EXPERIENCES WITH A SECOND GENERATION ROAD FUND IN NAMIBIA FOUR YEARS AFTER ESTABLISHMENT[1]

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Introduction

The Road Fund Administration (RFA) came into operation on 1 April 2000, to manage the Namibian road user charging system (RUCS) and a Road Fund, which receives all revenue from the RUCS and the expenditure of which is dedicated to road (sub)sector related projects and programmes. Some four years after implementation, the picture emerging is that some success has been achieved but not to the extent as originally envisaged. Excessive reliance on revenue from road user charges on fuel, and Government sensitivities and policy developments about fuel pricing subsequent to the establishment of the RFA, have caused a setback. A need has been identified for review of the way ahead and for bold steps towards direct road user charging instead of the indirect road user charge collected through fuel levies. After an introduction to the RUCS, this paper briefly introduces the aforementioned experiences from the operation of the RUCS and resulting conclusions.

Namibia is a semi-arid country on the southwestern coast of Africa, with an area of about 823 144 square kilometres and a population of about 1,8 million. As can be seen from the information tabulated below, the vastness of the country, necessitating a relatively extensive road network for its low traffic and thin, low-income population makes it particularly important that the road sector should function efficiently. This provided the impetus for the policy and institutional road sector reform launched shortly after Namibia's Independence in 1990.

ROAD NETWORK AND TRAFFIC

Road Class	**Total**	**Primary**	**Secondary**	**Tertiary**
	42 238	3 944	9 599	28 695
Surface Type	**Total**	**Bitumen**	**Gravel**	**Earth**
	42 238	5 477	24 516	12 245
VKT[1] / a [million]	1 573	1 318	214	41
	100.0%	83.8%	13.6%	2.6%
Vehicle Population		180 000		

(1) VKT: Vehicle Kilometres Travelled

ECONOMIC

GDP (2002): app. US$ 4 billion
Income skewed: 1% of population earn 32% of income
Transport sector contribution to GDP: app. 3,5%
Roadworks cost inflation: est. at 8% / annum

The Namibian Road User Charging System

Consistent with the aim of the road sector reform, the objective of the RFA is to manage the RUCS in such a way as to raise sufficient revenue, through equitable road user charges, to ensure the achievement of a safe and economically efficient road sector. It is important to note that the achievement of this broad objective can essentially be reduced to (i) the achievement of an economically efficient level of funding of road sector projects and programmes, and (ii) the efficient use of monies. While the role of the RFA is aimed primarily at the former, the latter is likewise a fundamental objective of the road sector reform, with the responsibility for this being shared by the RFA as well as recipients of funds from the RFA. Regarding the funding level, the RFA Act mandates the RFA to autonomously, independently and expertly fulfil the two main functions of: (i) regulating the economically efficient level of road

[1] This paper presents the viewpoints and opinions of the authors, and should not be construed as an official view or policy of the Road Fund Administration or the Government of Namibia, or as being authorized by these.

funding, and (ii) imposing equitable road user charges on road users with the ultimate objective that such revenue should enable funding of the roads infrastructure at the economically efficient level. It is notable that this funding should cover not only the preservation of the national road network, as in the case of most road funds, but also the development thereof. To achieve stable road user charges, the RFA may make use of loan financing from donors and the private sector. The major types of road user charges imposed currently are road user charges on diesel and gasoline used on-road, vehicle licence fees, and cross-border transit charges on foreign vehicles. The RFA may also impose a fee related to vehicle mass and travelling distance, to improve road user charging equity between light and heavy vehicles. However, due to constraints to be discussed later, this has not yet been implemented. Since a significant quantity of diesel is used off-road, the RFA, in view of equity considerations, operates a system to refund the road user charge on diesel used off-road by the major industries.

The RFA performs its functions as a semi-state organisation with staff contingent of about 15, managed by a Chief Executive Officer, and governed by a board of five directors. Directors are appointed, in consultation with the Minister responsible for transport, by the Minister of Finance, to whom they are accountable in terms of a performance statement. In terms of the legislation, directors should be appointed for their relevant expertise, and not to represent specific interest groups. This requirement is consistent with the approach of determining road user charges based on efficiency principles.

The Namibian road user charging approach constitutes a significant break from the traditional practice of determining road funding, often in competition with other funding priorities of Government, according to largely subjective "affordability" criteria and where the available funds are then allocated in what is regarded as the most efficient manner. Instead, the respective responsibilities of the RFA and Government are that the RFA should ensure that the road sector is efficient and that road users pay fully for roads which are justified on economic efficiency principles, while Government should continue to fund projects and programmes that are not economically viable, but of social priority.

Development of and Experiences with Road User Charging

The major challenges

The revenue and expenditure of the RFA are largely determined by needs for funding the management of the national road network, consuming about 80% of the expenditure from the Road Fund, with the balance allocated to various other road sector related functions, e.g. the quality control of road traffic. Against this background, the major challenges that the RFA came to face in the four years since its establishment can be summarised as: (i) an immediate peak demand for funds to reduce the pre-reform backlog in the rehabilitation of bitumen roads; (ii) technical difficulties in determining the economically efficient level of funding of road sector projects and programmes and the appropriate road user charging strategy; and (iii) to raise the level of revenue from road user charges to the level required for economic efficiency. These challenges are briefly discussed hereafter.

Reducing the backlog

Inadequate road maintenance funding levels and extensive deferment of the rehabilitation of bitumen roads that had served far beyond their design lives caused a peak demand for funds in the initial years of the RFA's existence. Meeting this challenge was made possible by the Government taking up loans from donor agencies, and by the RFA funding the Namibian cost contribution towards projects financed through such loans. While the Government had previously been unable to budget for the required Namibian co-funding, the RFA managed to

raise the required funds on the Namibian capital market by issuing Government guaranteed loan stock. The RFA's capacity for such borrowing was substantiated by a five-year business plan of the RFA, demonstrating a road user charging strategy of building the initial low road user charges revenue basis up to an economically efficient and long-term stable level of road user charges. The introduction of road user charging therefore had a beneficial effect on the level of road infrastructure funding, as evidenced by the figures in the table below.

ROAD NETWORK PRESERVATION AND DEVELOPMENT EXPENDITURE
[million US$ equivalent at current exchange rates]

Expenditure Item	Governm.	Road Fund Administration + Donors			
	1998/99	2000/01	2001/02	2002/03	2003/04(1)
Rehabilitation and Development	15.472	25.357	11.317	30.313	39.410
Routine and Periodic Maintenance	26.483	42.192	47.572	51.868	61.208
Total for Developm., Rehab., Maint.	41.955	67.549	58.889	82.181	100.618

(1) Estimate

Determining the economically efficient level of funding

In view of the low base from which road user charges started (as discussed further below), the need for loan financing to reduce the road rehabilitation backlog, and the requirement of eventually achieving long-term stable real rates of road user charges, the need for a long-term strategy for road user charging became apparent. The determination of the economically efficient level of funding of road sector projects and programmes thus required the preparation of a Medium- to Long-term Roads Master Plan (MLTRMP) for the development and preservation of the national road network. The Roads Authority (RA), the semi-state organisation responsible for the management of the national road network, assumed the responsibility for the preparation of the MLTRMP in consultation with the RFA. The MLTRMP would then essentially determine the consequent strategy for road user charging. Organisational and technical capacity constraints turned the preparation of the MLTRMP into a multi-year programme, during which time the RA also had to establish a Road Management System as a critical element. By mid-2004, it was at last possible to attach tangible costs to meeting the objective of achieving a safe and efficient road sector as envisaged in the RFA Act. Broadly, it was found that the current funding level was about 80% of what it optimally should have been; however, the level of road user charges revenue stood at only about 60%, with the difference having been covered by borrowing.

Raising road user charges to the level required for economic efficiency

When the Road Sector Reform was conceptualised, indications were that revenue from the existing levels of "roads related taxes" was sufficient to largely cover the costs of the national road network, which would ease the introduction of a road user charging system from a fiscal viewpoint. While this facilitated the decision at the time to implement a fully self-sustaining road user charging system, the time required for implementation and rampant inflation had seriously undermined this basis, when the RFA in April 2000 assumed the funding responsibility for the management of the national road network. The initial base of road user charges constituted the vehicle licence fees and a portion of the fuel taxes previously collected by Government, which were ceded to the RFA as road user charges, and the inadequate level of which had also resulted in the previously discussed peak demand for funding to reduce the backlog.

The RFA has motivated its business plan and increases in road user charges on fuel through several stakeholder consultations. Although it found broad support among the public and road carriers, ever since the introduction of the RUCS Government has been reluctant, for various

reasons, to allow increases in the road user charge on fuel as determined by the RFA. Since April 2000, the road user charge on diesel was increased from the initial US$ 0,10 / l, and in the case of gasoline from US$ 0,11 / l, to US$ 0,12 / l in 2003, where after no further increases had been granted. With about 75% of all road user charges revenue derived from the road user charges on fuel, the failure to increase these charges has severely constrained RUCS revenue. Although the RFA was able to increase licence fees by an average of 15% per year, this increase could not even compensate for the effects of inflation (increasing 25% of total revenue by 15% results in an overall revenue increase of about 4%, far below the inflation rate). Unfortunately, this has resulted in the RFA essentially being limited to only continue funding road maintenance as from 2005.

Conclusions from Experiences

To enable the RUCS to continue pursuing the aim of a safe and efficient road sector despite the aforementioned problems, the RFA in 2003 launched a RUCS Review project, in which the legislation, rationale for and macro-economic effects of road user charging were thoroughly revisited. The findings of the project generally confirmed the soundness of the current system of road user charging. However, significant conclusions were that the introduction of at least a simple MDCS would have to be expedited and several weaknesses in the legislation would have to be addressed, also reinforcing it with a view to eventually extending the principles of the MDCS into a generally applicable direct road user-charging instrument to progressively replace fuel levies. The details for a simple first stage implementation of MDCS were developed as part of the project.

It had required intensive policy and technical debate and personal engagement among stakeholders over a period of nine years to achieve the political adoption of the RUCS and RFA. One of the post-reform neglects was not having sustained the same level of effort in public relations. Nevertheless, large road carriers with their technical insights remained supportive of the RUCS, whereas it has become evident that technical and economic efficiency arguments have remained mostly irrelevant to politicians and their public service advisors. On the other hand, arguments by vested business interests in favour of toll roads are becoming increasingly attractive to Government, even against economic arguments presented in disfavour thereof.

An inference that can be drawn from this is that defending the RUCS on a puritan technical and economic basis might be unsustainable in the face of apparent competition between road user charges on fuel and Government fuel taxes. Road user charges levied in a more direct manner, avoiding the perception of such competition, are likely to be more acceptable and sustainable (hence the political interest in toll roads).

Considerations on the Future of the Road User Charging System

Revision of the legislation and preparations for introducing an MDCS in 2005 are in progress. In view of the above conclusions, the need for a progressive shift to direct road user charging in general appears inevitable. Such direct charging would be based on principles similar to those of the MDCS, primarily relating to vehicle characteristics and to actual distance travelled, which determine a vehicle’s cost responsibility for road network use. GPS-based travelling distance measurement systems are now within technological grasp, and are believed to reduce the compliance enforcement problems experienced with older systems. The major challenge to successful implementation, apart from legislative amendments, will be institutionalising the effective traffic law enforcement required to support such a system. On the positive side, such a system would allow precise and cost-efficient road tolling even on Namibia’s low volume roads, thereby offering business opportunities and synergy with Government’s interest in toll roads.