 4.12.3 the needs identified by authorities should help identify an appropriate network to service the needs.
- 4.12.4 the services should be put out to tender or negotiated. Minibus taxi operators, small bus operators and other small transport operators will be encouraged to participate in contracted services. In this regard, assistance will be offered to disadvantaged operators to enable them to participate in the system.
- 4.12.5 the services must be provided in term of a transport plan.
- 4.12.6 the current policy makes it clear that where public transport subsidy is applied, it must be done transparently and efficiently, in a manner that proves that public resources are optimally used.
- 4.13 Welfare is seen as one of the many goals but should not be the sole reason for subsidisation.



#### 5 PROBLEM STATEMENT

- 5.1 The NDOT developed the overarching National Transport Policy i.e. the 2021 White Paper supplemented by the development of several transport sector polices. The NDOT has also undertaken the development of several strategic transport sector studies and prepared a number of Transport Strategies and Plans to assist the National and other levels of authority in the planning and development of an efficient transport system to enable prosperous and sustainable development of local communities. Each of the Policy, Strategy, Framework or Planning documents have identified many issues and challenges in the prevailing transport system and related causes. More recently, the Competition Commission of South Africa has undertaken a Market Enquiry into Land Based Public Passenger Transport and published a report, which report has also identified many issues and challenges in relation to the public transport system in South Africa.
- 5.2 All issues, challenges and problem statements identified and formulated in all adopted and draft documents referenced in this policy document have been collated and assessed to provide the basis for firstly understanding the transport system environment, secondly identifying the same problem statements, thirdly attempting to identify and interpret core issues causing a lack of or undertaking inadequate actions in the transport system planning and implementation processes in South Africa and lastly preparing the basis for the formulation of adequate policy statements in relation to public transport subsidy matters in the context of this policy development.
- 5.3 Collated Problem Statements
- 5.3.1 The problem statements have been grouped into the following six categories:
- 5.3.1.1 Relationship between / Integration of Transport Modes
- 5.3.1.2 Land-use, Transport, Environmental Planning and Implementation Relationship
- 5.3.1.3 Transport Modes Specific Matters
- 5.3.1.4 Rural Transport
- 5.3.1.5 Transport Funding / Subsidies
- 5.3.1.6 Public Transport Industry Transformation Matters
- 5.3.1.7 Institutional and Capacity Matters
- 5.4 The key observations of past transport policies and those in draft are as follows:
- 5.4.1 One of the key issues is the lack of integration of public transport in South Africa. It is one of the most frequently referenced problems and likely deserves major attention in transport planning and design processes going forward. It is however noted that sufficient emphasis has not been given to understand the fundamentals of such integration, the complexity and realistic targets of making progress in this regard. It is rather taken for granted that the technical transport system integration is practically achievable within a foreseeable planning cycle.
- 5.4.2 Spatial planning in South Africa is a significant challenge and likely the most complex to attend to in the context of the transformative efforts in the country. This is a constant



- reminder that spatial and land-use development is at the heart of all policy developments. Despite the fact that integrated land-use and transport planning has been referred to at all planning levels there is perhaps a lack of understanding as to how to practically attend to it.
- 5.4.3 Insufficient funding of the transport sector remains a challenge and is likely to remain as such in the short to medium term. There appears to be an imbalance and management-related challenges with the allocation and flow of subsidies towards the public transport users. The allocation of funds between transport infrastructure and operations also requires a re-assessment of its rationale.
- 5.4.4 There is a general consensus that the revitalisation of rail infrastructure, institutional organisation and management of rail operations are the key targets for the sustainable development of transport in South Africa. There is however no clarity on the time frame since considerable funding is required and the time frame for implementation could play a major role in the development planning cycles at localised levels, especially given the extensive levels of infrastructure vandalism that have taken place on the PRASA network, as well as protracted processes required to relocate informal settlements that have invaded parts of the rail reserve. Even where funding was made available, PRASA was unable to create sufficient recovery traction. For example in 2020/21 financial year, the NDOT reallocated the entire funding for PRASA's modernisation programme to other Department's entities due to PRASA's inability to deliver on its expenditure plans.
- 5.4.5 Despite some recognition of rural transport development challenges, generally the rural transport has not been attended to in sufficient depth at the level of policy implementation.
- 5.4.6 Similar observations apply to the learner transport and NMT challenges. The planning and implementation of learner transport system and services in particular has been compromised by the institutional challenges and non-alignments between relevant authorities.
- 5.4.7 There have been considerable discussions and references at all levels of the public transport sector about a dire need to transform the industry and create the basis for a meaningful integration of services and empowerment of the stakeholders. The transport sector policies are very shallow in this regard. There is no true demonstration of what is meant by the transformation in the public transport sector and which approach and time frames to be followed in this regard.
- 5.5 Problem Statements unique to this Policy
- 5.5.1 The policy development approach adopted has sought an understanding of passenger mobility needs and travel demand preferences as reflected in household travel surveys and other surveys to enable the identification and formulation of issues and challenges unique to this policy and aimed to be addressed through its policy statements.
- 5.6 Statement 1: South African households are prone to spending disproportionately more on lower capacity transport modes.
- 5.6.1 Despite the fact that rail is seen as the backbone of the transport system, and despite increased investment in higher capacity road-based public transport solutions, lower capacity transport modes continue to dominate. Consequently, South African households are prone to spending disproportionately more on low capacity transport modes i.e. private vehicles and minibus-taxis.



5.6.2 StatsSA's income and expenditure survey is the only national survey that records household transport related expenditure at a detailed level. Figure 5.1 shows the proportional split of expenditure for an average household for the last survey that took place in 2010/11 (latest version). An average household in South Africa spent 82% of the transport budget on private transport. Road-based public transport constituted approximately 16% of the transport budget. South Africa thus remains a car-intensive country in terms of household expenditure.

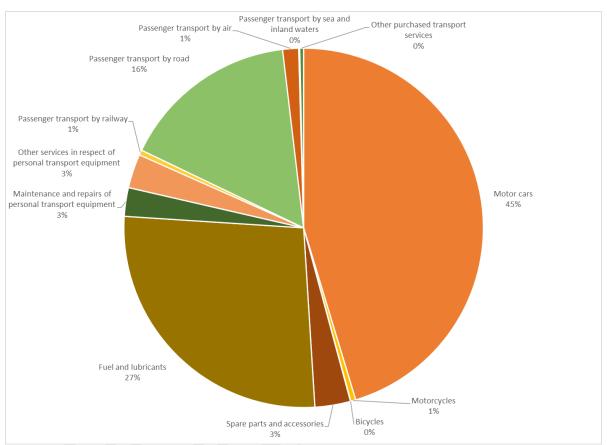


Figure 5.1: Aggregated proportional split of household expenditure on transport

- 5.6.3 Whilst Figure 5.1 is an aggregate across the country, Figure 5.2 shows the proportional distribution of expenditure on transport related items in terms of income deciles, where decile 1 is the lowest 10% of households based on income, and decile 10 the highest 10%. Public transport expenditure, as a proportion of total transport expenditure is highest in the lower income deciles, as much as 60%. Expenditure on motor cars increases with the increase in income. Expenditure on fuel and lubricants remains proportionately high, from 22% in decile 1 to as much as 35% in the higher deciles. For low-income households this implies that where a private car is owned and used, fuel and lubricants may be a significant expense burden.
- 5.6.4 Figure 5.3, derived from the 2018 General Household Survey, represents the number of households and their expenditure on specific public transport modes, and further demonstrates that the majority of South African households tend to spend more on minibus taxis than buses and trains.



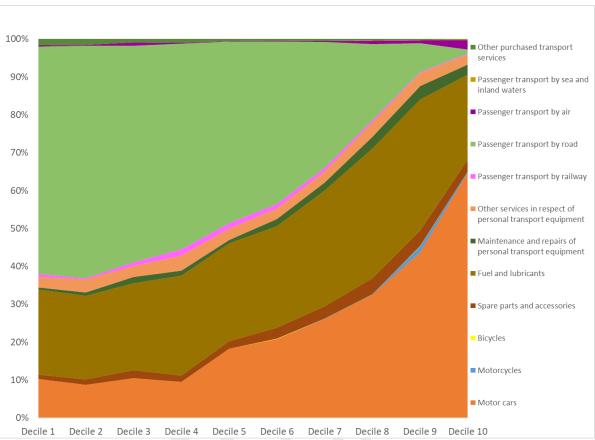


Figure 5.2: Household transport expenditure profile across income deciles

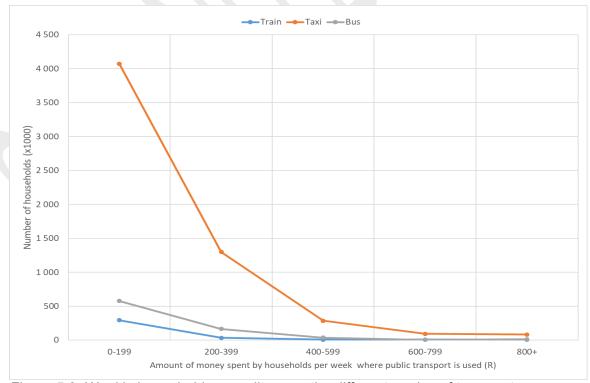


Figure 5.3: Weekly household expenditure on the different modes of transport



- 5.7 Statement 2: The rationale behind the current subsidy is unclear
- 5.7.1 Funding of public transport is disjointed across the three spheres of government, leading to inefficient state spending. In terms of both the 1996 and the 2021 White Papers on National Transport Policy and the NLTA, transport funding should be preceded by approved transport plans. This has however in the main not transpired resulting in funding being done along historical lines. In addition where new funding priorities are identified, they may be more influenced by short-term needs. Therefore, transport plans have played a limited role to shape transport funding in the country.
- Figure 5.4 shows that rail receives proportionately higher subsidy, but this commensurate 5.7.2 with its high operational costs. It appears that the higher the passengers per km, the higher the subsidy. However, whilst Metrorail carries more passengers per km than Gautrain, it receives relatively less subsidy per km. The unit cost of private car use costs is significantly higher, but individually it does not attract a much subsidy per km (in terms of proportionate cost of road crashes, expenditure on road safety, and free usage of land). However, the cumulative subsidy of private cars is much more than that of public transport. Subsidies also tend to be higher for newer technologies (as an example Gautrain and BRT's), thus implying that the expansion of the transport network is likely to require proportionately higher subsidies if the fares are also to be affordable to low income users. In respect of low volumes of travel, minibus taxis cost the least. However, given the limited capacity of minibus taxis, their total cost of deployment increases disproportionately relative to higher capacity modes, resulting from cumulative fixed costs per passenger kilometre serviced. To illustrate this, Figure 5.5 shows a published international case study of unit cost to society (comprising user, operator, and externalities), of operating different public transport modes for a range of passenger travel demand. Minibus taxis cost the least in lower demand corridors and networks relative to higher capacity modes which cost society the least when travel demand increases substantially. It is therefore important to match each mode of public transport to appropriate travel volumes. Such analyses would ordinarily be required in a transport plan to justify subsidised network configurations, but currently absent in the plans.
- 5.7.3 Capital cost recovery is typically not included in rail operations fares because such costs are considered sunken costs. Capital cost recovery is however included in minibus taxis and to a large extent in buses. The reason for this differentiated approach is not clear in policy. Nonetheless, this practice further shows that rail is substantially subsidised.



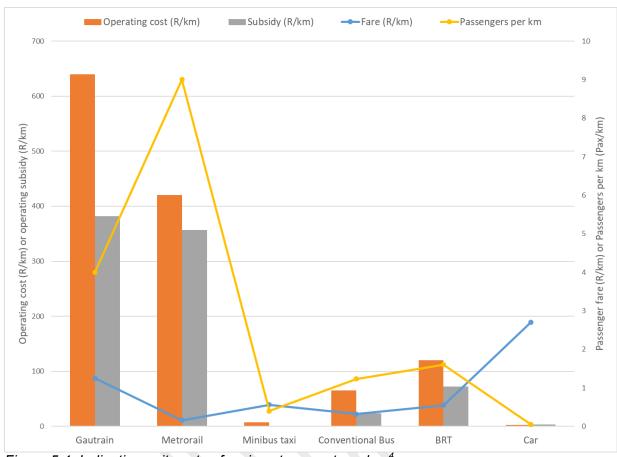


Figure 5.4: Indicative unit costs of various transport modes 4

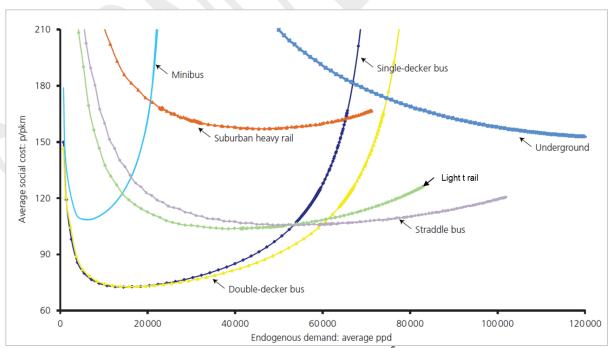


Figure 5.5: Relative total cost of transport modes to society 5

<sup>&</sup>lt;sup>5</sup> Li, X. & Preston, J. 2013. Reassessing the financial and social cost of public transport. Proceedings of the Institutions of Civil Engineers



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<sup>&</sup>lt;sup>4</sup> Based on various published data.

- 5.8 Statement 3: The allocative efficiency of the current public transport funding is not clear:
- 5.8.1 The allocative efficiency of the current subsidy spend has not been officially defined. As an example, it is not clear how both capital and operational subsidies for passenger rail services are apportioned. The extent to which the allocation of subsidy is benefitting end-users is also not clear.
- 5.9 Statement 4: Public transport is receiving disproportionately little funding relative to its role in the economy and society at large
- 5.9.1 Public transport is a capital intensive undertaking. It has however been shown that investment in public transport yields high returns on economic growth, job creation, labour income, and tax revenue<sup>6</sup>. In South Africa, the majority of households rely completely on public transport to access basic services. Therefore, the provision of good quality public transport is as equally important as the provision of other basic services such as health, education, and justice.
- 5.10 Statement 5: Current public transport funding does not incentivise innovation
- 5.10.1 The role of technological innovation is not incentivised in the current public transport subsidy. Innovation has the potential of leapfrogging and increasing system efficiencies and thereby increasing the relative size of the network that can be supported. Innovation could, for example, be in the form of intermodal integration, energy sources, and business models.
- 5.11 Statement 6: Public transport funding is done in isolation of other built environment initiatives
- 5.11.1 Public transport is an integral part of the functioning of the built environment. However, most built environment grants tend to be administered in isolation of public transport infrastructure and operations, thereby reducing the potential of economies of scale. Figure 5.6, shows that rail remains the most inaccessible public transport mode, for which, proportionately, more users travel longer to access services. This in contrast to minibus taxis where 90% of users are able to access its service within a kilometre. Investment of government-led human settlements programmes has been done in isolation of large rail operations. As a result, most rail users continue to travel relatively long distances to access its service.

<sup>&</sup>lt;sup>6</sup> American Public Transportation Association. 2009. Economic impact of public transportation investment. TCRP Project J-11, Task 7, Transit Cooperative Research Program.



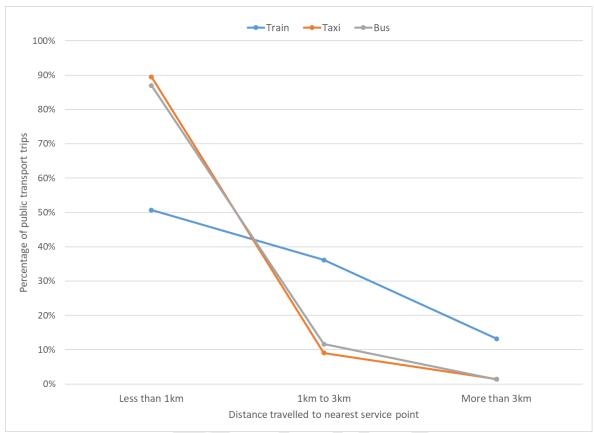


Figure 5.6: Accessibility of different public transport modes

- 5.12 Statement 7: Operational subsidy is not differentiated in terms of operating conditions
- 5.12.1 Vehicle operating costs are a function of road conditions. Figure 5.6 shows the relationship between selected bus operating costs and the quality of road surfaces (measured in terms of change in the International Roughness Index IRI)<sup>7</sup>, where a higher IRI represents higher road deterioration. Vehicle repair and maintenance costs are the most sensitive to deteriorating road conditions, followed with a large margin by fuel consumption and tyre wear. Roads in rural areas are typically characterised by higher IRI, implying that vehicle operating costs would be relatively higher than in typical urban areas. However, the current allocation of subsidies do not reflect this reality, and should therefore be funding operations at a higher rate per kilometre. This is also exacerbated by the fact that development densities in rural areas are typically low, resulting in public transport operations generating relatively less revenue per kilometre.

Dreyer, CMW and vd M Steyn, WJ. 2015. Evaluation of the effect of deteriorating riding quality on bus-pavement interaction. Journal of the South African Institution of Civil Engineering, Vol. 57, No. 3



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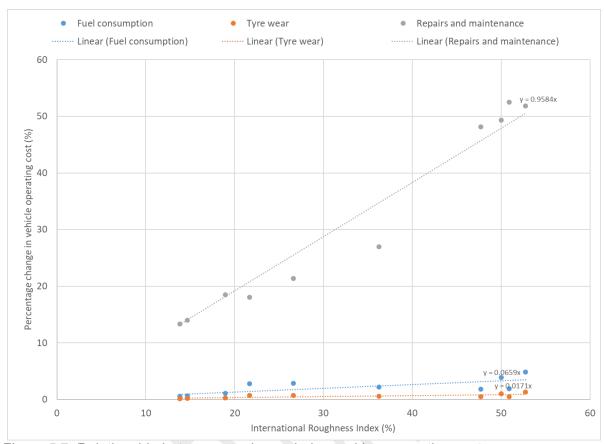


Figure 5.7: Relationship between roughness index and bus operating costs

- 5.13 Statement 8: The current geographical concentration of subsidy requires correction but, expanding this to the rest of the country requires much more financial resources
- 5.13.1 A number of scenarios were developed to evaluate how the geographical spread of subsidies would look like if it were allocated on the basis of social, economic, and environmental objectives, collectively referred to as the triple bottom line. This is because the spatial allocation rationale for the current public transport subsidy regime is unclear. These scenarios are reflected in Figure 5.8.
- 5.13.2 In Figure 5.8, the social dimension is represented in terms of the intensity of the number of individuals who live in households with per capita income lower than the poverty line (R1 183 per person in 2018). The economic dimension is represented in terms of the intensity of the number of work trips originating from an area. Allocation of subsidy to be positively correlated with job opportunities is therefore a proxy for supporting economic productivity. The environmental dimension is represented by the intensity of the use of public transport and non-motorised transport in an area. Allocation of subsidy to be positively correlated with intensity of both public transport and non-motorised transport use would be incentivising the use of "greener" modes (including minibus taxis as it carries relatively more persons per km).
- 5.13.3 The following conclusions can be drawn from the four scenarios:
- 5.13.3.1 Prioritising social development would result in subsidies being directed mostly towards rural and semi-urban areas.
- 5.13.3.2 Prioritising economic development would direct subsidies mostly towards metropolitan areas and other areas that include mining towns.



- 5.13.3.3 Prioritising environmental objectives would result in a strong shift of subsidies towards areas that are currently not subsidised.
- 5.13.3.4 In a scenario where all three objectives are equally weighed, the allocation of subsidies would change significantly from the current spatial allocations. In particular, a shift away from metropolitan areas.
- 5.14 It is clear that in order to realise the triple-bottom line objectives the spatial allocation of subsidies would need to change significantly. Areas that currently benefit very little from subsidies would indeed begin to do so. It is, however, not the place of a policy document to make allocations of subsidy but to highlight that there is a strategic need to reform the spatial distribution of subsidy allocation. The allocation of subsidy to an area should be on the basis of the area contributing to the attainment of sustainable transport objectives.



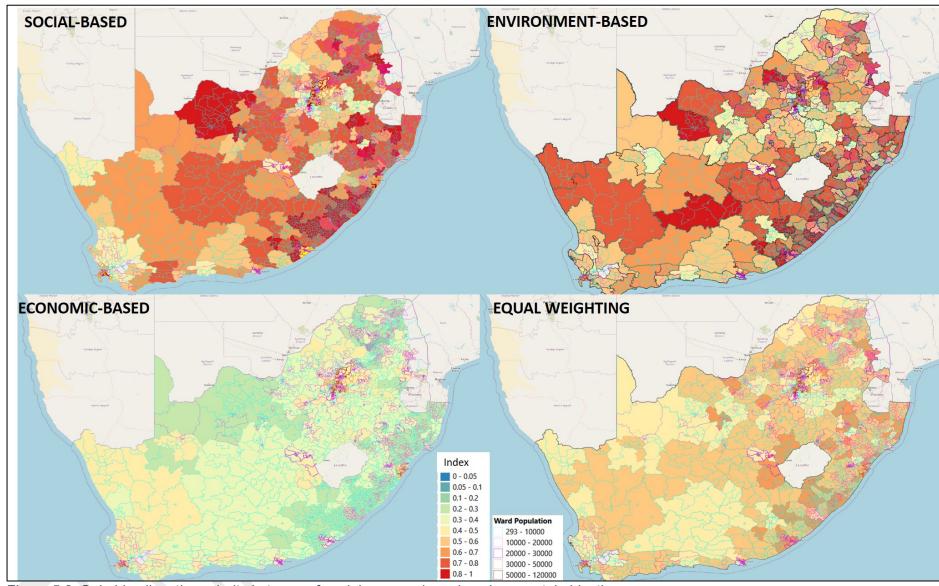


Figure 5.8: Subsidy allocation priority in terms of social, economic and environmental objectives



## **6 POLICY GUIDELINES**

- 6.1 Vision
- 6.1.1 a public transport system that is fully supportive of sustainable d goals.
- 6.2 Mission
- 6.2.1 establish clear objectives for public transport subsidisation, a appropriate models for policy implementation, and a costing m founded on the principles that public transport subsidy should be us equitable and sustainable in the medium to long-term.
- 6.3 Goals
- 6.3.1 to support the vision and goals of the 2021 White Paper on Trans overarching transport policy.
- 6.3.2 to support the goals and objectives of the key sectorial development strategies.
- 6.3.3 to demonstrate the transport funding shortfall and provide a ratior provision of sufficient funding for the development of sustainable pub systems.
- 6.3.4 to provide a rationale for adequate spatial distribution of public trans including subsidies within the country.
- 6.3.5 to provide a rationale for the adequate provision of funding of pub services in relation to varying operating conditions across the country.
- 6.3.6 to provide an efficient approach to approve public transport for subsidies in response to efficient transport plans.
- 6.3.7 to promote planning of integrated transport systems encouraging the transformation of the prevailing public transport industry.
- 6.3.8 to promote planning of efficient and cost effective transport syst context of sustainable development of local communities.
- 6.4 Strategic Objectives
- 6.4.1 to demonstrate an understanding of inherent local development of relation to public transport development and the economic implica operations;
- 6.4.2 to demonstrate an understanding of the institutional set-up of the public transport funding and operations management;
- 6.4.3 to demonstrate an understanding of the public transport industry s profile and provide a basis for their transformation towards an integrat



- 6.4.4 to propose a funding approach for transport system development at a feasible level to ensure the closure of public transport infrastructure provision and maintenance backlog over a period of time and the simultaneous development of sustainable transport systems;
- 6.4.5 to provide an economic basis for efficient multimodal integrated public transport system planning within a conducive transport ecosystem;
- 6.4.6 to propose the consolidation of public transport funding streams at the National level and across the various tiers of government;
- 6.4.7 to propose funding mechanisms to facilitate accelerated development of efficient integrated transport plans at a local level;
- 6.4.8 to propose a subsidy approach for public transport to facilitate the transformation of the public transport operations industry across the prevailing operational areas functioning on a mode exclusive basis; and
- 6.4.9 to establish governance, institutional and regulatory adjustments for managing, operating and maintaining public transport and facilitating capital investments in new technologies.



## 7 INTERNATIONAL LESSONS

- 7.1 Why do we subsidise:
- 7.1.1 based on a comprehensive review of literature<sup>8</sup>, public transport subsidisation is implemented in response to a wide range of transport policy objectives which include:
- 7.1.1.1 reduction of road traffic congestion and associated issues such as air pollution.
- 7.1.1.2 support of low-income households to access basic opportunities.
- 7.1.1.3 specific targeting of selected groupings of vulnerable people over and above low-income households.
- 7.2 How do we subsidise
- 7.2.1 Globally, direct public transport subsidy applies exclusively to formalised public transport services. Subsidy takes the form of traditional financing of state owned public transport operations, and where the private sector is involved, a form of contracting. Contracting has mainly been through awards that follow competitive bidding to supply services, and in many cases it includes the supply of associated infrastructure. A trend has emerged where there is a separation of asset ownership from delivery of services. In such an arrangement, the state owns the fixed assets, supplemented by rolling stock provided by suppliers selected competitively. Services are then provided by operators, selected competitively, within a framework defined by the state, for example scheduling, fare structure and network definition. Such operators are paid on a per km basis for operating a scheduled service, at tendered rates. There is overwhelming evidence that competitive tendering does reduce operating costs, especially where the services were offered by state monopolies.
- 7.2.2 Subsidies provided to the operator (supply-side subsidies) have for the most part been found to be neutral or regressive; while user targeted subsidies (demand-side subsidies) perform better at being redistributive; leading to conclusion that developing countries are better-off with demand-side subsidies<sup>4</sup>.
- 7.2.3 Competitively tendered or negotiated rates can be net-based or gross-based. In net-based contracts, bidders compete on the basis of a rate that will recover costs, supplemented by fare revenue accruing to the bidder. With gross-based contracts, bidders compete on the basis of rates to supply a service at a fee to the contracting authority, where the contracting authority collects all the fare revenue and assumes most of the financial risks.
- 7.2.4 Net-based contracts tends to attract less bidders over time than gross-based contracts. Therefore over time, the incumbent operator may become entrenched. Gross based contracts on the other hand require high levels of administrative capacity and contract management capability on the part of the contracting

<sup>8 \*</sup>Serebrisky, T., Gómez-Lobo, A., Estupiñán, N., & Muñoz-Raskin, R. 2009. Affordability and Subsidies in Public Urban Transport: What Do We Mean, What Can Be Done?, Transport Reviews, 29:6, 715-739, DOI: 10.1080/01441640902786415



authority. In order to protect service quality, contracts have over time incorporated various forms of performance incentives. Under performance-based contracting an operator may be paid a subsidy fee per service kilometre for providing a minimum service level, and an incentive payment per passenger trip for passenger numbers above trip numbers associated with minimum service levels, which would ordinarily require the operator to innovate. Overall, contracting has traditionally taken the following forms internationally:

- 7.2.4.1 Cost-plus: operators carry neither cost nor revenue risks in that the authority reimburses all the costs incurred by the operator. However, the subsequent renewal of the contract depends on the previous performance of the contractor. Awarding of contracts is often open to abuse. It is frequently used in the US.
- 7.2.4.2 Gross cost: All the fare revenue is transferred to the authority and the operator is paid an amount specified in the bid contract. The operator carries no revenue risk but carries the operating costs risk. Used in some UK areas and in New Zealand.
- 7.2.4.3 Gross cost with incentive: The operator is compensated on the basis of rate of revenue per passenger specified in the bid contract as opposed to a flat payment. Operator therefore carries both cost and revenue risks.
- 7.2.4.4 Net cost/ Minimum subsidy/ Net subsidy: The operator keeps the fare revenue and receives additional sum, usually fixed, from the authority where competition is based on the lowest amount requested. The operator carries some cost risk. Used in some UK contracts and used in all London services from 1997.
- 7.2.4.5 Commercial services: Used mainly where the services are lucrative. The operator carries both revenue and cost risks and usually pays the authority for the right to operate. Competition is on the basis of the amount due to the authority. (Tanzania BRT)
- 7.2.5 A global review by the World Bank<sup>9</sup> on reform of subsidised services points to the following recommendations:
- 7.2.5.1 Political commitment to the reform is essential. This in turn improves the credibility of contracts.
- 7.2.5.2 A proper legal foundation is necessary. Regulatory instruments must be properly drafted in order to prevent selective enforcement and "harassment" of certain operators by the enforcement agencies.
- 7.2.5.3 A strong local institutional foundation is required. The subsidy management function should be controlled by a city level agency, without which transport provision is likely to be uncoordinated.

<sup>&</sup>lt;sup>9</sup> Gwilliam K., 2005. Bus franchising in developing countries: Some recent Wold Bank experience. Institute of Transport Studies, University of Leeds.



- 7.2.5.4 Design of the subsidy management system must realistically reflect financial constraints. For example, without adequate fares operators will not be able to recover operating costs.
- 7.2.5.5 Contracts must be unambiguously formulated. The payment conditions and related clauses must be clearly stated in tender documents.
- 7.2.5.6 The administrative agency must be technically competent and trustworthy. The administrative agency must not have any business links with any operator.
- 7.2.5.7 Systems based on one license for each vehicle have proven to be difficult to regulate effectively because the volume of contracts will typically outnumber the administrative capacity of the authority. Initially a form of industry consolidation may be necessary.
- 7.2.5.8 Sub-contracting should be strictly limited. The holder of the contract must be held accountable for the performance of the contract as a whole.
- 7.2.5.9 Vested interest of public enterprises must be confronted. The protection of the incumbent parastatal has been a major impediment to effective reforms.
- 7.2.5.10 Good monitoring and enforcement is essential. This is needed to ensure compliance with contracts as well as to remove illegal operators who undermine the contracted operators.
- 7.2.6 Table 7.1 provides a snapshot of experiences in the management of public transport subsidies in different parts of the world. It is apparent from this review that different countries use different mechanisms to subsidise public transport. No one solution has been a panacea for all areas. In fact, solutions that were initially mooted as best turned out otherwise. Important to note is that solutions must be responsive to the prevailing environment and should not compromise long-term fiscal sustainability.
- 7.2.7 The examples and cases recorded in the literature from international sources and presented in this section suggest that the subsidy distribution mechanisms have pre-dominantly been based on the implementation thereof through operating contracts and there are no tangible references to the subsidy mechanisms to reach users directly. The administrative and management complexities of reaching users directly have historically been major deterrent to implementing such an approach. It is though expected that the rapid technology development and administrative digitisation of the social systems internationally and in South Africa should provide much more efficient ways to consider direct user subsidy options seriously in the near future.



Table 7.1: Notable public transport subsidy lessons on subsidies from selected countries

Country	Notable perspectives
Singapore	In 2016 the Singaporean government introduced a gross-cost contracting model where the state owns all operating assets, as well as the replacement of rolling stock, and collects fare revenue. The model is predicated on proving low entry barriers for new operators and allowing for quick turnaround times in response to changing planning needs. Contracts are for five years, with a possibility of extending for a further two years based on performance. Operators pay a leasing fee for the use of the infrastructure. Operators are also required to maintain assets to specified standards, and their performance in this regard is incorporated in the incentive-disincentive framework. Revenue for operators is generated from contracted operating fee, advertising, and property. The model has allowed for improved livery of services, and more coordinated procurement of vehicle technology. In 2019, very large deficits were reported owing to the overall cost of the contracting model. The government was reported to be punting increasing fares in order
Brazil	between 1985 and 1987, Brazil introduced an employer-based subsidy system, referred to as the 'Vale Transporte' scheme. Employers retain up to 6% of employee earnings and provide employees with a voucher that is redeemable for monthly homework public transport trips. Employers also receive tax benefits from the scheme. The administrative requirements have been found to favour larger employers, due to availability of financial accounting infrastructure, as well as permanent workforce relative to casual workers. In order to improve accountability on public transport funding, a 2011 an "Urban Mobility" law was introduced to which mandated cities with population of over 20 000 people to develop their "mobility plans" in order to qualify for federal funding, with conditions that include efficiency, equity and sustainability. However, five years later, it was found that out of the 3 342 eligible Brazilian cities only 8% had already developed their mobility plans.
China	Infrastructure development, including public transport infrastructure, is seen as an instrument to facilitate economic growth and increased foreign direct investment. Large public transport infrastructure programmes are financed mainly by local government through the practice of fiscal decentralisation. The main source of financing is revenue from land leasing (and land value capture), because all land is publicly owned, and debt financing. National government provides guarantees for bad debt.
South Korea	In 2004, the Metropolitan government of Seoul moved from net- cost contracts operated by private operators to gross-cost contracts, allowing also for free transfers between public transport modes. This was supplemented by the introduction of exclusive public transport lanes in order to increase service reliability. The reforms reportedly resulted in increased patronage and reduced externalities such as road crashes, while



creasing productivity by some 3.5%. However, the sourcing of perators was not done competitively, but sourced from cumbent operators, referred to as sole-source negotiation ocurement. Increased costs of operations are being attributed the non-competitive process of sourcing the operators.  In the non-competitive process of sourcing the operators.
ompetitive tendering for subsidised public transport triggered forms from most public transport agencies. Public transport se per capita increased by 22% from 1991 to 2007, while
ablic transport vehicle kilometres per employee increased by 1% between 1998 and 2006; and passenger revenue per chicle kilometre increased by 21%. The outcomes were alised through a strategy that combines reduced costs and creased revenue. From a cost reduction perspective, the rategy included institutional restructuring; reduction of imployee benefits; use of temporary employees; encouraging tirement of older employees; sharing of employees, vehicles and facilities across organisations; eliminating low performing utes; and procuring newer vehicles in order to reduce aintenance costs. Revenue enhancement entailed substantial re hikes for single tickets, but large discounts for monthly and inval tickets; improved service quality to increase patronage; and increasing the costs using a car.
ne City of Tallinn, with a population of close to half a million in 121, introduced a fare-free public transport service for sidents in 2013 following a referendum on the matter. though the service experienced patronage growth, most of it as from people who previously walked, and little from car sers. The number of people registering as residents of Tallinn creased and boosted the city revenue. The revenue collected of the resident taxes is used to finance the public transport ervice.
response to the rising bus costs per vehicle km, the British overnment promulgated legislation to convert the whole bus estem in competitive tendering, the process that was empleted in 1999. As a result, the bus system in London experienced increased ridership of 30%. Outside London, 80% all public transport services are planned and operated by ivate independent competitors who also set their own fares, in ensultation with the authorities. The remaining 20% of the ervices are contracted by the authorities. The privatisation of ilways has not reduced costs as initially envisaged.
ne conversion of contracting to competitive tendering began in 1989 and finalised in 1995. Initially, the Copenhagen overnment owned operator was prohibited from bidding and ally after the public bus operations were sold to a private ompany were they allowed to bid for contracts. Since the ompletion of competitive tendering, bus ridership in openhagen increased by 9%, attributed to expanded services and improved service quality.



Country	Notable perspectives
	transport services to competitive tendering and all the services in Stockholm to competitive tendering. Both capital and operational costs have dropped markedly despite the retention of previously government labour force at pre-existing wage rates.
Finland	Helsinki Metropolitan Area Council followed a staged approach to competitive tendering. Based on the lessons learnt from the previous competitive tendering rounds, the Council increasingly shed its bus operations to the private sector, a process that took over a period of about six years. Significant annual cost savings were realised in addition to improved service quality.
Chile	Public sector owned transport services in Santiago was changes from a strictly regulated market in 1977 to a deregulated system in 1979 and completely unregulated in 1989 resulting in liquidation of public sector services. However, due to reported price collusions within the private sector, the fares increased substantially. Bus services were subsequently re-regulated in the form of bus licences awarded on the basis of service quality and price.



#### 8 POLICY STATEMENTS

- 8.1 The NPTSP is complementary to overall national transport policy. Public transport supply, especially regarding a network considered strategy for development, will not be left to the free-market because of the tendency of free market to invest mainly in low capacity transport modes given the capital intensive nature of public transport undertakings. Low capacity modes of transport tend to increase the cost of the built environment, through network congestion and associated externalities. Public transport is also an instrument that the state will use to fundamentally transform the spatial configuration of the built environment, given the history of deep structural spatial inequalities in the country.
- 8.2 The following set of statements form the basis for the public transport subsidy policy. The statements are informed by the technical analysis documented as part of the policy formulation process.
- 8.3 Public transport subsidy principles
- 8.3.1 Reason for subsidising public transport: The current national transport policy correctly points out that the subsidy allocation must be implemented in order to address specific transport goals. Welfare is one of the goals but is not the sole reason. Public transport subsidy must be implemented to contribute towards the realisation of sustainable development goals. Such a transport system results in society and the economy, in its current form and in the future, paying less than a set maximum for the use of space. It is characterised by such things as maximum access distances to appropriate public transport services with acceptable frequencies (irrespective of personal attributes); facilitates reduced consumption of natural resources that include land, air quality, and energy; and has minimal input costs for its intended purpose.
- 8.3.2 In South Africa, as in many parts of the world, the spatial imbalances resulting in inequitable access to opportunities warrants an intervention by the state as the custodians of improved quality of life. Correcting these imbalances will require some form of state intervention. Therefore, the first reason for implementing subsidies is to correct spatial imbalances. In this context, spatial imbalances are measured in terms of the number of travelled kilometres required to fulfil basic household activities (work, education and health) per active member of household, in excess of a policy maximum.
- 8.3.3 The correction of spatial imbalances may still not result in affordability of services due to income disparities. Therefore, the second reason for implementing subsidies is to increase the affordability of services by low-income persons and households to fulfil basic household activities (work, education and health). In this context, affordability is measured in terms of the amount of money or proportion of household income, for a household considered poor, which is required to use public transport for basic activities, relative to a policy maximum.
- 8.3.4 The rate of change in the built environment requires that the above interventions be implemented rapidly, in order to contribute to the building of resilient spaces. Resilient spaces continue to serve the population as intended irrespective of system shocks that include energy and land price shocks, global market shocks, and population increases with associated demographic changes. Appropriate infrastructure also reduces the cost of doing business. Therefore, it is necessary



to invest capital to create the necessary network capacity, at a responsive rate. Therefore, the third reason for implementing subsidies is to capitalise the public transport network at an appropriate rate, in order to deliver network capacity in excess of a policy minimum.

8.3.5 For the purpose of this policy, the transport system performance benchmarks in Table 10.1 will be adopted. These benchmarks will be the basis of evaluating the extent to which the transport system in a given functional area is performing as it should when subsidies are applied. Subsidy will only be allocated in terms of transport plans which independently prove that a network being subsidised is achieving the benchmarks within reasonable timeframes.

Table 8.1 Transport system performance benchmarks

Goal	Benchmark	Current levels	Notes
Minimise system input costs for public transport services	Personnel costs as % of operating costs limited to maximum of 25% of operating costs for road-based; and up to 40% for rail-based services.	<ul> <li>Typically ranges from 25% to over 50% for bus operations in South Africa.</li> <li>Typically over 60% for Metrorail services</li> </ul>	<ul> <li>A 2020 survey carried out in Gauteng Province shows that more than 50% of operators in the province have manpower as a percentage of operating costs at less than 25%.</li> <li>PRASA has a published target of reducing manpower as proportion of operating cost to 37% by 2025/26.</li> <li>Larger efficient contracts are negatively correlated with manpower cost per contracted kilometre.</li> </ul>
Minimise impact to the environment	Achieve a system-level maximum 50 grams CO <sub>2</sub> per passenger km, for motorised travel.	<ul> <li>260 grams CO<sub>2</sub> per vehicle km for typical petrol car and 306 grams CO<sub>2</sub> per vehicle km for a typical diesel car; with weighted average of 265 grams CO<sub>2</sub> per vehicle km. translating to 180 grams CO<sub>2</sub> per passenger km, for for occupancy of 1.4 persons per car.</li> <li>Typical bus: 1300 grams CO<sub>2</sub> per vehicle km, translating to 0.7 grams CO<sub>2</sub> per passenger km, translating to 0.7 grams CO<sub>2</sub> per passenger km</li> </ul>	<ul> <li>South Africa has pledged in the Paris Agreement, to peak greenhouse gas emissions between 2020 and 2025, and reduce emissions beyond 2030. The Green Transport Strategy states that for the transport sector to contribute towards emission reduction targets it needs to implement radical changes.</li> <li>South Africa is promoting a target of 120g CO<sub>2</sub> per vehicle km for light passenger vehicles through Carbon tax legislation has been in force since 2010.</li> <li>Most of the gains will be made with the transformation of lower capacity transport modes and travel, through making public transport much more attractive, and adoption of innovation in energy source technology.</li> </ul>



Goal	Benchmark	Current levels	Notes
Minimise trip length	<ul> <li>Maximum trip length of 40km one way for work trips.</li> <li>Maximum of 10km for education trips.</li> </ul>	<ul> <li>Buses and train travel as much as 114km one way for work trips.</li> <li>Education trips average 14km.</li> </ul>	<ul> <li>The 2021 White Paper on National Transport Policy states one of the strategic objectives to encourage more urban land-use densification, correcting spatial imbalances and reducing travel distances and times for commuting to a limit of about 40 km or one hour in each direction.</li> <li>The national norms and standards for schools, published under the auspices of the South African Schools Act, requires school catchment area to be within 3km of a settlement being served.</li> <li>The 2005 Department of Transport's report on "Key Results of the National Household Travel Survey" recommends maximum travel time for education trips of 31 minutes. At an average speed of 20km/h, the maximum distance is 10km. Planning must encourage shorter distances to access schools.</li> </ul>
Minimise motorised travel	Maximum 2.5 trips per person per day without compromising basic needs.	<ul> <li>Unavailable.         However,         elsewhere in         the world trips         per person         average 4 on a         weekday.</li> <li>Local research         estimates         public transport         trip generation         rate at 0.5 trips         per person per         day to or from         an activity.</li> </ul>	<ul> <li>Reduction is predicated on the implementation of a spatial transformation agenda, where the vast majority of needs can be adequately catered for through non-motorised travel.</li> <li>The target rate allows for two to three daily activities per person with reliance on motorised transport.</li> </ul>
Minimise crashes	■ Toward Zzero fatalities per 100 000 population.	About 26 fatalities per 100 000 population.	<ul> <li>Officially planning for any number of deaths is not acceptable, and would be against section 11 of the Constitution (right to life).</li> <li>In 2018, road crashes in South Africa cost a minimum of 3.4% of the GDP. Financing of public transport must contribute to improved transport safety to offset the cost of crashes to society.</li> </ul>
Direct cost of transport to society as %	Less than 7%.	<ul><li>Society spends about 12% of GDP on</li></ul>	<ul> <li>South African households spend the equivalent of 12% of GDP on transport, this is</li> </ul>



Goal	Benchmark	Current levels	Notes
of GDP		transport.	5% higher than places elsewhere in the world, many being trading partners, spending 7% of GDP on transport, at similar levels of public transport and non-motorised transport use.
Reduce total travel time	<ul> <li>Limit travel time to 40 minutes for work trips on public transport.</li> <li>Limit travel time to 30 min for education trips.</li> <li>Limit travel time to 1 hour for all other trip purposes.</li> </ul>	<ul> <li>Significant proportion of work trips take more than 1 hour.</li> <li>Education trips of more than 1 hour have been observed.</li> </ul>	<ul> <li>The 2021 White Paper on National Transport Policy states one of the strategic objectives to encourage more urban land-use densification, correcting spatial imbalances and reducing travel distances and times for commuting to a limit of about 40 km or one hour in each direction.</li> <li>The national norms and standards for schools, published under the auspices of the South African Schools Act, requires school catchment area to be within 3km of a settlement being served.</li> <li>The 2005 Department of Transport's report on "Key Results of the National Household Travel Survey" recommends maximum travel time for education trips of 31 minutes. At an average speed of 20km/h, the maximum distance is 10km. Planning must encourage shorter distances to access schools.</li> </ul>
Minimise cost of service to the user	<ul> <li>Limit expenditure on transport to 10% of income for person with income.</li> <li>Limit cost of service to less than 10% of minimum living level for persons from poor households.</li> <li>Scholar transport service to be provided at no cost to learners whose nearest school is more than 3km away from home.</li> </ul>	South African surveys report on household expenditure rather than personal expenditure. However, for the purpose of this policy, a personal travel is what is being subsidised. Nonetheless, as much as 40% of households have been shown to spend more than 10% of income on public transport.	<ul> <li>The 1996 White Paper on National Transport Policy required that public transport commuters should not spend more than about 10 percent of disposable income on transport. A specific target was not specified in the 2021 White Paper. However, the 2021 White Paper requires that the cost of transport should represent a reasonable and declining percentage of disposable income. The original target is considered reasonable.</li> <li>The national norms and standards for schools, published under the auspices of the South African Schools Act, requires school catchment area to be within 3km of a settlement being served.</li> </ul>



Goal	Benchmark	Current levels	Notes
Minimum operating speed on-board public transport	<ul> <li>Public transport on an approved network must have a minimum operating speed of 40km/h during the peak.</li> </ul>	Public transport operating speeds can be as low as 10km/h in some areas/corridors.	■ The 2021 White Paper on National Transport Policy states one of the strategic objectives to encourage more urban land-use densification, correcting spatial imbalances and reducing travel distances and times for commuting to a limit of about 40 km or one hour in each direction, implying a target speed of 40km/h.
Universal access	At least 80% of persons with disabilities should indicate that they are able to use public transport without difficulty.	The level of difficulty of using public transport for persons with disabilities has generally not been measured.	The 2021 White Paper on National Transport Policy requires all publicly contracted or subsidised services and infrastructure to provide for universal access, and therefore must be explicitly accounted for.

- 8.3.6 The proposed transport system benchmarks should not be understood as absolute targets within any given planning cycle and variances would occur depending on the circumstances. The transport plans should demonstrate short, medium and long-term transport system development objectives within a public transport provision framework that has clearly articulated tasks and activities. The efficient plans prepared in on this basis if approved and supported by the authorities would then qualify to be considered for subsidy based on an established set of guiding benchmarks.
- 8.4 Public transport subsidies will be implemented to achieve goals in transport plans
- 8.4.1 Subsidisation of public transport will be based on approved transport plans, approved by municipal councils. Such plans must be purpose driven and be transformative, and be developed in consultation with communities. It will be necessary to have appropriately trained personnel to develop such plans in order to achieve desirable outcomes. In this regard, transport planning and management professionals across all spheres of government, responsible for the generation of transport plans, will be required to have minimum level of professional accreditation to be developed by the Department of Transport.
- 8.4.2 Shortage of technical capacity in local government to develop and implement responsive transport plans must be appropriately addressed as required in section 154 of the Constitution. Such a shortage of technical capacity should not justify preservation of the status quo.
- 8.5 Public transport subsidies will be managed by municipalities
- 8.5.1 Subsidisation of public transport will be vested in municipalities. This is in line with section 151 of the Constitution stating that "a municipality has the right to govern, on its own initiative, the local government affairs of its community, subject to national and provincial legislation" Further: "the national or a provincial



government may not compromise or impede a municipality's ability or right to exercise its powers or perform its functions". Where municipalities have declared that they have no capacity to administer public transport subsidies in terms of plans, the relevant provincial government must provide support to the affected municipality to help develop such capacity.

- 8.5.2 A public transport subsidy budget will be appropriated to municipalities from national and provincial treasuries in line with transport planning policy, and in support of approved transport plans. Municipalities will apply for public transport funding, to cover a specific period, from national and provincial treasuries, in line with transport plans. Municipalities will also be required to supplement national and provincial appropriations from their own financial resources. Financing of municipal transport plans will be based on the merits of applications by municipalities.
- 8.5.3 Where the subsidised public transport network transcends municipal boundaries, the principles of cooperative governance across municipalities will apply. Relevant municipalities may jointly assign the management of the subsidy to a juristic entity in order to ensure that the public transport service is efficiently managed in order to achieve joint transport system goals.
- 8.5.4 National government may invest in large-scale inter-provincial public transport networks that are in the national interest. While the state will own the infrastructure and associated systems for such networks, the operation of the services should be competitively contracted. While the state will finance the infrastructure and associated systems, the services will be operated on a full cost recovery basis from the users.
- 8.6 Public transport will be cost recovery based
- 8.6.1 Apart from scholar transport services, public transport services will not be provided free of charge. On the contrary, public transport will be provided in a manner that recovers costs of operations from its users. However, subsidy will be allocated in order to cover the cost of providing the service above what is deemed affordable to users in a specific municipality, limited to what is affordable to the state.
- 8.6.2 Operators will be paid a fee per km to recover costs and generate a margin for operational viability. Operators will be required to provide a minimum quality of service. All operations will be electronically monitored. In this regard, operators may be paid a performance incentive when the number of passengers grows at a rate higher than the population growth rate of the area.
- 8.7 Public transport subsidy will consist of both operational and capital support
- 8.7.1 Subsidy will comprise a direct user-targeted operational component and capital subsidy component. This will be enabled by advances in information technology and digital identity.
- 8.7.2 Direct user-targeted subsidy will be limited to households that are considered poor, earning below the upper-bound poverty line that is determined by the state (R1183 per person per month in household 2018). Persons from such



households should not spend more than 10% of their income per month on transport for work, education and basic health services. This will be limited to a maximum number of trips per month.

- 8.7.3 All the infrastructure, including non-motorised transport infrastructure, and vehicles operating on the subsidised network, will be financed and owned by the state, and managed through an appropriate contract. Operators will be required to compete for the right to operate in line with a service contract and an approved transport plan and to ensure non-discriminatory access to the infrastructure in line with the provisions of relevant economic regulations and competition laws. The approach to financing infrastructure state is warranted because:
- 8.7.3.1 The state is already financing the infrastructure through contracted tariffs that include financing costs.
- 8.7.3.2 The practice of requiring operators to source funding for rolling stock and other infrastructure is a barrier for new entrants. The practice also requires new entrants to compete with incumbent operators whose infrastructure has been financed by the state. The 2021 Competition Commission Inquiry into Land Based Public Passenger Transport Sector found that the cost of finance could be prohibitive due to high interest rates.
- 8.7.3.3 With economies of scale, government would have leverage to strengthen and transform the local automotive industry and incentivise the maximisation of local content. The 2021 Competition Commission Inquiry into Land Based Public Passenger Transport Sector found that very limited transformation has taken place in the automotive industry, especially. The automotive industry master plan seeks to increase local content from a baseline of under 40% in 2018 to 60% by 2035. Such a drive must prioritise public transport.
  - 8.7.4 Fare structure and operational features of the network will be set by the relevant municipality, in line with an approved transport plan.
  - 8.7.5 Subsidy will be limited to capital subsidy and the subsidisation of persons from poor households. Higher income households are considered subsidised through the provision of capital subsidy for public transport, but their expenditure will be kept to what is deemed affordable, through the mechanism of appropriate contracted tariffs, by the contracting authority in line with an approved transport plan.
  - 8.7.6 Direct user-targeted subsidies will require a fare collection system allowing for a means-tested form of digital identification. The fare collection system will be financed through the capital subsidy.
  - 8.8 Operating subsidy will increasingly be administered through information technology
  - 8.8.1 Government will invest in information technology systems that will help identify and validate individual travellers requiring subsidy. The means testing technology will be linked to databases that may include the population register, social



development beneficiary databases, and personal income tax database.

- 8.9 Differentiation of urban and rural areas
- 8.9.1 Rural areas will have proportionately more subsidy per km. This will make allowance for low development densities and the historical legacy of underdevelopment for as long as the relevant infrastructure is not elevated to the expected levels of quality to trade-off the additional cost of operations.
- 8.10 Mode specific financing
- 8.10.1 There will be no differentiation of public transport modes. Rather, subsidy will be paid on the basis of a transport plan that incrementally achieves specific goals. The subsidised network will be services by a combination of modes of transport that minimise the generalised cost of transport in a municipality.
- 8.10.2 In some planning areas, there could be a single vehicle mode applicable, whilst in other planning areas there could be a combination of vehicle modes. The operating contracts will be designed to include a variety of vehicle modes and not targeting mode-specific industry operators as conventionally referred to in the past and present planning approach.
- 8.11 Governance and administration
- 8.11.1 No municipality should be a public transport operator. However, the municipality may own public transport infrastructure and associated systems, and competitively contract external entities to operate services.
- 8.11.2 Subsidisation of public transport will be subject to systematic monitoring and evaluation to ensure that it achieves set transport goals. The administration of the public transport subsidy is subject to South Africa's fiscal management policies.



# 9 THE SOUTH AFRICAN MACRO-ECONOMIC PERSPECTIVE WITH REFERENCE TO THE TRANSPORT SECTOR AND HOUSEHOLDS

- 9.1 The subsidisation of transport effectively needs to address the funding requirement and where and how subsidies are allocated and controlled to maximise the benefits. Subsidies are fiscal considerations that require an allocation to transport and public transport in particular, of the revenue government has available for various priorities. The Transport, Storage and Communications sector receive an annual DORA allocation of which a portion is allocated to subsidies. It is necessary to understand to what extent government should allocate more subsidy to public transport to bring down the cost to the end consumer. This is further coupled to the premise of ensuring inclusivity through integration of public transport nodes coupled to the premise on which this is based and the assigned responsibility.
- 9.2 Ultimately subsidies are akin to social benefits that permit households to become more financially sustainable. Funding for subsidies need to be guided by economic principles that are underpinned by a social dimension. This section therefore considers the macro and micro economic context of subsidy funding, the allocation of funds to the transport sector and ownership of public transport sector movable and immovable assets.
- 9.3 The Mini-bus Taxi Industry forms a large part of public transport provision as highlighted in other sections. However, the impact of minibus taxi on the macro economy does not form part of the official statistics collated for traditional bus services or other forms of public transport. The figures analysed in this section are therefore official data and without the mini-bus taxi industry does not necessarily reflect the broader public transport context. It is important to consider this caveat when considering and interpreting the analysis provided in this section.
- 9.4 Macro-economy, transport and revenue
- 9.4.1 It is clear from Figure 9.1 that since 2008 the share of rail passenger transport income declined from about 26% to 18% of passenger transport income. This excludes the income generated in most of the lightly-regulated parts of the sector (mainly minibus taxis). In Figure 9.2, passenger transportation journeys illustrate the same trend as the income side. It is also clear that rail transport is much cheaper per journey. There was, however, a sharp per journey cost (road and rail) increase towards the end of the period see Figure 9.3.



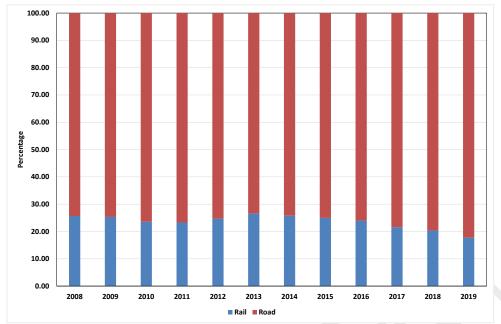


Figure 9.1: Percentage share of income for passenger transportation using current price data

Source: Basic data: Stats SA - P7162. Own calculations.

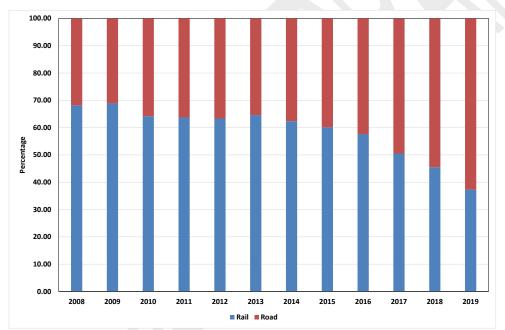


Figure 9.2: Percentage share of passenger journeys (actual numbers)

Source: Basic data: Stats SA - P7162. Own calculations.



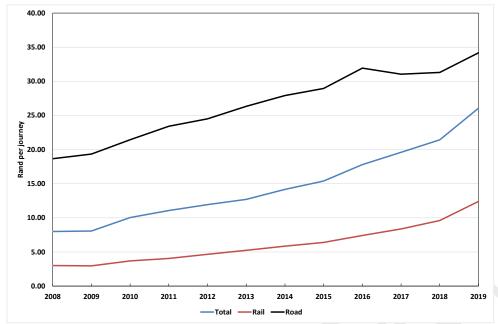


Figure 9.3: Rand per passenger journey

Source: Basic data: Stats SA - P7162. Own calculations.

9.4.2 Figure 9.4 illustrates the subsidies and incentives paid to the transport and communication (SIC 7) sector as percentage of total paid to all industries. No clear trend is present prompting one to ask if the current subsidy policy is effective or alternatively what is driving the volatility and at what "expense" to the transport sector. The downward trend for the period 2003 to 2009 is observable and it may be policy uncertainty, but also the reprioritisation of funds due to lower state revenue.



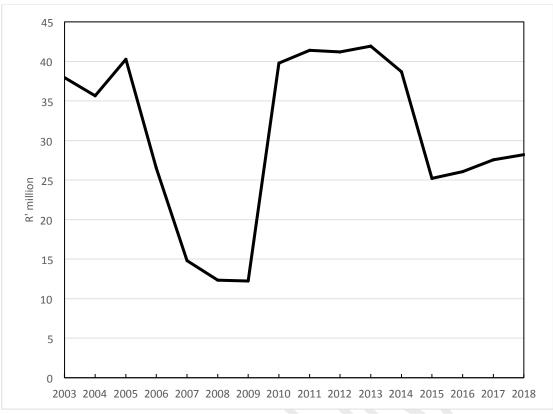


Figure 9.4: Transport, storage and communication subsidies and incentives as percentage of total paid by government to all industries

Source: Basic data: Stats SA - P0021: Annual Financial Statistics (AFS). Own calculations.

9.4.3 Figure 9.5 illustrates the percentage share for Transport and Communication of Real Gross Domestic Product since 1960. It is important to note that separate transport data is note published. Reasons for the increase from about 1.5% to 6% include the addition of alternative transport modes (minibus taxis) and the changes in the communications field (cell phones, television etc.). These caused a shift in consumer spending.



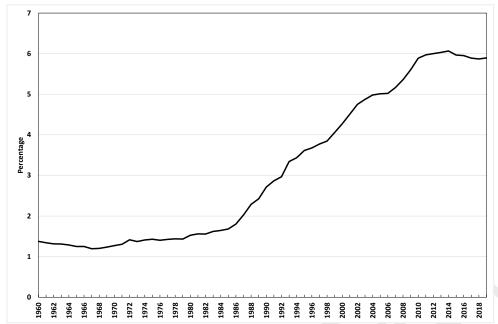


Figure 9.5: Transport and communication services as percentage of GDP at Constant 2010 prices

Source: Basic data: SARB Quarterly Bulletins. Own calculations.

- 9.4.4 Figure 9.6 illustrates the government subsidies, incentives and capital transfers received by the Transport, Storage and Communication sector since 2003. In terms of government subsidies and incentives, the average amount allocated per annum between 2003 and 2018 was R5 234 million. An analysis of the percentage increase per annum does not show any discernible trend with a range between -9% in 2015 to 20% in 2016. The average spread (average of percentage changes per annum) over the period of annual increases or decreases is 8%. However, volatility over the period is clear from 2015.
- 9.4.5 Capital transfers which are composed of investment subsidies and other capital transfers (e.g. transfers of ownership of fixed assets and debt forgiveness). Over the period 2011 to 2018 the average capital transfer to the Transport, Storage and Communications sector was R1 964 million. Capital transfers have increased from 2012, which clearly indicates the volatility in capital transfers over the period, as demonstrated below:

	2012	2013	2014	2015	2016	2017	2018
4	49%	5%	34%	4%	55%	5%	-30%



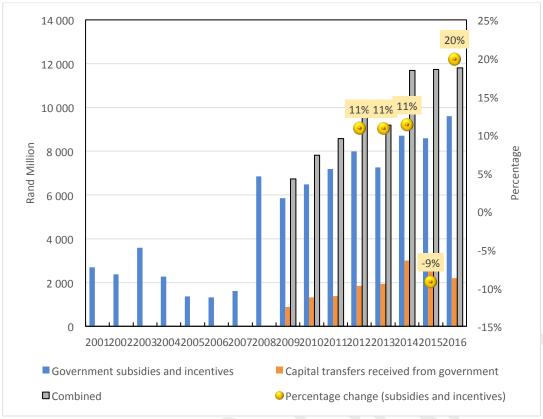


Figure 9.6: Transport, storage and communication: Government subsidies; incentives and capital transfers received

**Source**: Basic data: STATSSA - Annual Financial Statistics Survey (AFS). Own calculations. \*\* Indicate preliminary figures.

## 9.5 Household Expenditure

- 9.5.1 An analysis of household expenditure nationally as well as at provincial level since 1993 is summarised in Table 9.1 below.
- 9.5.1.1 A: Final consumption expenditure by households as percentage of disposable income
- 9.5.1.2 B: Spending on transport and communication services as percentage of final consumption expenditure by households
- 9.5.2 Over time (in current and constant price terms) households are spending an increasing percentage of their disposable income. This can be interpreted that income is not increasing at the same rate as prices (inflation) looking at the current prices part of the table. Removing, however, the inflationary effect shows the same tendency. This is probably due to a need to increase living standards or utilising new technologies as it become available. This is also evident looking at spending on transport and communication services as percentage of final consumption expenditure by households. The disturbing fact is that transport and communication share of expenditure is increasing over time. A clear indication that intervention is necessary to reduce the cost to households.



Current prices	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
South Africa	1993	1994	1993	1990	1997	1998	1333	2000	2001	2002	2003	2004	2003	2006	2007	2008	2009	2010	2011	2012	2013	2014	2013	2010	2017	2018
A	95.1	95.1	95.1	95.5	94.1	94.9	95.3	95.6	96.1	95.8	96.3	96.6	97.0	99.1	99.6	98.3	97.6	98.0	98.6	99.4	99.7	99.5	98.4	98.4	97.4	97.8
В	8.7	8.5	8.5	8.7	8.3	8.4	8.5	8.8	9.3	9.5	9.5	9.5	9.3	9.3	9.1	9.2	9.5	10.0	9.8	9.8	9.8	9.9	9.6	9.3	8.9	8.7
P1: Western Cape																										
A	95.1	95.1	95.1	95.4	94.0	94.8	95.2	95.5	96.0	95.7	96.2	96.5	96.9	99.1	99.6	98.2	97.5	97.9	98.6	99.4	99.7	99.5	98.3	98.4	97.4	97.7
В	8.3	8.1	8.1	8.3	7.9	8.0	8.1	8.4	8.8	9.0	9.1	9.0	8.9	8.9	8.7	8.8	9.1	9.6	9.4	9.4	9.4	9.5	9.2	8.9	8.5	8.3
P2: Eastern Cape																										
A	95.3	95.3	95.4	95.7	94.4	95.2	95.6	95.8	96.3	96.1	96.5	96.8	97.2	99.2	99.6	98.4	97.8	98.1	98.7	99.5	99.7	99.5	98.5	98.5	97.6	97.9
В	8.4	8.1	8.1	8.4	8.0	8.0	8.2	8.5	9.0	9.2	9.2	9.2	9.0	9.0	8.8	8.9	9.3	9.7	9.6	9.6	9.6	9.6	9.4	9.0	8.7	8.5
P3: Northern Cape																										
A	95.6	95.6	95.6	95.9	94.7	95.4	95.7	96.0	96.4	96.2	96.6	96.8	97.2	99.2	99.6	98.4	97.8	98.2	98.7	99.5	99.7	99.5	98.5	98.6	97.6	97.9
В	7.9	7.7	7.6	7.9	7.5	7.6	7.8	8.0	8.5	8.7	8.7	8.8	8.6	8.6	8.4	8.5	8.7	9.2	9.0	9.0	9.0	9.0	8.8	8.4	8.1	7.9
P4: Free State																										
A	95.0	95.0	95.0	95.4	94.0	94.8	95.2	95.5	96.0	95.8	96.3	96.5	97.0	99.1	99.6	98.2	97.6	98.0	98.6	99.4	99.7	99.5	98.4	98.4	97.4	97.7
В	7.3	7.2	7.2	7.4	7.0	7.1	7.2	7.5	7.9	8.1	8.1	8.2	8.0	8.0	7.9	7.9	8.2	8.7	8.6	8.6	8.7	8.7	8.5	8.2	7.9	7.7
P5: KwaZulu-Natal																										
A	94.1	94.1	94.1	94.5	92.8	93.8	94.3	94.6	95.2	94.9	95.5	95.8	96.4	99.0	99.5	97.9	97.1	97.6	98.3	99.3	99.7	99.4	98.0	98.1	96.9	97.3
В	9.0	8.7	8.7	8.9	8.5	8.6	8.8	9.0	9.5	9.7	9.7	9.7	9.5	9.5	9.3	9.4	9.8	10.2	10.1	10.0	10.1	10.1	9.9	9.5	9.2	9.0
P6: North West	<u> </u>	<u> </u>		<u> </u>	<u> </u>	<u> </u>				<u> </u>				<u> </u>		<u> </u>						<u> </u>			<u> </u>	
A .	95.0	95.0	95.1	95.4	94.0	94.9	95.3	95.6	96.1	95.8	96.3	96.6	97.0	99.1	99.6	98.3	97.6	98.0	98.6	99.4	99.7	99.5	98.4	98.4	97.4	97.7
В	8.6	8.4	8.3	8.6	8.2	8.3	8.4	8.7	9.2	9.3	9.4	9.4	9.2	9.1	9.0	9.1	9.4	10.0	9.8	9.8	9.9	9.9	9.7	9.3	9.0	8.8
P7: Gauteng	0	0	0	07.5	0	07.5	07.5	07.1	00.	00.0	00.0	00.0	07.5	00.5	00.5	00.	07.5	00.	00.5	00.1	00.5	00.5	00.5	00.5	0= -	0=0
A	95.4	95.4	95.5	95.8	94.5	95.3	95.6	95.9	96.4	96.1	96.6	96.8	97.2	99.2	99.6	98.4	97.8	98.1	98.7	99.4	99.7	99.5	98.5	98.5	97.6	97.9
В	9.4	9.2	9.1	9.4	8.9	9.0	9.1	9.4	9.9	10.1	10.1	10.1	9.9	9.8	9.7	9.7	10.0	10.5	10.3	10.3	10.3	10.4	10.1	9.7	9.3	9.1
P8: Mpumalanga	06.4	06.4	00.4	00.0	05.6	06.3	00.4	06.7	07.0	00.0	07.2	07.4	07.7	00.4	00.7	00.7	00.2	00.5	00.0	00.0	00.0	00.0	00.0	00.0	00.1	00.2
A R	96.4 8.8	96.4	96.4	96.6	95.6 8.3	96.2	96.4	96.7 8.9	97.0 9.3	96.8 9.5	97.2 9.4	97.4 9.4	97.7 9.2	99.4 9.2	99.7	98.7 9.1	98.2 9.5	98.5 10.0	99.0	99.6 9.7	99.8	99.6 9.8	98.8 9.5	98.8	98.1 8.8	98.3
P9: Limpopo	8.8	8.6	8.5	8.8	8.3	8.4	8.6	8.9	9.3	9.5	9.4	9.4	9.2	9.2	9.0	9.1	9.5	10.0	9.8	9.7	9.8	9.8	9.5	9.2	8.8	8.6
Δ	94.7	94.8	94.8	95.2	93.7	94.6	95.0	95.3	95.9	95.6	96.1	96.4	96.9	99.1	99.6	98.2	97.5	97.9	98.5	99.4	99.7	99.4	98.3	98.3	97.3	97.6
В	7.9	7.7	7.7	7.9	7.5	7.6	7.8	8.0	8.5	8.6	8.6	8.6	8.4	8.4	8.2	8.3	8.6	9.1	9.0	9.0	9.1	9.1	8.8	8.5	8.2	8.1
В	7.5	7.7	7.7	7.5	7.5	7.0	7.0	0.0	0.5	0.0	0.0	0.0	0.4	0.4	0.2	0.5	0.0	J.1	5.0	5.0	J.1	J.1	0.0	0.5	0.2	0.1
				ı						ı																
Constant 2010 prices	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Constant 2010 prices South Africa	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	<b>1993</b> 95.1	<b>1994</b> 95.1	<b>1995</b> 95.1	<b>1996</b> 95.5	<b>1997</b> 94.1	<b>1998</b> 94.9	<b>1999</b> 95.3	<b>2000</b> 95.6	<b>2001</b> 96.1	<b>2002</b> 95.8	<b>2003</b> 96.3	<b>2004</b> 96.6	<b>2005</b> 97.0	<b>2006</b> 99.2	<b>2007</b> 99.6	<b>2008</b> 98.3	<b>2009</b> 97.6	<b>2010</b> 98.0	<b>2011</b> 98.6	<b>2012</b> 99.4	<b>2013</b> 99.7	<b>2014</b> 99.5	<b>2015</b> 98.4	<b>2016</b> 98.4	<b>2017</b> 97.4	<b>2018</b> 97.8
	95.1	95.1	95.1	95.5	94.1	94.9	95.3	95.6	96.1	95.8	96.3	96.6	97.0	99.2	99.6	98.3	97.6	98.0	98.6	99.4	99.7	99.5	98.4	98.4	97.4	97.8
South Africa A B	95.1	95.1	95.1	95.5	94.1	94.9	95.3	95.6	96.1	95.8	96.3	96.6	97.0	99.2	99.6	98.3	97.6	98.0	98.6	99.4	99.7	99.5	98.4	98.4	97.4	97.8
South Africa A B	95.1	95.1 6.1	95.1 6.3	95.5 6.4	94.1	94.9	95.3 7.0	95.6 7.5	96.1	95.8 8.3	96.3 8.5	96.6	97.0 8.6	99.2	99.6	98.3	97.6 9.6	98.0	98.6	99.4	99.7	99.5	98.4	98.4	97.4	97.8 9.5
South Africa A B	95.1 6.0 95.1	95.1 6.1 95.1	95.1 6.3 95.1	95.5 6.4 95.4	94.1 6.6 94.0	94.9 6.6 94.8	95.3 7.0 95.2	95.6 7.5 95.5	96.1 7.9 96.0	95.8 8.3 95.7	96.3 8.5 96.2	96.6 8.6 96.5	97.0 8.6 96.9	99.2 8.4 99.1	99.6 8.6 99.6	98.3 9.1 98.2	97.6 9.6 97.5	98.0 10.0 97.9	98.6 9.9 98.6	99.4 9.8 99.4	99.7	99.5 10.1 99.5	98.4 9.9 98.3	98.4 9.8 98.4	97.4 9.7 97.4	97.8 9.5 97.7
South Africa A B P1: Western Cape A B	95.1 6.0 95.1	95.1 6.1 95.1	95.1 6.3 95.1	95.5 6.4 95.4	94.1 6.6 94.0	94.9 6.6 94.8	95.3 7.0 95.2	95.6 7.5 95.5	96.1 7.9 96.0	95.8 8.3 95.7	96.3 8.5 96.2	96.6 8.6 96.5	97.0 8.6 96.9	99.2 8.4 99.1	99.6 8.6 99.6	98.3 9.1 98.2	97.6 9.6 97.5	98.0 10.0 97.9	98.6 9.9 98.6	99.4 9.8 99.4	99.7	99.5 10.1 99.5	98.4 9.9 98.3	98.4 9.8 98.4	97.4 9.7 97.4	97.8 9.5 97.7
South Africa A B P1: Western Cape A B	95.1 6.0 95.1 5.6	95.1 6.1 95.1 5.8	95.1 6.3 95.1 5.9	95.5 6.4 95.4 6.1	94.1 6.6 94.0 6.2	94.9 6.6 94.8 6.2	95.3 7.0 95.2 6.7	95.6 7.5 95.5 7.1	96.1 7.9 96.0 7.4	95.8 8.3 95.7 7.9	96.3 8.5 96.2 8.1	96.6 8.6 96.5 8.2	97.0 8.6 96.9 8.2	99.2 8.4 99.1 8.1	99.6 8.6 99.6 8.2	98.3 9.1 98.2 8.7	97.6 9.6 97.5 9.2	98.0 10.0 97.9 9.6	98.6 9.9 98.6 9.5	99.4 9.8 99.4 9.4	99.7 9.9 99.7 9.5	99.5 10.1 99.5 9.7	98.4 9.9 98.3 9.5	98.4 9.8 98.4 9.4	97.4 9.7 97.4 9.2	97.8 9.5 97.7 9.1
South Africa A B P1: Western Cape A B	95.1 6.0 95.1 5.6 95.3	95.1 6.1 95.1 5.8 95.3	95.1 6.3 95.1 5.9	95.5 6.4 95.4 6.1 95.7 6.2	94.1 6.6 94.0 6.2	94.9 6.6 94.8 6.2 95.2	95.3 7.0 95.2 6.7 95.6	95.6 7.5 95.5 7.1 95.8	96.1 7.9 96.0 7.4 96.3	95.8 8.3 95.7 7.9 96.1	96.3 8.5 96.2 8.1 96.5	96.6 8.6 96.5 8.2	97.0 8.6 96.9 8.2	99.2 8.4 99.1 8.1	99.6 8.6 99.6 8.2	98.3 9.1 98.2 8.7 98.4	97.6 9.6 97.5 9.2	98.0 10.0 97.9 9.6 98.1	98.6 9.9 98.6 9.5	99.4 9.8 99.4 9.4	99.7 9.9 99.7 9.5	99.5 10.1 99.5 9.7 99.5	98.4 9.9 98.3 9.5	98.4 9.8 98.4 9.4 98.5	97.4 9.7 97.4 9.2 97.6	97.8 9.5 97.7 9.1 97.9 9.3
South Africa  A  B  P1: Western Cape  A  B  P2: Eastern Cape  A	95.1 6.0 95.1 5.6 95.3 5.8	95.1 6.1 95.1 5.8 95.3 5.9	95.1 6.3 95.1 5.9 95.3 6.1	95.5 6.4 95.4 6.1 95.7 6.2	94.1 6.6 94.0 6.2 94.4 6.4	94.9 6.6 94.8 6.2 95.2 6.4	95.3 7.0 95.2 6.7 95.6 6.8	95.6 7.5 95.5 7.1 95.8 7.3	96.1 7.9 96.0 7.4 96.3 7.6	95.8 8.3 95.7 7.9 96.1 8.1	96.3 8.5 96.2 8.1 96.5 8.3	96.6 8.6 96.5 8.2 96.8 8.4	97.0 8.6 96.9 8.2 97.2 8.4	99.2 8.4 99.1 8.1 99.2 8.2	99.6 8.6 99.6 8.2 99.6 8.3	98.3 9.1 98.2 8.7 98.4 8.8	97.6 9.6 97.5 9.2 97.8 93	98.0 10.0 97.9 9.6 98.1 9.7	98.6 9.9 98.6 9.5 98.7 98.7	99.4 9.8 99.4 9.4 99.5 99.5	99.7 9.9 99.7 9.5 99.7 99.7	99.5 10.1 99.5 9.7 99.5 9.8 99.5	98.4 9.9 98.3 9.5 98.5 9.6	98.4 9.8 98.4 9.4 98.5 9.6	97.4 9.7 97.4 9.2 97.6 9.4	97.8 9.5 97.7 9.1 97.9 9.3
South Africa A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B	95.1 6.0 95.1 5.6 95.3 5.8	95.1 6.1 95.1 5.8 95.3 5.9	95.1 6.3 95.1 5.9 95.3 6.1	95.5 6.4 95.4 6.1 95.7 6.2	94.1 6.6 94.0 6.2 94.4 6.4	94.9 6.6 94.8 6.2 95.2 6.4	95.3 7.0 95.2 6.7 95.6 6.8	95.6 7.5 95.5 7.1 95.8 7.3	96.1 7.9 96.0 7.4 96.3 7.6	95.8 8.3 95.7 7.9 96.1 8.1	96.3 8.5 96.2 8.1 96.5 8.3	96.6 8.6 96.5 8.2 96.8 8.4	97.0 8.6 96.9 8.2 97.2 8.4	99.2 8.4 99.1 8.1 99.2 8.2	99.6 8.6 99.6 8.2 99.6 8.3	98.3 9.1 98.2 8.7 98.4 8.8	97.6 9.6 97.5 9.2 97.8 9.3	98.0 10.0 97.9 9.6 98.1 9.7	98.6 9.9 98.6 9.5 98.7 9.7	99.4 9.8 99.4 9.4 99.5 9.6	99.7 9.9 99.7 9.5 99.7	99.5 10.1 99.5 9.7 99.5 9.8	98.4 9.9 98.3 9.5 98.5 9.6	98.4 9.8 98.4 9.4 98.5 9.6	97.4 9.7 97.4 9.2 97.6 9.4	97.8 9.5 97.7 9.1 97.9 9.3
South Africa  A  B  P1: Western Cape  A  B  P2: Eastern Cape  A	95.1 6.0 95.1 5.6 95.3 5.8 95.6 5.5	95.1 6.1 95.1 5.8 95.3 5.9 95.6 5.6	95.1 6.3 95.1 5.9 95.3 6.1 95.6 5.7	95.5 6.4 95.4 6.1 95.7 6.2 95.9 5.9	94.1 6.6 94.0 6.2 94.4 6.4 94.6	94.9 6.6 94.8 6.2 95.2 6.4 95.4 6.1	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5	95.6 7.5 95.5 7.1 95.8 7.3 96.0 6.9	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9	96.6 8.6 96.5 8.2 96.8 8.4 96.8	97.0 8.6 96.9 8.2 97.2 8.4 97.2	99.2 8.4 99.1 8.1 99.2 8.2 99.2 7.8	99.6 8.6 99.6 8.2 99.6 8.3 99.6 7.9	98.3 9.1 98.2 8.7 98.4 8.8 98.4	97.6 9.6 97.5 9.2 97.8 9.3 97.8	98.0 10.0 97.9 9.6 98.1 9.7 98.2 9.2	98.6 9.9 98.6 9.5 98.7 9.7 98.7	99.4 9.8 99.4 9.4 99.5 9.6	99.7 9.9 99.7 9.5 99.7 9.7 99.7	99.5 10.1 99.5 9.7 99.5 9.8 99.5 9.2	98.4 9.9 98.3 9.5 98.5 9.6	98.4 98.4 98.4 9.4 98.5 9.6 98.6	97.4 9.7 97.4 9.2 97.6 9.4 97.6 8.8	97.8 9.5 97.7 9.1 97.9 9.3 97.9
South Africa A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B	95.1 6.0 95.1 5.6 95.3 5.8 95.6 5.5	95.1 6.1 95.1 5.8 95.3 5.9 95.6 5.6	95.1 6.3 95.1 5.9 95.3 6.1 95.6 5.7	95.5 6.4 95.4 6.1 95.7 6.2 95.9 5.9	94.1 6.6 94.0 6.2 94.4 6.4 94.6 6.0	94.9 6.6 94.8 6.2 95.2 6.4 95.4 6.1	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5	95.6 7.5 95.5 7.1 95.8 7.3 96.0 6.9	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9	96.6 8.6 96.5 8.2 96.8 8.4 96.8	97.0 8.6 96.9 8.2 97.2 8.4 97.2 8.0	99.2 8.4 99.1 8.1 99.2 8.2 99.2 7.8	99.6 8.6 99.6 8.2 99.6 8.3 99.6 7.9	98.3 9.1 98.2 8.7 98.4 8.8 98.4 8.4	97.6 9.6 97.5 9.2 97.8 9.3 97.8 97.6	98.0 10.0 97.9 9.6 98.1 9.7 98.2 9.2	98.6 9.9 98.6 9.5 98.7 9.7 98.7 98.6	99.4 9.8 99.4 9.4 99.5 9.6 99.5	99.7 9.9 99.7 9.5 99.7 9.7 99.7	99.5 10.1 99.5 9.7 99.5 9.8 99.5 9.2	98.4 9.9 98.3 9.5 98.5 9.6 98.5 9.0	98.4 9.8 98.4 9.4 98.5 9.6 98.6 9.0	97.4 9.7 97.4 9.2 97.6 9.4 97.6 8.8	97.8 9.5 97.7 9.1 97.9 93.3 97.9 8.7
South Africa  A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B P4: Free State A B	95.1 6.0 95.1 5.6 95.3 5.8 95.6 5.5	95.1 6.1 95.1 5.8 95.3 5.9 95.6 5.6	95.1 6.3 95.1 5.9 95.3 6.1 95.6 5.7	95.5 6.4 95.4 6.1 95.7 6.2 95.9 5.9	94.1 6.6 94.0 6.2 94.4 6.4 94.6	94.9 6.6 94.8 6.2 95.2 6.4 95.4 6.1	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5	95.6 7.5 95.5 7.1 95.8 7.3 96.0 6.9	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9	96.6 8.6 96.5 8.2 96.8 8.4 96.8	97.0 8.6 96.9 8.2 97.2 8.4 97.2	99.2 8.4 99.1 8.1 99.2 8.2 99.2 7.8	99.6 8.6 99.6 8.2 99.6 8.3 99.6 7.9	98.3 9.1 98.2 8.7 98.4 8.8 98.4	97.6 9.6 97.5 9.2 97.8 9.3 97.8	98.0 10.0 97.9 9.6 98.1 9.7 98.2 9.2	98.6 9.9 98.6 9.5 98.7 9.7 98.7	99.4 9.8 99.4 9.4 99.5 9.6	99.7 9.9 99.7 9.5 99.7 9.7 99.7	99.5 10.1 99.5 9.7 99.5 9.8 99.5 9.2	98.4 9.9 98.3 9.5 98.5 9.6	98.4 98.4 98.4 9.4 98.5 9.6 98.6	97.4 9.7 97.4 9.2 97.6 9.4 97.6 8.8	97.8 9.5 97.7 9.1 97.9 9.3 97.9
South Africa A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B	95.1 6.0 95.1 5.6 95.3 5.8 95.6 5.5	95.1 6.1 95.1 5.8 95.3 5.9 95.6 5.6	95.1 6.3 95.1 5.9 95.3 6.1 95.6 5.7	95.5 6.4 95.7 6.2 95.9 95.9 95.3	94.1 6.6 94.0 6.2 94.4 6.4 94.6 6.0	94.9 6.6 94.8 6.2 95.2 6.4 95.4 6.1	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5	95.6 7.5 95.8 7.1 95.8 7.3 96.0 6.9 95.5 6.5	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4	97.0 8.6 96.9 8.2 97.2 8.4 97.2 8.0 97.0 7.4	99.2 8.4 99.1 8.1 99.2 8.2 7.8 99.1 7.3	99.6 8.6 99.6 8.2 99.6 8.3 99.6 7.9	98.3 9.1 98.2 8.7 98.4 8.8 98.4 98.2 7.8	97.6 9.6 97.5 9.2 97.8 9.3 97.8 8.8 97.6	98.0 10.0 97.9 9.6 98.1 9.7 98.2 9.2 98.0	98.6 9.9 98.6 9.5 98.7 9.7 98.7 9.1 98.8 8.7	99.4 9.8 99.4 9.4 99.5 9.6 99.5 9.0	99.7 9.9 99.7 9.5 99.7 9.7 99.7 99.7 8.7	99.5 10.1 99.5 9.7 99.5 9.8 99.5 9.2	98.4 9.9 98.3 9.5 98.5 9.6 98.5 9.0	98.4 9.8 98.4 9.4 98.5 9.6 98.6 9.0	97.4 9.7 97.6 9.4 97.6 8.8 97.4	97.8 9.5 97.7 9.1 97.9 9.3 97.9 8.7 97.7 8.4
South Africa  A  B  P1: Western Cape  A  B  P2: Eastern Cape  A  B  P3: Northern Cape  A  B  P4: Free State  A  B  P5: KwaZulu-Natal	95.1 6.0 95.1 5.6 95.3 5.8 95.6 5.5 95.0 95.0	95.1 6.1 95.1 5.8 95.3 5.9 95.6 5.6 95.0 94.0	95.1 6.3 95.1 5.9 95.3 6.1 95.6 5.7 95.0 5.4	95.5 6.4 95.4 6.1 95.7 6.2 95.9 95.9 95.3 5.5	94.1 6.6 94.0 6.2 94.4 6.4 94.6 93.9 5.7	94.9 6.6 94.8 6.2 95.2 6.4 95.4 6.1 94.8 5.7	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5 95.2 6.1	95.6 7.5 95.5 7.1 95.8 7.3 96.0 6.9 95.5 6.5	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2 96.0 6.8	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6 95.7 7.2	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4	97.0 8.6 96.9 8.2 97.2 8.4 97.2 8.0 97.4	99.2 8.4 99.1 8.1 99.2 8.2 99.2 7.8 99.1 7.3	99.6 8.6 99.6 8.2 99.6 8.3 99.6 7.9 99.6 7.4	98.3 9.1 98.2 8.7 98.4 8.8 98.4 98.2 7.8	97.6 9.6 97.5 9.2 97.8 9.3 97.8 8.8 97.6 8.3	98.0 10.0 97.9 9.6 98.1 9.7 98.2 9.2 98.0 8.7	98.6 9.9 98.7 98.7 9.7 98.7 98.7 98.8	99.4 9.8 99.5 9.6 99.5 9.0 99.4 8.6	99.7 9.9 99.7 9.5 99.7 9.7 99.7 99.7 99.	99.5 10.1 99.5 9.7 99.5 9.8 99.5 99.5 8.9	98.4 9.9 98.3 9.5 98.5 9.6 98.5 9.0 98.4 8.6	98.4 9.8 98.4 9.4 98.5 9.6 98.6 9.0	97.4 9.7 97.6 9.4 97.6 8.8 97.4 8.5	97.8 9.5 97.7 9.1 97.9 9.3 97.9 8.7 97.7 8.4
South Africa  A  B  P1: Western Cape  A  B  P2: Eastern Cape  A  B  P3: Northern Cape  A  B  P4: Free State  A  B  P5: KwaZulu-Natal  A	95.1 6.0 95.1 5.6 95.3 5.8 95.6 5.5	95.1 6.1 95.1 5.8 95.3 5.9 95.6 5.6	95.1 6.3 95.1 5.9 95.3 6.1 95.6 5.7	95.5 6.4 95.7 6.2 95.9 95.9 95.3	94.1 6.6 94.0 6.2 94.4 6.4 94.6 6.0	94.9 6.6 94.8 6.2 95.2 6.4 95.4 6.1	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5	95.6 7.5 95.8 7.1 95.8 7.3 96.0 6.9 95.5 6.5	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4	97.0 8.6 96.9 8.2 97.2 8.4 97.2 8.0 97.0 7.4	99.2 8.4 99.1 8.1 99.2 8.2 7.8 99.1 7.3	99.6 8.6 99.6 8.2 99.6 8.3 99.6 7.9	98.3 9.1 98.2 8.7 98.4 8.8 98.4 98.2 7.8	97.6 9.6 97.5 9.2 97.8 9.3 97.8 8.8 97.6	98.0 10.0 97.9 9.6 98.1 9.7 98.2 9.2 98.0 8.7	98.6 9.9 98.6 9.5 98.7 9.7 98.7 9.1 98.8 8.7	99.4 9.8 99.4 9.4 99.5 9.6 99.5 9.0	99.7 9.9 99.7 9.5 99.7 9.7 99.7 99.7 8.7	99.5 10.1 99.5 9.7 99.5 9.8 99.5 9.2	98.4 9.9 98.3 9.5 98.5 9.6 98.5 9.0	98.4 9.8 98.4 9.4 98.5 9.6 98.6 9.0	97.4 9.7 97.6 9.4 97.6 8.8 97.4	97.8 9.5 97.7 9.1 97.9 9.3 97.9 8.7 97.7 8.4
South Africa  A  B  P1: Western Cape  A  B  P2: Eastern Cape  A  B  P3: Northern Cape  A  B  P4: Free State  A  B  P5: KwaZulu-Natal	95.1 5.6 95.3 5.8 95.6 5.5 95.0 5.2 94.0 6.2	95.1 95.1 5.8 95.3 5.9 95.6 5.6 95.0 6.3	95.1 5.9 95.3 6.1 95.6 5.7 95.0 5.4 94.0 6.4	95.5 6.4 95.4 6.1 95.7 6.2 95.9 95.3 5.5 94.5 6.6	94.1 6.6 94.0 6.2 94.4 6.4 94.6 6.0 93.9 5.7 92.8 6.7	94.9 6.6 94.8 6.2 95.2 6.4 95.4 6.1 94.8 5.7	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5 95.2 6.1	95.6 7.5 95.5 7.1 95.8 7.3 96.0 6.9 95.5 6.5 94.6 7.7	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2 96.0 6.8	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6 95.7 7.2 94.9 8.5	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4 95.5 8.7	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4 95.8 8.8	97.0 8.6 96.9 8.2 97.2 8.4 97.2 8.0 97.0 96.4 8.8	99.2 8.4 99.1 8.1 99.2 7.8 99.2 7.8 99.1 7.3 99.0 8.6	99.6 8.6 99.6 8.2 99.6 8.3 99.6 7.9 99.5 8.7	98.3 9.1 98.2 8.7 98.4 8.8 98.4 98.2 7.8 97.9 9.3	97.6 9.6 97.5 9.2 97.8 9.3 97.8 8.8 97.6 8.3 97.1 9.8	98.0 97.9 96.9 98.1 98.2 98.2 97.6 10.2	98.6 9.9 98.7 9.7 98.7 9.1 98.6 8.7 98.3 10.2	99.4 99.5 99.5 99.6 99.5 90.0 99.4 8.6 99.3	99.7 9.9 99.7 9.5 99.7 99.7 99.7 99.7 10.2	99.5 99.5 99.5 99.5 99.5 99.5 99.5 99.5	98.4 98.0 98.5 98.5 98.5 98.0 98.0	98.4 98.4 98.5 98.6 98.6 98.6 98.1 10.1	97.4 9.7 97.4 9.2 97.6 9.4 97.6 8.8 97.4 8.5	97.8 9.5 97.7 9.1 97.9 93.3 97.9 8.7 97.7 8.4
South Africa A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B P4: Free State A B P5: KwaZulu-Natal A B	95.1 5.6 95.3 5.8 95.6 5.5 95.0 6.2	95.1 95.1 5.8 95.3 5.9 95.6 5.6 95.0 6.3 94.0 6.3	95.1 5.9 95.3 6.1 95.6 5.7 95.0 5.4 94.0 6.4 95.0	95.5 6.4 95.4 6.1 95.7 6.2 95.9 95.3 5.5 94.5 6.6	94.0 94.0 6.2 94.4 6.4 94.6 6.0 93.9 5.7 92.8 6.7 94.0	94.8 6.2 95.2 6.4 95.4 6.1 94.8 5.7 93.8 6.8	95.2 6.7 95.6 6.8 95.7 6.5 95.2 6.1 94.3 7.2	95.6 7.5 95.5 7.1 95.8 7.3 96.0 6.9 95.5 6.5 94.6 7.7	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2 96.0 6.8 95.2 8.1	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6 95.7 7.2 94.9 8.5	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4 95.5 8.7	96.6 8.6 96.5 8.2 96.8 8.4 96.8 96.5 7.4 95.8 8.8	97.0 8.6 96.9 8.2 97.2 8.4 97.2 8.0 97.0 96.4 8.8	99.2 8.4 99.1 8.1 99.2 7.8 99.1 7.3 99.0 8.6	99.6 8.2 99.6 8.3 99.6 7.4 99.5 8.7	98.3 9.1 98.2 8.7 98.4 8.8 98.4 98.2 7.8 97.9 9.3	97.6 97.8 97.8 97.8 97.8 97.8 8.8 97.6 8.3 97.1 98	98.0 98.0 97.9 98.1 98.2 98.0 8.7 97.6 10.2	98.6 9.9 98.7 9.7 98.7 9.1 98.6 8.7 98.3 10.2	99.4 99.5 99.5 99.6 99.5 90.0 99.4 8.6 99.3	99.7 9.5 99.7 9.7 99.7 99.7 99.7 10.2	99.5 99.5 99.5 99.5 99.5 99.5 99.5 99.5	98.4 98.5 98.5 98.5 98.6 98.6 98.0 98.0 98.0	98.4 98.4 98.4 98.5 98.6 98.6 98.4 8.6 98.1 10.1	97.4 97.4 97.6 97.6 97.6 8.8 97.4 8.5 96.9 10.0	97.8 9.5 97.7 9.1 97.9 93.3 97.9 8.7 97.7 8.4 97.3 98.9
South Africa  A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B P4: Free State A B P5: KwaZulu-Natal A B P6: North West A B	95.1 5.6 95.3 5.8 95.6 5.5 95.0 5.2 94.0 6.2	95.1 95.1 5.8 95.3 5.9 95.6 5.6 95.0 6.3	95.1 5.9 95.3 6.1 95.6 5.7 95.0 5.4 94.0 6.4	95.5 6.4 95.4 6.1 95.7 6.2 95.9 95.3 5.5 94.5 6.6	94.1 6.6 94.0 6.2 94.4 6.4 94.6 6.0 93.9 5.7 92.8 6.7	94.9 6.6 94.8 6.2 95.2 6.4 95.4 6.1 94.8 5.7	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5 95.2 6.1	95.6 7.5 95.5 7.1 95.8 7.3 96.0 6.9 95.5 6.5 94.6 7.7	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2 96.0 6.8	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6 95.7 7.2 94.9 8.5	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4 95.5 8.7	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4 95.8 8.8	97.0 8.6 96.9 8.2 97.2 8.4 97.2 8.0 97.0 96.4 8.8	99.2 8.4 99.1 8.1 99.2 7.8 99.2 7.8 99.1 7.3 99.0 8.6	99.6 8.6 99.6 8.2 99.6 8.3 99.6 7.9 99.5 8.7	98.3 9.1 98.2 8.7 98.4 8.8 98.4 98.2 7.8 97.9 9.3	97.6 9.6 97.5 9.2 97.8 9.3 97.8 8.8 97.6 8.3 97.1 9.8	98.0 97.9 96.9 98.1 98.2 98.2 97.6 10.2	98.6 9.9 98.7 9.7 98.7 9.1 98.6 8.7 98.3 10.2	99.4 99.5 99.5 99.6 99.5 90.0 99.4 8.6 99.3	99.7 9.9 99.7 9.5 99.7 99.7 99.7 99.7 10.2	99.5 99.5 99.5 99.5 99.5 99.5 99.5 99.5	98.4 98.0 98.5 98.5 98.5 98.0 98.0	98.4 98.4 98.4 98.5 98.6 98.6 98.4 8.6 98.1 10.1	97.4 9.7 97.4 9.2 97.6 9.4 97.6 8.8 97.4 8.5	97.8 9.5 97.7 9.1 97.9 93.3 97.9 8.7 97.7 8.4
South Africa  A  B  P1: Western Cape  A  B  P2: Eastern Cape  A  B  P3: Northern Cape  A  B  P4: Free State  A  B  P5: KwaZulu-Natal  A  B  P6: North West  A	95.1 5.6 95.3 5.8 95.6 5.5 95.0 6.2	95.1 6.1 95.1 5.8 95.3 5.9 95.6 5.6 95.0 6.3	95.1 6.3 95.1 5.9 95.3 6.1 95.6 5.7 95.0 6.4 95.0 6.2	95.5 6.4 95.4 6.1 95.7 6.2 95.9 95.3 5.5 6.6 95.4 6.4	94.1 6.6 94.0 6.2 94.4 6.4 94.6 6.0 93.9 5.7 92.8 6.7	94.9 94.8 94.8 6.2 95.2 6.4 95.4 6.1 94.8 6.8 94.9 6.5	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5 95.2 6.1 94.3 7.2 95.2	95.6 7.5 95.5 7.1 95.8 7.3 96.0 6.9 95.5 6.5 94.6 7.7	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2 96.0 6.8 95.2 8.1 7.8	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6 95.7 7.2 94.9 8.5 95.8	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4 95.5 8.7	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4 95.8 8.8	97.0 8.6 96.9 8.2 97.2 8.4 97.2 8.0 7.4 8.8 97.0 8.5	99.2 8.4 99.1 8.1 99.2 8.2 99.2 7.8 99.1 7.3 99.0 8.6	99.6 8.6 99.6 8.2 99.6 8.3 99.6 7.9 99.5 8.7	98.3 98.4 98.4 8.8 98.4 8.4 98.2 7.8 97.9 9.3 98.3 9.0	97.6 97.8 97.8 97.8 97.8 97.8 8.8 97.6 8.3 97.1 98	98.0 10.0 97.9 9.6 98.1 9.7 98.2 98.0 8.7 97.6 10.2	98.6 9.9 98.7 9.7 98.7 98.7 98.6 8.7 98.6 98.6 99.9	99.4 99.5 99.5 99.6 99.5 90.0 99.4 8.6 99.3	99.7 9.5 99.7 9.7 99.7 99.7 99.7 10.2	99.5 99.5 99.5 99.5 99.5 99.5 99.5 99.5	98.4 9.9 98.5 98.5 9.6 98.5 9.0 98.4 98.0 10.1	98.4 98.5 98.6 98.6 98.6 98.6 98.6 98.1 10.1	97.4 97.4 97.6 97.6 97.6 8.8 97.4 8.5 96.9 10.0	97.8 9.5 97.7 9.1 97.9 93.3 97.9 8.7 97.7 8.4 97.3 98.9
South Africa  A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B P4: Free State A B P5: KwaZulu-Natal A B P6: North West A B	95.1 5.6 95.3 5.8 95.6 5.5 95.0 5.2 94.0 6.2 95.4	95.1 6.1 95.1 5.8 95.3 5.9 95.6 5.6 95.0 6.3 95.0 6.1	95.1 6.3 95.1 5.9 95.3 6.1 95.6 5.7 95.0 6.4 95.0 6.4 95.0 6.2	95.5 6.4 95.4 6.1 95.7 6.2 95.9 5.9 95.3 5.5 94.5 6.6 95.4	94.1 6.6 94.0 6.2 94.4 6.4 94.6 6.0 93.9 5.7 92.8 6.7 94.0 6.5	94.9 94.8 94.8 95.2 6.4 95.4 6.1 94.8 5.7 93.8 6.8 94.9 6.5	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5 95.2 6.1 94.3 7.2 95.2 7.0	95.6 7.5 95.5 7.1 95.8 7.3 96.0 6.9 95.5 6.5 94.6 7.7 95.5 7.4	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2 96.0 6.8 95.2 8.1 7.8	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6 95.7 7.2 94.9 8.5 95.8 8.2	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4 95.5 8.7 96.3 8.4	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4 95.8 8.8 96.6 8.5	97.0 8.6 96.9 8.2 97.2 8.4 97.2 97.0 96.4 8.8 97.0 8.5	99.2 8.4 99.1 8.1 99.2 7.8 99.1 7.3 99.0 8.6 99.1 8.3	99.6 8.6 99.6 8.2 99.6 8.3 99.6 7.9 99.6 7.4 99.5 8.7	98.3 98.4 98.2 8.7 98.4 8.8 98.4 98.2 7.8 97.9 9.3 98.3 9.0	97.6 9.6 97.5 9.2 97.8 93 97.8 8.8 97.6 9.5 97.6	98.0 97.9 9.6 98.1 9.7 98.2 9.2 98.0 8.7 97.6 10.2 98.0 10.0	98.6 9.9 98.7 98.7 98.7 98.7 98.6 98.6 99.9	99.4 99.5 99.5 99.6 99.5 90.0 99.4 8.6 99.3 10.1 99.4	99.7 99.7 99.7 99.7 99.7 99.7 99.7 10.2	99.5 99.5 99.5 99.5 98. 99.5 99.5 99.5 8.9 99.5 10.4 99.5	98.4 9.9 98.5 98.5 9.6 98.5 9.0 98.4 8.6 98.0 10.1	98.4 9.8 98.5 9.6 98.6 99.0 98.1 10.1 98.4 99.9	97.4 97.6 97.4 97.6 97.6 97.6 8.8 97.4 8.5 97.4 97.6	97.8 9.5 97.7 9.1 97.9 97.9 8.7 97.7 8.4 97.3 97.3 97.7 9.7
South Africa  A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B P4: Free State A B P5: KwaZulu-Natal A B P6: North West A B P7: Gauteng A	95.1 6.0 95.1 5.6 95.3 5.8 95.6 5.5 95.0 6.2	95.1 6.1 95.1 5.8 95.3 5.9 95.6 5.6 95.0 6.3	95.1 6.3 95.1 5.9 95.3 6.1 95.6 5.7 95.0 6.4 95.0 6.2	95.5 6.4 95.4 6.1 95.7 6.2 95.9 95.3 5.5 6.6 95.4 6.4	94.1 6.6 94.0 6.2 94.4 6.4 94.6 6.0 93.9 5.7 92.8 6.7	94.9 94.8 94.8 6.2 95.2 6.4 95.4 6.1 94.8 6.8 94.9 6.5	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5 95.2 6.1 94.3 7.2 95.2	95.6 7.5 95.5 7.1 95.8 7.3 96.0 6.9 95.5 6.5 94.6 7.7	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2 96.0 6.8 95.2 8.1 7.8	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6 95.7 7.2 94.9 8.5 95.8	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4 95.5 8.7	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4 95.8 8.8	97.0 8.6 96.9 8.2 97.2 8.4 97.2 8.0 7.4 8.8 97.0 8.5	99.2 8.4 99.1 8.1 99.2 8.2 99.2 7.8 99.1 7.3 99.0 8.6	99.6 8.6 99.6 8.2 99.6 8.3 99.6 7.9 99.5 8.7	98.3 98.4 98.4 8.8 98.4 8.4 98.2 7.8 97.9 9.3 98.3 9.0	97.6 9.6 97.5 9.2 97.8 97.8 8.8 97.6 8.3 97.1 98.9	98.0 10.0 97.9 9.6 98.1 9.7 98.2 98.0 8.7 97.6 10.2	98.6 9.9 98.7 98.7 98.7 98.7 98.6 8.7 98.6 98.6 99.9	99.4 9.8 99.5 9.6 99.5 9.0 99.4 8.6 99.3 10.1	99.7 9.9 99.7 9.5 99.7 99.7 99.7 99.7 10.2	99.5 10.1 99.5 9.7 99.5 9.8 99.5 9.2 99.5 8.9 99.4 10.4	98.4 9.9 98.5 98.5 9.6 98.5 9.0 98.4 98.0 10.1	98.4 9.8 98.5 9.6 98.6 99.0 98.1 10.1 98.4 99.9	97.4 9.7 97.4 9.2 97.6 9.4 97.6 8.8 97.4 8.5 96.9 10.0	97.8 9.5 97.7 9.1 97.9 9.3 97.9 8.7 97.7 9.8 97.3 9.8
South Africa A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B P4: Free State A B P5: KwaZulu-Natal A B P6: North West A B P7: Gauteng A B	95.1 5.6 95.3 5.8 95.6 5.5 95.0 5.2 94.0 6.2 95.4	95.1 6.1 95.1 5.8 95.3 5.9 95.6 5.6 95.0 6.3 95.0 6.1	95.1 6.3 95.1 5.9 95.3 6.1 95.6 5.7 95.0 6.4 95.0 6.4 95.0 6.2	95.5 6.4 95.4 6.1 95.7 6.2 95.9 5.9 95.3 5.5 94.5 6.6 95.4	94.1 6.6 94.0 6.2 94.4 6.4 94.6 6.0 93.9 5.7 92.8 6.7 94.0 6.5	94.9 94.8 94.8 95.2 6.4 95.4 6.1 94.8 5.7 93.8 6.8 94.9 6.5	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5 95.2 6.1 94.3 7.2 95.2 7.0	95.6 7.5 95.5 7.1 95.8 7.3 96.0 6.9 95.5 6.5 94.6 7.7 95.5 7.4	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2 96.0 6.8 95.2 8.1 7.8	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6 95.7 7.2 94.9 8.5 95.8 8.2	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4 95.5 8.7 96.3 8.4	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4 95.8 8.8 96.6 8.5	97.0 8.6 96.9 8.2 97.2 8.4 97.2 97.0 96.4 8.8 97.0 8.5	99.2 8.4 99.1 8.1 99.2 7.8 99.1 7.3 99.0 8.6 99.1 8.3	99.6 8.6 99.6 8.2 99.6 8.3 99.6 7.9 99.6 7.4 99.5 8.7	98.3 98.4 98.2 8.7 98.4 8.8 98.4 98.2 7.8 97.9 9.3 98.3 9.0	97.6 9.6 97.5 9.2 97.8 93 97.8 8.8 97.6 9.5 97.6	98.0 10.0 97.9 9.6 98.1 98.2 98.2 98.0 10.2 98.0 10.0	98.6 9.9 98.7 98.7 98.7 98.7 98.6 98.6 99.9	99.4 99.5 99.5 99.6 99.5 90.0 99.4 8.6 99.3 10.1 99.4	99.7 99.7 99.7 99.7 99.7 99.7 99.7 10.2	99.5 99.5 99.5 99.5 98. 99.5 99.5 99.5 8.9 99.5 10.4 99.5	98.4 9.9 98.5 98.5 9.6 98.5 9.0 98.4 8.6 98.0 10.1	98.4 9.8 98.5 9.6 98.6 99.0 98.1 10.1 98.4 99.9	97.4 97.6 97.4 97.6 97.6 97.6 8.8 97.4 8.5 97.4 97.6	97.8 9.5 97.7 9.1 97.9 97.9 97.9 8.7 97.7 8.4 97.3 9.8 97.7 9.7
South Africa  A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B P4: Free State A B P5: KwaZulu-Natal A B P6: North West A B P7: Gauteng A B	95.1 5.6 95.3 5.8 95.6 5.5 95.0 6.2 95.0 6.2	95.1 6.1 95.1 5.8 95.3 5.9 95.6 5.6 95.0 6.3 95.0 6.1	95.1 5.9 95.3 6.1 95.6 5.7 95.0 5.4 94.0 6.4 95.0 6.2	95.4 6.4 95.7 6.2 95.9 95.3 5.5 94.5 6.6 95.4 6.4	94.0 6.2 94.4 6.4 94.6 6.0 93.9 5.7 92.8 6.7 94.0 6.5 94.0 6.5	94.9 94.8 6.2 95.2 6.4 95.4 6.1 94.8 5.7 93.8 6.8 94.9 95.3 7.0	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5 95.2 6.1 94.3 7.2 95.2 7.0	95.6 7.5 95.8 7.1 95.8 96.0 6.9 95.5 6.5 94.6 7.7 95.5 7.4 95.9	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2 96.0 6.8 95.2 8.1 7.8 96.4 8.3	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6 95.7 7.2 94.9 8.5 95.8 8.2 96.1 8.8	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4 95.5 8.7 96.3 8.4 96.6 9.0	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4 95.8 8.8 96.6 95.8 96.6 96.8	97.0 8.6 96.9 8.2 97.2 8.4 97.2 8.0 97.0 7.4 8.8 97.0 96.4 8.8 97.0 97.2	99.2 8.4 99.1 8.1 99.2 7.8 99.2 7.8 99.1 7.3 99.0 8.6 99.1 8.3	99.6 8.2 99.6 8.3 99.6 7.4 99.5 8.7 99.6 8.4 99.6	98.3 9.1 98.2 8.7 98.4 8.4 98.2 7.8 97.9 9.3 9.0 98.4 9.6	97.6 9.6 97.5 9.2 97.8 97.8 8.8 97.6 8.3 97.1 9.8 97.6 9.5 97.6	98.0 98.0 97.9 9.6 98.1 97.9 98.2 98.0 8.7 97.6 10.2 98.0	98.6 9.9 98.7 97.7 98.7 91.1 98.6 8.7 98.3 10.2 98.6 9.9 98.7	99.4 99.5 99.5 99.6 99.5 90.0 99.4 8.6 99.3 10.1 99.4 99.4	99.7 9.9 99.7 9.5 99.7 99.7 99.7 10.2 99.7 10.0	99.5 99.5 99.5 99.5 99.5 99.5 99.5 8.9 99.4 10.4 99.5 10.2	98.4 98.6 98.6 98.5 9.0 98.4 98.0 98.4 10.1	98.4 9.8 98.4 9.4 98.5 98.6 90 98.4 10.1 98.4 9.9 98.5 10.3	97.4 9.7 97.6 9.4 97.6 8.8 97.4 8.5 96.9 10.0 97.4 9.8	97.8 9.5 97.7 9.1 97.9 93. 97.9 8.7 97.7 8.4 97.3 98. 97.7 9.1
South Africa  A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B P4: Free State A B P5: KwaZulu-Natal A B P6: North West A B P7: Gauteng A B	95.1 5.6 95.3 5.8 95.6 5.5 95.0 6.2 95.0 6.0 95.4 6.4	95.1 5.8 95.3 5.9 95.6 5.6 95.0 6.3 95.0 95.0 6.1	95.1 5.9 95.6 95.6 5.7 95.6 5.4 94.0 6.4 95.0 6.2	95.5 6.4 95.4 6.1 95.7 6.2 95.9 95.3 5.5 94.5 6.6 95.4 95.8	94.0 6.2 94.4 6.4 94.6 6.0 93.9 5.7 92.8 6.7 94.0 95.6	94.9 6.6 94.8 6.2 95.2 6.4 95.4 6.1 94.8 5.7 93.8 6.8 94.9 95.3 7.0	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5 95.2 6.1 94.3 7.2 95.2 7.0	95.6 7.5 95.8 7.1 95.8 96.0 6.9 95.5 6.5 94.6 7.7 95.5 7.4 95.9 7.9	96.1 7.8 96.0 7.4 96.3 7.6 96.4 7.2 96.0 6.8 95.2 8.1 96.1 7.8 96.4 8.3	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6 95.7 7.2 94.9 8.5 95.8 95.8 96.1 8.8	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4 95.5 8.7 96.3 8.4 96.6 9.0	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4 95.8 8.8 96.6 95.8 96.8 97.4	97.0 8.6 96.9 8.2 97.2 8.4 97.2 8.0 97.0 7.4 8.8 97.0 96.4 8.8 97.0 97.0 97.0 97.0 97.0 97.0	99.2 8.4 99.1 8.1 99.2 7.8 99.1 99.1 8.6 99.1 8.3	99.6 8.6 99.6 8.2 99.6 7.9 99.6 7.4 99.5 8.7 99.6 9.1	98.3 9.1 98.2 8.7 98.4 8.8 98.4 99.2 7.8 97.9 9.3 98.3 99.3 98.4 9.6 98.4	97.6 9.6 97.5 9.2 97.8 97.8 8.8 97.6 8.3 97.1 98.5 97.6 9.5	98.0 97.9 9.6 98.1 9.7 98.2 9.2 98.0 8.7 97.6 10.2 98.0 10.0 98.1	98.6 9.9 98.7 97.7 91.1 98.6 8.7 98.3 10.2 98.6 98.9 98.7	99.4 99.5 99.5 9.0 99.5 9.0 99.4 8.6 99.3 10.1 99.4 10.4	99.7 9.9 99.7 9.5 99.7 9.1 99.7 10.2 99.7 10.0 99.7 10.5	99.5 10.1 99.5 9.7 99.5 98.8 99.5 99.5 10.4 99.5 10.2	98.4 9.9 98.5 98.5 98.6 98.0 10.1 98.4 98.0 98.0	98.4 9.8 98.4 9.4 98.5 98.6 90 98.4 10.1 98.4 9.9 98.5 10.3	97.4 9.7 97.6 9.4 97.6 8.8 97.4 8.5 96.9 10.0 97.4 98.1	97.8 9.5 97.7 9.1 97.9 93.3 97.7 8.4 97.7 9.7 9.7 9.7 9.7 9.7 9.7
South Africa  A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B P4: Free State A B P5: KwaZulu-Natal A B P6: North West A B P7: Gauteng A B P8: Mpumalanga A B	95.1 5.6 95.3 5.8 95.6 5.5 95.0 6.2 95.0 6.0 95.4 6.4	95.1 5.8 95.3 5.9 95.6 5.6 95.0 6.3 95.0 6.1 95.4 95.4	95.1 6.3 95.1 5.9 95.3 6.1 95.6 5.7 95.0 6.4 95.0 6.2 95.4 6.3	95.5 6.4 95.4 6.1 95.7 6.2 95.9 95.3 5.5 94.5 6.6 95.4 95.8	94.0 6.2 94.4 6.4 94.6 6.0 93.9 5.7 92.8 6.7 94.0 95.6	94.9 6.6 94.8 6.2 95.2 6.4 95.4 6.1 94.8 5.7 93.8 6.8 94.9 95.3 7.0	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5 95.2 6.1 94.3 7.2 7.0 95.6 7.5	95.6 7.5 95.8 7.1 95.8 96.0 6.9 95.5 6.5 94.6 7.7 95.5 7.4 95.9 7.9	96.1 7.8 96.0 7.4 96.3 7.6 96.4 7.2 96.0 6.8 95.2 8.1 96.1 7.8 96.4 8.3	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6 95.7 7.2 94.9 8.5 95.8 95.8 96.1 8.8	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4 95.5 8.7 96.3 8.4 96.6 9.0	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4 95.8 8.8 96.6 95.8 96.8 97.4	97.0 8.6 96.9 8.2 97.2 8.4 97.2 8.0 97.0 7.4 8.8 97.0 96.4 8.8 97.0 97.0 97.0 97.0 97.0 97.0	99.2 8.4 99.1 8.1 99.2 8.2 7.8 99.1 7.3 99.0 8.6 99.1 8.3	99.6 8.6 99.6 8.2 99.6 7.9 99.6 7.4 99.5 8.7 99.6 8.4 99.6 9.1	98.3 9.1 98.2 8.7 98.4 8.8 98.4 99.2 7.8 97.9 9.3 98.3 99.3 98.4 9.6 98.4	97.6 9.6 97.5 9.2 97.8 97.8 8.8 97.6 8.3 97.1 98.5 97.6 9.5	98.0 97.9 9.6 98.1 9.7 98.2 9.2 98.0 8.7 97.6 10.2 98.1 10.5 98.9	98.6 9.9 98.7 97.7 91.1 98.6 8.7 98.3 10.2 98.6 98.9 98.7	99.4 99.5 99.5 9.0 99.5 9.0 99.4 8.6 99.3 10.1 99.4 10.4	99.7 9.9 99.7 9.5 99.7 9.1 99.7 10.2 99.7 10.0 99.7 10.5	99.5 10.1 99.5 9.7 99.5 98.8 99.5 99.5 10.4 99.5 10.2	98.4 9.9 98.5 98.5 98.6 98.0 10.1 98.4 98.0 98.0	98.4 9.8 98.4 9.4 98.5 98.6 90 98.4 10.1 98.4 9.9 98.5 10.3	97.4 9.7 97.6 9.4 97.6 8.8 97.4 8.5 96.9 10.0 97.4 98.1	97.8 9.5 97.7 9.1 97.9 93.3 97.7 8.4 97.7 9.7 9.7 9.7 9.7 9.7 9.7
South Africa A B P1: Western Cape A B P2: Eastern Cape A B P3: Northern Cape A B P4: Free State A B P5: KwaZulu-Natal A B P6: North West A B P7: Gauteng A B P8: Mpumalanga A B	95.1 5.6 95.3 95.3 95.6 95.6 95.0 95.0 6.2 95.0 6.2 95.0 6.2	95.1 95.1 95.3 95.6 95.6 95.0 6.3 95.0 6.1 95.4 6.5 96.4 6.5	95.1 6.3 95.1 5.9 95.3 6.1 95.6 5.7 95.0 6.4 95.0 6.2 95.4 6.3	95.4 6.4 95.4 6.1 95.7 6.2 95.9 95.3 5.5 94.5 6.6 95.4 6.4 95.8 6.9	94.0 6.6 94.0 6.2 94.6 6.0 93.9 5.7 94.6 6.5 94.5 7.0 95.6 6.6	94.9 6.6 94.8 6.2 95.2 6.4 95.4 6.1 94.8 6.8 94.9 6.5 95.3 7.0	95.3 7.0 95.2 6.7 95.6 6.8 95.7 6.5 95.2 6.1 94.3 7.2 7.0 95.6 7.5	95.6 7.5 95.5 7.1 95.8 7.3 96.0 6.9 95.5 6.5 94.6 7.7 95.5 7.4 95.9 9.9 9.7 9.9	96.1 7.9 96.0 7.4 96.3 7.6 96.4 7.2 96.0 6.8 95.2 8.1 96.1 7.8 96.4 8.3 97.0	95.8 8.3 95.7 7.9 96.1 8.1 96.2 7.6 95.7 7.2 94.9 8.5 95.8 8.2 96.1 8.8	96.3 8.5 96.2 8.1 96.5 8.3 96.6 7.9 96.2 7.4 95.5 8.7 96.3 8.4 96.6 9.0	96.6 8.6 96.5 8.2 96.8 8.4 96.8 8.0 96.5 7.4 95.8 8.8 96.6 8.5 96.8 91.	97.0 8.6 96.9 97.2 8.4 97.2 8.0 97.0 96.4 8.8 97.0 8.5 97.2 97.2 97.7 8.5	99.2 8.4 99.1 8.1 99.2 8.2 7.8 99.1 7.3 99.0 8.6 99.1 8.3	99.6 8.6 99.6 8.2 99.6 7.9 99.6 7.4 99.5 8.7 99.6 8.4 99.6 8.4	98.3 9.1 98.2 8.7 98.4 8.4 98.2 7.8 97.9 9.3 99.3 99.6 98.7 98.9	97.6 9.6 97.5 9.2 97.8 9.3 97.8 8.8 97.6 8.3 97.1 9.8 97.6 9.5	98.0 97.9 9.6 98.1 9.7 98.2 98.0 8.7 97.6 10.2 98.1 10.5 98.5 10.0	98.6 9.9 98.7 98.7 98.7 98.3 10.2 98.6 9.9 98.7 10.5	99.4 99.5 99.5 99.6 99.5 99.4 8.6 99.3 10.1 99.4 10.4 99.6 99.8	99.7 99.7 9.5 99.7 99.7 99.7 99.7 10.2 99.7 10.0 99.7 10.5 99.8	99.5 10.1 99.5 98. 99.5 99.5 8.9 99.4 10.4 99.5 10.2	98.4 9.9 98.5 98.5 98.6 98.0 98.4 10.1 98.4 99.9 98.5 10.3	98.4 98.4 98.4 98.5 96.6 98.6 98.1 10.1 98.4 9.9 98.5 10.3	97.4 9.7 97.6 9.4 97.6 8.8 97.4 8.5 96.9 10.0 97.4 98.1 97.6	97.8 97.7 9.1 97.9 9.3 97.9 8.7 97.7 8.4 97.3 9.8 97.7 9.1 97.9 97.9 97.9 97.9

Table 9.1: Household expenditure nationally as well as at provincial level since 1993

**Source**: Basic data: STATSSA - RIES—Household income & expenditure by 2011 municipality/ward-based metro region. Own calculations.

9.5.3 The outcomes of the analysis indicate that a need exists to increase subsidy funding to passengers to minimise the detrimental impact of increasing transport costs. This means ensuring effective utilisation and allocation of subsidies to benefit poor households and those in need or specific segments of the commuting population. Subsidisation is intended to drive down the price of



transport and therefore should be sufficient to enable the objective of creating or contributing to sustainable livelihoods. The economic argument of allocating more subsidy is sound if the derived benefit for the household is sufficient to enhance affordability.

- 9.5.4 As a covering note to the analysis provided above it should be noted that the focus of the economic analysis is on subsidy provision. It was not possible to distinguish transport subsidies from the incentives and subsidies related to the transport, storage and communication sector from the data available. Although, economic data has limitations and this is acknowledged, the use of budgets to reflect consumption is not aligned to consumption expenditure or the production of transport goods and services in the economy. The use of travel survey data offers some indication of household expenditure, it does not align with the supply side represented by GDP due to timing differences.
- 9.6 Economic context for subsidisation at a macro economic level
- 9.6.1 The need for subsidisation is clear from the previous analysis. Subsidising users' fares for public transport may sound like a great idea, and often there are good economic reasons for doing so. In all industrialised and many developing countries, urban transport systems are subsidised with public funds to continue operating. It sounds even better if subsidies target certain populations, such as students, older adults, or low-income communities. There are two important points to keep in mind about transport subsidies:
  - subsidising users' fares, particularly with targeted subsidies, is effective; and
  - Discounted fares for particular populations should not be funded by charging other passengers more. By focusing on both sides of the equation, policy makers can ensure an efficient and sustainable transport system.
- 9.6.2 Subsidies for public transport make sense from an economic perspective. The debate on transport subsidies has a long history in discussions of transport economics. Subsidising user fares has been shown to increase ridership, which in turn increases the frequency of the entire system and reduces waiting times for all users. Additionally, by shifting people to more sustainable modes of transport, subsidies can help address the negative externalities of car use which include traffic congestion, air pollution, and fatalities. Furthermore, subsidies can be redistributive, meaning that they benefit lower-income individuals. These are all compelling reasons for subsidising users' public transport fares.
- 9.6.3 However, problems can arise when subsidies are not properly applied. If subsidies do not improve the quality of service or fail to help those in need, they lose their impact. Implementing targeted subsides should be a redistributive measure, as they are an effective solution for increasing access to public transport among disadvantaged communities.
- 9.6.4 Subsidies essentially need a funding source that is derived through taxes or revenue allocations. It is necessary to find alternative funding sources for



transport subsidies.. Alternatively, funding could come from taxes on inefficient car use parking regulations and fees, since private vehicles often do not pay for the full amount of their social cost—which includes traffic congestion, air pollution, and accidents. All these sources of funding together with social impact investment i.e capturing the long-term financial benefits of improved road safety to fund the up-front capital improvement of the road infrastructure can help ease the financial burden on transport budgets, alleviate the expenses of transport on household budgets, but also result in savings that would stimulate other household spending that would not have been possible without alleviating the burden of transport costs.

- 9.6.5 Initiatives to subsidise public transport fares should be sensible and balanced. The intention to subsidise the public transport fares of marginalized populations is good, but without the proper financing mechanisms, transport sector deficits will only grow. For instance, Public-Private Partnerships give businesses the opportunity to voluntarily contribute to the funding of transport systems because the businesses ultimately benefit from such systems. Ensuring an efficient and sustainable public transport system requires not only supporting particular communities, but doing so in a financially viable manner.
- 9.6.6 A subsidy is likely to reduce public transport charges. From a micro-economic perspective, the supply curve will shift to the right, reducing the equilibrium price. This will lead to an extension of demand, as more people are encouraged to use this form of transport. The increased demand is the combined result of the income and substitution effect. At a lower price, alternatives to public transport appear more expensive (the substitution effect), and, assuming household income remains constant, cheaper public transport results in an increase in real income (the income effect) and by extension results in either savings that boost economic growth or additional spending that multiplies through various economic sectors due to the additional spending. In addition, the income effect of lower public transport prices may be very weak. Indeed, increases in real income may encourage greater use of private transport use, and discourage use of public transport, suggesting that public transport is an inferior good.
- 9.6.7 Subsidisation of public transport may result in a moral hazard, with state subsidies being regarded as an insurance against inefficient practices. Such inefficiency raises the cost of supply, and diverts scarce resources from more efficient uses. For example, bus companies may over-employ, and operate too many buses, which are run at 'half-empty' for long periods. There is, of course, no guarantee that all the state subsidy will be passed on to the passenger in terms of lower fares.
- 9.7 Guiding economic principles and transport funding
- 9.7.1 It is fundamental for a city's/province's/country's development to have an effective transport system, especially public transport that addresses the needs of many. For most of the population, public transport is the only means to access employment, education and public services. The operational and financial features of these transport interventions change from one country/city to the other but, interestingly, they all present themselves as public. Public transport refers to a means of transportation that is shared and open to the public, usually by ticket purchase, as opposed to private modes. It also can refer to the ownership of a system, if it is owned by a public entity or even if the system is



- operated by a private company if it is funded by public resources.
- 9.7.2 A current trend worldwide is to formalise the existing informal mass transport sector. It is an attempt by governments to gain more regulatory control over transport and decrease negative externalities. Often this includes the introduction of public funding through subsidies, either for the construction of infrastructure for transit systems (e.g. BRT), rail projects or the introduction of operating subsidies.
- 9.8 Transport as a public good from an economic perspective
- 9.8.1 A public good has non-excludable benefits and non-rival consumption. Under this definition public transport is not a public good since at a certain point there is not non-rival consumption as transport vehicles have a carrying capacity. However, there are low marginal costs where there is available capacity and the benefits of public transport are non-excludable, meaning everyone can benefit from the existence of public transport even if they are not consuming it at any moment.
- 9.8.2 Public transport provides benefits to society that private transportation does not, particularly in more efficient use of public infrastructure such as roads. In addition, everyone benefits from the potential transportation option public transport provides. Since it is open to the public it serves as an automatic back-up option to all private transportation users regardless of if they ever use it. The only barrier is the cost of the fare, which may exclude poorer communities.
- 9.8.3 Another way to consider the question of public goods is if the market allocates the optimal amount of that good. Many studies on urban bus transport have shown that the market fails to provide the optimal level of accessibility and creates many negative externalities. Therefore, there is a public, in this case meaning government, interest in intervening in the market.
- 9.9 Public ownership and financing
- 9.9.1 When a transport system including assets and infrastructure is owned by a government it is clear it is public in some sense of the word. Ownership by the state is not the most important factor (state owned enterprises can operate like a private firm). It is accepted that the less an organisation can define its own criteria of success and its own goals the more public it is. This translates into the distance between the public goals and the private goals in the provision of transport service.
- 9.9.2 A key argument for some level of public control over transport sytems from public financing. When public money is used to subsidise transport it would follow that the agency receiving the funding should somehow be accountable to the taxpayers for that money. This is an issue when a transport system has public funding but is not publicly owned. This situation is particularly prevalent in South Africa where a privately owned service is continually funded by government, but may not be economically viable but considered socially necessary. Formalising the transport sector in South Africa by adding public investment while keeping private operators will necessitate accountability, and hence the need for control that aligns with the needs at more localized level.
- 9.10 The nature of public transport in South Africa necessitates state ownership and a certain level of control. Efficiency necessitates that as the private sector operator



in manner that attempts to create efficiencies and increase profits, the state is required to ensure a return on social investment, something that can only occur with a certain level of control. The latter is informed by accountability at a level of government that is competent to drive the return on social investment. Transport planning, investment in capital and operations, and a differentiated subsidy regime need funding support and acceptable allocation from the Fiscus at levels that are well above the current average of R5 billion per annum.



#### 10 ENABLING INTERVENTIONS

- 10.1 Transport plans
- 10.1.1 Subsidisation of public transport should be implemented through approved transport plans. The plans must mainly be responsive to strategic needs in municipalities. In this regard, the practice of dispensing public transport subsidy purely on a historical basis should come to an end. This is because such a practice incentivises inefficiencies.
- 10.1.2 The plans submitted by municipalities will be funded on a competitive basis. However, in order to create stability, the plan must be generated for a 5-year horizon in the case of operational subsidies, and 10 years for capital subsidy. The plans will be subject to annual reviews.
- 10.2 Funding of public transport
- 10.2.1 There is no internationally agreed norm for funding public transport. However, in line with international trends10, and for the level of public transport use and non-motorised transport in the country, South African society should not be spending more than about 7% of GDP on transport. Nonetheless, the South African society pays about 5% more than this. Therefore, 5% remains the efficiency backlog of the passenger transport system. In order to reverse this, investment in public transport must be significant and be directed. As a benchmark, South Africa should spend 5% of its GDP on public transport infrastructure, systems and operations, initially to eradicate the prevailing backlogs. The National Development Plan (NDP) requires public infrastructure investment focused on transport, energy and water to be at the level of 10% of GDP. The 2050 National Infrastructure Plan estimates that delivering the NDP development objectives will require R6 trillion between 2016 and 2040, 72% of which is made up of energy and transport infrastructure.
- 10.3 Subsidy formula
- 10.3.1 Subsidisation of public transport at a municipal level will be subject to a formula. The formula allocates subsidy on the basis of the following weights:
- 10.3.1.1 Base allocation of 40% to Category B and C municipalities; and 60% to category A municipalities. While Category B and C municipalities make up 60% of the population, Category A municipalities generate about 50% more travel than Category B and C combined11.
- Funding on the basis of a plan, where the plans will be independently evaluated and scored. The evaluation of the plans will be in terms of criteria provided for in Table 10.1. The individual municipalities must demonstrate how they are implementing their plans in order to achieve the stated benchmarks.

<sup>&</sup>lt;sup>11</sup> Lombard M, Cameron B, Mokonyama M, Shaw A 2007. Report on Trends in Passenger Transport in South Africa. Development Bank of Southern Africa, Halfway House, Midrand, South Africa.



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<sup>&</sup>lt;sup>10</sup> International Association of Public Transport's Mobility in cities database, 2006

Table 10.1: Subsidy allocation framework

Goal	Benchmark	Weight
Minimise system input costs for public transport services	<ul> <li>Urban areas: Personnel costs as % of operating costs limited to maximum of 25% of operating costs for road-based; and up to 40% for rail-based services.</li> </ul>	10%
Minimise impact to the environment	<ul> <li>Achieve a system-level maximum 50 grams</li> <li>CO<sub>2</sub> per passenger km, for motorised travel.</li> </ul>	10%
Minimise trip length	<ul><li>Maximum trip length of 40km one way for work trips.</li><li>Maximum of 10km for education trips.</li></ul>	15%
Minimise Motorised travel	<ul> <li>Maximum 2.5 trips per person per day without compromising basic needs.</li> </ul>	5%
Minimise crashes	<ul> <li>Towards zero fatalities per 100 000 population.</li> </ul>	10%
Direct cost of transport to society as % of GDP	Less than 7%.	10%
Reduce total travel time	<ul> <li>Limit travel time to 40 minutes for work trips on public transport.</li> <li>Limit travel time to 20 min for education trips.</li> <li>Limit travel time to 1 hour for all other trip purposes.</li> </ul>	10%
Minimise cost of service to the user	<ul> <li>Limit expenditure on transport to 10% of income for person with income.</li> <li>Limit cost of service to R120 per month for persons from poor households.</li> </ul>	10%
Minimum operating speed on-board public transport	<ul> <li>Public transport on an approved network must have a minimum network operating speed of 40km/h during the peak.</li> </ul>	10%
Universal access	<ul> <li>At least 80% of special needs travellers should indicate that they are able to use public transport without difficulty.</li> </ul>	10%



## 11 ROLES AND RESPONSIBILITIES

- 11.1 As we alluded to previously in the policy document, Schedules 4 and 5 of the Constitution provide for the functional areas of the three spheres of government. This is relevant in the context of the roles and responsibilities of the three spheres of government in fulfilling their respective mandates.
- 11.2 National sphere of Government:
- 11.2.1 The National sphere of Government formulates transport policy and strategy and in doing so it is obliged to provide for strategic transport planning. Section 34 of the NLTA i.e. the enabling legislation provides that the National sphere of Government must prepare the National Land Transport Strategic Framework.
- 11.2.2 It is the National sphere of Government that is obliged to capacitate and monitor Provinces and Municipalities that do not have the resources to perform their respective land transport functions. The coordination between the National sphere and the Provinces is a function of the National sphere to ensure that the land transport function is effective and efficient.
- 11.3 Provincial sphere of Government
- 11.3.1.1 The Provinces are obliged to prepare the Provincial Land Transport Framework under Section 35 of the NLTA and it is the Province that has to coordinate the execution of land transport as between itself and the Municipalities that fall within its functional area.
- 11.3.1.2 An important function is the liaison with other Government departments, either provincially or nationally where such other government departments responsibility impacts on transport and land use planning issues.
- As provided for on the National level, Provinces must build capacity within the Municipalities to perform land transport functions. The implementation of the Provincial Integrated Development Strategy is a function of the Province and it is their responsibility to ensure that less capacitated Municipalities are able to fulfil their transport service functions.
- 11.4 Municipal spheres of Government
- 11.4.1 Here lies the key to effective land transport system within the country. In accordance with the devolution of power it is the Municipalities that are required to be capacitated in order that Municipalities can develop integrated transport plans within their functional areas to serve their communities and developing their integrated development plans. Service delivery approaches that recognise a need to consolidate resources such as the District Development Model, which uses metropolitan and district municipalities as delivery focal points, will assist with improved planning.
- 11.4.2 Land transport policy within a Municipal function must incorporate special development policies on matters such as spatial transformation. The Municipality



- being a planning authority is required to prepare plans for its area ensuring implementation thereof and monitoring performance.
- 11.4.3 Sections 151 to 163 of the Constitution set out all matters that deal with local government. What is clear is that the Constitution clearly had in mind that devolution of authority to the Municipalities in order that service delivery can be met at a community level. The various functions in respect of land transport at a municipal level must be read in conjunction with the roll out of Integrated Development Plans within the Municipalities' functional areas. Much emphasis is placed on the Municipalities contracting for transport services and monitoring such services within its functional area.
- 11.5 Institutional arrangements Planning Authorities
- 11.5.1 The Act imposes a number of requirements on government to ensure the effective management and implementation of policy. It also sets out in great detail the relationships of each sphere of government and emphasises their interconnectedness in performing national transport planning and implementation.
- 11.5.2 Chapter 2 of the Act sets out the institutional arrangements for land transport and identifies the responsibility of the national sphere of government, the provincial sphere of government and lastly the municipal sphere of government.
- 11.5.3 The Act defines a planning authority as "a municipality in relation to its planning functions".
- 11.5.4 The following sections are relevant on the issue of planning,
- Section 14 of the Act provides that all planning authorities must prepare the integrated transport plans as contemplated in Section 36 and perform the constitutional transport functions listed in Parts B of Schedule 4 and 5 of the constitution and perform any other land transport related functions assigned to them in terms of the constitution and this Act.
- 11.5.4.2 Section 15 provides that every Municipality that intends establishing an integrated public transport network or has significant passenger rail services in its area must establish an intermodal planning committee. The function of an intermodal planning committee is to coordinate public transport between the modes in order to achieve the objects of the Act.
- 11.5.4.3 Section 16 provides that a planning authority may establish a land transport advisory board with representation from Government and the private sector to advise it in relation to land transport matters.
- Section 31 of the NLTA provides that land transport planning must be integrated with the land development and land use planning processes, and the integrated transport plans required by the NLTA are designed to give structure to the function of municipal planning mentioned in Part B of Schedule 4 of the Constitution and must be accommodated in and form an essential part of integrated development plans with due regard



to legislation applicable to local government and its integrated transport plan must form the transport component of the integrated development plan of the municipality.

- 11.6 Funding arrangements for land transport
- 11.6.1.1 NLTA requires municipalities that are establishing an integrated public transport network to establish their own Municipal Land Transport Fund which will be paid from moneys appropriated by the Minister from Parliament, money appropriate by the MEC from the Minister or from the Provincial Legislature, user charges imposed on motor vehicles, parking areas and other sources, interest and donations or foreign aid. The Municipality is required to administer that fund to defray the cost of its functions under the Act or its integrated transport plan.
- 11.6.1.2 A municipality which has established a municipal land transport fund may impose user charges, which may differ from case to case defending on specific classes of motor vehicles, land or building that generate movement of passengers and parking. These amounts will accrue to the fund
- 11.6.1.3 The moneys made available to municipal transport funds by the Minister and MEC are to be applied to give effect to land transport policy and to achieve the objects and purposes of the NLTA and the Minister may impose conditions to that effect
- 11.7 Transport Planning
- 11.7.1.1 NLTA sets out the general principles for transport planning and its integration with land use and development planning. It provides that land transport planning must be integrated with the land development and land use planning processes, and the integrated transport plans required by this Act are designed to give structure to the function of municipal planning and must be accommodated in and form an essential part of integrated development plans, with due regard to legislation applicable to local government, and its integrated transport plan must form the transport component of the integrated development plan of the municipality.
- 11.7.1.2 The types of plans required under the Act:
- 11.7.1.3 A National Land Transport Strategic Framework prepared by the Minister. This is a five-year National Land Transport Strategic Framework for the country to guide land transport planning countrywide



- 11.7.1.3.1 Provincial Land Transport Frameworks prepared by the MEC. This is a five-year Provincial Land Transport Framework in accordance with the requirements prescribed by the Minister after consultation with all the MECs. The Provincial Land Transport Framework must provide a transport framework as an overall guide to transport planning within the province, being guided by the National Land Transport Strategic framework.
- 11.7.1.3.2 Integrated transport plans prepared by planning authorities. This is a five-year plan setting out the integrated transport plans for their respective areas

## 11.7.2 Contracting

- 11.7.2.1 NLTA contemplates three types of contracts for the provision of transport services, namely negotiated contracts; tendered contracts; and interim contracts.
- 11.7.2.1.1 Negotiated contracts may be concluded in respect of subsidised service contracts, between contracting authorities and operators in their area, only once and for a maximum period of 12 years, and with a view to integrating services forming part of the integrated public transport networks in terms of their integrated transport plans; promoting economic empowerment of small businesses or previously disadvantaged persons; or facilitating of a parastatal or municipal transport operator to discourage monopolies
- 11.7.2.1.2 Subsidized service contracts. The contracting authorities must take steps before the expiry of contracts, to put arrangements in place for the services to be put out to tender so that the services can continue without interruption
- 11.7.2.1.3 Commercial service contracts which may also not exceed seven years and must be put out to public tender.
- 11.7.2.1.4 Existing contracting arrangements. Where there is an existing interim contract, current tendered contract or negotiated contract as defined in the NLTTA, in the area of the relevant contracting authority, that authority may allow the contract to run its course; or negotiate with the operator to amend the contract to provide for inclusion of the operator in an integrated public transport network; or make a reasonable offer to the operator of alternative services, or of a monetary settlement, which offer must bear relation to the value of the unexpired portion of the contract, if any

## 11.7.3 Relevant Regulations

- 11.7.3.1 The Minister has promulgated a number of regulations under the NLTA. The key regulatory provisions for the purposes of this policy include the following.
- 11.7.3.1.1 The National Land Transport Regulations, 2009. These regulations are



the major general regulations promulgated under the NLTA. Chapter 4 is of particular relevance, which governs the general provisions relating to operating licences.

- 11.7.3.1.2 Minimum Requirements for the Preparation of Integrated Transport Plans, 2016. These regulations govern how different planning authorities should prepare and submit their integrated transport plans.
- 11.7.3.1.3 The National Land Transport Regulations on Contracting for Public Transport Services, 2009.



## 12 IMPLEMENTATION PRIORITIES

- 12.1 Policy adoption and implementation cycle could take several years and the state of the public transport services in South Africa has been in a dire need of adequate interventions to boost its service standards and viability of the operations for some time. In the context of the funding and subsidy proposals formulated in this policy, a further consideration has been made on which policy aligned measures could be implemented rather sooner than holding on until the full policy implementation process takes place.
- 12.2 The following public transport operational challenges have been considered critical and deserve an accelerated funding / subsidy related intervention:
- 12.2.1 Minibus-taxi service across the country has been the highest utilised mode of transport for several decades though receiving a minimum direct funding intervention by the Government. In many parts of the Country the minibus-taxi operations are the only public transport choice to communities for any mobility requirements. This is greatly applicable in the rural areas and in many peri-urban areas. Any service improvement or more affordable service offering would not be possible within the short time frame without a form of additional subsidy.
- 12.2.2 The prevailing contracted bus services have been continuously engaged on the short term interim basis for nearly two decades. In such situations, the bus operating companies could not make long-term business plans and adequate investment decisions pending the long term Government plans. One of the critical operations planning issues relate to the recapitalisation of rolling stocks hence the companies have been operating aged and under-maintained vehicles for a prolonged period of time. This has caused a drop in levels of service in terms of missing trips, safety and comfort. The prevailing service costing approach has been particularly damaging to the bus operating companies providing services in the rural areas in which areas the cost factors are valued differently relative to the urban and shorter distance operations
- 12.2.3 The increased capital subsidy for passenger rail services has not translated into commensurate increase in rail service capacity and patronage. Apart from documented administrative problems at the Passenger Rail Agency of South Africa, this is also because rail infrastructure has largely not been integrated into the rest of the built environment. For example, large scale state subsidised housing programmes have not taken advantage of land within the vicinity of passenger rail stations. While rail is referred to as the backbone of public transport, it remains functionally unintegrated with the rest of the public transport network, despite almost a half of train users having at least one transfer to other motorised modes.
- 12.3 The policy development process hence considered relevant interventions possible to be planned for and implemented prior to the full implementation of the policy. The intervention measures contemplated in this regard are aligned to the long-term policy principles and would provide necessary assistance to the public transport customers and industry within the short-medium time frame.
- 12.4 The following interventions are proposed:
- 12.5 Evaluate possible additional capital subsidy funding of the minibus-taxi operators through increased budget for "scrapping" allowance through the Taxi



Recapitalisation Programme on the per application basis. The additional capital funding would assist the operators through reduced finance cost of the rolling stock and overall operating cost of the service. The intervention could be implemented as a mechanism for the fare management of the minibus-taxi services or as an improved profitability of the operations through the reduction of the operating costs of the service. The TRP system has already registered a considerable proportion of the minibus-taxi operators and include precise records of allowance allocations made in the past. The past records as well as the registration of the remaining operators could provide the basis to formulate adequate additional capital subsidy allocations.

- 12.6 Evaluate appropriate technology solutions to introduce a cashless and automatic fare collection (AFC) for the minibus-taxi services whilst appreciating the prevailing business model of the industry. The appropriate AFC system solution could be used as the basis for an ultimate integrated transport system solution and could also be considered as additional capital subsidy funding of the minibus-taxi operators.
- 12.7 Promote and implement a system of competition for the market in the short term related to public transport routes based on operating licenses, concessions and negotiated and tendered contracts with all public transport operators registered as formalized commercial entities. This would be achieved by a negotiated approach based on an interim rationalisation of the prevailing service designs and funding approach and issue operating contracts aligned to the current legislative requirements to enable stabilisation of the service provision and improvement of the service levels. This would also enable the meaningful and increased participation of small, medium, micro enterprises, small bus operators and minibus operators in line with relevant preferential procurement legislations. intervention would apply for a single contractual cycle in terms of the NLTA (Sec. 93(2)) and allow for the preparation of adequate integrated transport plans as the basis for funding and subsidy approvals in terms of this policy. Where new services are warranted in the short term this can be achieved through tendered contracts so long as there is a meaningful participation by small, medium, micro enterprises, small bus operators and minibus operators.
- 12.8 Providing subsidised connectivity of road-based services to rail services should be prioritised in order to strengthen the role of rail as the backbone for public transport. Furthermore, locating state subsidised housing programmes in the vicinity of rail stations should also receive priority
- 12.9 Road network asset management systems must be updated to ensure that roads used by public transport received maintenance priority, alongside existing prioritisation metrics.
- 12.10 Work to rebase the funding and budgets for public transport in the country should start in earnest, in order to produce a roadmap that will result in public transport infrastructure and services being funded to the tune of 5% of GDP by 2030.
- 12.11 Production of 52 model integrated transport plans, for metropolitan and district municipalities by 2027 aligning with this policy, for implementation by 2030.
- 12.12 Review of the National Rural Strategy and the development of a rural transport policy and finally the development and implementation of rural integrated public transport network (RIPTNs)



- 12.13 Contracted scheduled bus services managed by provinces at present in IRPTN areas are to be taken over by municipalities and should form part of the ITPs.
- 12.14 Providing assistance to the MBT industry to consolidate its thousands of individual operators into companies operating fleets of taxis on behalf of shareholders and in so doing contract with government.
- 12.15 The taxi recap programme in terms of which allowances are paid to taxi operators should continue to be investigated with a view to re-energising it (with a far higher allowance).



#### 13 CONCLUSION

- 13.1 South Africa is still in a socio-political and economic hangover from apartheid more than 25 years after our democracy. This means that our historical discourse guite physically shapes the ways in which we have been understanding and planning for mobility. Our socio-political and economic history means that we have a particular experience that has shaped the ways we do things, see things and innovate. It requires a consciousness around how and why South Africans move the way we do, with the intent to shape how we ourselves want to change that and why. This means that transforming the transport system requires serious deepening of conversations around inequity and inequality, the dismantling of Apartheid spatial planning, and most importantly, safety, dignity and quality of life of South Africa's citizens. Understanding the mobility and transport system transformation requirements need to be shaped by those who understand and experience the realities that come with a lack of mobility as a result of our historical and present socio-political and economic juncture. An opportunity exists for government, academia and industry to collaborate in creating a new conducive transport ecosystem in South Africa.
- 13.2 As transportation is usually a proxy for social mobility it must not simply be a means of transporting people back and forth from work but it must also allow everyone to cheaply, easily and safely access the length and breadth of the city..." (Driving Afrika's Future: Mobility for All Dr Paul Amayo)
- 13.3 The NPTSP has been developed in response to a dire need to transform the public transport system in the Country and provide mobility options to previously marginalised citizens in particular to encourage and enable their economic, education and social activities and improve their quality of life.



## **SCHEDULE 1**

# SCHEDULE OF STAKEHOLDERS ENGAGEMENT SESSIONS DURING THE POLICY DEVELOPMENT PERIOD

	Engagem	ent Session	Constitution France
Date	Time	Venue	Organisations Engaged
12-Feb-19	14h00	DoT Office Boardroom, Pretoria	National Treasury (NT)
26-Feb-19	10h00	Manhattan Hotel, Pretoria	Provincial Transport Department
25-Mar-19	13h00	DoT Office Boardroom, Pretoria	National Taxi Alliance (NTA)
26-Mar-19	10h00	DoT Office Boardroom, Pretoria	South African Bus Operators Association (SABOA)
28-Mar-19	10h00	DoT Office Boardroom, Pretoria	South Africal Local Government Association (SALGA); Cities Support Netowrk (CSN)
10-Apr-19	10h00	DoT Office Boardroom, Pretoria	South African National Taxi Associations Council (SANTACO)
May 2019			DOT Exco
31-Jul-19	09h00	CSIR Convention Centre	SABOA Conference
27-Sep-19	10h00	Birchwood Conference Centre	Public Transport Industry Development Workshop on the Future of Public Transport Operations Grant Workshop, DOT & Provincial Departments
31-Oct-19	10h00	DoT Office Boardroom, Pretoria	DOT Rail Transport Infrastructure Development
22-Nov-19	09h00	CSIR, Pretoria	Professionals and Academics Ssctor
04-Nov-20	12h30	Online Zoom	South Africal Local Government Association (SALGA); Cities Support Netowrk (CSN)
Feb21		Google Forms Distribution	Universities; COSATU; Professionals; ABCD; SACN; SAITA; ITDP; UKZN; Ahmed Kathrada Foundation; Media; UBER; etc.
Feb22		Multi-media Presentations Distributed	All Stakeholders
March 21 - June 21		GooGle Form Inputs	ITDP; ITLS Africa; Vaalbara; UBER; Profssionals and Academics; HSRC; etc.
11-Mar-21	10h00	Online Google Meet	National Treasury (NT)
15-Mar-21	11h00	Online Zoom	DOT Exco
15-Apr-21	10h00	Online Google Meet	COGTA, DHS, DPME, DTCS Limpopo, EC Transport, FS Transport, Gauteng DPTRT, KZN Transport, Mpumalanga Transport
11-May-21	09h00	Online	Transport Forum
08-Jun-21	10h00	Online Zoom	SALGA
11-Jun-21	14h00	Online Microsoft Teams	SALGA National Working Committee
15-Jun-21	14h30	Online Microsoft Teams	NEDLAC (Freight and Public Transport Workstream)
17-Jun-21	14h00	Online Microsoft Teams	NEDLAC (Decongestion Task Team)
13-Jul-21	11h00	Online Google Meet	SANTACO
04-Aug-21	13h00	Online Zoom	SABOA
12-Aug-21	10h00	Online Zoom	SANSBOC
21-Sep-21	10h00	Radisson Blu Tambo Conference Cente	SANTACO
23-Sep-21	10h30	Online Zoom	SANSBOC



## **SCHEDULE 2**

# SCHEDULE OF POLICY AND LEGISLATIVE DOCUMENT RELEVANT OT THE NPTSP DEVELOPMENT

	Relevant Policies / Legislation / Strategie	es	
	National Transport Policy White Paper	Policy	1996
	Moving South Africa Transport Strategy	Strategy	1998
	PT Strategy and Action Plan	Strategy	2007
	Rural Transport Strategy	Strategy	2007
	National Non Motorised Transport Policy_Draft	Policy	2008
	NLTA	Legislative	2009
	National Learners Transport Policy	Policy	2015
Transport	NLTA Ammendment Bill	Legislative	2017
·	National Transport Master Plan 2050	Planning	2017
	National Transport Policy White Paper Update_Darft	Policy	2017
	National Rail Policy_Draft White Paper	Policy	2017
	National Land Transport Strategic Framework 2017_2022	Strategy	2017
	The Economic Regulation of Transport Bill_Draft	Legislative	2018
	Green Transport Strategy 2018-2050	Strategy	2018
	DOT Strategic plan	Planning	2014
	Guidelines for Human Settlement Planning and Design		2000
	Rural Development Programe Frmework		2008
Spatial Development	Integrated Urban Development Framework		2016
	Spatial Poverty and Inequality in SA_WorkingPaper		2018
	National Spatial Development Framework 2050		2019
	The Changing Wealth of Nations_World Bank		2018
Economics	Towards Economic Strategy for SA		2019
	National Social Economy Green Paper_Draft		2019
	Carbon Tax Policy Paper		2013
Environment	National Climate Change Response White Paper		2018
	National Climate Change Adaptation Strategy Draft		2019
	National Development Plan 2030		2012
	National Infrastructure Plan		2012
Axilliary	White Paper on the Rights of Persons with Disability		2016
	New District Coordination Model to Improve the Coherence and Impact of Government Service Delivery and Development		2019



## **SCHEDULE 3**

# KEY POLICY CONSIDERATIONS GATHERED FROM THE PREVIALING POLICIES

# **AND LEGISLATION**

Table 1: Key Policy Considerations gathered from the White Paper on the National Transport Policy

## 1996 White Paper / 2017 White Paper Draft

Responded to a heavily subsidised and inefficient bus service; an under utilised rail service and an unregulated taxi industry that was now transporting at least 60% of commuters population. It responded to the work and findings of the National Taxi Task Team, formed in the early 1990s to address conflicts and challenges within the taxi industry	1996
Recognised that South Africa's public transport challenges could never be effectively addressed without addressing land-use settlement patterns and urban form. The legacy of apartheid policies led to spatially disaggregated settlements and urban sprawl, resulting in inordinately long commuting distances and excessive transport costs.	1996
Set the strategic objectives to promote the use of public transport over private car travel, with the goal of achieving a ratio of 80:20 between public transport and private car usage and to ensure that public transport is affordable, with commuters spending not more than 10% of disposable household income on transport.	1996
identified elements of infrastructure and operations which cannot or should not be paid for by the user, but which provide social benefits. Government would contribute to the financing of these socially necessary services in the form of appropriations, grants or subsidies to achieve an equitable distribution of resources. In the longer term Government would seek a reduction in the cost of the state subsidisation of transport operations, predicated on a more effective and efficient public transport system being developed.	1996
Considered subsidisation to be only an interim measure.	1996
Recognised only limited justifiable reasons for providing a subsidy, including that the programme was part of a transport plan; it advanced welfare considerations such as catering for people with disabilities; it promoted the use of public transport; or it assisted minibus taxi operators and small operators to participate in the provision of subsidised services.	1996
Provided some guidance on the approach to the implementation and administration of subsidies. Funding would be channeled through a single authority to avoid multiple funding for the same service.	1996
Recognised that rail operations would be based on operating and maintenance "concessions". The current "deficit financing system" would be abolished and replaced with this concession system to ensure more efficient and effective use of funds.	1996
Recognised that the minibus taxi industry would need to be tightly regulated. Financial and technical assistance would be offered to minibus taxis to enable them to obtain contracts and improve economic viability.	1996
Identified the strategic overarching funding objectives to ensure adequate, equitable, efficient, sustainable and dedicated financing and funding for infrastructure, operations and law enforcement;	2017
Government funding must be equitable between modes, taking into account, among others, the degree of cost recovery in each mode, the Government's social responsibilities and development goals, the suitability of modes and the associated level of demand for each mode in the relevant areas.	2017
Intends to create Integrated Rapid Public Transport Networks in large cities that should incorporate and integrate the various modes of public transport. It proposes greater planning and regulation to improve integration and efficiency of transport systems. These include a dedicated law enforcement body in public transport space; providing assistance to the MBT industry to consolidate operators so that the state can ultimately contract with them and regulate routes; converting unscheduled non-contracted services to contracted services; promoting automatic fare collection and further investigations into the Taxi Recapitalisation Programme in terms of which allowances are paid to taxi operators, with a view to re-energising the programme; and establishing priority lanes on the road networks for buses and taxis.	2017
Identifing a dedicated funding source, established and implemented for the provision of public transport, identifying the optimal sources of funding such as road pricing, user charging, the fiscus or fuel tax.	2017
Providing provincial and local governments with fiscal powers so that they can fulfill the functional responsibilities envisioned in the policy with respect to funding of public transport.	2017
The application of funds to transport improvements must be self-sustaining and replicable. To encourage this, users of urban transport facilities should pay for all or most of the costs incurred within limits of affordability.	2017
Where subsidies are required for welfare considerations or to promote public transport they will be applied through mechanisms that provide incentives for efficiency.	2017
Funding for transport operations must be channeled through a single authority for offering the same service. A single authority therefore needs to coordinate the funds that any one operator receives for rendering public transport services.	2017



Table 2: Key Policy Considerations gathered from National Transport Polices

National Non Motorised Transport Policy Draft (2008) / National Learners Transport Policy / National Rail Policy - Draft White Paper (2017)	
increase the role of NMT as one of the key transport modes, to integrate NMT as an essential element of public transport, and provide a safe NMT infrastructure and allocate adequate and sustainable funding for the development and promotion of NMT.	NMT 2008
Develop infrastructure and maintenance standards that recognise NMT as an essential mode of transport and to allocate adequate and sustainable funding for promotion and development of NMT.	NMT 2009
DoT would establish a national NMT Fund to promote the implementation of the policy and to assist provincial governments and municipalities in funding NMT related infrastructure as well as subsidies for the provision of bicycles for public transport purposes in rural areas.	NMT 2010
The DoT together with the DBE developed a national learner transport policy to address the issues where the majority of society was placed in areas that were largely inaccessible and to change the current learner transport environment.	NLTP 2015
The policy focus includes the issue of funding. Due to the shared responsibility for learner transport at national and provincial levels an effective intergovernmental mechanism to coordinate the provision of learner transport is vital. In this regard a national inter-departmental committee and provincial joint planning committees are to be established.	NLTP 2015
Learner transport should be integrated with the public transport system	NLTP 2015
Challenge of the unsustainable operations because the method of compensation for scholar transport operators is not uniform throughout the provinces and there is a lack of coordinated planning between the provincial departments of education and transport as well as local authorities.	NLTP 2015
The types of learner transport service include the Dedicated Service i.e. 'the subsidized group' that includes operators who are providing a dedicated learner transport service and are receiving a subsidy from the DBE and/or the DOT and the Non-dedicated Service i.e. 'the non-subsidized group' which includes operators that do not receive a subsidy.	NLTP 2015
Learner transport to be integrated with mainstream public transport services according to the IPTN in both rural and urban areas. Dedicated learner transport services will continue to be implemented in areas where there are no public transport services.	NLTP 2015
A standardised form of remuneration for subsidised learner transport will be based on total kilometres travelled.	NLTP 2015
Learner transport will be funded through the fiscus from the relevant treasury allocations.	NLTP 2015



Table 3: Key Policy Considerations gathered from National Transport Polices

National Non Motorised Transport Policy Draft (2008) / National Learners Transport Policy / National Rail Policy - Draft White Paper (2017)	
Historical under-investment in rail infrastructure and services has led to the rail becoming an anticompetitive and inefficient mode of transport. The policy aims to position rail travel as an affordable, competitive, effective, integrated, reliable, safe and sustainable mode of transport that provides the backbone of South Africa's freight logistics and passenger mobility systems and to devolve authority over urban rails to local authorities over time.	NRP 2017
The Government will develop a National Rail Master Plan and supportive intervention and investment programmes. It will fund all national rail policy objectives directly or indirectly and will augment Transnet's and National Treasury's funding ability from additional sources	NRP 2018
Promoting economic growth and social development through investment in rail; to apply user pays principles, and provides passenger rail services as an instrument of economic and social policy; to retain all state-owned railway network, but, where appropriate, make them available to the private sector; to ensure that subsidies, where provided, are targeted, transparent and monitored with respect to achieving their intended purpose.	NRP 2019
The Policy sets out to revitalize the country's railway sector by investing substantially to establish a high-performance rail sector. Given the massive investment backlog in rail, the primary intervention is to invest to reposition rail as land transport backbone by 2050.	NRP 2020
In terms of institutional repositioning PRASA occupies a monopoly position in providing passenger rail services and is largely funded by the fiscus. Introduction of competition for services rendered by PRASA may improve efficiencies and improve service quality.	NRP 2021
The Policy recognizes that Government will have to increase this operational subsidy to achieve Government goals for passenger rail usage.	NRP 2022
The Government is also looking into high-speed rail options which involve more complex funding arrangements including export credit, foreign direct investment, intergovernmental agreements and supplier credit.	NRP 2023
In order to achieve modernization of passenger rail in this manner, the Policy provides that the respective spheres of government may apply their own funds to rail investments to the extent of their ability, which will be insufficient.	NRP 2024



Table 4: Key Policy Considerations gathered from the National Transport Strategies

National Transport Strategies and Plans  Key challenges facing public transport subsidies include lack of affordable basic access to transport because of past land use patterns and a lack of effective targeting of subsidies; a lack of financial sustainability leading to an ineffective public transport system; increasing car dependence; and a mismatch between subsidy allocation and transport use.  The TRP aimed to enhance safety and efficiency in the minibus taxi industry through a once-off recapitalization process. The programme began with the goal to replace 97 000 minibus-taxi vehicles. The aim of the programme was to reduce average fleet age; introduce larger vehicles for efficiency; and assist in formalization of the taxi industry. The TRP funds have been regarded as a form of a subsidy provided to the Minibus-taxi industry and the fund details are revealed in a later section of the document.  The 2007 Public Transport Strategy and Action Plan emphasised the need to establish comprehensive public transport networks which are actively controlled and managed by a strong public network company linked to the city authority. The plan aimed to achieve a shift in public transport service delivery away from operator controlled, commuter based, uni-modal routes, to user-oriented, publicly controlled, fully integrated, mass rapid transport networks. It planned to consolidate operators including minibuses into capable entities and provide business planning support to ensure high quality service provision under a contract. The Strategy and Action Plan had three phases i.e. 2007-2010, 2011-2014 and 2015-2020  Dedicating additional funding of R30million per year over the medium-term expenditure framework period to be used to implement the Integrated Rural Transport Strategy.  Envisages R3bn for the implementation of Phase 1 of the Integrated Public Transport Network in six rural districts and focusing on certain strategic interventions, including upgrading and maintenance of rural access road corridors, development of no	MSA 1998
an ineffective public transport system; increasing car dependence; and a mismatch between subsidy allocation and transport use.  The TRP aimed to enhance safety and efficiency in the minibus taxi industry through a once-off recapitalization process. The programme began with the goal to replace 97 000 minibus-taxi vehicles. The aim of the programme was to reduce average fleet age; introduce larger vehicles for efficiency; and assist in formalization of the taxi industry. The TRP funds have been regarded as a form of a subsidy provided to the Minibus-taxi industry and the fund details are revealed in a later section of the document.  The 2007 Public Transport Strategy and Action Plan emphasised the need to establish comprehensive public transport networks which are actively controlled and managed by a strong public network company linked to the city authority. The plan aimed to achieve a shift in public transport service delivery away from operator controlled, commuter based, uni-modal routes, to user-oriented, publicly controlled, fully integrated, mass rapid transport networks. It planned to consolidate operators including minibuses into capable entities and provide business planning support to ensure high quality service provision under a contract. The Strategy and Action Plan had three phases i.e. 2007-2010, 2011-2014 and 2015-2020  Dedicating additional funding of R30million per year over the medium-term expenditure framework period to be used to implement the Integrated Rural Transport Strategy.  Envisages R3bn for the implementation of Phase 1 of the Integrated Public Transport Network in six rural districts and focusing on certain strategic interventions, including upgrading and maintenance of rural access road	
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	RTS 2007
	RTS 2007
National Treasury through the equitable share allocation mainly allocates funding for national, provincial and municipal road authorities. Provinces and municipalities then receive supplementary funds through provincial and municipal conditional grants. These funds are channeled through National Treasury and the Department of Provincial and Local Government respectively. Provinces also raise their own revenue from vehicle licence fees, while municipalities raise extra income through rates and taxes.	RTS 2007
The funding strategy focused on four types of conditional grants or funding programmes, the Municipal Infrastructure Grant, the Provincial Infrastructure Grant, the Public Transport Infrastructure Grant and SANRAL's Community Development Programme.	RTS 2007
Proposes development of appropriate rural public transport and subsidization options such as assessing the grants provided to rural transport operators, assessing the current pattern, level and beneficiaries of subsidized public transport options, highlight the worker/peri-urban bias of the current transport subsidy system; and investigating supplementary or new forms of subsidy systems aimed at providing credit for developing appropriate means of transport and other support services.	RTS 2007



Table 5: Key Policy Considerations gathered from the National Transport Strategies

National Transport Strategies and Plans	
Two types of funding, namely pure public funding, at the one extreme, and pure user charging, at the other, with blends thereof in between.	NTMP 2050
Cost responsibility and benefit apportionment - Apart from properly valuing the cost of infrastructure, the nature of the cost should be well understood. Since transport infrastructure is provided as a network, often on a capacity ahead of demand basis, with variable daily (peak vs. non-peak) and even seasonal demand, and location-specific characteristics, it is not always clear who causes the cost. In the same vein that the source of cost may be uncertain, so, too, can the beneficiaries be, since the benefits of the project may be confined to a very defined group (a private good) or could spill over to broader society (public good).	NTMP 2051
Affordability (equity) considerations - At the one extreme, users should not be expected to pay for the social or broader economic benefits premium obtained from a transport project. However, at the other, some users cannot afford to pay their share of marginal costs. Applying the principles previously discussed, no transport service should be completely free (users should pay at least the marginal operating cost they impose); the remaining marginal costs may be shared with other users with the government contributing to the extent that there are broader social and economic benefits derived from the project. However, the government should provide subsidies in a consistent manner and based on a clear policy. Subsidies should be specifically linked to achieving particular, agreed social objectives.	NTMP 2052
Formalising a subsidisation policy - Building on the principle of distinguishing between the commercial and social aspects of transport infrastructure and users, the government's approach to the subsidisation of infrastructures, services and users should be clearly formulated.	NTMP 2053
The NLTSF recognizes that there is a need for an overall increase for funding for land transport in terms of Maintenance and basic improvement of the current transport system; Capital and operational investment to address the backlog and Capital and operational investment to upgrade and expand the transport system.	NLTSF 2017-2022
The ring fencing of the transport system-related funding. Major transport investment project require a proper evaluation and life-time financial projections including all cost and income streams, subsidies and including also projected wider social and economic impacts of the project.	NLTSF 2017-2023
The alignment of transport funding between Treasury and NDOT.	NLTSF 2017-2024
Instituting "no-car zones", within most of the central business districts being closed off for car use, and emphasising eco-mobility mode of transport like walking and cycling as the preferred mode of transport.	GTS 2018
To achieve modal shifts in the transport sector that reduce GHG emissions and other harmful emissions, reduce transport congestion and improve temporal, spatial and economic efficiency in the transport sector. In particular, achieve a 30% shift of freight transport from road to rail by and 20% shift of passenger transport from private cars to public transport and eco-mobility transport.	GTS 2018
To promote strategies and standards for delivering transport infrastructure, integrated transit planning and systems that build climate resilience in urban and rural communities, whilst minimising the environmental impact of transport infrastructure.	GTS 2018
Invest in sources of green energy's infrastructure, such as biogas filling stations, electric car charging points, GIS integrator ICT technology platforms for locating stations, regulating future pricing and providing statistics.	GTS 2018
BRT systems need to be significantly expanded throughout the large cities.	GTS 2018
The taxi industry, a major component of the transport sector, needs to be engaged to develop their role as important feeders to the public transport system; An ITS must be developed, where all public transport including the minibus industry can be monitored by metropolitan control centres through GPS, GIS and IoT connectivity; A single ticketing system should be developed, where the public can use smart tags as the payment mechanism; Non-motorised transport infrastructure, namely the building of cycle lanes along key transport routes and improved pavements walkways must be included in the maintenance mandates of SANRAL and local government where appropriate.	GTS 2018
Invest in the improvement and development of PRASA's (passenger rail) infrastructure and services; Drawing from the Gautrain model, expand and upgrade rail networks into all urban areas; Secure local and global private sector participation in high-speed networks; Conduct research to appropriately tax the road transport sector for road maintenance; Develop a system to incentivise corporates and private sector spend on rail transport; Encourage PRASA to investigate a move towards fuel-cell and solar powered locomotives in a shift to using low carbon energy sources.	GTS 2018



Table 6: Key Policy Considerations gathered from the other critical National Policies and Strategies

Economic / Spatial / Environment Development Policies and Strategies	
Decent living standards include transport; Reducing the cost of living for low-income and working class households includes commuter transport; Investing in public transport in areas that affect the poor members of the society; Unemployed need access to education, healthcare and public transport; Focus on increasing investment in infrastructure; Subsidies (not transport only) to poor households should be as direct and transparent as possible; Prioritise investments in public Transport infrastructure and systems including the renewal of the commuter rail fleet supported by enhanced links with road based services; Spatial transformation is focus to achieve that larger proportion of the population live closer to work and commuter transport should be safe reliable and energy efficient; More reliable and affordable public transport and better co-ordination between the modes; Resolving the problems with bus rapid transport systems; Devolving transport management to local governments	NDP 2030
Expanding effective, affordable, and integrated public transport systems and prioritizing targeted housing and urban development interventions to overcome spatial legacies.	SA Economic Strategy 2019
Modernizing network industries to promote competitiveness and inclusive growth such as Energy, Transport and Telecommunications,	SA Economic Strategy 2019
To finalize the Economic Regulation of Transport Bill; Public transport can play a significant role in overcoming historical spatial planning through the integration of modes by local government and the densification of cities in specific areas. Local governments should take responsibility for the integration of public transport and land use planning. We should consider a review of fuel price regulation and implement strategies to formalize the taxi industry.	SA Economic Strategy 2019
Integrated transport and mobility is a vital component of South Africa's economic infrastructure investment. It contributes to a denser and more efficient urban form, supports economic and social development, and is crucial for strengthening rural-urban linkages.	IUDF
Cities and towns where goods and services are transported efficiently, and people can walk, cycle and use different transport modes to access economic opportunities, education institutions, health facilities and places of recreation.	IUDF
Cities and towns that are liveable, integrated and multi-functional, in which all settlements are well connected to essential and social services, as well as to areas of work opportunities.	IUDF
The NSDF has formulated the National Spatial Development Pattern including National Urban Network and National Connecting and Movement Infrastructure particularly important in the context of the transport planning and implementation.	NSDF 2050

