SOUTH AFRICA'S

WAY AHEAD: TRADE POLICY OPTIONS

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South Africa's way ahead: trade policy options

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Introduction

This book presents the output of a tralac project focusing on the trade agenda of South Africa and the Southern African Customs Union (SACU) of which South Africa is a member. The proliferation of Free Trade Agreements (FTAs) is very much part of SACU and specifically South Africa's trade agenda, since FTAs are negotiated collectively by SACU member states. The aim of the analysis in this book is twofold. First, the implications of different FTAs that are either being negotiated or being considered, are assessed in the context of the current Doha Round of multilateral trade negotiations. Second, the book presents a sober assessment of trade modelling exercises, noting the value as well as the limitations of these exercises in the making of trade policy choices and negotiating trade agreements.

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Trudi Hartzenberg
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Foreword

This book raises many fascinating policy questions. The authors have systematically built a series of policy scenarios for South Africa and its Southern African Customs Union (SACU) trade partners in order to see what the welfare consequences might be of preferential trading arrangements. The simulations are not only limited to situations in which South Africa and SACU enter into variously configured free trade agreements (FTAs), but they also consider what would happen to these countries if third parties from outside the region were to establish FTAs among themselves.

We have known for a long time that trade liberalisation will throw up winners and losers, both within countries and, in some circumstances, among countries. Where winners and losers are located within the same jurisdiction, it may be argued that governments have a chance to mitigate the adverse effects of trade liberalisation on disadvantaged groups through the use of various adjustment-related and social policies. But what happens when the winners and losers are different countries? These distributional outcomes may often prove more delicate and difficult to deal with. Multilateral trade liberalisation can have these effects, especially through adverse terms of trade effects associated with reductions in subsidies. One of the things that the preferential trade liberalisation scenarios simulated in this book suggest, however, is that such distributional consequences are likely to occur more frequently under discriminatory trade liberalisation. No easy answer exists to this particular policy challenge, but it is not difficult to see that this may be one reason why we observe ‘herd’ behaviour and burgeoning regionalism around the world.

The analytical technique most prominently used in this book – general equilibrium modelling – has its strengths and weaknesses. The authors have shown a high degree of professionalism in acknowledging what the shortcomings are of the analytical method, relating both to stringent data requirements and a set of assumptions in respect of which the results of the simulations can be very sensitive. Moreover, we cannot always be sure about what it is that actually drives results. Although the simulations suggest that the South African car industry may be fairly

competitive internationally, for example, the authors acknowledge that this picture might be influenced by policy effects the simulation has not captured. Similarly, when a simulated increase in South Africa's tariff by 25 percentage points across all sectors results in a net welfare gain for the country, the authors note that this result is sensitive to assumptions that could reasonably be varied.

On the other hand, these analytical techniques and the quality of the data they rely upon are improving all the time. And because the simulations build on the highly realistic notion that the effects of a policy change will ripple throughout an economy, we can often pick up counter-intuitive or less than fully obvious relationships from the simulations. We see, for example, that if South Africa were to enter into an FTA with India and Brazil, its SACU partners would suffer a drop in welfare because of the effect of the new preferences on the price of South Africa's manufactures.

Overall, this book makes a valuable contribution to increased understanding of the consequences of various trade policy choices in southern Africa. The authors are to be commended. The real contribution of work of this kind is not so much in specifying what governments should do, but rather where to look for their options and what questions to ask before exercising them.

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Contents

List of acronyms

ACP	African, Caribbean and Pacific
AGOA	African Growth and Opportunity ACT
AMAD	Agricultural Market Access Database
AMS	Aggregate Measurement of Support
AoA	Agreement on Agriculture
AVEs	Ad Valorem Equivalents
BLNS	Botswana, Lesotho, Namibia and Swaziland
BRIC	Brazil, Russia, India and China
CAP	Common Agricultural Policy
CET	Common External Tariff
CGE	Computer General Equilibrium
CIF	Costs of Freight and Insurance
COMESA	Common Market for East and Southern Africa
COSATU	Congress of South African Trade Unions
CPI	Consumer Price Index
DDA	Doha Development Agenda
EBA	Everything But Arms
EC	European Commission
EFTA	European Free Trade Association
EMA	Export Marketing Assistance Scheme
EPA	Economic Partnership Agreement
EU	European Union
EV	Equivalent Variation
FDI	Foreign Direct Investment
FOB	Free on Board
FTA	Free Trade Agreement
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GEIS	General Export Incentive Scheme
GSP	Generalised System of Preferences
GTAP	Global Trade Analysis Project

HS	Harmonised System
IBSA	India, Brazil and South Africa
LDC	Least Developed Country
MFN	Most Favoured Nation
MIDP	Motor Industry Development Programme
MTR	Mid-Term Review
NAMA	Non-Agricultural Market Access
NFM	Non-Ferrous Metals
NTBs	Non-Tariff Barriers
OECD	Organisation for Economic and Cooperation Development
PROVIDE	Provincial Decision-Making Enabling
PSE	Producer Support Estimate
RAF	Rest of Africa
RoO	Rules of Origin
RoW	Rest of the World
RTA	Regional Trade Agreement
S&D	Special and differential treatment
SACU	Southern African Customs Union
SADC	Southern African Development Community
SAM	Social Accounting Matrix
SMME	Small, Medium and Micro Enterprises
SP	Special Products
SPS	Sanitary and Phytosanitary
SSA	Sub-Saharan African
SSM	Special Safeguard Measures
TCF	Textile, Clothing and Footwear
TDCA	Trade Development and Cooperation Agreement
TFP	Total Factor Productivity
TIFA	Trade and Investment Framework Agreement
TIPS	Trade and Industrial Policy Strategies
ToT	Terms of Trade
TPRM	Trade Policy Review Mechanism
TRQ	Tariff Rate Quotas
WTO	World Trade Organisation

A summary of the implications for South Africa of Free Trade Agreements (FTAs): the analytical approach

Ron Sandrey and Hans Grinsted Jensen

In a world where the Doha Development Agenda (DDA) outcome from the World Trade Organisation (WTO) is making limited progress, and indeed is in suspension, global attention is increasingly turning to the proliferation of Free Trade Agreement (FTA) options. It is reputed that all 149 members of the WTO except Mongolia are involved as a partner in at least one, and in many cases several, of these FTAs, although many of these agreements are partial and preferential agreements rather than genuine FTAs. There is an ongoing debate about what actually constitutes an FTA, and the WTO itself does not seem to be able to resolve this matter despite declaring that an FTA should involve 'substantially all trade'. There is an even bigger debate about whether these FTAs are 'building' or 'stumbling' blocks towards a more open global trading environment, as by definition they are preferential agreements that exclude many trading partners. Do they make it easier or harder to reach the end goal of essentially global free trade?

Notwithstanding this debate FTAs are a fact of life, and this is very much so for most of South Africa's southern hemisphere trading competitors. Chile, for example, has FTAs or preferential agreements with around 50 different countries that represent over 85 percent of the global Gross Domestic Product (GDP). These countries include both the US and the EU. New Zealand, while not negotiating with either the US or the EU, has been at the forefront of negotiating 'clean and comprehensive' FTAs, and is very active in Asia where it has the pole-position for reaching a comprehensive FTA with China. Similarly, Australia has an FTA with the US, albeit an FTA that excludes some of the sensitive agricultural products. Meanwhile, South Africa has the important Trade, Development and Cooperation Agreement (TDCA) with the EU, the Southern African Customs Union (SACU) itself, largely open-access for imports from SADC members (and a potential FTA with SADC in preparation), the MERCOSUR and EFTA Agreements and the unilateral African Growth and Opportunity ACT (AGOA) for preferential access into the US. But is this enough, or is South Africa falling behind?

In a series of papers, tralac have undertaken analyses on some of the FTA options facing South Africa; and to give the general trading environment and the modelling background for this, the set has included three introductory papers outlining this background. This full set includes a summary of the implications of FTAs for both the agricultural and non-agricultural

sectors and indeed an analysis of the implications for both of these sectors from a possible DDA outcome from the WTO, an analysis of the implications for Botswana, Lesotho, Namibia and Swaziland (BLNS) from the FTAs, an analysis of the 'Comprehensive' FTA where all the potential partners are deemed to have a simultaneous FTA with South Africa/SACU only, and a defensive analysis as to what the implications of South Africa's major trading partners concluding an FTA that excludes South Africa may be.

These analyses have involved using the Global Trade Analysis Project (GTAP) computer model, and the model and the version used for these FTA papers and the associated assumptions and limitations are documented in one of the papers [1]. The series of FTA options have all included the BLNS countries that along with South Africa make up the Southern African Customs Union (SACU), as South Africa can no longer negotiate bilateral trade agreements under the new SACU agreement. Note that South Africa and Botswana are modelled as countries in their own right, but that the other three countries of Lesotho, Namibia and Swaziland are aggregated. While the latter is not ideal, there is no other option with GTAP.

The FTA analysis has been undertaken on the following on a one-off bilateral basis:

- extending the Trade Development and Cooperation Agreement between South Africa and the EU to a full FTA beyond the TDCA;
- an FTA with the US;
- an FTA between India, Brazil and South Africa/(SACU) – the so-called IBSA FTA configuration;
- an FTA with Japan;
- an FTA with China; and finally
- this analysis has been also extended to examine the implications of involving a large scale comprehensive bilateral FTA that includes South Africa/SACU on the one side and all of the above on the other side (the 'comprehensive FTA') as a series of agreements that occur simultaneously between South Africa/SACU and the individual bilateral partners only. This is known as a 'hub and spokes' configuration, with South

[1] GTAP is a global network of researchers who conduct quantitative analyses of international economic policy issues, especially trade policy, using at least some variant of a standard GTAP model. They cooperate to produce a consistent global economic database, covering many sectors and all parts of the world. This database contains bilateral trade patterns, production, consumption and intermediate use of commodities and services data. See the website at www.gtap.agecon.purdue.edu for a full introduction to the model.

Africa/SACU as the 'hub' and the individual partners as the 'spokes' radiating out from the hub.

All of the papers in this series are available on the tralac website (www.tralac.org) under 'Publications' and then 'Working Papers'. In almost all instances there are more background details in these Working Papers than is provided in the tralac book, and much of the repetitious information that is available in the Working Papers is not included in the book. The interested reader is referred to the website and to the listing of references in the book at the end of each paper.

The welfare implications of the FTAs modelled

Before embarking on a *tour de force* encompassing the individual results it is useful to give an overview of the highlights of the welfare and trade implications from the simulations. The GTAP model expresses the welfare implications of a modelled change in a country's policy as the Equivalent Variation (EV) in income. The EV in income measures annual change in a country's income (gains or losses) from having implemented, for example, an FTA scenario. The EV is simply defined as the difference between the initial pre-FTA scenario income and the post-FTA scenario income after implementation of the FTA, with all prices set as fixed at current (pre-FTA) levels.

EV = post-FTA Income – pre-FTA Income

If a country's EV in income increases due to a policy change, the country can increase its consumption of goods equal to the increase in income, thereby improving the national welfare in the country. The EV is a doubly effective measure for measuring global economic impacts of an FTA agreement between groups of countries. Firstly, the EV provides a monetary valuation of effects induced by FTA policy changes globally and at the country or regional level, so as to illuminate winners and losers. And secondly, the EV also facilitates comparisons of different policy scenarios, given that income changes are measured in initial base prices.

Table 1 shows the changes in welfare from the so-called comprehensive FTA assuming a complete 100 percent reduction in merchandise tariffs between South Africa/SACU and the individual 'spoke' partners, with the data expressed in US$ million as one-off increases in annual welfare at the assessed end point of 2015. South Africa's gains are a massive $3,348 million (or 2.43 percent of GDP at 2015), and this figure, as expected, dominates the

outcome. Botswana makes modest gains of $29 million in welfare terms, while the Rest of SACU (the aggregation of Lesotho, Namibia and Swaziland) makes major gains of $631 million (some 2.97 percent of GDP). India and Brazil both show large positive gains, while Nigeria and the Rest of Africa record small gains. The other parties, including the excluded Rest of the World, register a loss – with the EU suffering a very large loss as it loses much of its privileged position into South Africa and faces more competition from the Republic in other markets.

Table 1: The individual contributions to welfare gains, $ million at 2015.

	Comp FTA	**With contributions from**				
	EV	**IBSA**	**EU27**	**China**	**Japan**	**US**
South Africa	3,348	1,473	1,117	304	253	201
Botswana	29	-18	28	14	0	4
Rest of SACU	631	-19	611	13	2	23
Nigeria	77	40	23	9	4	0
Rest of Africa	-36	-17	-2	-10	1	-7
EU	-2,220	-1,257	-321	-138	-211	-293
US	-98	-333	78	64	-124	218
India	916	1,004	-30	-29	-9	-19
China	-63	-268	-30	313	-21	-56
Brazil	1,393	1,472	-39	-1	-17	-23
Japan	-275	-280	-137	9	213	-80
Rest of World	-987	-896	77	77	-41	-204

Source: GTAP results

In further examining the GTAP results we are able to decompose the results to show in Table 1 (right-hand side) where the gains or losses actually come from. Note:

- the big gains to South Africa from IBSA and the EU FTAs;
- the gains to both Botswana and Rest of SACU are mostly from unfettered access to the EU (access that may be granted in any case under the proposed Economic Partnership Agreements);
- the EU loses across the board as other countries gain access at preferential rates into South Africa;
- the big gains to both India and Brazil from IBSA;
- the mixed welfare position of the US, China and Japan; while

- not shown is that for the individual FTA simulations the summed welfare gains to each of the parties in Table 1 very similar to the welfare gains from the comprehensive FTA and the individual results for the main parties in the specific FTAs are very close to the data shown on the right hand side of Table 1. This provides solid evidence that 'adding extra FTAs to the basket' adds to rather than dilutes the cumulative gains.

The 'big picture' for trade and production in South Africa

Table 2 presents a summary of the final outcome of the changes to trade flows and production by sector for the main sectors that are affected. Column 2 shows the $ million value of the change in production, with this expressed as a percentage of the 2015 sector output, while columns 4 to 8 inclusive show the respective contributions from each of the parties to the comprehensive FTA. These latter values closely mirror the results from the individual FTAs.

Table 2: the trade and output summary by main sectors, $ million, % and % points contribution.

	Change in production		**Individual contributions from (% points)**				
	value $ million	**%**	**IBSA**	**China**	**Japan**	**US**	**EU27**
Agriculture							
Other grains	227	10.3	-0.3	0.1	**9.8**	-0.2	0.9
Vegetables, fruit nuts	129	-0.9	-0.8	-0.2	-0.8	-0.2	1.1
Cattle	667	14.6	0.4	-0.1	-0.1	0.0	**14.4**
Other agricultural products	103	0.5	0.1	0.4	-0.2	0.0	0.1
Beef, sheep meat	853	19.2	0.3	-0.2	-0.1	0.0	**19.3**
Vegetable oil	92	7.6	**7.4**	0.3	-0.1	-0.1	0.1
Other foods	361	2.1	0.1	0.3	0.6	-0.1	1.2
Beverage, tobacco	141	2.8	0.5	0.1	0.2	0.1	1.9
Resources							
Coal/oil/gas	293	0.1	0.0	0.0	0.0	0.0	0.0
Other minerals	367	1.6	1.0	0.3	0.1	0.0	0.2
Manufacturing							
Apparel	29	8.9	-7.4	-9.8	0.9	25.2	0.1
Leather	-137	-13.3	-2.6	-9.6	0.5	0.0	-1.5
Petrol/coal products	281	1.6	0.3	0.2	0.2	0.1	0.8
Chemical/plastics/rubber	459	2.7	1.6	0.5	0.1	0.0	0.6
Non-ferrous metal	2,275	18.0	15.6	0.4	0.5	0.3	1.2
Motor vehicles	-607	-4.4	-1.6	0.6	-0.5	-1.1	-1.8

Source: GTAP results

The highlights from Table 2 and key points from the FTA simulations are:

- the massive gains from IBSA in non-ferrous metals as South African gold gains duty-free access into India, and India in turn is able to reduce costs in this crucial manufacturing sector[2];
- the large gains from beef and sheep meats into the EU as that market is unconditionally opened to South Africa, and the big increase in cattle required to service this trade;
- the gains in 'other grains' (maize) into Japan;
- the gains to vegetable oils from access into India;
- the modest gains in resources;
- the modest gains for apparel from unfettered access to the US (despite the disruption to this sector from duty-free Chinese imports);
- the loss to the vehicle sector caused mainly by increased imports from the EU (despite the outcome that shows South Africa increasing its exports in this sector to the Rest of the World as its competitiveness is enhanced).

There are three key policy recommendations that can be drawn for these and other supporting results:

1. it should not need an FTA to discuss with India the mutual gains available to reducing the Indian gold tariffs;
2. if South African can secure permanent duty-free access to the US for apparels, this will do a lot to mitigate possible disruption to the sector from Chinese imports;
3. and, lastly, the overall results from the motor vehicle sector seem to suggest that the South African industry is relatively competitive internationally, and that it is able to withstand most of the pressures that would result from free access to the South African market. It is interesting to note that much of the pressure to improve competitiveness would come from the EU, IBSA and the US. This provides economic support to the recent agreement to lower EU tariffs into South Africa for vehicles.

Labour markets and the Unskilled Labour closure

In the standard GTAP model the total labour supply is fixed exogenously, and the model assumes that there is full employment in all countries/regions of the world. This is a very

[2] Gold jewellery is the second largest export from India, with much of this going to the US.

simple assumption and is clearly not the case in South Africa with an unemployment rate of approaching 30 percent. Therefore we have extended the standard model so that the total unskilled labour supply is modelled using a labour supply curve which specifies the relation between labour supply (unemployment rate) and the real wage in each region as an alternative scenario.

The standard GTAP simulation results are as seen in Tables 1 and 2, where the welfare gains for South Africa are some $3,348 million and the increased real GDP is 2.43 percent; the employment of unskilled labour increases by 0.79 percent and the real wage rate by 2.19 percent. At the other extreme where the real wage is fixed and all adjustments must come through the number of unskilled persons employed, we find that employment is up by 4.90 percent, welfare almost doubles to $6,070 million or an impressive 4.57 percent of real Gross Domestic Product (GDP), and the Customer Price Index (CPI) increase is a significantly lower 0.15 percent. These results were: (a) consistent across the different individual FTAs when the same scenarios were modelled; and (b) also consistent when two other scenarios close to the standard model closure and the alternative scenario approach were modelled.

This is a dramatic result which highlights that if South Africa is serious about increasing both welfare and employment in the economy, then policies moving towards creating jobs rather than rewarding those actually in employment is a superior option for policy makers.

The limitations of and the assumptions used in the GTAP as used.

It is always possible to do an almost endless number of 'what if' scenarios. For this study we have limited our analysis to the **primary** FTA outcome where all tariffs between the partners are reduced as per the agreement, although at times we have modelled (a) the overall FTA results following our Doha outcome and (b) alternative labour market closures to assess the options of different labour market policies in South Africa.

In addition, there are some of extra assumptions and general limitations that we need to record.

- For the IBSA FTA we have not disaggregated/split gold out of the GTAP non-ferrous metals (NFM) sector in the database. By not doing so we are affecting other industries

which are using NFM as inputs in South Africa – especially the motor vehicle sector as they are using other minerals aggregated with gold in NFM.

- In the Japan FTA we are not capturing the full potential of expanded agricultural export from South Africa to Japan because of the Tariff Rate Quotas (TRQ) regimes in Japan where we have chosen use in quota tariff rates on import from all regions with zero quota rents.
- For USA FTA, we have not reduced any of the HS6 digit numbers on these products to zero as a part of the AGOA during the base line period 2001–2015 as this is a complex operation given the nature of AGOA. The results for the US will therefore be an overestimate, but, conversely, they will provide an indication of the value of permanent duty- and quota-free access for apparel from South Africa into the US.
- As always, we use the so-called Armington assumption to differentiate trade between different suppliers of the goods, and this will alter the results.
- We have not included Non-Tariff Barriers (NTBs) and there are no trade facilitation issues modelled. There is also no liberalisation of services, and no increase in efficiency (TFP) due to scale economies.
- We have not modelled tariff revenue transfers between the SACU member countries, and this is an important feature of tariff-reducing policies in SACU.
- Given the complex and controversial nature of supports to the South African motor vehicle industry (in a world where these supports are common to most developing countries with such an industry) we caution that it is difficult to accurately measure the full implications of this complex support regime protecting the South African motor vehicle sector. We have therefore treated the available tariffs at face value as the measure of protection and modelled the sector in the same manner as any other.

Section 2: the specific Working Papers and chapters

The objective of these discussions is to augment the overall summary above and provide an insight in greater detail for the series of papers. It is designed to give a comprehensive overview of the complete research in a digestible document rather than a stand-alone report on each of the papers.

1. The South African Trading Environment

This first paper outlines the current environment of the South African merchandise trading relationships. It provides both a short synopsis of the legal frameworks that institutionalise these relationships and a summary of the trade profile trends over the last ten years by

source of imports and destination of exports. This background then extends to the profile of the composition of the trade.

It starts by examining South Africa's economic performance, with this followed by a review of the Republic's trade policies, its membership to the Southern African Customs Union (SACU), an overview of the Southern African Development Community (SADC) and recent trade initiatives. The objective is to briefly explain the legal and institutional backgrounds to these agreements. It then profiles the current (December, year 2006) merchandise trade by both trading partners and trade composition before comparing and contrasting this profile with the one that existed in 1996.

The paper finds that:

- South Africa's trade profile has not changed significantly over the years under review. The same commodity composition in 1996 is more or less the same as in 2006.
- South Africa's traditional trading partners have not changed significantly. The EU, the US, and Japan remain the major trading partners for South Africa, with China as the spectacular mover.
- Key to note is the loss of market share by the major traditional trading partners of South Africa and the emergence of countries such as China in South Africa's trade profile.
- South Africa's profile of trade with the world differs significantly from that with SADC. South Africa imports predominantly manufactured goods from the Rest of the World, and primary goods from SADC. This reflects South Africa's relative comparative advantage in producing manufactured goods, when compared with SADC, and its comparative advantage in producing primary goods (resources) with respect to the world.
- South Africa's comparative advantage relative to SADC in the production of manufactured goods is again reflected in the difference between its export profile with SADC, and that with the world. South Africa's exports to SADC countries are predominantly manufactured goods, while South Africa's exports to the world are predominantly commodity based.

2. The use and limitations of computer models in assessing trade policy

In a dynamic and complex world where there are many trade policy options facing politicians and other decision makers, the use of models to assist in clarifying the potential trade-offs that are inherent within such complexities is becoming more routine. While this situation can potentially assist these decision makers, there is also considerable scope for the converse in that the linkages between the actual 'back room' modeller and the decision maker can be less than direct. The lack of clear understanding of the implications of changes to policies on the part of decision makers caused by weaknesses in the policy advice chain can easily be accentuated by an inappropriate modelling base whence the initial advice came.

The objective of this paper is to try to 'demystify' computer general equilibrium (CGE) trade models[3] in general and the GTAP model in particular. The paper then discusses model strengths and weaknesses, and sheds some light on situations where a particular model may or may not be an appropriate tool for the task at hand. The emphasis is on a 'policy maker friendly' approach rather than a more technical framework directed at modelling practitioners. While of course a model can be any abstraction to represent and portray reality, the focus is entirely upon the narrow sub-set of models that seeks answers to implications directly relevant to changes in trade policy even though the implications and indeed the original premise may or may not be from a direct trade policy question. The emphasis is upon South African and regional applications, although a more international perspective is given at times.

The paper also introduces the model as used by tralac in its analysis of FTA options for South Africa and discusses the assumptions used and limitations of the model. These limitations of and the assumptions used in this GTAP model are discussed above in summary and in more detail in the relevant working paper: It must be stressed that often the assumptions used can dictate the outcome of the modelling exercise, and care must be taken to outline these assumptions and how they may influence the results. Models are, after all, an abstraction from reality, so care must be taken to get them as close to the 'real world' as possible. The onus is on the modeller to explain how closely this is adhered to.

[3] Where the term 'general equilibrium' means that all players in the economy (and often global economy) can be brought onto the stage, whereas a 'partial equilibrium model' means that only the immediate and usually local actors are used. A CGE model can be, in effect, 'closed down' to simulate small or local programmes, but often this may be using a hammer to crack nuts where a smaller but more detailed model is more appropriate.

3. The South African Trading Environment: the Crystal Ball

In undertaking research on the implications of a trade policy change such as an FTA using a computer model the approach is to programme the model with as many as possible of the known changes that include the best estimates of all the macro economic changes such as GDP and population forecasts. This then becomes the 'baseline' and the differences between this so-called **baseline** scenario and this so-called **primary** scenario that we are examining (such as an FTA) are therefore the direct results of implementation of the FTA.

However, an equally interesting question may be: What are the trade patterns as projected in the **baseline** that we are using to examine the FTA against? This paper uses the GTAP database to assess how the South African trade profile may change from 2001 through to the 2015 profile that is used as a benchmark for tralac work on assessing the impact of possible FTAs on South Africa and SACU. The results suggest that at 2015, given a great deal of earlier known information and best forecasts for the future unknowns used, the broad global export situation shows that:

- the dominance of the EU is declining over time;
- there is a similar decline in shares for the 'old' economies of the US and Japan;
- there is a big rise in China, Rest of the World[4] and to a lesser extent India and possibly the Rest of Africa; and
- there is a modest (but increasing) role of South Africa.

Similar patterns are exhibited for global imports; the 'old' economies of the EU and Japan are declining, but the US and the 'new' economies of China, India and Rest of the World are increasing their share of global imports. This is what we would expect when the World Bank forecasts for real GDP growth in China (7.2%) and India (5.8%) are well above the global average.

For South Africa, agriculture is forecast to increase both its global presence and share of South African exports, with secondary (processed foods) agriculture doing better than primary agriculture. The stand-out feature is the vegetable, fruit and nuts sector, while both sugar products and beverages and tobacco decline in relative importance for South African exports but increase their global shares. Resources overall have increased as a percentage of South Africa's exports but the Republic has lost global market share in these exports (and

[4] Where 'Rest of the World' is all remaining countries not included elsewhere. This configuration is used as it represents the countries/regions used in the GTAP simulations in other tralac work.

in coal/oil/gas in particular). Finally, South Africa is marginally increasing its share of global manufacturing exports, but as agriculture is doing better, manufacturing declines as a percentage of South African exports.

As always, there are limitations to this research. One is that the data originally used is for global trade at 2001. This means that the world is nearly half-way to the 2015 target date and many factors may have already changed, but there is no feasible alternative to using the GTAP database for this forecasting exercise.

4. South Africa and the TDCA – a mid-term review and beyond to a full FTA

The Trade, Development and Cooperation Agreement (TDCA) for merchandise trade between South Africa and the EU entered into force on 1 January 2000. It has a transition period of twelve years for South Africa and ten years for the EU that will eventually lead to much of the trade becoming duty-free. Exceptions to this are concentrated in agricultural imports into the EU and motor vehicles imports into South Africa[5]. The agreement does not technically cover imports from the EU into other SACU countries, although it does de facto mostly apply to their imports from the EU. At the halfway point of the TDCA implementation, the data shows that South African imports from the EU have been trending downwards in recent years but the EU remains the main source of imports into the Republic. Similarly, the EU remains the main overall destination for South African exports and the share has remained very stable over the implementation period. Analysis undertaken in the paper shows very little evidence that the reductions in EU tariffs have been beneficial to South African exports to date.

This paper then uses the GTAP computer model to assess what the likely benefits from the TDCA agreement to both partners are likely to be. The results suggest that there will be gains to South Africa of around $317 million at 2015, with these gains split between better access into the EU and greater efficiency at home from better resource allocation. The EU gains a larger $540 million, with most of this from preferential access into South Africa. Other trading partners generally lose in welfare terms, and we caution that the GTAP model gives an incomplete account of the tariff reductions that feed through into less income for the other SACU partners from the revenue-sharing agreement.

[5] On the latter, vehicle tariffs from the EU into South Africa will reduce from the earlier non-preference level of around 26 percent to 18 percent at July 2007, thus providing an extension to the TDCA that is in effect an 'early harvest' for the full South African/EU FTA.

In the final section, the GTAP model is used to assess the implications of removing the remaining tariffs at the end point to bring about a comprehensive FTA between all of SACU and the EU post-TDCA. Here the results are much more dramatic – welfare gains of $1,134 for South Africa and $616 million for the Rest of SACU (as defined by Lesotho, Namibia and Swaziland – from Swaziland's sugar trade with the EU). There is, however, a welfare loss for the EU. The gains for South Africa are concentrated in the agricultural sector, although there are also benefits from the motor vehicle sector. This is not surprising given that the residual protection post-TDCA is in these sectors. These results suggest that South Africa has more to gain from what was left 'on the table' at the TDCA than what was agreed at the time.

5. South African agriculture: a possible WTO outcome and FTA policy space - a modeling approach

The stalling of the talks in the Doha Round at the WTO in Geneva are leading to questions about the value of such a round for South Africa, and against this setting there is a feeling that the Republic may have gone too far in liberalising its agricultural sector and that perhaps an increase in border tariffs may be justified given the continued global distortions to agriculture.

This paper uses the GTAP computer model to simulate (a) a likely outcome for agriculture from the Doha Round and (b) the impacts for South Africa of raising its tariffs by 25 percentage points across all agricultural sectors. Following the analysis of the paper then explores whether South Africa actually has the policy space within its multilateral WTO commitments and bilateral FTA commitments to undertake such a unilateral action. The institutional issue of South Africa undertaking these actions within the mandate of the SACU Agreement is ignored, although the implications from the model's output for the wider SACU is explored.

To set the scene a preamble to the WTO is provided. This includes the major issues from the agricultural negotiations in the WTO, an examination of the influence of the previous WTO Uruguay Round on agriculture in South Africa, and a review of some of the more recent analyses of a likely Doha Round outcome for African and South African agriculture. The striking feature of the latter is that the estimated benefits to agriculture globally are reducing as (1) the limitations of a likely outcome from Doha are being realised and (2) more realistic trade modelling is being done by researchers. Next, a profile of South African agricultural imports is given to set the scene. This includes an analysis of the changes in the trade over

the last ten years, imports by destination, and the main import sources with their tariff rates and associated trade preferences.

The likely Doha outcome

An important part of the model assumptions is that there will be a degree of flexibility that enables countries to preserve their tariff protection on a few selected lines, and this protection is allocated by the model to the most heavily protected tariff lines (the so-called special and sensitive products).

The overall global welfare gains from Doha are estimated to be some $48.2 billion, with a lesser $3.27 billion of this from agricultural reform and the greater $45 billion from the liberalisation of markets for non-agricultural goods. The agricultural results are reinforcing the 'modern' GTAP outcomes which show that use of these special and sensitive products neuters an agricultural outcome from the DDA. South Africa gains some $223 million, with $37 million of this from agricultural reform and the remainder from non-agricultural reforms. The big gainers are China, Japan, EU and our 'Rest of the World', while the US suffers a loss in welfare. Botswana has a loss in welfare of some $12 million, while the 'Rest of SACU' aggregation of Lesotho, Namibia and Swaziland gains by $20 million. We show that these results are consistent with those presented in the literature review of recent analysis, and reinforce that the shielding of some sensitive and special products considerably reduces the global gains from agricultural liberalisation.

By product, the gainers in South Africa are the beef and sheep meat and dairy products sectors where output and consequently exports increase. Production and trade in the wheat and sugar sectors decline (where South Africa largely chose to utilise its protective flexibility in the sugar sector). Beef exports to the EU and 'Rest of the World' are the big export gainers. There is a very slight increase in agricultural imports.

Increasing South African agricultural tariffs

This study was undertaken as a separate exercise **raising all tariffs by a uniform 25 percentage points** from the original base that did not consider a Doha Round outcome. Overall, the welfare results were positive for South Africa to the extent of an increase of $51 million at 2015 despite a reduction in allocative efficiency in the South African economy. Botswana has a reduction in welfare (by $17 million), but the other SACU aggregation benefited by $19 million. Most productive activities increased, while trade flows of both

exports and imports declined as more domestic production was used locally**. On the face of it this move is marginally welfare enhancing for South Africa and South African agriculture**. This outcome is, however, very sensitive to the assumptions used about South Africa's ability to obtain a slightly higher price for its reduced exports on the global market, and if the Armington elasticities governing this are increased, the welfare gain turns to a welfare loss of $73 million.

The problem comes when the 'policy space' available to make these changes is considered. Here we find that the combination of breached WTO bound tariffs, the lower and similarly bound WTO in-quota tariff rates and bilateral tariff preferences negotiated with the EU and non-SACU Southern African Development Community (SADC) members means that there is little or no 'policy space' available to make these changes except in wheat, possibly other grains (maize) and vegetable oil seeds (an import that is used as feedstuff in the domestic chicken sector). While this lack of space and the downstream effects of increasing input costs need to be further considered at a more detailed level, it appears that the limited policy space available will restrict South Africa's abilities to unilaterally raise border protection for the agricultural sector.

6. The WTO Doha Development Agenda (DDA): a possible Non-Agricultural Market Access (NAMA) outcome and implications for South Africa

This paper is a companion paper to the one reviewing agriculture, but this time with the implications of a likely Doha outcome for the non-agricultural (NAMA) products reported.

For **NAMA** reform we use the simple Swiss formula with coefficients 5 and 20 for developed and developing countries respectively, including newly acceded members. Developing countries and newly acceded countries are allowed to exclude up to five percent of their tariff lines if it does not exceed five percent of their value of imports. South Africa is deemed to be protecting selected lines in wearing apparel and motor vehicles. Non-bound tariff is bound by adding 20 percentage points (mark up) to the MFN rate. The so-called Paragraph 6 countries and small vulnerable countries are not required to make any reductions in their applied tariffs but have to bind all their tariff so that the simple average of all NAMA tariff lines does not exceed 28.5 and 22 percent respectively on average. LDCs are not required to do anything by way of reform themselves, but gain duty-free access into developed countries markets[6].

[6] Most LDCs already effectively have this quota- and duty-free access into the EU under the Everything But Arms (EBA) agreement into the EU, while all African countries except South Africa may

The overall gains of $48.2 billion are dominated by NAMA gains of $45 billion, thus reinforcing the 'modern' GTAP results which show that use of the special and sensitive products neuters an agricultural outcome from the DDA. South Africa's total gains are $223 million, with the bulk ($186 million) from the NAMA outcome. The biggest loser in dollar terms is the US (from NAMA), with all other countries/regions gaining from NAMA. China and the rest of the world (RoW) are the biggest gainers, with all the gains for both coming from NAMA. These results for the world and for South Africa are consistent with recent modelling work under similar frameworks.

By sector, output declines in many of the industrial products, with gains from agriculture and the resultant move into these agricultural sectors accentuating the losses to NAMA. The South African sectors to gain from the NAMA outcome are:

- apparel, with increased exports to the US and the use of flexibility to restrict imports from China, India and the Rest of Africa;
- non-ferrous metals with a large increase to India (an increase much lower than the FTA outcome here but still significant, thus reinforcing the FTA outcome), Japan, the Rest of the World and the EU; and
- motor vehicles, where there is a large increase in exports to the Rest of the World that more than compensates for increased imports from the EU[7]. As for apparel, South Africa restricts imports in this sector using flexibility.

Output increases marginally in all the resource sectors, and the biggest NAMA price increase by sector is in fisheries followed by the coal, oil and gas sector.

7. Examining the India, Brazil and South African (IBSA) Triangular Trading Relationship

The question of a closer trading relationship between India, Brazil and South Africa (the so-called IBSA countries) has generated a lot of interest. Following a comprehensive examination of the most recent merchandise trade flows between the relevant countries, this

well have the same access into the EU under the proposed Economic Partnership Agreements (EPAs) with the EU (except initially for rice and sugar). This latter point needs to be kept in mind as the market access under an EPA may grant all African countries except South African many of the Doha benefits.

[7] Note that TDCA tariff preferences for vehicles from the EU into South Africa were reduced at July 2007 from 26 to 18 percent, thus providing an 'early harvest' in this sector which will reduce the gains that can be attributed to the DDA.

paper uses the GTAP model to look at the possible economic results from removing all merchandise tariff barriers between the three IBSA partners.

An analysis of the trade data shows all three IBSA countries to be important global trading nations, with global exports from Brazil, South Africa and India of $118 billion, $52 billion and $100 billion respectively during 2005, and similarly imports of $74 billion, $55 billion and $138 billion for the same countries. The respective bilateral trade between the IBSA partners is also important, with most of the pairings ranking in the high teens to early twenties as bilateral partners for both exports and imports and a range from $0.32 billion (South African exports to Brazil) to $2.65 billion (Indian imports from South African) in value.

The IBSA agreement is potentially beneficial for all major parties with similar welfare gains of between one to one and a half billion dollars at 2015, but with this translating into larger gains for South Africa when measured as a percentage of real GDP as South Africa has a smaller economic base to work from. As is generally the case in this type of analysis, those countries not part of the FTA find that their overall welfare declines modestly, and here the biggest welfare decline in dollar terms is in the EU, with all other countries/regions except Nigeria also facing lower welfare. Unfortunately this group also includes both Botswana and 'Rest of SACU', although these welfare losses are very low and may be misleading given that intra-SACU trade and therefore any changes in this trade will not be picked up in the model's database given the poor quality of this trade data.

The IBSA FTA is of greater value (in fact about double the welfare gains) to South Africa than the partial TDCA as it now stands and discussed above. This is because South Africa is deemed to have gained comprehensive access into the relatively highly protected Indian market in particular, thus gaining a considerable advantage over global competitors in both agricultural and non-agricultural goods.

The examination of the current trade flows between the IBSA partners hypothesised that the interesting results for South Africa may concentrate upon the sugar trade in agriculture and the motor vehicle trade in the non-agricultural sectors. Neither of these proved to be significant for South Africa. Sugar production actually declines in South Africa despite gaining better access into India, as this access is taken up by Brazil rather than the presumably less efficient South African production. Similarly for motor vehicles, where South African production declines by 1.6 percent in the face of more efficient production, and consequently imports from Brazil in particular, and to a lesser extent India.

Given the extent to which China has displaced South African domestic production of clothing with its dramatically increasing exports over the last few years, it should be no surprise that India, although currently not a major source of South African imports but a country with enormous production capacity perhaps second only to China, should compete strongly in South Africa if tariffs were to be eliminated. Clothing production declines by 11.0 percent, and this is a massive decline for an individual sector.

However, **the major finding from this GTAP exercise, and one not anticipated from the trade data, is the massive gains to South Africa from attractive access into India from a zero rather than a 15 percent duty on gold**. This is a happy juxtaposition on the world's leading gold producer meeting a large jewellery exporter that enables both partners to prosper as India's costs are reduced. Indeed, it is this sector that is driving a considerable portion of the welfare gains to both South Africa and India, and the policy implication is very clear: reducing the Indian tariffs on gold is a win-win situation and must become a priority for negotiators.

Overall, the results for the agricultural sector are modest. Initial agricultural products have been a very minor part of South Africa's exports into India's heavily protected market, while agricultural imports from India are concentrated in the duty-free imports of rice. Brazil has become a major global player in agricultural exports, and sends large quantities of soya bean products and poultry meats, pork and beef to South Africa. Following the FTA, South Africa increases **exports** to India by $182 million and Brazil by an insignificant $7 million. Overall some $140 million of the increase is trade diversion from previous destinations and leaves a global increase of only $44 million overall. Increases are in vegetable oils and fats ($68 million) and wool ($30 million) to India take place, while there are global reductions in exports of (a) vegetables, fruit and nuts and (b) other food products. For **imports**, there is a similar but slightly larger overall increase of $92 million, driven mostly by increased imports from Brazil of $76 million (other crops, other meats and vegetable oils and fats).

The implication for the **BLNS countries** of Botswana, Lesotho, Namibia and Swaziland is disquieting, as they see declines in their welfare. This comes mostly from terms of trade losses as the better access for South African non-agricultural goods into India consequently increases the relative prices for SACU imports from South Africa. Exports of sugar products (we presume from Swaziland) to India increase, but this is mostly at the expense of reduced exports to the EU overall. Exports from Botswana reduce marginally in the manufacturing sector as their costs increase (but also marginally). Imports from India increase, but almost all of this is a substitution away from the traditionally-based South African source. There are

very low and insignificant changes in the trade flows with Brazil. In agriculture, there are no (or almost no) changes to trade flows other than the sugar exports to India.

8. Revisiting the South African-China trading relationship

A feature of South African imports in recent years has been the increasing penetration of the market by China and the dominance of this market in sectors where China actively competes. This was vividly illustrated during 2006 when quotas were placed on the importation of Chinese textiles and clothing to protect a domestic section that seems unable to compete even behind significant tariff protection. Conversely, the reported South African exports to China (of mostly ores, steel and fuels) are lower, leading to a trade deficit with China of some $4.8 billion during 2006. This must, however, be tempered by the strong suggestion that exports are massively underreported when Chinese trade data is considered. This data shows a lesser deficit of $1.7 billion - still high, but more manageable.

Against this trading background, the paper undertakes a GTAP simulation of a possible FTA where all the tariffs between SACU and China are reduced to zero. In contrast with earlier tralac work, this model does not incorporate any non-tariff barrier reductions in the Chinese market, and this exclusion reduces the gains to South Africa by nearly half (but increases Chinese gains).

The overall results show gains, measured as equivalent variation of income at 2015, to the two main partners of South Africa and China of around $300 million each. Both Botswana and the Rest of SACU gain very modestly, while the EU is the big loser as it is displaced by China in the South African market in particular.

South African exports are up modestly by around 1.1 percent or $0.57 billion. There is little change in agriculture or natural resources, even though most agricultural prices increase marginally. The action is concentrated in general machinery and ‘other manufactures’.

Conversely, imports from China are up by around $1.6 billion, with $846 million of this concentrated in the textile, clothing and footwear sectors. Nearly two-thirds of this increase is, however, trade diversion away from other sources, and given that China is generally the lowest cost supplier of most of these goods, this is a reasonable outcome for South Africa. This does, however, result in a decline in South African production of up to 14.6 percent in the apparel sector in particular. Other increases in Chinese imports are concentrated in

electrical machinery and other manufacturing equipment. Surprisingly, there is little change in trade flows in either direction in the newly liberalised motor vehicle sector in both countries.

9. South Africa and Japan: towards a new trading relationship?

- Japan was South Africa's single most important export destination during 2005. These exports concentrated on precious stones and metals (platinum) and motor vehicles, and the duties on the major export products into Japan from South Africa are generally zero or very low.
- Imports from Japan are concentrated in motor vehicles, and duties on these imports are relatively high. During 2005 Japan was South Africa's fourth main source of imports.
- Agricultural trade is low, with South African exports concentrating upon sugar, fruit and maize, and almost no imports from Japan. Many of the exports to Japan face moderately high duties, although in the case of sugar, these exports enter Japan duty-free under special concessions.
- The simulation of an FTA suggests modest welfare gains of around $250 million for the major partners of South Africa and Japan. The gains for South Africa are split between gains from better access into Japan and from increased efficiency at home as Japanese competition forces these efficiencies. Both Botswana and Rest of SACU gain a miniscule amount, while the EU and the US in particular lose.
- In agriculture, South African exports of mainly corn (maize) and 'other foods' increase, and, as expected, there is almost no change in agricultural imports (only $22 million). Overall, exports increase in agriculture by $217 million, but some $63 million is trade diverted from other markets. The increase in agricultural exports to Japan is muted by the special arrangements made for sugar which means that this sector does not feature through the GTAP model, and by the fact that South African export and Japanese import profiles are in any case not a very close match.
- There is no change in the trade flows in the natural resource sectors.
- In the non-agricultural trade, there are small increases in output in all the main sectors except motor vehicles. In this vehicle sector, imports from Japan increase by a large $600 million in response to the elimination of the 16.3 percent weighted tariff that existed at the South African border, but as around 60 percent of this is merely imports being diverted from other sources the overall increase is a much lower $220 million here. At the same time, global exports of vehicles increase by $80 million but production declines by 0.8 percent in the face of an output price that declines by a

smaller 0.5 percent. These changes in the non-agricultural sector are largely as expected, and it is only in the motor vehicle sector that Japan faces significant duties for its export mix to South Africa, while South Africa generally faces low tariffs into Japan in manufacturing (and resource) exports.

- Overall, the implications for the BLNS countries hardly register, and there is a very slight loss in global welfare.

10. Examining the US/South African (SACU) trading relationship and the implications of an FTA

SACU entered into negotiations for an FTA with the US in July 2003, but soon found that they were unable to entertain contemplating the US Trade Representative's template for a Free Trade Agreement that extends to the opening of services markets, onerous intellectual property rights, as well as extensive commitments on investment, competition, government procurement, labour and the environment. The negotiations first stalled and have since been suspended indefinitely, but a scaled-down agreement for just looking at border tariff reductions may be an option. The objective of this paper is to outline the merchandise trading relationship between South Africa and the United States of America and then explore the implications of moving this relationship to an FTA that eliminates quotas and import duties at the respective borders. This relationship may be important for South Africa as the US has in recent years consistently been in the top three individual export destinations and import sources. Consideration is also given to the FTA impacts on the BLNS countries.

Many South African exports (US imports) enter the US under AGOA, and these include items such as (some) apparel and footwear, wine, certain motor vehicle components, a variety of agricultural products, chemicals, steel and others. Indeed, except textiles and clothing, all natural resources and manufacturing South African imports were effectively duty-free, while in agriculture only oilseeds, other crops, milk and sugar faced tariff barriers over 1.4 percent. Thus, market access gains from an FTA for South Africa are likely to be muted. South African imports from the US are headed by aircraft and vehicles, but they do cover a diverse range. The average duty of these imports during 2005 was assessed by tralac to be 4.80 percent (in the absence of tariff rebates).

The resulting **welfare gains** from a computer simulation of the FTA are estimated to be some $189 million for South Africa, a figure in line with the expected modest market access gains. This is split between the market access gains into the US ($102 million) and the gains from greater efficiency in the South African economy from lowering its own tariffs. Gains

accruing to the US are a greater $243 million, and are almost entirely the result from the elimination of South Africa's tariffs. Indeed, it is notable that the US only loses a miniscule $14 million from allowing duty-free access for South Africa. The EU is the main global loser as the US displaces it in South African market, and the size of this loss ($328 million) largely contributes to a global welfare of a slightly higher figure. This shows that an FTA would meet the stated US objective of levelling the playing field with the EU for competing in South Africa at virtually no cost to the US itself. Botswana's welfare hardly changes, but the Rest of SACU gains an important $30 million from better (Swaziland) sugar access to the US.

Increases in South African **exports** are heavily concentrated in sugar and oilseeds for the agricultural sector, and textiles and clothing in the manufacturing sectors. It is encouraging that there appears to be limited trade diversion for these exports, as the increase to the US of $323 million is only slightly lower than the global increase of $352 million as greater efficiencies are introduced into the South African economy. Increased **imports** from the US are much higher ($906 million) in response to larger initial protection and therefore greater tariff reductions, but many of these imports ($540 million) merely constitute trade diversion from other sources. The bulk of the increases is in manufacturing products, with motor vehicles and their component parts contributing to over half of the total.

11. Examining the defensive interests for South Africa/SACU should some of its major trading partners negotiate bilateral FTAs

A great deal of analysis is undertaken in support of developing options for bilateral FTAs in order to understand where both the opportunities and threats may come from within the particular FTA that is being proposed. This is essentially an offensive interest for a country. However, in a global trading environment where the multilateral global trade talks in Geneva under the WTO umbrella have reached an impasse, numerous FTAs are being negotiated and even more proposed. This raises the question of what happens should a country be excluded from an FTA that involves its major trading partners. Are there significant defensive threats to its trading interests?

This paper takes the analysis of South African/SACU FTA options a step further and looks at the defensive position of what may happen to South Africa should other key trading partners embark upon a bilateral FTA programme amongst themselves. These two FTAs are (a) a bilateral FTA between the EU and the US, and (b) a bilateral FTA between the EU and China, with complete quota- and duty-free merchandise trade access in each of the FTAs. Again, we use the GTAP computer model for these analyses.

The overall welfare results for the two sets of direct FTA partners involved are, as expected, very large. For the **US/EU FTA** the EU and the US gain $3.0 billion and $3.6 billion respectively, but this is at a considerable cost to the excluded countries as global welfare reduces by a large $9 billion when global trading markets become more rather than less distorted. These negative results hold for Africa, with South Africa losing some $122 million in welfare and Botswana and the Rest of SACU losing $4 million and $10 million respectively. A post-Doha simulation shows considerably reduced gains to the EU in particular but, importantly, it reinforces the value of Doha to the excluded countries by reducing the global (and African) loss from the FTA.

For the **China/EU FTA,** there are much greater gains to the EU ($5.5 billion) and China ($8.2 billion), and crucially there are **global** gains of some $7.5 billion although, as expected, all excluded countries lose. South Africa's losses are some $56 million (less than half of losses from the EU/US FTA), while Botswana's losses increase to $17 million and the Rest of SACU's decline to $4 million. The post-Doha simulation lowers the gains to the partners but leaves most other global losses marginally lower.

As expected from these welfare results, the **trade** losses to South Africa are muted but still important. The overall loss in **output** as a result of trade and welfare impacts are more significant, with these being $638 million from the US ($266 million in the services sector) and $307 million from the China FTAs respectively.

The prospects of these two FTAs should be of a concern to South Africa and especially so if there is no settlement to the Doha WTO process, but they are not necessarily a major potential disaster should they eventuate.

12. Free Trade Agreements (FTA) prospects for South Africa: the comprehensive approach

The main focus of the FTA analysis in this series has been undertaking simulations on an individual bilateral basis by extending the TDCA between South Africa and the EU to a full SACU FTA; an FTA with the US; an FTA between India, Brazil and South Africa/SACU; an FTA with Japan; and an FTA with China. In the final paper, we extend the FTA coverage to a large scale comprehensive FTA that includes South Africa/SACU on the one side and all of the above on the other side (in the form of a series of agreements that occur simultaneously between South Africa/SACU and the individual bilateral partners). This is what is known as a 'hub and spokes' agreement, with South Africa/SACU the 'hub' and the partners the 'spokes'.

The welfare gains to South Africa and indeed SACU are dramatic. As shown in Table 1, following a comprehensive FTA at the end point of 2015 South Africa gains some US$3.35 billion, a figure that represents 2.43 percent of the real GDP at that time. Botswana gains $29 million and the Rest of SACU gains an impressive $631 million.

Agriculture

As expected, South African agriculture does well out of the comprehensive FTA, and particularly with increased exports of some $1.1 billion. Detailed analysis shows that much of this comes from increased exports to the EU followed by Japan and India. Increased exports to China and the US are modest, while those to Brazil are negligible. Dominating by sector is the dramatic increase in beef and sheep meat exports to the EU, followed by exports of maize to Japan, and fruit and vegetables and dairy to the EU. Overall, increases in exports are dominated by processed rather than primary agricultural products.

Crucially, the results by sector for the comprehensive FTA analysis retain most of the export gains found from the individual bilateral FTAs. This is because each individual FTA tends to show export gains in different sectors and therefore there is limited 'dilution' of results.

Imports increase by a smaller $333 million, or less than one-third of the export value. The largest increase is in the 'catch-all' category of 'other processed foods' ($58 million), followed by 'other crops' ($55 million), 'other meats' (poultry and pork, $49 million) and dairy products ($50 million). The largest increase is from the EU in secondary agriculture, followed by 'other crops' and vegetable oils from Brazil.

Real prices increase for all agricultural products following a comprehensive FTA, while output increases for most, with output responses for, firstly, cattle, and then beef and sheep meats and also maize in double figures. There are declines in the output of wheat, vegetables and fruit, plant fibres (cotton), 'other crops' and 'other meats' as other agricultural sectors become relatively more profitable, but in all of these sectors the real prices increase to compensate.

Non-agriculture

South African non-agriculture also does very well, with increased exports of $2.96 billion. Much of this ($2.23 billion) comes from increased exports of non-ferrous metals (gold?) to India, followed by exports of motor vehicles to the EU and, surprisingly, as the sector becomes more competitive as a result of an open environment, some vehicles to the Rest of

the World. Increased manufacturing exports to China and Brazil are modest, while those to both the EU and US are even more so. The results by sector for the comprehensive FTA analysis retain most of the export gains found from the individual bilateral FTAs, with the exception of the EU and, to a lesser extent, the US.

Imports increase by a smaller $2,998 million, with the largest increase in motor vehicles ($943 million), mostly from the EU. This is followed by increases in general machinery and equipment, chemicals, plastics and rubber, and then textiles. It is notable that there is not a major surge in clothing imports as the increases from China are largely offset by reductions from other sources, and this, combined with the effects of clothing exports (to the US), means that South African clothing production actually increases.

Real prices increase for most non-agricultural products following a comprehensive FTA, while the output picture is more mixed with both increases and decreases. In particular, output in the motor vehicle sector declines by 4.4 percent.

Profiles of the authors

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Hans Grinsted Jensen is a researcher at the University of Copenhagen, Institute of Food and Resource Economics, International Economics and Policy Division. His field of expertise has focused on the CAP, WTO, EU enlargement and general equilibrium modelling for the past 10 years. He has been awarded the GTAP (Global Trade Analysis Project) Research Fellow distinction in recognition of his significant contribution to the development of GTAP database. He has published international articles focused on the EU enlargement, the EU sugar regime, and the decoupling of domestic support in the EU among others. He has also had his work published in various book chapters where one of the latest is a chapter in a World Bank book focusing on the WTO Doha Round and where he has contributed with a chapter on the consequences of reducing limits on aggregate measurement of support.

During 2003 – 2006, Mr Jensen was a member of the European Network of Agricultural and Rural Policy Research Institutes (ENARPRI) network (http://www.enarpri.org/). The central themes of this network included the impact of regional, bilateral, and multilateral trade agreements which the European Union had concluded or was negotiating, including WTO enlargement, Everything But Arms (EBA), EuroMed, Mercosur, and the multifunctional model of European agriculture and sustainable development of rural areas.

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Nick has extensive experience in a wide range of African, national and provincial policy issues relating to agriculture. He has served on numerous formal commissions and committees of inquiry, including the Strauss Commission on the provision of rural financial

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Nick is a graduate of the University of Stellenbosch, where he obtained his PhD in 1986. He has published extensively in peer reviewed journals, and is currently the editor of Agrekon, the journal of the Agricultural Economics Association of South Africa.

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