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Non-Tariff Barriers to Trade in Southern Africa:

Towards a Measurement Approach

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GLOSSARY OF ABBREVIATIONS

BURS	Botswana Unified Revenue Service
BUSA	Business Unity South Africa
COMESA	Common Market for Eastern and Southern Africa
DOT	Department of Transport (SA)
FESARTA	Federation of Eastern and Southern African Road Transport Associations
FTA	Free Trade Agreement
GDP	Gross Domestic Product
NTB	Non Tariff Barriers
RFA	Road Freight Association
SANRAL	South African National Roads Agency Limited
SAIIA	South African Institute of International Affairs
SAD 500	Single Administrative Document (for common usage by Sustoms Administratins in the region)
SADC	Southern African Development Community
SARS	South African Revenue Service
TRALAC	Trade Law Centre of Southern Africa
TKC	Trans-Kalahari Corridor
WTO	World Trade Organization

ABOUT THE AUTHOR

Costa Pierides has extensive and lengthy experience in the area of transport-related matters, and runs his own one-man consultancy, Pierides Consulting.

ABOUT THE FUNDERS

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1. BACKGROUND TO AND MANDATE FOR THIS RESEARCH

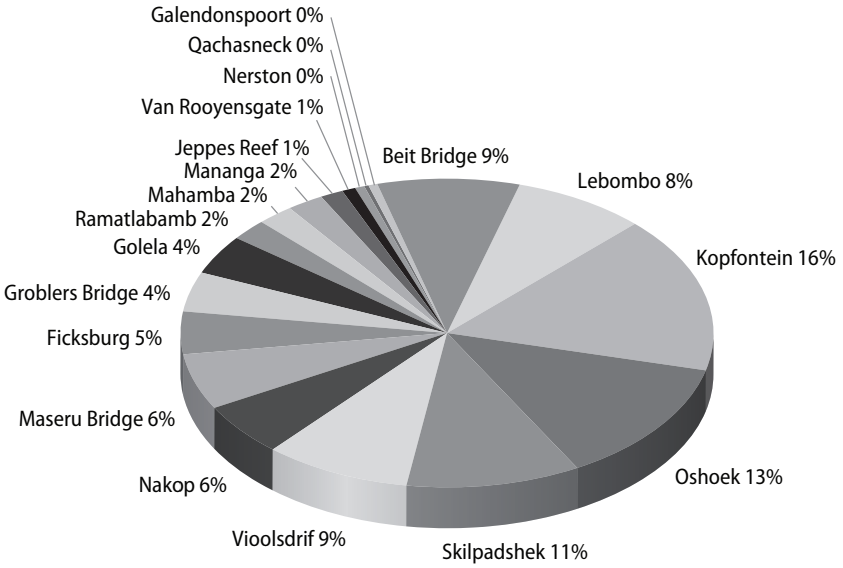
Liberalisation of goods trade has enjoyed substantial advances in South and Southern Africa in recent years, notably through the Uruguay Round agreements, unilateral liberalisation under structural adjustment programmes, and Southern African Development Community (SADC) and Common Market for Eastern and Southern Africa (COMESA) free trade agreements (FTAs). Notwithstanding ongoing problems with rules of origin pertaining to tariff concessions, tariff rates have been reduced substantially and processes established to liberalise and/or harmonise services trade and associated regulations. Yet major obstacles to the actual conduct of trade remain. Both SADC and COMESA have recognised this and established processes to address non-tariff barriers (NTBs) to trade. Key to the success of those processes is identifying the most problematic NTBs and establishing institutions to effectively deal with them. This paper is intended to contribute towards achieving this objective by focusing on one corridor (the Durban–Gaborone route) and dissecting the key generic NTB issues affecting supply chain costs. Naturally, this would need to be placed within context by identifying what part transport in general plays in the economy, and indeed (in particular), the role road transport plays.

Issues

In late 2006 the South African Institute of International Affairs (SAIIA) initiated analysis of these issues through a pilot-study of South Africa–Zimbabwe trade via the Beit Bridge border post — the busiest border in Southern Africa. That study revealed the difficulty of measuring the cost of NTBs to economies, opting instead to catalogue NTBs for the four major product groups traded bilaterally.[1] This methodology revealed a host of NTBs, but not those traditionally thought of as such. The latter are generally associated with border procedures and regulations, including, among others, customs, health, immigration, security and technical standards. The SAIIA study revealed that if the definition of

[1] The study is available at *<http://www.saiia.org.za/modules.php?op=modload&name=News&file=article&sid=1102>*.

Figure 1: Transactions per annum at all South African land borders



Source: South African Revenue Service (SARS), from the CCA1 computer system

an NTB is broadened to include trade policy barriers (e.g. exchange controls), then a new world of regulatory obstacles to the conduct of trade is opened up.

Yet the problems around Zimbabwe's economic and political trajectory are unique. Therefore, the pilot study was expanded to the case of South Africa–Botswana trade. Furthermore, the study centres on the implications of NTBs for South African companies' supply chains. Hence, the present analysis draws on the supplychainforesight study by Barloworld Logistics,[2] which established that major South African corporations are lagging behind in both their understanding of supply-chain management in general and consequently management of their own supply chains in particular. This has substantial implications for their competitiveness in a fast-moving global economy. Our particular interest is in highlighting the impact that NTBs have on supply chains, as opposed to on individual companies, in order to reinforce the importance of systemic thinking as the basis for competing internationally.

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[2] Barloworld Logistics, *supplychainforesight survey*, 2006, *http://www.supplychainforesight.co.za*.

Within this, transport and logistics are particular focus areas, for three reasons. Firstly, the South African government's Accelerated and Shared Growth Initiative for South Africa correctly prioritises developing the country's logistics system, towards which end billions of rands have been earmarked for expenditure. Secondly, it is clear that notwithstanding the National Department of Transport's recently released 'vision' document,[3] many problems remain both in terms of its formulation and implementation. Thirdly, during SAIIA's 29 August 2007 workshop on the South Africa–Zimbabwe NTBs study, this emerged as a key theme. As Durban in particular is a key port in Southern Africa, through which much of the region's container trade is directed, the corridor from Gaborone to Durban is the centrepiece of the present study.

Methodology

The study focuses on Durban–Botswana trade, particularly road transport via the corridor through Kopfontein border post running through to Gaborone. The rationale for focusing on this route is as follows:

This border carries the most traffic to Botswana and its primary city, Gaborone. Recent evidence indicates that while a good 38%[4] of north-bound traffic deviates from Beit Bridge to Groblers Bridge, the comparative vehicle tonnages south have dropped by nearly 60%, due possibly to the overloading controls imposed on this corridor in 2005 near the South African border.[5] The indications are that Zambian traffic, aiming to avoid overloading detection, has been diverting through Kopfontein/Tlokweng (for details, please consult table 1 in the border post-statistical annexure at the end of this report). During the site visit and trip by the project team on Wednesday, 31 October 2007, the massive wear on infrastructure on the Tlokweng side of the border was indicative of overloading practices being rife on this route.

While studies have been done on the trans-Kalahari borders of Skilpadshek and Ramatlabama, with Groblers Bridge also getting attention on the Zam-

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3 Department of Transport, *National Freight Logistics Strategy*. Pretoria: Department of Transport, 2005.

4 Data supplied by the South African Revenue Service (SARS).

5 Pinard MI, *Review of Cross Border Overloading Control Pilot Project at Martins Drift/Groblers Bridge*. Southern Africa Global Competitiveness Hub, August 2006.

bian/Malawi/DRC[6] route deviations from Beit Bridge, no studies have been done on Kopfontein. And yet this is the border with the largest volume for Botswana (16%, versus 11% for the largest of the Trans-Kalahari Corridor borders, Skilpadshek, and Ramatlabama at 2%); see Figure 1.

The following broad questions guided the research:

1. What are the companies concerned sourcing from the region that could be amenable to cost reductions and greater efficiencies if NTBs were ameliorated?
2. What are the obstacles, both regulatory and logistic, that are encountered en route between Durban and Botswana, and can these be costed? The Barloworld study shows that most big South African companies interviewed do not cost their supply chains; this research could assist in that direction.

Research consisted of a combination of desktop analysis and interviews with relevant government officials and business groups; nevertheless, it was the first-hand observations of procedures involved in moving goods through this corridor that presented the most challenging and identifiable NTBs requiring attention, as these have a direct effect on the costs of all goods on this route, as detailed further in this report.

Interviews were conducted with various government and quasi-governmental agencies and officials at a very senior level, together with representatives of the private sector, in order to verify the research findings.

This study brings into focus the NTBs affecting trade and export competitiveness, both in terms of the traditional thinking and the actual factors not previously given the attention they perhaps deserve. Without a doubt, the most visible NTB constraint determined on this route (and in this study, on transport), and therefore on the logistics chain costs, can be attributed to user charges.

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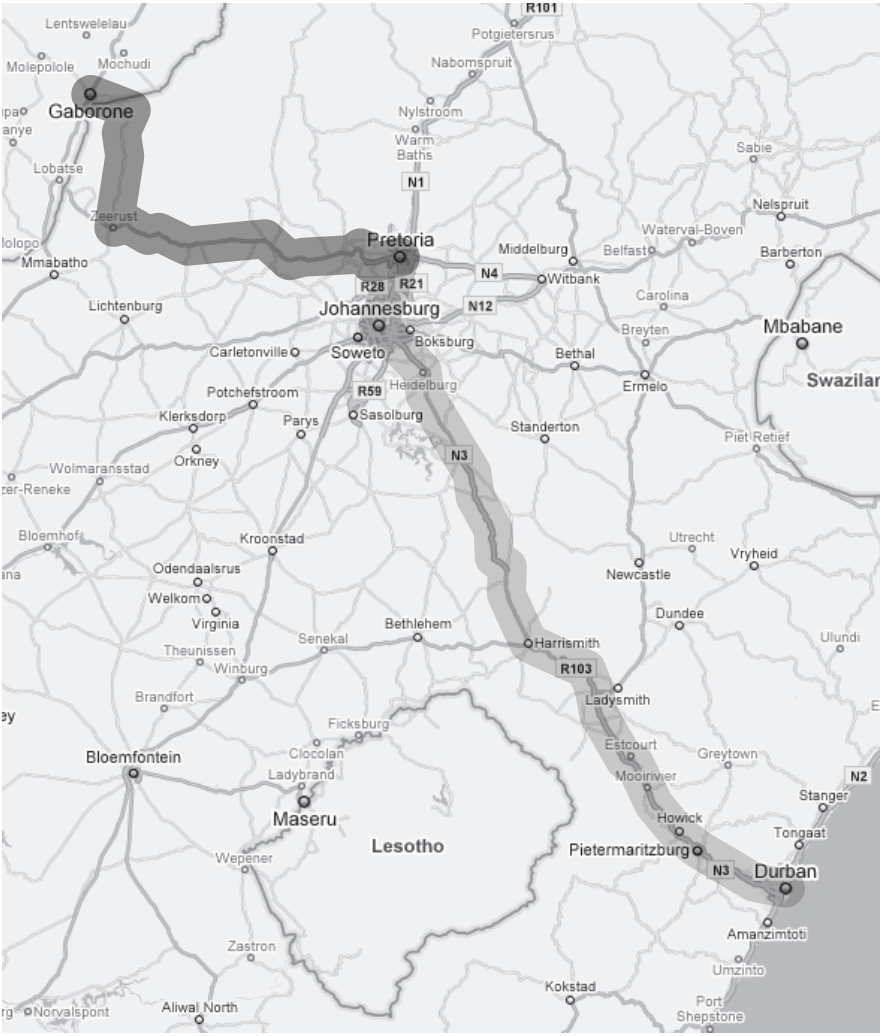
[6] Democratic Republic of the Congo.

2. IN SEARCH OF A MEASUREMENT APPROACH: THE CORRIDOR

The route between Durban and Gaborone is shown in Figure 2.[7]

Figure 2: The Durban–Gaborone corridor



[7] A South African National Roads Agency Ltd toll tariff map and toll fees table are available from the organisation's website, <*http://www.nra.co.za*>.

The largest and most visible NTB to trade: user charges on the N3/N4

At the beginning of the nineteenth century there were still thirty-three toll-houses on the main route between Maintz and Bomberg, thirty on the Rhine between Strasbourg and the Dutch/German border, and nine on the short stretch between Coblenz and Bingen. At any rate, German feudalism would seem to have resisted the formation of a unified market and a single Customs territory. Toll-houses were often built on both sides of a river and ships coming up or down the river had to pay tolls on both banks. They must have been busy zigzagging back and forth. There can be no doubt that the existence of so many toll-houses constituted a serious obstacle to the development of commerce.[8]

Direct costs

In the map in Figure 2, the route is split into two legs, the route from Gaborone to Pretoria (now called Tshwane) in dark gray and the follow-on to Durban in lighter gray. The details of toll roads on the south-bound leg are given in Table 1, using the same colour coding.

Table 1: Toll road fees on the south-bound Gaborone–Durban route

South-bound from Gaborone in sequence: name of toll road plaza	Physical direct cost: tariff for heavy vehicle class 4, with 5 or more axles
Swartruggens Mainline	R 181.00
Marikana Mainline	R 35.00
Brits Mainline	R 33.00
Doornpoort Mainline	R 25.00
De Hoek	R 82.00
Wilge	R 108.00
Tugela	R 128.00
Mooi	R 115.00
Marianhill	R 20.00
All south-bound tolls total	R 727.00

[8] Asakura H, *World History of the Customs and Tariffs*. Baku City: World Customs Organization, 2003, p. 240; emphasis added.

The return north-bound leg requires the same toll fees paid, i.e. R727.00. The whole trip then is costed for South African toll fee purposes as R1,454.00. This constitutes the visible cost. But the question of heavy vehicles gearing down and stopping, and then building up momentum back to their operational optimum speeds has not ever been addressed in a study on the NTB subject.

Indirect costs: heavy vehicle fuel consumption arising from the stop/start process at each toll plaza

Each heavy vehicle will be required to stop and start 18 times on a return trip. The fuel consumption involved is based on the Road Freight Association (RFA) vehicle cost schedule information[9] for an 8-axle articulated combination of vehicles, and is estimated at 7 litres per stop-start operation at each toll plaza. This translates into a figure of 126 litres for the trip.

At the pump price in Gauteng of R7.19–7.26 per litre for 0.05% sulphur content diesel fuel,[10] this translates into an additional cost of R905.94–914.76 (average R910.36), almost two-thirds of the toll road fees involved.

Heavy vehicle stationary time/downtime at the toll plazas

Figure 3: Roadworks on the south-bound route: one of several sites

[9] RFA (Road Freight Association), *Vehicle Cost Schedule Information*, booklet, April 2007, concept 19.

[10] Fuel prices as at 19 November 2007 in Tshwane/Pretoria, Gauteng vary per fuel station (BP Glenfair R7.26/litre; Engen Fairie Glen R7.19/litre).

During the research trip, it was ascertained that an average stopping time of 5 minutes per toll plaza was required. Taking the equivalent time for a heavy vehicle, this has been modelled for the 18 stops to yield a figure of 90 minutes, or 1.5 hours. At a downtime cost for this vehicle combination of R485.03[11] per hour, this adds an additional R727.55 in cost to the vehicle operator.

The direct and indirect cost of toll roads

Adding up the costs in this model, a cost figure of R3,091.91 is arrived at, purely for toll roads in South Africa.

User charges for heavy vehicles in Botswana

A single return trip from the border at Tlokweng to Gaborone now costs 325 pula[12] per 100km. This appears as a minimum fee payable by truckers, and translates into a figure of R464.28 per 100km, although the actual distance to be travelled is 32km to Gaborone return.

So, the road user charges amount to a total figure of R3,556.19 for the corridor in both countries.

3. INADEQUATE INFRASTRUCTURE (ROAD AND PORT) COUPLED WITH POOR MAINTENANCE AS AN NTB

Does infrastructure fall under the scope of NTBs?

There is a logical flow to this development beginning with the 2004 SADC-sponsored Imani report entitled Inventory of Regional Non-Tariff Barriers, which includes the following:

- General Classification of NTBs:
- Inadequate trade-support services: finance; insurance; transport services; market information; electronic communications systems, standards author-

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11 RFA, *op. cit.*, concept 19.

12 Zunckel H, 'Costs soar despite free-trade deal', Trade Law Centre for Southern Africa, 13 August 2004, *<http://www.tralac.org/scripts/content.php?id=2824&print=1>*.

ities. Barriers include lack of nationwide availability of services.

- Deficiencies of infrastructure: ports, roads, airports, border posts.[13]

As this report appears to have affected the direction of later studies,[14] the focus of this study (i.e. the Imani report) needs to be highlighted, as the findings of the present study do not correspond with those of the Imani report.

On page 3 the latter states,[15] 'Without a doubt and somewhat ironically the biggest barriers faced by traders within the region are in agricultural commodities', but on the next page it describes customs administration as still appearing to be 'the single biggest NTB in the region'.[16]

It is true that events have largely overtaken this finding. Since 2004 Botswanan, South African and Namibian customs administrations have introduced transit/trade facilitation measures that vastly improved customs efficiencies, and utilisation of the Trans-Kalahari Corridor rose from 15% to 65%[17] during the project; also, the universal application of the Single Administration Document 500 (SAD 500) came as a direct result of this project.

A brave attempt was made at Beit Bridge by the Federation of Eastern and Southern African Road Transport Associations to measure this 'biggest NTB', and this was followed by a more comprehensive study by Mthembu-Salter[18] that placed issues such as the none availability of forex as a major hurdle for Zimbabwe traders, as opposed to customs delays.

In interviews with various Botswana officials and representatives during the last week of October 2007, the comment was made: 'We are delighted that a hands-on approach has been adopted in this research, as the reference mate-

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13 Imani Development Austral, *Inventory of Regional Non-Tariff Barriers: Synthesis Report*. November 2004, p.7; emphasis added.

14 For example, Curtis B, *Draft Final Report: Beit Bridge Action Plan Monitoring Arrangement that Improves the Efficiency of Transport Services*. Johannesburg: Federation of Eastern and Southern African Road Transport Associations, October 2006; and Mthembu-Salter G, 'The cost of non-tariff barriers to business along the north-south corridor (South Africa–Zimbabwe) via Beit Bridge: A preliminary study.' Johannesburg: SAIIA.

15 Imani Development Austral, *op. cit.*, p.3.

16 *Ibid.*, p.4.

17 World Bank, *Global Economic Prospects*. New York: World Bank, 2005, p.82.

18 Mthembu-Salter, *op. cit.*

rial to date is largely desktop-research-based and possible more academic in value.'[19]

Infrastructure as an NTB

In the Durban–Gaborone corridor, the most visible impact on the cost-effectiveness of trade is user charges, and this will be further addressed in the discussion on the supply chain costs below.

But this was not the only factor. Road infrastructure, the lack of investment regionally to cater for economic growth and the heavy deterioration in what exists together make up scope for further concern as an NTB. The road from Gaborone to Tlokweng is in such bad repair that a trip from the border to Gaborone, a mere 16 odd kilometres, takes 1.5 hours in traffic. This is not acceptable for a growing economy. And the same criticism must apply to South Africa's major urban routes, which are hopelessly unable to cope with the volumes of traffic they have to bear.

On the Durban–Tshwane/Pretoria corridor trip of Tuesday 6 and Wednesday 7 November 2007 the trip was hampered on both sides of the freeway by road works. Several of these resulted in major slow downs in traffic, adding another hour to the average trip. The net result of this is added cost. For heavy vehicles, this means another R485.03 in cost. And traffic jams at peak times are a further cost consideration.

Weighbridges as an infrastructure NTB

Once again, this is not where it ends. Truckers also have to contend with a growing number of weighbridge sites. At Tlokweng, a full-platform-scale weighbridge is under construction. While this is to be applauded on account of the diverted overloaded traffic traversing this border from Zambia, the road infrastructure is in desperate need of upgrade and repair. When this weighbridge comes into operation, there will be an added cost to operators of down-

[19] Interviews with Johnson Maiketso (Botswana Institute for Development Policy Analysis), Ranga Munyaradzi (Southern Africa Global Competitiveness Hub) and Buhalo Matshameko Mudongo (Botswana Unified Revenue Service), Johannesburg and Gaborone, 29–31 October 2007.

time for weighing. Again, this does not end there. On the South African side, east of Rustenburg, a set of two new platform-scale weighbridges are under construction. This will further add to cost for operators, but we have to accept that these measures are necessary to address undisciplined overloaders, to the detriment of legal carriers.

On the Johannesburg–Durban route there are two sites where weighbridges operate, at Heidelberg and near Mooi River. On the research team's return journey we encountered a large traffic jam of heavy vehicles waiting to be weighed. This was about 4.30 pm on Wednesday, 7 November 2007.

The process of weighing is time consuming and cumbersome, and averages conservatively 20 minutes to half an hour. In this case, the tail-enders would be waiting for 1.5 hours at least, adding another R727.55 to the downtime cost of the trip.

Harbour charges as an NTB

A recent comprehensive study by Chasomeris argues that South Africa's harbour wharf age charges have been coming more into line with international practices since the late 1990s.[20] Nevertheless, there are still permit costs of R195 for harbour carriers required annually per truck. Although relatively small in relation to overall costs, the process of applying for and obtaining a permit for foreign hauliers can be challenging, and would normally be done by an agent who charges a commission, adding a further cost to the price.

This may not be an issue currently. However, the looming Container Security Initiative and associated costs of scanning containers are likely to become further cost- and delay-issues affecting the trade. Also, it needs to be said that Durban harbour has for years been unable to cope with the volume of trade going through the port, but it appears that expansions and upgrading are at last under way. This, although not quantified, has for years served as an NTB to traders.

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[20] Chasomeris MG, *South Africa's Port Performance: Policy, Pricing and Growth*. 2004/05.

Border posts as an NTB

The physical time spent with customs was relatively short, at about ¼ of an hour or 1 hour for both borders, north- and south-bound included. For a vehicle carrying a container, with its documentation in order (about ¼ of current cargo declarations are electronic at this border, from the author's personal experience), this would be an average ½ hour per trip both sides of the border.

Cost of downtime would amount to R485.03. But the fuel usage would also need to be considered, namely 14 litres one way or 28 litres return. At R7.02 to the litre, this would come to R196.56. Total cost at the border is therefore R681.59 (i.e. 12.07% of total NTBs on the route).

Table 2: Summation of all NTB costs identified in the Durban–Gaborone corridor

Type of NTB identified in this report in the Durban–Gaborone corridor	Value (rands)	Percentage of total NTBs
Direct cost: toll fees RSA* south-bound return (R727 x 2)	R1,454.00	25.75%
Indirect cost: modelled at 126 litres for 18 stops (eastern suburbs Tshwane/Pretoria average price for low-sulphur diesel)	R910.36	16.13%
Indirect cost: downtime for 18 stops	R727.55	12.89%
RSA toll roads summary cost	R3,091.91	54.77%
Botswana user charges for heavy vehicles minimum charge	R464.28	8.23%
Infrastructure repairs resulting in lane closures and traffic delays on route	R485.03	8.59%
Congestion/delays at weighbridges	R727.55	12.89%
Harbour carrier permit (once-off annual cost)	R195.00	3.45%
Customs/police/immigration clearance at two borders	R681.59	12.07%
Total of all assessed NTBs	R5,645.36	100%

**Republic of South Africa*

4. TOWARDS MEASURING THE NTB IMPACT ON THE SUPPLY CHAIN

Costs

The latest (2005) South African Department of Transport report, National Freight Logistics Strategy, relies on the following 2002 figures in terms of contributors to South Africa's gross domestic product (GDP):

Table 3: The contribution of transport to South Africa's GDP, 2002

Sector	Revenue (millions of rands)
Land transport (road and rail)	R50,323
Supporting/auxiliary activities	R40,628
Air transport	R25,648
Water transport	R4,594
Total	R121,193

Within the context of Table 3, Table 4 places road and rail in context.

Table 4: Comparative South African road : rail tonnages, 2000–03

Year	Rail tonnages	Road tonnages	Road to total tonnage (%)
2000	184,230,000	440,255,000	70.5%
2001	184,442,000	475,703,000	72.1%
2002	181,551,000	488,641,000	72.9%
2003	184,996,000	504,574,000	73.2%

Source: RFA

We now move on to the crux of the project, this being to determine the impact that the identified NTBs have on the supply chain, and therefore on the final cost of sales. And here we revert to the Barloworld Logistics report of 2006.[21]

Nearly 40% of the respondents interviewed for the Barloworld Logistics report believe that logistics supply chain costs account for 10–20% of costs of

[21] Barloworld Logistics, *op. cit*.

sales.[22] If an average is taken, this places supply chain costs at a conservative figure of 15% of sales. Nearly half of the supply chain costs are ascribed to 'inbound and outbound transport costs', or 7.5% of cost contributed to the final figure in the sold item.[23] As demonstrated above in Tables 3 and 4, the road transport portion performs a critical role in South African economy here, and, indeed, in the regional economies, as the role of rail has waned dramatically over the last decade to a fraction of what it was in the 1990s when it was the dominant role player in a regulated environment.

It is now necessary to determine the cost per kilometre and model the trip costs to determine what the impact of NTBs is relative to the trip cost. The end result will be therefore a tool that can be utilised to measure/model the intangible costs associated with issues such as downtime and fuel usage at forced stops. This would assist possible future tasks of measuring or modelling impacts in other corridors or companies determining the previously unquantified costs of their cross-border trips.

From the field trip, the kilometres travelled are set as 2,100 return, without making any allowances for detours around traffic jams. At a rate of R11.02[24] per kilometre for an 8-axle articulated unit, this translates into a figure of R23,142. NTBs account for R5,645.36, or 24.4% of these costs, or about a quarter of the trip costs, which translate into 1.83% of the final cost of sales, as determined by the Barloworld Logistics study.

If this is modelled into the RSA national statistics[25] of R1,727.5 billion GDP at current prices, we end up with a cost figure of R31.61 billion annually.

However, this has to be treated with caution, as the costs are modelled on one corridor only, and it is evident that the complexities vary from corridor to corridor, as evident from the Beit Bridge report.[26] Nevertheless, a sense is given of the possible magnitude of the NTB costs involved.

During the 14 hours of travelling from Gauteng to Durban and back to

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22 *Ibid.*, p.19.

23 *Ibid.*, p.20, Fig. 15.

24 RFA, *op. cit.*, concept 19.

25 Statistics South Africa, *Statistical Release P0441: Gross Domestic Product, First Quarter 2007*, p.20, Table 5.

26 Mthembu-Salter, *op. cit.*

Table 5: Modelling the cost of NTBs in the Durban–Gaborone corridor

2,100km x R11.02 p/km = R23,142 Note: this figure includes the cost of the driver
This study shows that of the above figure, R5,645.36 is an inherent cost or 24.4% of the round trip cost. What this implies is that this cost is absorbed somewhere in the system, either by the transporter, the client, or a combination of the two.
Taking this to the next level, NTBs account for 24.4% of the 7.5% cost of sales determined from the Barloworld study, or 1.83% of final cost of sales.
Working this figure into the RSA national statistics of a R1,727.5 billion GDP at current prices, we achieve a crude measure of the national impact, i.e. R1,727.5 x 1.83% = R31.61 billion

Gauteng, not one Botswana-registered heavy commercial vehicle was sighted. Two Zimbabwe-registered vehicles were seen heading south out of several hundred domestically registered vehicles seen on the route. Why?

The answer may lie in the numerous NTB 'hassle' factors observed in this report. Perhaps the chances are that Botswana operators prefer to run shorter distances to Gauteng instead of facing the battery of toll plazas, weighbridges and harbour permit issues en route to Durban.

Furthermore, rough diamonds account for 84.5% of Botswana's exports,[27] and heavy vehicles are hardly necessary to move these sorts of goods.

5. CONCLUSIONS AND RECOMMENDATIONS ARISING FROM THIS STUDY

Firstly, there are hindrances in the economic system that need to be addressed in the interests of competitive efficiencies, and the experiences in this corridor should be modelled for purposes of determining the overall impact on the country and, indeed, the region. Bottlenecks do exist in the form of delays/downtime, unnecessary fuel usage and costs associated with toll roads, border posts, road repairs and congestion coupled with delays at weighbridges. Many of these indirect costs can be substantially minimised if addressed in a coherent fashion. And how these stack up in terms of overall supply chain costs are placed in perspective in the graphic representations in Figures 9 and 10.

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[27] Imani Development Austral, *op. cit.*

Figure 4: NTBs as a proportion of heavy vehicle running costs

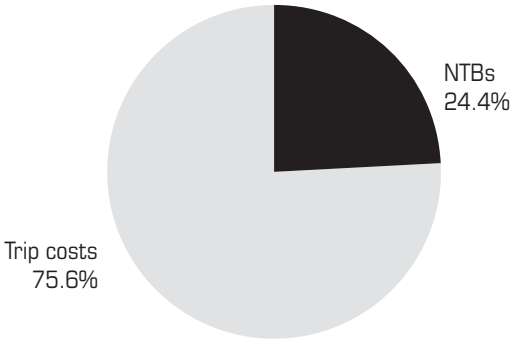
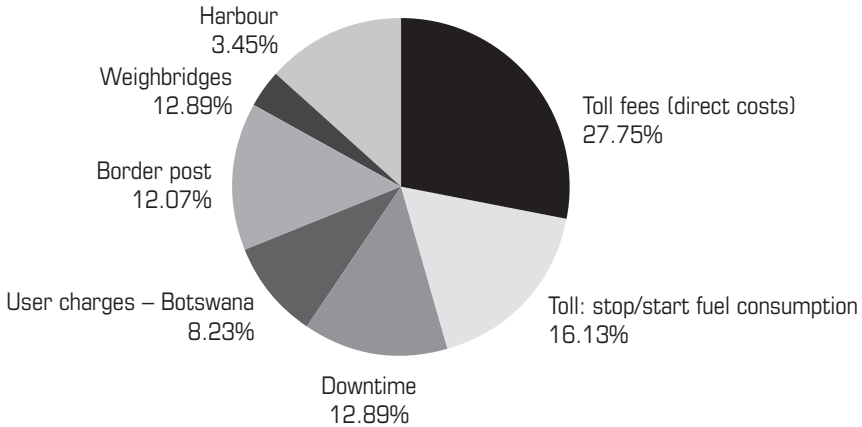


Figure 5: NTB costs, Durban–Gaborone corridor



Starting with toll booths, the question is, why do we need these edifices dotted all over our roads? Surely, user charges can be apportioned to foreign carriers for each trip at port of entry into the country, as is the case with other countries in the region that do this? Such charges then become a once-off irritant, paid in one place, and the vehicle then traverses the road infrastructure unhindered by toll plazas. The universal rate appears to be a charge of $5.00 per 100 kilometres.

For domestic transporters, there is a dedicated fuel levy of about R1.28 per litre that was allocated to the fuel price over a decade ago, but was never utilised for the purpose of road building, repair and maintenance. The net result has been that this became absorbed or blended into tax. But the domestic users also pay toll fees, with the net result that they actually pay for roads twice.

Road users may therefore be justifiably peeved if they feel that road infrastructure investment has not kept pace with economic growth, and they are paying for this public amenity twice.

But, returning to this study, the damaging factor creeps in with the downtime and fuel inefficiencies experienced en route. Undoubtedly, this has to be considered in terms of job creation in poorer communities where these plazas are usually placed, but is this a justifiable sacrifice for the competitiveness of the country's or region's exports? What this report is suggesting is that in the dynamic world companies do business in, solutions of ten years ago may have become obsolete today. Maybe this needs to be looked at again? The possibility of utilising a micro chip implant in the windscreen of a vehicle coupled to an overhead boom reader at the toll gates could significantly reduce the delay factor, but this still is not going to completely reduce the additional fuel consumed by slowing down into the toll booth area and gearing up back to optimal speed.

Weighbridges are also increasing finding their way into our infrastructure costs, but again, surely there are more imaginative ways of ensuring that the culprits are so heavily penalised that they refrain from these practices in future? The bandit operators are indeed formidable foes in that they find ways of evading the system, but the governments in the region can likewise not afford to continue to allow the arteries of the region to be compromised by selfish interests. The answer may lie in the regional adoption of accredited client schemes and the sharing of risk-based information on offenders by the law enforcement agencies. A networked approach would thus have a broader impact if, for example, habitual offenders have their cross-border permits revoked.

Road congestion and infrastructure around economic hubs like Gaborone, Gauteng and Durban are hopelessly out of kilter with the needs of the economy in terms of capacity and spending. Again, this should receive urgent priority from the respective governments. While it is the case that the transport portfolio has for many years been neglected, the South African government has more recently given it a high priority, and this pressure needs to remain in place until 2010 and beyond. The government of Botswana needs to follow suit.

Also, if we go on to accept that we have a common customs union, why do we need to have two stops within the same union? As with Beit Bridge, a heavy vehicle can stop once in the country of exit, be checked by both coun-

tries, and its documents cleared before the vehicle continues its journey. Surely this makes sense in an environment where both countries have adopted the same SAD 500 customs document? And the need for clients to submit their declarations electronically to both administrations is surely overdue? SARS and the Botswana Unified Revenue Authority need to assign effort to getting their CCA1/Asycuda systems talking to each other. If this can be achieved, there is no need for borders. These become virtual borders with document submissions being made electronically. The improved efficiencies should be tangible.

And finally, harbours need attention. If an accreditation scheme is universally adopted and embraced by traders, the need for controlling entry into the port using a permit becomes obsolete.

Further research needed?

This report cannot by its nature cover all the bases. Nevertheless, it has gone a substantial way to achieveing its objective of measuring the NTBs on this corridor, i.e. the objective of modelling or measuring the cost of NTBs and generating a tool for further studies has essentially been documented in this report. The position of the other major corridors will need to be considered and the question answered as to whether the same arguments apply to the same extent, or whether there are other features that influence the NTB scenario in different ways. What the various reports referred to in this study show is that they are all dealing with complex issues that vary on each route. A compendium of NTBs may need to be compiled for more informed policy decision making.

And, arising from this study, it may be appropriate to develop a short-list action strategy, otherwise what value is the study if nothing tangible materialises from it?

Concerning the potential for follow-up NTB-type work, it was noted at the Business Unity South Africa workshop held in Johannesburg on 23 November 2007 that the study had not covered rail and should be extended to ports (Durban and Maputo were mentioned in this regard), and would be expected to include shipping and broader competition issues within the transport industry. It was also noted that future work should distinguish between regulatory costs and user charges (in respect of which it should draw on the World Bank's Doing Business report, in which South Africa was rated 124th on the cost of car-

rying out cross-border trade). Finally, it was suggested that South Africa should be compared to similar emerging markets and developing countries elsewhere in order to get a proper sense of how the country rates internationally.

ANNEXURE:
BORDER-POST TRANSACTIONS INDICATING A POSSIBLE PATTERN OF ROUTE SHIFTS TO BYPASS WEIGHBRIDGE CONTROLS

Table 5: The position at Groblers Bridge/Martin's Drift border posts pre- and post-weighbridge monitoring

Post-monitoring, south-bound, Groblers Bridge, 2006		**Pre-monitoring, south-bound, Groblers Bridge, 2004**	
Date	Count	Date	Count
200601	1,055	200401	1,892
200602	4,015	200402	4,297
200603	1,180	200403	2,712
200604	952	200404	1,841
200605	1,263	200405	5,084
200606	782	200406	3,874
200607	1,975	200407	5,841
200608	1,479	200408	4,394
200609	1,361	200409	5,575
200610	1,345	200410	2,976
200611	1,539	200411	2,651
200612	1,374	200412	3,841
Total	18,320		44,978
	59% drop		

North-bound, Groblers Bridge, 2006		North-bound, Groblers Bridge, 2004	
Date	Count	Date	Count
200601	4,985	200401	1,899
200602	6,313	200402	4,300
200603	4,485	200403	2,715
200604	1,800	200404	1,844
200605	6,289	200405	5,095
200606	5,142	200406	3,877
200607	4,230	200407	5,852
200608	5,043	200408	4,409
200609	3,045	200409	5,579
200610	5,463	200410	2,980
200611	7,687	200411	2,655
200612	7,806	200412	3,885
Total	62,288		45,090
	38% increase		

Source: SARS, from the CCA1 computer system

Table 6: The position at the Kopfontein/Tlokweng border post pre- and post-implementation of weighbridge monitoring practices near Groblers Bridge

Pre-monitoring at Groblers Bridge border post, south-bound, Kopfontein, 2004		Post-monitoring at Groblers Bridge border post, south-bound, Kopfontein, 2006	
Date	Count	Date	Count
200401	342	200601	709
200402	446	200602	939
200403	546	200603	671
200404	628	200604	126
200405	291	200605	493
200406	284	200606	1,315
200407	672	200607	1,047
200408	695	200608	436
200409	634	200609	1,388
200410	624	200610	1,644
200411	524	200611	1,988
200412	214	200612	1,164
Total	5,900		11,920
		102% increase	

North-bound, Kopfontein, 2004

Date	Count
200401	16,747
200402	31,742
200403	34,803
200404	32,496
200405	33,571
200406	19,924
200407	23,848
200408	2,468*
200409	23,573
200410	5,523*
200411	17,587
200412	4,857*
Total	247,139

North-bound, Kopfontein, 2006

Date	Count
200601	20,707
200602	24,837
200603	29,163
200604	20,706
200605	27,818
200606	27,419
200607	24,975
200608	27,849
200609	27,247
200610	30,725
200611	31,994
200612	22,821
	316,267
28% increase	

** These figures appear to be out of character with the normal trade pattern statistics and may, therefore, need to be treated with some circumspection.*

Source: SARS, from the CCA1 computer system

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