

A HOLISTIC FINANCING STRATEGY FOR TRANSPORT IN SOUTH AFRICA

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ABSTRACT

This paper discusses the financial requirements for transport in South Africa. The importance of proper transport facilities and services to the economy and people of South Africa, the shortfall in existing funding and financing is expanded upon. Finally possible ways to establish a holistic financing strategy for transport in South Africa is suggested.

1. INTRODUCTION

Transport in South Africa has experienced a substantial decline in funding and financing during the last decade. This has been of great concern to professionals and transport experts (local as well as international), based on the long-term impact on the South African economy. A number of studies have been done during the last two years to determine the shortfall of financing and funding, and also the consequences thereof.

This paper broadly sketches the importance of transport to the economy and the inter-relationship between the economy, on the one hand, and transport and land use development on the other. It provides basic information why sufficient funding and financing is necessary. It also touches on the direct and indirect consequences of insufficient funding, indicating some of the problems presently experienced. Certain specific efficiency gains in providing adequate financing to transport is addressed in broad terms.

Estimates have also been done to determine the need for land transport in South Africa and the current transport need on provincial and local government level is summarised in this document. This is compared to the existing financing and funding levels, providing the estimated current deficit, after also taking into account the built-up backlog.

This paper then proceeds to investigate possible ways in which to address this problem. The basic approach proposed is to utilise mechanisms to recover funds as far as possible from the users of transport. There would, however, still be a social service component left for which authorities would have to budget, and for which they would have to compete with other departments for the limited sources available.

It is further clear that both the under-funding of transport and any change in the financing of transport would have an effect on the macro economy of the country. This aspect is discussed briefly.

The paper is concluded with a number of recommendations.

2. MOTIVATING THE NEED FOR APPROPRIATE SOURCES OF FINANCE

2.1 INTRODUCTION

A broad indication of the national transport needs for financing and backlogs due to an under-recovery is provided later in this paper. These figures express the need to refocus existing expenditure, rationalise institutions and their sources, and to improve cost recovery from users, whilst providing access to the transport network for all people, as well as addressing most urgent public transport needs. Since transport competes for funds with other government functions, such as education, health, welfare, etc., it is necessary to establish the importance and priority of transport.

It could be argued that many other government functions also experience shortfalls, and that Government should just see that the shortfalls are in proportion to each other. The following arguments are germane to the transport case for transport revenue accounts sourced from various direct (tolls) and indirect (levies) user-charging mechanisms. There is also a case for transport funds for the social service component of transport provision (i.e. subsidies) and the funds necessary to alleviate backlogs, especially for outlying areas in providing the means for basic transport services and public transport provision in general.

- In the needs assessment, basic priority determination was included specifically for public transport and, therefore, only the essential needs have been reflected.
- In evaluating the shortfall for transport, a critical point can be reached, beyond which the damage to infrastructure and the negative influence on the economy would not just continue to increase linearly, but would have severe influence on the well-being of the country. There is evidence that such a point may in certain cases already have been reached.
- Transport is an essential part of production and transaction costs, having an impact on the economy as a whole.

- Transport is not only necessary to provide access to schools and hospitals and other essential services, but has a potential stimulating role in respect of the economy. If the economy can grow faster, more money will be available for educational and health services, additional work opportunities are created and transport can play a role in stimulating economic growth.

The purpose of this section of the paper is, therefore, to discuss the importance of transport and to develop key arguments to motivate the need for appropriate cost-related financing mechanisms and, where necessary, subsidy support for transportation in South Africa.

2.2 THE IMPORTANCE OF TRANSPORT

The importance of sustainable and well-developed transport infrastructure and efficient services is motivated hereunder:

- i) Transport is vital for the development and economic growth of any country, because transport:
 - stimulates and promotes growth;
 - facilitates economic development and trade;
 - makes the country attractive for overseas investment;
 - reduces cost of production and the price of the end product;
 - directly and indirectly provides employment and contributes to the creation of jobs both directly and indirectly;
 - is important for social development and upliftment;
 - reduces poverty;
 - improves the quality of life; and
 - increases labour market efficiency.

The Midrand area in Gauteng is considered a good example of development related to the high accessibility provided by investment in transport infrastructure in the right place. The importance of the inter-relationship between transport and land-use development should, therefore, not be underestimated. Other corridor developments in the country are also a case in point.

- ii) National Cabinet identified transport as one of the five main national priorities (but did not match this statement with appropriate fiscal and financial support and revenue sources).
- iii) The transport sector provides much more revenue to government than it receives to cover its costs as the following very rough estimates indicate:

Revenue:	Fuel levy	:	R12,3 bil
	VAT on vehicle sales	:	R 3,6 bil
	VAT on other vehicle expenses	:	R 6,8 bil
	Vehicle licencing	:	R 1,0 bil
	Customs on fuel	:	R 0,6 bil
	TOTAL	:	R24,3 bil

The expenditure on transport by local, provincial and national government amounts to approximately R16,1 bil.

- iv) World Bank studies indicated that the average economic rate of return on transport projects at completion is 22%, which is higher than the average for other projects. (Note: WEFA used 15% as appropriate for RSA conditions.)

2.3 KEY ARGUMENTS MOTIVATING THE NEED FOR APPROPRIATE FINANCIAL MECHANISMS

The following key arguments serve to prioritise transport in relation to other government functions:

- i) Funds are required to address the historical backlog, eg.:
 - Transport infrastructure providing access to, and located in, many residential areas are insufficient, e.g. many streets are unpaved or badly maintained and proper access roads are lacking. This limits the development potential in these areas.
 - Many residential areas are located far away from employment areas and

city centres, without adequate public transport services. This makes transport difficult to afford.

ii) Transport serves as an agent for transformation, e.g.:

- Addresses spatial imbalances;
- Provides access to work opportunities and services, such as education and health;
- Provides access to social services for the elderly and unemployed;
- Develops SMMEs;
- Provides work for emerging consultants, emerging contractors and other emerging companies;
- Provides employment in general; and
- Provides mobility and contributes to GEAR.

iii) Maintaining and protecting infrastructure investment, i.e.:

- There is a need to protect and extend the existing infrastructure. (The value of road / street infrastructure alone (National plus Provincial plus Local) is approximately R218 billion.)
- There is, however, currently a rapid deterioration of certain infrastructure. The following Gauteng statistics on provincial roads verifies this:
 - In 1985 more than 80% of roads were in a good/very good condition. Currently less than 40% of roads are in a good/very good condition;
 - More than 25% of the roads in Gauteng are currently classified as being poor/very poor; and
 - Average age of roads is increasing. Approximately 70% of all roads are older than 20 years.

- Timeous maintenance is important. Delay in maintenance can increase costs by as much as 16 times. World Bank studies indicate that in 85 developing countries, R250 billion has been lost over a period of 20 years because of inadequate maintenance.
 - Deterioration of roads results in increased vehicle operating costs, and a negative impact on the economy.
- iv) Major shift to public transport is necessary, i.e.:
- Public transport must be promoted and made more accessible, secure and sustainable. There is a need to increase public transport usage and for a better balanced transport system. This will improve affordability and efficient utilisation of infrastructure and resources.
 - An initial kick-start of capital investment is needed, thereafter farebox revenue should cover a large part of the expenditure.
 - Externality costs imposed by private motoring can be minimised by enhanced use of public transport (due to the low impact of public transport on the environment, and decreased externality costs).
 - It is becoming common practice throughout the world to apply externality charges (say a fuel levy) for the subsidisation of public transport.

A better return should be obtained from the R2,5 billion currently spent on bus and rail subsidies. Rationalisation of subsidy expenditure will, however, take some time to be fully effective.

3. IMPLICATIONS

3.1 THE "DO NOTHING" ALTERNATIVE: THE CONSEQUENCES OF CONTINUING WITH INSUFFICIENT FUNDING

Due to the lack of effective public transport systems, there is currently increasing pressure to move to private transport. Increased vehicle ownership and usage, without a corresponding increase in public transport and infrastructure provision will result in the following:

- There will be increased traffic congestion with a resultant increase in travel times and operating costs. The present congestion cost on the N1-freeway between Pretoria and Johannesburg alone is estimated to be more than R300million/annum.
- There will be increased pollution levels and accidents, with commensurate increased costs to the economy and the country.
- Economic growth will be impaired, including the cost of moving goods and therefore, also the cost of the end product, and the production and labour market efficiency.
- Quality of life will be impaired.
- If sufficient funding is not available to provide effective and efficient urban transport systems, urban areas could start to experience the problems of Bangkok, which loses as much as a third of its gross city product per annum due to congestion (or R25million/day for Bangkok).

Insufficient funds for the maintenance of infrastructure will result in the further deterioration of infrastructure with cost implications for future maintenance/rehabilitation, and with increased operation costs for users and the economy.

3.2 EFFICIENCY GAINS RELATING TO THE SPENDING OF FUNDS ON TRANSPORT

Investment in transport, given that the right strategies are pursued, should result in tangible efficiency gains. In the Moving South Africa (MSA) study, much effort went into the identification of the benefits of implementing various strategies. This study concluded that in the nature of restructuring, a number of the strategic actions would require up-front investment or expenditure in order to effect the changes required. Systems benefits will be long term in character, and may take a long time to develop, while costs will be high at first. MSA is convinced that the restructuring will have both high economic and social returns, but clearly the investments required to kick start the process will have to be found, or at the very least, staged in a fashion that allows for these to be substantially funded.

At the very highest level, the distribution of benefits can be broken down into four parts:

- The creation of greater value for customers;
- The improvement in industry profitability and reinvestment;
- The lowering of the fiscal burden; and
- The minimisation of externalities.

Some examples of efficiency gains that may result from appropriate spending on transport are given below. This aspect, however, needs to be further developed in more detailed studies.

Table 3.1: Efficiency gains relating to the spending of funds on transport

Application of Funding	Effect of Particular Application	Efficiency Gain
1.Establishment and development of attractive public transport services in viable corridors	<ul style="list-style-type: none"> Higher density development in corridors is promoted Increased demand for public transport service due to larger concentration of people at work 	<ul style="list-style-type: none"> Public transport services becomes less costly to render – reduced level of subsidisation Reduced need for travel Well located corridors will result in shorter trip distances <i>See note 1 below</i>
2.Establishment and development of transport infrastructure and services in support of large (macro) development initiatives.	<ul style="list-style-type: none"> Improved viability of economic development initiatives 	<ul style="list-style-type: none"> More efficient transport of goods and people Attraction of foreign investment (making it more attractive for the investor)
3.Re-investment in rail rolling stock – placing a greater emphasis on capital replacement	<ul style="list-style-type: none"> Improved service levels Improved performance Improve operational safety 	<ul style="list-style-type: none"> Lower operating and maintenance costs <i>See note 2 below</i>
4.Improvement of levels-of-service of public transport.	<ul style="list-style-type: none"> Higher frequencies Higher speed Shorter total trip times 	<ul style="list-style-type: none"> Improvement in productivity of workers Part of social upliftment Reduced level of subsidisation <i>See note 3 below</i>
5.Financial support to public transport operators (in terms of transport plans)	<ul style="list-style-type: none"> Renewal of fleet-reduction in age of vehicles Improved regulation and control 	<ul style="list-style-type: none"> Less accidents Less violence
6.Transport planning and the implementation of transport plans.	<ul style="list-style-type: none"> Holistic planning Holistic funding Holistic prioritisation Greater interest in planning process Longer term focus 	<ul style="list-style-type: none"> More effective and efficient planning
7.General	Construction of transport infrastructure and rendering of transport services generally stimulates the economy	<ul style="list-style-type: none"> Development of SMMEs Creation of job opportunities Capacity building and skills

Note 1: Extract from Moving South Africa:

“As an illustration of the benefits of corridor densification, MSA analysed the potential benefits of densifying the Soshanguve corridor north of Pretoria. The effort would result in improved vehicle utilisation and a total net transport cost savings of R3 million per annum. This allows for 100 % cost recovery and the elimination of subsidies. Additionally, densification on this corridor would lead to improved frequency and reliability of operations along the route.”

Note 2: Extract from Moving South Africa:

“Commuter Rail Sustainability: The average age of commuter rail rolling stock is 25 years old, creating steadily increasing maintenance costs and resulting in slower speeds and increased travel time for customers. No new rolling stock has been added to the fleet in the last five years. As a result, maintenance costs have escalated sharply since 1995. Estimates from a study commissioned by the SARCC suggest that reinvestment in rolling stock of R300 million, or more, per annum is required to halt rising costs and improve operational safety.

Currently in South Africa, only 20 % of the subsidy is spent on capital investment, with the rest supporting operations. The MSA strategy recommends reversing the imbalance, and reorienting rail subsidies to place a greater emphasis on capital replacement. Newer equipment will allow the rail system to run at lower operating and maintenance costs, whilst improving service levels to customers on key corridors where rail is the optimal mode.”

Note 3: Extract from Moving South Africa:

“Bus Sustainability: As in rail, the average age of the bus fleet in South Africa is gradually escalating, from 10.1 years in 1991 to 12.7 years in 1996. At the same time, ridership has been declining, from 780 million trips in 1991 to 650 million in 1995. The consequence of this, in part due to the deficit subsidy mechanism for municipal buses, has been to increase subsidy per trip from about R2 in 1991 to just over R3 in 1995. The decreasing sustainability has negatively affected the ability to give customers satisfactory service; most customers interviewed during the situational analysis complained of poor equipment and service levels.”

Taxi Sustainability: “..... a number of measures will improve taxi industry sustainability, most significantly improved regulation of entry and permissions. Again, however, the key to success in shoring up the sustainability of the industry will be the formalisation process, and the follow-on enforcement activity, which will insist on recapitalisation of the industry.”

4. TRANSPORTATION FINANCING AND FUNDING NEEDS

The summary **Table 4.1** details the current backlog in funding for transport as well as the deficit to meet ongoing needs in South Africa's transport system. At present R14 921m is budgeted by provincial and local levels of government for transport. The annual need amounts to R25 862m (revenue from transport sector = R24 300m) and this leaves a deficit of R10 941m. It has been calculated that there is a backlog of R6 821m in respect to transport in this country.

All amounts have been calculated in 1998 Rands and split into operational and infrastructure.

Table 4.1: Total transportation* financial and funding needs for the RSA
(Provincial and Local Government: 1998 Rand)

Application	Financial Situation as for 1998		Financial and Funding Need and Deficit	
	Current Backlog** (Rm)	Annual Budget (Rm)	Annual Need (Rm)	Annual Deficit*** (Rm)
Operations	R4,616	R11,911	R18,279	R6,368
Infrastructure	R2,205	R3,010	R7,583	R4,573
Total	R6,821	R14,921	R25,862	R10,941

* infrastructure, facilities and services for all modes (private, rail, bus, taxi)

** for proper maintenance of existing infrastructure and upgrading of public transport service

*** in respect of current annual budget

The current backlog amount consists of R 4 616m for operations, being mainly to address the backlog in maintenance of infrastructure, and R 2 205m for the urgent need for upgrading of public transport, i.e. upgrading of service provision and rolling stock for rail, bus and taxi to appropriate levels.

In **Table 4.2**, a phased approach is suggested to finance both the current backlog in funding and the annual deficit. One of the reasons for this procedure is that there is insufficient capacity available to build the required capital projects immediately. However, it is assumed that over a period of say five years, the sectors in the economy which will participate in the capital expenditure programs will have built up sufficient resources to adequately address this amount of new expenditure. A disadvantage of this procedure is that in actual fact an additional deficit will build up during this period being the difference between the phased value and the actual deficit per year.

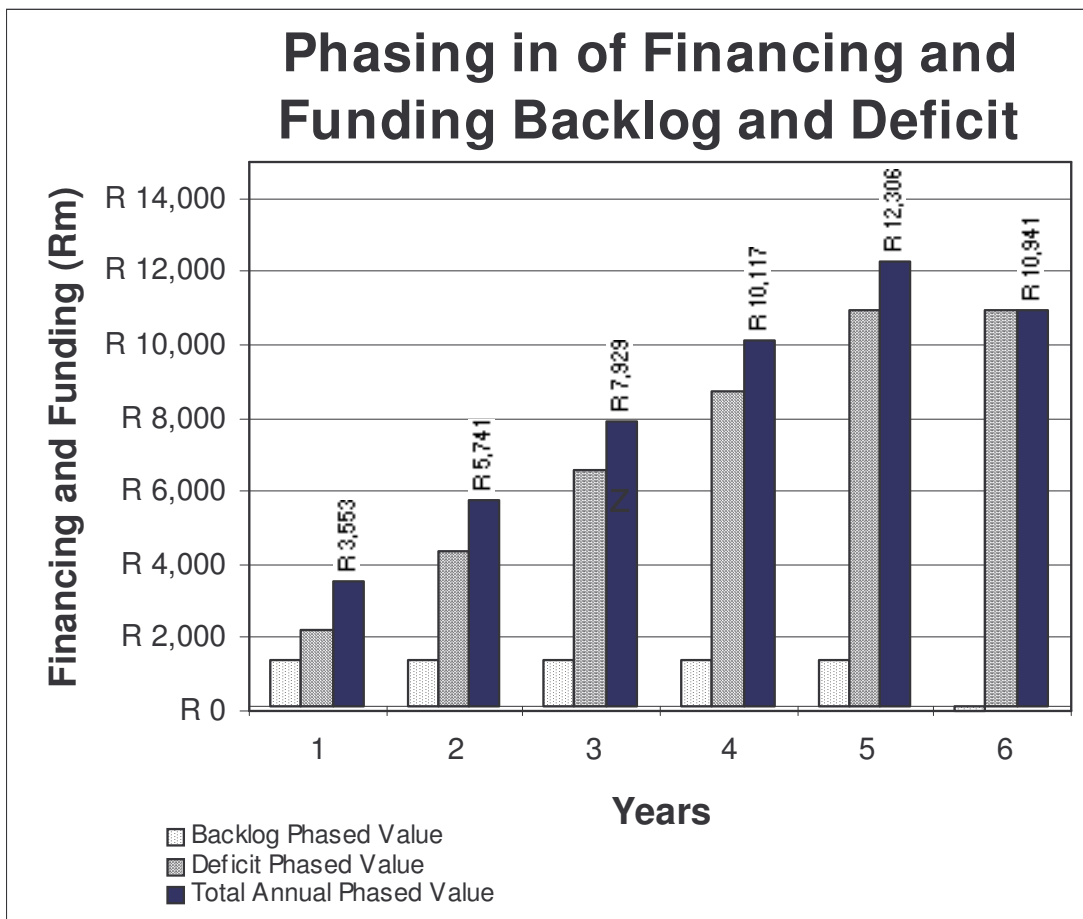
In line with the above reasoning, it is proposed that the backlog element of the required finance amount for transport be dealt with over a five-year period. This means R1 364m will be needed in years one to five, giving a total of R6 821m over this period. The yearly deficit for transport of R10 941m is proposed also to be phased in over 5 years at 20 % of the yearly deficit being added each year. As may be seen in **Table 4.2**, the total expenditure per year will reach a peak of R12 306m in year five and then fall to R10 941m in year 6 at which level it will remain. In years 1 to 4 the total expenditure rises gradually to reach this new level of transport funding. In year six, the plateau of new spending, that is R10 941m above present levels, will then pertain. This consists of a 73 % increase on present levels of expenditure on transport by provincial and local levels of government.

Table 4.2: Addressing backlog and phasing in of deficit in financial and funding needs for the RSA

Type	Years					
	1	2	3	4	5	6
	(Rm)	(Rm)	(Rm)	(Rm)	(Rm)	(Rm)
Backlog*	R1,364	R1,364	R1,364	R1,364	R1,364	R0
Deficit**	R2,188	R4,377	R6,565	R8,753	R10,941	R10,941
Total	R3,553	R5,741	R7,929	R10,117	R12,306	R10,941

* addressed

** phased in over 5 years



5. FINANCING PRINCIPLES, SOURCES AND STRATEGY

5.1 INTRODUCTION

This section takes into account Central Government's financial and fiscal policies in order to investigate possible sources of cost recovery and funding strategies for transport in South Africa. In doing so, existing policy and legislation, together with proposed policy, have been taken into account. This includes:

- the establishment of Transport Authorities and their associated Transport Funds;
- the devolution of powers and functions to these Transport Authorities; and
- the appreciation that transport (like electricity) is a commodity or service, for which users should preferably bear the full cost. The exception is where the responsible authority bears part of the cost for welfare considerations.

5.2 PRINCIPLES

5.2.1 Fundamental Principles

In the development of a funding strategy, the following fundamental principles should apply:

- i) Costs should be recovered from users, i.e. :
 - cost of rendering public transport service (limit social welfare expenditure to households paying more than 10% of disposable income for transport);
 - cost of use of roads (depreciation and maintenance); and
 - cost of externalities.
- ii) The most direct cost recovery mechanism should be applied.
- iii) The revenue should be secured in a transport revenue account (i.e. it should be earmarked).
- iv) The externality revenue should be applied to public transport improvements.
- v) It is assumed that the current sources of finance will continue to exist.

5.2.2 Policy Principles with Financial Implications

The following policy principles have a bearing on finance:

- i) Economic and financial sustainability
 - enhance competition;
 - private operation of fleets;
 - better franchise and concession arrangements;

- direct charges for infrastructure which reflect costs;
 - proxy user charges based on earmarking tax (for maintenance); and
 - public and private sector partnerships.
- ii) Environmental sustainability
- user charges which reflect externalities (use fuel as a proxy); and
 - establish a fund for the fuel surcharge.
- iii) Social sustainability
- reduce barriers to entry and encourage informal supply; and
 - improve targeting of subsidy.

Implementation of the foregoing national and provincial policy principles will improve the application of funding and finance in transport in the course of time. Comments have been made that savings of between 10% and 25% of current expenditure can be achieved through the application of these principles and measures. This will take time, but also requires the necessary initial capital expenditure to alleviate backlogs and to upgrade the current transport system.

5.3 SOURCES OF FINANCE AND A COMBINATION OF SOURCES

This section of the paper identifies appropriate alternative sources/mechanisms of financing transport.

The following cost recovery mechanisms exist:

- i) Direct cost recovery (e.g. tolls) is desirable, although not always practical in urban areas, or cost-effective.

- ii) An indirect “proxy” user charge (e.g. fuel levy) is considered the most effective mechanism.
- fuel levy is the most equitable, efficient and administratively simple user charging mechanism;
 - there should be a “Transport Fuel Levy” for all transport cost recovery (road, rail, infrastructure and services); and
 - allocation should be on the basis of fuel sales by area (province initially, thereafter the Transport Authorities).

The following are some of the sources of funding that were investigated:

- fuel levies;
- licence fees;
- improved use of existing funds;
- RSC type levies;
- development levies and/or bulk services contributions at municipal level, and
- travel demand management levies.

It should be noted that the money required should be seen as being for transport as a whole and also for both provincial and local spheres of government.

5.4 **FINANCING STRATEGY**

- The following priorities are proposed:
 - Ensure that the existing money is spent cost effectively. Attempt to achieve a 10% improvement in the use of existing money;
 - Prevent further deterioration of the existing transport system by increasing maintenance spending;
 - Provide for increased investment in public transport;
 - Optimise the availability and utilisation of RSC-type levies for transport on local government level;
 - Utilising licence fees specifically for transport should be negotiated,

- possibly as a replacement of a part of the budget allocation by the provincial government. It should, furthermore, be negotiated to obtain any additional income from licence fees, above the present levels;
 - Fuel levies should, however, be obtained for the benefit of all three levels of government; and
 - Allowance should be made for differentiated fuel, licence and RSC-type levies.
- It is proposed that a basket approach be accepted, that is a basket of different financing mechanisms.

A basket of different financing sources is shown in **Table 5.1**.

Table 5.1: A basket of different financing sources

Funding/Financial Source (Phased in over 5 years)	Estimate income (R billion)					
	Year					
	1	2	3	4	5	6
More innovative use of existing funds: Reduce current spending (Progressively up to max of 10%)	0,3	0,6	0,9	1,2	1,5	1,5
RSC-Type Levy	0,4	0,8	1,3	1,7	2,1	2,1
Licence Fees (increased progressively over 5 years up to a max of 100%)	0,2	0,4	0,6	0,8	1,0	1,0
Fuel levy*	2,7 17c/liter (7%)	3,9 25c/liter (10%)	5,1 32c/liter (13%)	6,4 41c/liter (16%)	7,7 49c/liter (20%)	6,3 40c/liter (16%)
TOTAL	3,6	5,7	7,9	10,1	12,3	10,9

* Total increase in fuel levy = max 20%

- The following general comments on the above approach can be made:
- The RSC-type levy was calculated on the basis of the levels of the recent RSC levies. In France a transport tax (“versement de transport”) is paid by employers, based on the total salary bill of the company/organisation. The rate varies between 0,55% and 2,4%, the latter being in the Paris region. If this approach is applied to South Africa at a rate of 1%, it will produce an income of R2 800m.
 - Licence fees are presently a general source of income to the provinces and not specifically allocated to transport. Compared internationally, South African licence fees are low. The suggested approach only takes into account the additional income to be allocated to transport. Provincial governments could however also consider allocating the total licence income to transport and reduce the normal budget allocation accordingly. Then the source of vehicle licence fees would be allocated entirely to transport.
 - A World Bank study on fuel prices indicated that developing economies in general have much lower fuel prices than industrial or developed economies. The South African fuel price is on average half that of most European countries. This study then suggested that fuel of developing countries could justifiably be increased with more than 50%. The suggested approach in this document makes provision for an ultimate increase of between 16% to 20%.
- The overall flow of funds and the financing procedures should be streamlined. Particularly relevant is the rail and bus subsidies, which are currently being budgeted and allocated by the NDoT. Such rail and bus subsidies should in future possibly form part of this financing strategy.

6. BROAD IMPLICATIONS ON THE ECONOMY: A MACRO-ECONOMIC IMPACT ANALYSIS BY WEFA SOUTHERN AFRICA

This section reports on a macroeconomic impact analysis of the proposed transportation strategy. The reason for a macroeconomic impact analysis is that the size of the expected *initial* stimulus is relatively large. The rule of thumb is that any public sector policy initiative that is larger than 1% of gross domestic product (GDP) requires a macroeconomic impact analysis. The main challenge of the impact analysis is to evaluate both macroeconomic costs and benefits of the proposed strategy.

Macroeconomic benefits were simulated by:

- increasing investment demand (government capital expenditure, current expenditure for more operational expenditure and maintenance and transfers to transport operators); and
- increasing capital productivity by the equivalent of a (conservatively estimated) 15% return on the investment in transportation infrastructure for the RSA based on a research by the World Bank (1996) and modelled by an equivalent increase in *potential* GDP.

Macroeconomic costs were simulated by:

- higher fuel levies, leading to a higher producer price index (PPI) and consumer price index (CPI) and higher government revenue;
- increasing corporate taxes to approximate an increase in RSC levies; and
- increase in licence fees both modelled by an equivalent increase in corporate taxes for reasons of convenience.

All these factors have their own specific economy-wide impact and the objective is to determine what the *net* effect will be on the South African economy. A single sector, quarterly econometric model of the South African economy was employed. The WEFA quarterly forecasting model is designed for the purposes of short to medium-term (6-20 quarters) forecasts of the South African economy and simulations. The broad structure of the model may be described as that of a conventional Keynesian demand-oriented model with explicit supply elements. These supply elements consist of a measure of *potential* output, which, in conjunction with expenditure-determined total output, allows one to determine economy-wide capacity utilisation. The latter then serves as a variable supply constraint in the determination of imports, investment, prices and wages.

The results suggest that the proposed transportation strategy, implemented according to the drivers mentioned above, has, from a macroeconomic perspective, a small positive impact on the South African economy. GDP rises slightly less than 1% (see row 1 of **Table 6.1**), with the main contributions coming from government consumption (row 2) and investment demand (row 3). The price tag on this mild stimulus is a slightly higher inflation (row 5), although increases are relatively small. The reason for this subdued impact on prices is that the strategy offers a balanced stimulus to the South African economy in that both supply and demand is activated. Supply side benefits follow from the return on investment assumption, which has been translated into an increase in *potential* GDP and puts a damper on increases in capacity utilisation (row 9). In addition, investment is stimulated directly as part of the strategy, which has not only a demand side effect (in addition to government consumption) but also a supply side effect in that it creates *potential* GDP. The impact on the employment levels in South Africa, as a result of the proposed strategy, will be that 30 000 additional jobs will be created in the economy by the end of year 5.

Table 6.1: Summary of the impact of a holistic transportation strategy on selected variables of the South African economy

	Year 1	year 2	Year 3	Year 4	year 5	
National accounts variables						
1.	GDP (level)	0.2%	0.4%	0.5%	0.7%	0.8%
2.	Government consumption expenditure (level)	0.3%	0.7%	1.0%	1.4%	1.6%
3.	Investment demand (level)	1.1%	1.8%	2.3%	2.7%	3.1%
4.	Imports (level)	0.4%	0.8%	1.2%	1.5%	1.8%
Price variables						
5.	CPI (% point change in consumer inflation rate)		0.1	0.1	0.1	0.1
6.	Exchange rate (change in Rands per US\$)	0.01	0.02	0.03	0.04	0.05
Selected other variables and ratios						
7.	Government deficit / GDP (% point change)	0.3%	0.5%	0.8%	1.0%	1.3%
8.	Balance of payments/GDP (% point change)	-0.1%	-0.2%	-0.4%	-0.4%	-0.5%
9.	Capacity utilisation (% point change)	0.1%	0.2%	0.2%	0.1%	0.0%

Source: model calculations

The only concern with the strategy is the impact on the balance of payments resulting from significant increases in imports (row 4). Note that the economy-wide import propensity was used. In the case of transport sector specific investments, this may well be lower, resulting in a less negative impact on the balance of payments. Moreover, the impact on the balance of payment should not be more or less than any other stimulus. Due to the open nature of the South African economy, any domestic growth will put pressure on the balance of payments.

Finally, the mild upturn created by the strategy, together with the assumed fuel levy and corporate tax increases, will lead to a drop in the budget deficit to GDP ratio (see row 7). This made it possible to assume a constant interest rate avoiding further negative effects emanating from monetary policy, during the period of observation. WEFA has emphasised that they have not modelled a multisector economy, and therefore ignored sectoral variation, which may or may not be quite significant. They have also not dealt with equity issues (the impact on poor versus rich households) following from the introduction of the fuel levy and corporate taxes.

7. RECOMMENDATIONS

It is trusted that the following agreement can be reached with the Department of Finance.

1. That the total transport needs and backlogs are noted, realising that further investigation and refinement may be necessary.
2. That it is clear that there is indeed a problem with unfunded and underfunded mandates in the transport sector.
3. That joint agreement will be sought with regard to the financing principles:
 - user cost recovery;
 - mechanisms for cost recovery;
 - welfare support for public transport; and
 - revenue accounts for required funding at all spheres of government.
4. That a joint investigation (between selected team members concerned with transport and finance) into appropriate financial mechanisms and levels of streamlined financing is necessary and will be undertaken forthwith. Agreement is also necessary on what the contents of such a study should include and what the criteria for evaluation of the outcomes would be.

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