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Engines of Economic Growth

SPECIAL FOCUS

EDITORIAL

FEATURES

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In April of this year, the World Bank, in collaboration with TIPS and the Witwatersrand University, hosted a seminar on the implications of the Doha Development Agenda (DDA) for Sub-Sahara Africa (SSA). The seminar reported on the findings of a major international research project investigating the market, welfare and poverty impacts of a potential DDA.

Building on the seminar discussions, this edition of the *Trade & Industry Monitor* examines the extent to which various regions, and the world as a whole, could gain from multilateral trade reform over the next decade. Employing the World Bank's global, economy-wide LINKAGE model, **Kym Anderson** and **Will Martin** examine the impact first of current trade barriers and agricultural subsidies, and then of possible outcomes from the Doha round.

Their results suggest that moving to free global merchandise trade would boost real incomes in SSA and Southeast Asia proportionately more than in other developing or high-income countries. Importantly, real returns to farm land and unskilled labour – and real net farm incomes – would rise substantially in those developing country regions, helping to reduce poverty the more agricultural subsidies are disciplined and applied tariffs are cut. For this to happen, however, both high-income and developing countries should engage in the reform process.

It is not only agricultural policy that is yet again causing contention in international trade negotiations. Economic Partnership Agreements (EPAs) have also fuelled widespread speculation: will they support the regional integration of the African, Caribbean and Pacific (ACP) countries as the EU claims, or lay these economies open to subsidised European exports as some critics allege?

Our article by the Institute of Development Studies' (IDS') **Christopher Stevens** and **Jane Kennan** suggests that both views are uninformed and incorrect. IDS has undertaken a comprehensive review of the trade and tariff structure of almost all ACP states – and the research comes to startling conclusions. The claim that EPAs will necessarily result in ACP markets being thrown open to EU imports appears to be overstated, but evidence suggests that they may well cause serious problems for regional integration.

Part of the problem arises from differences in the commodity composition of countries' imports from the EU. Research into whether this could be overcome by, for example, the calculation of 'substantially all' being made at a regional rather than a country level is highly desirable. But until the European Commission negotiators provide guidance on what they would expect, the range of possible options is so large that informed speculation is difficult.

Another transformation of global significance analysed in this *Monitor* is the growth and integration of China in the world economy. Destined to become the largest economy in the world by the mid-21st century, China holds great significance for the African continent.

On the one hand, China's growth is likely to sustain a global boom in the prices of primary commodities that are produced in Africa. On the other hand, there are the global consequences of increasing Chinese domination of labour-intensive manufactured products. China's unparalleled capacity to supply these goods at lower cost will significantly reduce their prices on world markets. ANC research co-ordinator **Michael Sachs** points out that while South African (SA) and African consumers would

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benefit from these lower prices, they could also hold major consequences in terms of employment and a 'hollowing out' of domestic industries.

Looking at regional economic growth, results from a quantitative assessment by the IMF's **Vivek Arora and Athanasios Vamvakidis** indicate that SA could act as an 'engine of growth' in Africa. Their study finds that a one percentage point increase in SA growth could be associated with a half to three-quarter percentage point increase in the rest of Africa's growth.

Finally, focusing on SA's economic development, particularly in terms of its small business sector, the Competition Tribunal's recent ruling that Nationwide Poles had been the victim of prohibited price discrimination at the hands of Sasol Oil, is of great significance.

The Witwatersrand University's **Grant Saggers** says the ruling signals that competition policy can – and will – be used to ensure that small enterprises have a 'level playing field' on which to compete with established firms. It further reaffirms the Competition Act's concern that small businesses are enabled to contribute actively to economic growth and job creation.

Prohibited Price Discrimination

Understanding the Nationwide Poles/Sasol Case Ruling and its Implications for Small Enterprises

In March 2005, the Competition Tribunal ruled that Nationwide Poles, a small producer of creosote-treated wooden poles, had been the victim of prohibited price discrimination at the hands of petrochemical giant Sasol Oil. Discussing the implications of the Tribunal's ruling, **Grant Saggers**[1] finds the decision of great significance to small and medium-sized enterprises (SMEs), as it signals that competition policy can be used to ensure that small enterprises have a 'level playing field' on which to compete with established firms. However, he also emphasises that the ruling is not a wholesale prohibition of discriminatory pricing practices; if satisfactory economic justification for a dominant firm's unequal treatment of purchasers can be provided, it would be encouraged to engage in price discrimination, as this would enhance welfare.

Introduction

The Competition Tribunal determined that Nationwide Poles' ability to compete on the merits against its larger competitors had been undermined by Sasol Oil, a dominant supplier of the chemical creosote[2], charging, without satisfactory economic justification, smaller buyers significantly higher prices for the product than larger counterparts.

While Nationwide's triumph has now secured it better creosote prices, the implications of the Tribunal's ruling extend farther than the competitive viability of a small pole producer in the Eastern Cape.

In the first place, the decision provides the first in-depth analysis of how price discrimination will be examined within SA, and therefore provides a point of reference for all future price discrimination cases. Second, the SA Competition Act 89 of 1998 is clearly concerned with creating a competitive process and market structure that treats SMEs fairly and encourages them to be active contributors to economic growth and job creation.

The Nationwide/Sasol decision affirms this intent by demonstrating that dominant firms will be held accountable for conduct that prevents SMEs from having access to, or "an equitable opportunity to participate" in, markets in which small businesses could otherwise thrive[3].

Sasol's pricing

The pricing schedule employed by Sasol for its product SAK K, a wax-additive creosote, offered discounts to buyers depending on the volume purchased in the previous quarter. Every three months, Sasol would calculate the discount that a customer would receive for purchases in the upcoming three months based on the amount of creosote the customer had purchased in the last quarter, transformed into an 'annualised equivalent' to determine the volume category into which the customer would fall.

According to the pricing structure, the largest creosote buyers would receive prices that were approximately 15% lower than the prices offered to the smallest buyers, of which Nationwide was one[4]. Nationwide viewed this as price discrimination.

Price discrimination

Price discrimination involves a dominant, price-setting firm sorting customers into groups and charging each a different price instead of offering a uniform, supra-competitive price to all customers. Discriminatory pricing behaviour by a dominant firm relies on the customers not being able to arbitrage (those buying at low prices profitably reselling the good to those offered higher prices) and can be divided into three broad categories[5].

In *first-degree* price discrimination, the dominant supplier computes each client's willingness to pay for the product. Therefore, by charging each client the maximum that

[1] Grant Saggers provided *pro bono* expert economic analysis for Nationwide Poles during the case. He is an economist at the University of the Witwatersrand, and the opinions expressed in this report are his alone.

[2] The Competition Tribunal, Republic of South Africa, Case Number 72/CR/Dec03 ('Nationwide/Sasol').

[3] Section 2(e) of the Act states that an explicit purpose of the Act is "to ensure that small and medium-sized enterprises have an equitable opportunity to participate in the economy".

[4] Nationwide/Sasol, 2005; paragraph 18.

[5] Gravelle H. and Rees R. (2004).

such a customer would be willing to pay, the supplier earns maximum profits and captures the entire consumer surplus. In comparison to the case where the dominant firm charges a standard price to all customers, first-degree discrimination is maximally welfare enhancing, as it eliminates the dead-weight losses to welfare associated with the higher prices set by dominant firms[6]. Obviously, due to information constraints, this 'perfect' price discrimination is unlikely to occur in reality, as the supplier would have to know each of its client's preferences.

In *second-degree* price discrimination, the dominant firm offers a menu of deals to its clients, and different customers 'self-select' the deal that they prefer[7]. Quantity discounts, as Sasol appears to offer on creosote, present a schedule of price-quantity combinations in which consumers that choose to purchase larger volumes of product are rewarded with better prices[8]. Thus, compared to the dominant firm offering only a uniform price to all buyers, big or small, volume discounts "tend to be welfare improving… [as the] lower marginal price [for larger buyers] reduces the allocative inefficiency [associated with the supra-competitive prices charged by dominant firms]"[9].

In *third-degree* discrimination, the supplier sorts the customers according to particular observable characteristics, and charges each segment a different price, depending on that segment's price elasticity of demand. For example, senior citizens may get cheaper movie-ticket prices than young adults. Again, by offering a particular group a better price than it would otherwise have received if there had been a uniform, supra-competitive price for all consumers, this form of discrimination increases overall social welfare.

Price discrimination and competition policy

Whether discriminatory pricing or discounting by a dominant firm should be of concern to competition authorities is a contentious issue. On the one hand, competition policy aims to enhance consumer welfare by providing consumers with better prices. On this standard, price discrimination can lead to lower prices for some customers when compared to the situation in which the dominant firm offers only a uniform, supra-competitive price to all customers.

On the other hand, competition policy also has a dynamic purpose, aiming to encourage competition by promoting and maintaining accessible and competitively structured markets. In developing the competitive process, competition policy aims to augment welfare in the future, and hopes to avoid the entrenchment of concentrated market configurations that are conducive to anti-competitive conduct. Consequently, price discrimination may be of concern to the competition authorities if the dominant firm's preferential treatment of some clients over others unfairly prevents some players from participating actively in the market.

The challenge for competition authorities with respect to price discrimination is to allow differential treatment in cases when it can be justified and creates efficiency, but prohibit it in cases where it damages the underlying competitive dynamics of the market.

For example, when the dominant firm has no satisfactory economic justification for the volume discounts it offers, its actions could alter the structure of the competitive process by unfairly impairing the ability of smaller firms to compete vigorously against their larger counterparts. By preventing small businesses from entering or expanding in the market, the market becomes more concentrated and prices may rise, harming consumer welfare in the long run. Thus, while offering volume discounts can be welfare enhancing when compared to the case where the dominant firm charges a single, supra-competitive price to all customers, they can, if unfairly applied, limit competition to the harm of welfare.

The challenge for competition authorities with respect to price discrimination is therefore to allow differential treatment in cases when it can be justified and creates efficiency, but prohibit it in cases where it damages the underlying competitive dynamics of the market.

Within the Competition Act, price discrimination is treated as a prohibited anti-competitive abuse of a dominant position. Should a firm feel that it has been unfairly prejudiced by the discriminatory behaviour of a supplier, section 9(1) of the Act effectively requires a complainant to follow a two-step procedure to prove that a respondent has engaged in prohibited price discrimination.

In the first step, the respondent must be shown to be a dominant firm within the relevant market, possessing the market power to behave or set prices to an appreciable extent independently of its customers or competitors. With the respondent's dominance established, the complainant must then demonstrate that, in discriminating between purchasers in terms of the prices or discounts offered on otherwise "equivalent transactions", the action of the respondent is "likely to have the effect of substantially preventing or lessening competition"[10].

However, with price discrimination enhancing welfare in certain situations, it would not be desirable to proscribe all differential pricing practice *per se*. Consequently, section 9(2) allows the respondent to defend its discriminatory behaviour if the unequal treatment has either cost justifications, is in an effort to meet competition, or is in response to changed market conditions (such as the deterioration of perishable goods).

Establishing Sasol's dominance

The definition of the relevant market – "the set of products (and geographic areas) that exercise a competitive constraint on each other"[11]– is instrumental in determining whether a firm has market power and is therefore dominant[12].

Nationwide argued that the pertinent market was the market for creosote, which was serviced by two creosote producers in SA – Sasol and Suprachem/ICC (a division of Mittal Steel SA[13]). Within the creosote market, Sasol would have a market share of over 45%, and would therefore be presumed dominant under section 7(a) of the Act[14].

Sasol insisted that the relevant market was wider than creosote alone, and should include all wood preservatives used to treat poles. Sasol

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[6] Frank R. (2003).

[7] Motta M. (2004, p492).

[8] The dominant firm would offer these more favourable prices to larger-volume purchasers if the larger volume purchased by a consumer allowed the dominant firm cost-saving efficiencies that it would not otherwise have been able to achieve. The dominant firm may then pass on some of that cost reduction to the customer in the form of a preferential price.

[9] Motta M. (2004, p495).

[10] Section 9(1)(a), (b), and (c) of the Act.

[11] Motta M. (2004, p102).

[12] Under Section 7 of the Act , "a firm is dominant in a market if –
(a) It has at least 45% of that market;
(b) It has at least 35% but less than 45% of that market,unless it can show that it does not have market power; or
(c) It has less than 35% of that market, but has market power."

[13] Formerly Ispat Iscor.

[14] Nationwide/Sasol, 2005; paragraph 57.

(continued from page 3)

argued that copper-chrome-arsenate (CCA) was substitutable for creosote in pole treatment, and therefore exercised a competitive constraint on Sasol's creosote pricing and should be incorporated into the relevant market. On this broader market definition, Sasol's market share would fall below 35% and, consequently, the complainant would have to show that Sasol had market power to establish its dominance.

Sasol argued that creosote and CCA were substitutable, as the SA Bureau of Standards (SABS) approved both for use in the preservation of wooden products in contact with the ground.

Further, Sasol advanced data suggesting that, as the price of creosote had risen relative to CCA, Sasol's creosote had lost market share while the use of CCA had increased. According to Sasol, this indicated that treated-pole manufacturers were substituting between the two chemicals. The Tribunal, however, rejected both of these arguments.

First, the substitutability of products is not determined by their having characteristics that 'resemble' each other (for example, each having the SABS stamp of approval), but rather by the consumer's perception of the products as substitutes.

The Tribunal established that the degree of substitutability between the two chemicals was "largely dependent upon the intended end use of the wood product that is subject to the treatment"[15].

Importantly, evidence suggested that for particular end uses, consumers of treated poles did not perceive creosote-treated poles and CCA-treated poles as substitutes. Creosote-treated poles were strongly favoured over CCA-treated poles for use in telephone and electricity transmission, due to their greater resilience to *veldt* fires.

Creosote-treated poles were also preferred for use in vineyards – the market segment serviced by Nationwide – as they were less likely to fracture under the pressure exerted by the grape-harvesting machines. Further, concerns over the toxicity of CCA in Europe, a major export destination for SA wine, had caused European regulations to move in the direction of "prohibiting the importation of wines from vineyards that utilise CCA-treated poles"[16].

All these factors were consistent with the fact that Sasol's pricing of creosote paid no attention to the pricing of CCA. If the products had been good substitutes in the eyes of consumers, this behaviour by Sasol would not have been possible.

Secondly, the Tribunal could not derive from Sasol's data that pole manufacturers were switching between creosote and CCA.

The validity of the data was called into question over concerns that it incorporated only estimates of the annual CCA production and output of Suprachem. Further, there was confusion as to whether the figures included or excluded imports and exports. Lastly, it was established that several factors other than creosote's increasing price could have caused CCA use to increase[17].

In the Tribunal's view, the complainant does not have to show that the discrimination perpetrated against it had caused actual harm to competition in the market, since a small firm's complaint will always fail – even if the action by the dominant supplier had forced the small firm to exit, its demise would not have reduced competition substantially and it would have no case.

Thus, with the substitutability of CCA rejected, the Tribunal concluded that the relevant market was that for creosote, and that under section 7(a) of the Act, Sasol was a dominant firm within the creosote market.

In fact, the boundaries of the Tribunal's relevant market may be confirmed by the market power Sasol exhibited in setting its prices without negotiation with customers and without regard for the prices offered by its competitors. Had the boundaries of the market extended beyond the creosote market, Sasol could not have exercised this degree of power.

Establishing the elements of prohibited price discrimination

Having proved dominance, Nationwide now had to demonstrate that Sasol's unequal treatment satisfied the elements of prohibited price discrimination as stipulated in the sub-sections of section 9(1) of the Act. Effectively, the complainant must show discrimination between purchasers, equivalence of transactions and that the dominant supplier's conduct is "likely to have the effect of substantially preventing or lessening competition"[18].

Nationwide was able to show that discrimination had occurred on otherwise equivalent transactions. Sasol, however, averred that Nationwide could not satisfy the test in section 9(1)(a) because, even if its conduct had impaired Nationwide's ability to compete, Nationwide was such a small player in the treated-poles market that Sasol's discrimination against it could not have *substantially* eroded the level of competition in the market.

Consequently, in Sasol's view, section 9(1)(a) required Nationwide to show actual harm to consumer welfare, and as it could not do so, its case had to fail.

The Tribunal, however, had a different opinion of the onus on the complainant with respect to section 9(1)(a).

In the Tribunal's view, the original drafters of section 9 of the Act would have realised that if the complainant had to show that the discrimination perpetrated against it had caused actual harm to competition in the market, a small firm's complaint will always fail, purely because the small firm "is not able to correlate harm that is inflicted upon it to harm that is inflicted on the broader market"[19].

If 'demonstration of actual harm to welfare' was the test, then even if the action by the dominant supplier had forced the small firm to exit, the small firm would have no case, since its demise would not have reduced competition substantially.

Instead, the Tribunal argued that the architecture of the Act presumes that price discrimination will have anti-competitive effects, and therefore "the legislature could not have intended the complainant to establish the anti-competitive effect of price discrimination"[20].

Rather, section 9(1)(a) merely requires the complainant to show that the dominant firm's discrimination has "competitive relevance"[21] – that the discrimination had bearing on the complainant's ability to compete. Nationwide was therefore able to satisfy section 9(a) by demonstrating that the higher prices that it received (relative to larger firms) on creosote, an input which accounts for approximately one-quarter of its total production costs, added 3% to 4% to its overall cost structure and, in so doing, substantially lessened its capability to compete with larger, more-favoured, firms[22].

[15] Nationwide/Sasol, 2005; paragraph 34.
[16] Ibid; paragraph 34.
[17] The sharp fall in creosote demand and increase in CCA use when creosote prices rose may, in fact, be evidence of the "cellophane fallacy" (Motta, 2004; p105). This refers to where price increases induce switching by buyers only because the initial price was already set at a monopoly level (that is, already maximising profits through price setting).
[18] Section 9(1)(a) of the Act.
[19] Nationwide/Sasol, 2005; paragraph 100.
[20] Ibid; paragraph 99.
[21] Ibid; paragraph 102.
[22] Ibid; paragraph 114.

Sasol's defence

The Tribunal concluded that Nationwide had proved that Sasol was a dominant firm engaging in a pricing practice that met the criteria of prohibited price discrimination. The discriminator can, however, attempt to justify its pricing practice under one of the defences offered in Section 9(2) of the Act.

Sasol admitted that the differential prices were not on account of different costs in servicing firms of different sizes. Instead, Sasol argued that its pricing schedule yielded cost-saving efficiencies by reducing the risk of losing large customers and therefore allowed the supplier to plan its creosote production better. The Tribunal, however, was not satisfied that this justification for the existence of the price schedule was in line with Sasol's actual intention.

The discounts rewarded customers for past purchases and not future purchases, and as such did not prevent large customers from switching to Suprachem. If production planning and the retention of large customers were of such importance to Sasol, the firm could have achieved these objectives better by implementing long-term supply contracts – something Sasol had not done. And, if these were concerns of Sasol, its price setting would be expected to be responsive to that of its competitor. However, Sasol set prices once a year, with no reference to the prices of any competitor. Sasol's defence was further weakened by the fact that it failed to quantify the actual magnitude of the cost-savings supposedly emanating from the pricing strategy. Consequently, the Tribunal found that Sasol was unable to defend its discriminatory pricing.

[23] Nationwide/Sasol, 2005; paragraph 89.

Conclusions

The *Nationwide/Sasol* decision will have far-reaching effects on the behaviour of dominant firms towards their smaller customers. In particular, the decision has shown that price discrimination by a dominant firm is proscribed when "manifestly inequitable [treatment of smaller players] relative to that accorded their better resourced competitors" poses a threat to smaller enterprises – "potentially robust, though still slender, saplings" – accessing and taking root in markets in which they, in the absence of discrimination, could thrive and ultimately enhance the level of competition[23].

SA's small business entrepreneurs already face towering barriers to successful entry and expansion: highly concentrated markets, well-established incumbents, information asymmetries, and scarcities of resources and funding. The *Nationwide/Sasol* ruling shows that large suppliers will be held accountable for conduct that irresponsibly and unfairly raises these barriers further.

The *Nationwide/Sasol* decision is of great significance to SMEs, as it clearly signals that competition policy can and will be used to ensure that small enterprises have a 'level playing field' on which to compete with established firms. Critics may argue that competition policy must be used to promote efficiency and not to create equality; that it must be aimed at protecting competition and not competitors (like SMEs). However, competition relies on the existence of competitors, and in a highly concentrated economy like SA that is prone to anti-competitive behaviour by incumbent firms, some level of protection must be given to small businesses if they are to survive until they can achieve the levels of efficiency and size needed to compete on their own.

Lastly, it must be emphasised that the ruling is not a wholesale prohibition of discriminatory pricing practices. If the dominant firm can provide satisfactory economic justification for its unequal treatment of purchasers, it can continue to do so. Indeed, in this situation, the dominant firm would be encouraged to engage in price discrimination, as this would enhance welfare.

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Annual Forum 2005 – Trade and Uneven Development: Opportunities and Challenges

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CALL FOR PAPERS

SA has experienced just over a decade of tariff-associated trade liberalisation through its WTO offer and Free Trade Area agreements with the EU and SADC. During this time, the macroeconomy has been stabilised and moderate growth has returned after a significant period of recession and decades of erratic growth.

However, the growth rate over the last decade has averaged only about 3%. This rate of growth does little to reduce widespread poverty in SA, and compares poorly with the growth rates of other middle-income developing countries.

Moreover, the widely expected positive link between trade and growth – and the perhaps more contentious inference of a positive relationship between trade and poverty via growth – have not been rigorously evaluated, although a significant body of empirical evidence has been accumulated internationally.

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EU-ACP EPAs: The Effects of Reciprocity

Speculation about Economic Partnership Agreements abounds: will they support the regional integration of the ACP countries as the EU claims, or lay these economies open to subsidised European exports as some critics allege? This article by **Christopher Stevens** and **Jane Kennan**[1] suggests that both views are uninformed and incorrect.

Introduction

It is impossible to know exactly what will be in an EPA until one nears completion, which may not be for another two years. But it is possible to make some informed speculations now. As part of a project to support ACP preparations for the detailed phase of EPA negotiations, IDS has undertaken a comprehensive review of the trade and tariff structure of almost all ACP states (*see Box 1*).[2] Making plausible assumptions about the strategic choices of ACP governments on reciprocity, the research comes to startling conclusions. The claim that EPAs will necessarily result in ACP markets being thrown open to EU imports appears to be overstated, but evidence suggests that they may well cause serious problems for regional integration and for government revenue.

Reciprocity

Whilst EPA preparations are required on a large number of issues, this project has concentrated on one key element known as reciprocity. Under the trade regimes that have linked them to Europe for three decades, the ACP have not been required to treat imports from the EU differently from those sourced in other industrialised countries. Under EPAs, by contrast, the ACP will be expected to remove tariffs on 'substantially all' imports from the EU during an implementation period. It is this requirement that has led to the assumption that EPAs are aimed at opening up ACP economies to subsidised European exports.

In fact, a primary objective of EPAs is to make the EU-ACP trade regime more easily defensible within the WTO. One peg upon which a defence can be hung is Article XXIV, from which the phrase 'substantially all trade' is taken. This allows countries to discriminate in their trade policy in favour of each other, and against other WTO members, if they are creating a free trade area (FTA). One requirement of an FTA is that most – but not all – trade be liberalised.

Because not all trade must be liberalised, the ACP countries have some room for manoeuvre to maintain their current barriers on some imports from the EU. How much room for manoeuvre, and the use that ACP countries make of it, will be a vital part of the EPA negotiations. Until these factors become clear, it will not be possible definitively to calculate the potential economic impact.

Box 1: Support for the EPA negotiations

IDS has developed a methodology and set of databases that can be used by both governments and civil society in each ACP state to identify which products should be included or excluded from liberalisation under an EPA.

The aim is to encourage an informed debate both within countries and between members of each regional group.

The methodology has been described in a Handbook, which is available electronically to all ACP organisations upon request, together with a dataset for the country concerned (subject to data availability).

The data cover the country's imports from the EU and applied tariffs, and allow users to build simple lists of EPA inclusions/exclusions on the basis of different assumptions on sensitivity.

But some informed assumptions can be made to provide early guidance on the potential direction and scale of EPA effects. The fundamental purpose of the IDS project is to empower stakeholders in ACP countries to make their own assumptions. Rather than relying on the polarised and inaccurate debate currently being had about EPAs, the IDS project aims to facilitate national debates that create a consensus on negotiating positions. In addition, IDS has used the database it has created to identify the implications of one plausible set of assumptions (*see Box 2*).

Three questions

IDS has sought answers to three questions.

- How much liberalisation would each ACP country have to undertake to meet different definitions of 'substantially all' trade?
- How difficult is it likely to be to forge common regional positions under EPAs that do not store up problems for the future?
- What effect will EPA liberalisation have on ACP government revenue?

How much liberalisation?

Using the four alternative definitions of 'substantially all' described in Box 2, IDS has calculated for each ACP state which items could be excluded and which would have to be included in the liberalisation package under the new EPA regime.

Since EPAs will only 'open the door' to imports if they remove restrictive tariffs, it is important to know the highest tariff currently levied on any liberalised item – what IDS calls 'the marginal tariff'. If country A could exclude from any liberalisation all those products on which it currently applies a tariff of 21% and over, the 'marginal tariff' would be 20%.

Creating regional consensus

Establishing national priorities for liberalisation is only a first step in the EPA negotiations. The second step is to reach a regional consensus.

Some ACP states expect to sign any deal agreed with the EU as part of a customs union that includes some or all of their EPA partners; others do not. The customs union signatories can have only one, common, schedule of tariff liberalisation towards the EU, which they will have to agree formally in advance of concluding the EPA. For those states that belong to a regional FTA, but not to a customs union, such pre-EPA agreement is not required.

But if no attempt is made to harmonise each of these countries' liberalisation schedules, there will be post-EPA integration problems.

For example, if country A excludes widgets from liberalisation and maintains a 100% tariff, but its neighbour, B, removes all duties, traders may circumvent A's restrictions by

[1] Respectively Research Fellow and Data Policy Analyst: Globalisation Research Group at the Institute of Development Studies (IDS), University of Sussex, UK. The views expressed in this article are the responsibility of the authors, and not the IDS.

[2] The research was funded by the UK Department for International Development (DFID). 22 of the 77 ACP countries were excluded from analysis because recent data on their applied tariffs were unavailable from the international source used (UNCTAD's Trade Analysis and Information System, or TRAINS, database). The views expressed in this article do not necessarily reflect those of DFID.

transporting EU goods across the border from B. To avoid this, either the tariff difference between A and B must be sufficiently small to make such trans-shipment commercially unviable, or rigorous border controls must be maintained to prevent trans-shipment, which will hurt intra-regional trade in the process.

Such differences in national inclusion/exclusion lists are likely. They arise not only from different tariff structures among the EPA members but also from differences in their imports from the EU.

The latter is a very important cause of difference. As members of the Southern African Customs Union (SACU), Lesotho and Botswana have identical tariffs, but whereas the former could fill its basket of 'inclusions' with items that are already duty free, Botswana's liberalisation would have to include all products currently facing tariffs of up to 42.5%. The difference is simply that Lesotho's imports of high-tariff items from the EU are very small, and Botswana's are larger.

ACP states will have three chances to deal with such problems.

- The first is **natural overlap** in their initial strategies for product inclusions and exclusions. Countries may autonomously choose the same products to include or exclude. This has been tested by IDS – and the results suggest that it will be rare.
- The next step is for **pre-EPA negotiation** to determine whether countries can compromise on their initial liberalisation schedules in order to obtain a better overlap with their partners.
- This will leave a core group of products where compromise is not possible and for which **post-EPA accommodation** will be needed. The key products are those for which cross-border trade is probable (for example, because the tariff differences are large and/or they have a high value-to-weight ratio).

Revenue effects

ACP countries rely heavily on tariffs for government revenue because they are relatively easy to collect. The items that ACP governments would need to exclude from liberalisation to protect revenue may be different from those thrown up by the exercises just described.

It is often the medium-level tariffs that yield the most revenue, since the highest-level tariffs are so restrictive that there are few imports on which to collect the tax.

[3] Maerten C. 2004. 'Economic Partnership Agreements: A New Approach to ACP-EU Economic and Trade Co-operation', presentation to TRALAC Annual International Trade Law Conference, November 2005.

[4] Plus Haiti.

Box 2: Assumptions made

Assumptions are required on the proportion of trade that will be liberalised under EPAs, and the choices that ACP governments make on which items to include and exclude from the liberalisation process.

On the proportion of trade, IDS has analysed the results of four different assumptions.

On government strategy it has made the only assumption that is possible for a third party – that current trade policy reflects government preferences over which sectors to protect, by how much, and is reflected in tariff levels. It is assumed that those products currently facing the highest tariffs will be excluded.

The 'base-line' assumption is that 80% of ACP imports are liberalised, and is derived from the precedent of the EU-SA Trade, Development and Co-operation Agreement (TDCA). This provides for the asymmetrical removal of tariffs over a transition period on a basket of goods that accounted for 90% of the value of trade between them during the negotiating period.

If it is assumed the EPAs offer all ACP members access to the European market equivalent to the 100% duty-free access provided under the 'Everything but Arms' (EBA) regime for least developed countries, then the average of 90% can be achieved by the ACP liberalising on just 80% of their imports.

A variation of the base case has taken an informal suggestion made by a Commission official that the proportionate liberalisation of the ACP could vary between regions[3]. The proportions suggested range from 67% to 83%, and these have also been applied.

IDS has also looked at the issue from the other direction. Instead of identifying how many high-tariff items could be excluded from liberalisation on a pre-determined threshold for 'substantially all', we have asked: in order for the ACP to be able to liberalise only on goods with a current tariff that is at or below 20% (or 10%), what proportion of trade would need to be excluded? Is this proportion plausibly consistent with the 'substantially all' requirement?

If countries choose to exclude from liberalisation only their highest-tariff items, they may find that they have to liberalise on their key revenue-generating items. A balance must be struck.

Liberalisation

Would the ACP have to eliminate substantial barriers that they currently maintain on imports from the EU? The broad picture presented in Table 1 is that a few countries would need to do so, but many would not.

The table takes all of the EPA regions, except the Pacific (due to a lack of data) and shows the most frequently encountered marginal tariff on the 'base assumption' about the proportion of trade to be liberalised. Thus, for example, if the 15 Caribbean countries[4] were able to exclude 20% of their imports from any liberalisation, most would liberalise only items with a tariff of 20% or less at present.

But some would have to cut slightly higher, and some lower, tariffs. In Guyana, the current highest tariff on any item that would be liberalised is only 15%, but in St Kitts and Surinam it is 25%, and in St Lucia it is 30%.

For some countries, though, the marginal tariff would be much higher. The highest is of Seychelles, at 100%, followed by Botswana at 42.5%, but there are special factors for both of these. For Seychelles (as for all the italicised countries in the table) some very large high-tariff items absorb a substantial share of the

(continued on page 8)

Table 1: Broad regional picture

Region[a]	Marginal tariff (%)[b]	Range	High outliers[c]
Caribbean	20	15 - 30	*St Kitts*, St Lucia, Surinam
Central Africa	30	20 - 30	None
East and Southern Africa	25	5 - 100	Burundi, *Djibouti*, Ethiopia, *Seychelles*
SADC	5	0 - 42.5	Angola, *Botswana*, *Mozambique*, Tanzania
West Africa	20	20 - 30	Nigeria

Notes:
(a) The Pacific region is not shown, as tariff data were unavailable for 12 of the 14 countries. Tariff data were also unavailable for the following countries in the regions which are listed:
Caribbean: Haiti
Central Africa: Sao Tome and Principe
East and Southern Africa: Comoros
West Africa: Cape Verde, Gambia, Guinea, Liberia, Sierra Leone.
(b) The most frequently encountered marginal tariff for all countries in the group if they liberalise on 80% of imports.
(c) In italicised countries, a small number of very large imports absorb a high proportion of the 20% excludable basket.

(continued from page 7)

20% excludable imports. For Seychelles it is tuna; if four fish items are ignored, its marginal tariff would be only 25%.[5] In Botswana it is one category of vehicle; its removal reduces the marginal rate to 0%.[6] Apart from these two, only a handful of states would have to liberalise tariffs that severely restrict imports at present.[7]

How quickly would these cuts have to be made? That, again, will be part of the negotiations, but it is extremely unlikely that it would be less than 12 years, which is the time period available to SA. If the recent Africa Commission proposals were adopted, it could be 20 years.

Reducing a tariff that is currently set at only 25% or 30% over a period stretching to 2020 or 2028 cannot be described as a 'shock'. Much will have happened between now and the end of the transition period; several WTO Rounds, for example, may have pushed bound tariffs below current applied ones.

But not all of the cuts could be deferred until the end of the transition period: would some moderately high tariffs have to be cut soon? It is not possible to give a short, definitive answer for such a diverse group, but a pointer can be provided from one of the IDS tests, which asks what proportion of trade would need to be excluded from cuts if the highest current tariff on any liberalised item were not to exceed 10%. The answer to this question allows us to determine whether restricting liberalisation in the first rounds of EPA implementation to those products with a 10% tariff or less would result in implausibly low proportions of trade being liberalised.

The answer is that in most cases it would not. Ample scope exists to restrict liberalisation in the early rounds to products facing low tariffs at present. If one were to say that at least 50% of imports have to be liberalised during the early rounds, only 12 of the 55 countries[8] would be forced to cut tariffs that are over 10%. And half of these face the problem of 'lumpy' imports noted for Seychelles. One other just fails to meet the 50% threshold.

Regional overlap

Whilst the charges of radical liberalisation may be overstated, the problems that EPAs may pose to ACP regionalism seem to be profound. Table 2 summarises the extent to which the application by each country of the IDS methodology results in similar lists of inclusions/exclusions to those of other members of the regional group. There is very little natural overlap. There is not a single product that would be in all the exclusion lists of all members of any of the groups.[9] And there would be very few that are common even to half of the members of a group. Indeed, in all cases apart from East and Southern Africa, over half (and as much as 92% for West Africa) of the products included in any one country's basket of exclusions would be absent from the exclusion lists of all its partners.

If there is very little natural overlap in the initial negotiating strategies devised, independently, by each country in a group, the task of pre-EPA negotiation between countries will be a substantial one. Hopefully the application of the somewhat mechanistic IDS methodology overstates the problem, and the countries will be able to modify their product schedules sufficiently to produce a compromise that covers a larger number of products than suggested in Table 2.

But it is optimistic to assume that post-EPA accommodation will not also be required. Countries will have to make hard choices on whether to change their trade policy in order to allow a compromise where there are real differences of approach. Otherwise they will defer the problem until the implementation stage of EPAs and face the consequent disruption to intra-regional integration.

Table 2: Regional differences

Region[a]	Proportion of exclusions (%)[b]		
	Common to all	Common to half[c]	No overlap
Caribbean	0	1	58
Central Africa	0	12	51
East and Southern Africa	0	2	43
SADC	0	3	64
West Africa	0	0.2	92

Notes:
(a) The Pacific region is not shown, as tariff data were unavailable from the international source used for 12 of the 14 countries.
(b) Shares calculated in relation to the items excluded by any member if 80% of imports are liberalised.
(c) Or, where there is an uneven number of countries within the group for which the necessary data are available, just over half.

Table 3: Revenue implications

	Share of liberalised items in total theoretical revenue			
	< 20%	20%-40%	40%-60%	≥ 60%
Base scenario (80% liberalisation)				
No. of countries[a]	2	4	24	21
All items with tariffs of 10% or less				
No. of countries[a]	24	20	5	2

Notes:
(a) Botswana, Lesotho, Namibia and Swaziland, covered by the SACU revenue formula, are excluded.

Revenue

Will a strategy of minimising the competitive effect of EPAs by excluding items with the highest tariffs maximise the adverse revenue impact? Probably.

IDS has calculated the revenue theoretically derived from every good imported from the EU[10] (by applying the set tariff to the value of imports). This almost certainly overstates the revenue actually collected (because it assumes 100% effective implementation and the absence of any duty draw-backs or other exemptions[11]), but as this applies to both the numerator and the denominator, the calculations – which provide an upper limit to the potential effect – might not be that far off the mark.

Table 3 shows the proportion of theoretical revenue that would be lost on the base scenario. The top row shows that three-quarters of the ACP could lose 40% or more of their tariff revenue from the EU, and for over one-third it could be 60% or more. This revenue would need to be replaced in full only over the 12 to 20 years of EPA implementation.

[5] The fish are 'imports' only in the sense that they are caught on EU vessels. They are then canned in Seychelles and exported. The EPA negotiations will allow Seychelles to identify an alternative way to levy a tax on this trade.
[6] Also, as part of SACU, it will effectively have to apply the provisions of the TDCA, and so its tariffs are likely to fall anyway.
[7] The marginal tariff for Burundi is 40%, for Djibouti 33%, and for seven others it is 30%. For all of the remaining 44 countries (for which data are available), the marginal rate is 25% or less.
[8] For which data are available.
[9] Other than the Pacific group – for which data are available for only two of the 14 members.
[10] Subject to data availability.
[11] And because, where a range of tariffs applies to the national-tariff-line-level items within an HS6 subhead, it is the *maximum* that has been used – which is not necessarily the one applicable to the sub-item actually imported.

The second row suggests how much needs to be replaced in the early stages. Taking the suggestion above that only goods facing tariffs of 10% or less be liberalised in the first phases, it shows the share of total theoretical revenue contributed by these goods. The initial 'cost' of reciprocity in terms of tariff revenue forgone would be much lower. Two-fifths of the countries would lose less than 20% of their revenue, and for almost three-quarters the loss would not exceed 40%.

Implications for EPAs

This article began by pointing to the widespread criticism of EPAs that they will force open ACP markets – but for some observers this is a desirable outcome. One of the arguments advanced by the European Commission, many EU member states and liberal trade economists in favour of EPAs is precisely that they will encourage ACP liberalisation.

This is not the place to enter into that debate – only to note that EPAs seem likely to give ACP governments substantial opportunities to avoid significant liberalisation. There are good reasons to expect, therefore, that one of the economic arguments made in favour of EPAs will not be sustained.

Another major argument advanced in favour of EPAs is that they will foster regional integration. Here it looks likely that there will be a significant effect – but a negative one. Part of the problem arises from differences in the commodity composition of countries' imports from the EU. Research into whether this could be overcome by, for example, the calculation of 'substantially all' being made at a regional rather than a country level is highly desirable. But until the European Commission negotiators provide guidance on what they would expect, the range of possible options is so large that informed speculation is difficult.

In the meantime, the more countries that undertake their own calculations of ideal inclusions/exclusions, the better. These can then be compared with the autonomous schedules of other regional group members and a more accurate picture obtained of the extent of possible natural overlap.

The task of adjusting to tariff revenue loss could be substantial. The IDS finding that the costs need not be high for many countries in the initial period adds urgency to the need to define the length of this period – which may be critical for both the liberalisation and revenue effects of EPAs. How long have ACP states got to roll in new systems such as a general sales tax? Should the final phase of EPA liberalisation be made conditional on such new systems being in place? These are the sort of informed questions that need to be directed to the negotiators.

SA as an Engine of Growth in Africa[1]

SA is often described as an engine of growth in Africa, in the sense that SA economic growth is believed to have a substantial impact on growth in other African countries[2]. This view appears plausible because of SA's relatively large economic size and its growing linkages with other African economies. However, there has been little quantitative assessment of just how large the effect might be. This article by **Vivek Arora** and **Athanasios Vamvakidis**[3] of the International Monetary Fund (IMF) attempts such an assessment by providing estimates of the impact of SA economic growth on growth in the rest of Africa during the last four decades. The results indicate that SA growth has a significant positive impact on growth in other African countries, with a one percentage point increase in SA growth being associated with a half to three-quarter percentage point increase in the rest of Africa's growth.

Introduction

SA growth could influence growth in other countries through a number of channels. The most obvious channel is international trade, with higher SA growth contributing to a rise in import demand that is directly reflected in an increase in the net exports of other countries. But there are other channels as well. Given the relatively advanced state of SA technology, additional spill-over effects could include an impact on investment and technology transfers along the lines discussed in the literature on trade and growth[4].

Also, with SA foreign direct and portfolio investment playing a large role in the capital flows of some African countries, the effects of SA growth could be transmitted through financial linkages. Moreover, because of SA's size and leadership role in multi-country political and economic initiatives,[5] developments there could influence business and consumer confidence in other African countries.

A quantification of the overall impact of SA growth on growth in the rest of Africa requires a formal econometric analysis. This article is based on results from such an analysis using data for 1960 to 1999 in the context of a standard growth model.[6] The analysis is based on countries' average growth rates during five-year sub-periods to avoid the impact of shorter-run macroeconomic fluctuations that may be associated with transitory shocks and business cycles. The impact is estimated first in a simple growth regression and then in a regression that controls for other, generally accepted, determinants of long-run growth. The results indicate that SA growth has a significant positive impact on growth in other African countries, with a one percentage point increase in SA growth being associated with a half to three-quarter percentage point increase in the rest of Africa's growth. The results hold even after controlling for global factors and are robust to the inclusion of other growth determinants and to changes in the sample and the period considered.

SA as a trade partner in Africa

The relatively large economic size of SA and its growing linkages with other African economies suggest that SA economic growth could have a significant influence on the rest of Africa. In 2003, SA GDP was equivalent to nearly one-third of African GDP on a purchasing power parity (PPP) basis and to 38% of African nominal GDP at market exchange rates (see Table 1).[7] SA accounted for 30% of the expansion in African GDP (PPP basis) during 1980 to 2003, and African and SA growth moved closely together, with a correlation coefficient of over 80%. In terms of financial linkages, SA direct and portfolio investment in other African countries during 1998 to 2002 was equivalent to 5% of GDP on average in those countries.[8]

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[1] This is an abridged version of IMF Working Paper 05/58, entitled *The Implications of SA Economic Growth for the Rest of Africa*, which was presented in June 2004 at the Bureau for Economic Research (BER) annual conference in Johannesburg. The full paper can be found at http://www.imf.org/external/pubs/ft/wp/2005/wp0558.pdf. A revised version of the IMF working paper is being published in the South African Journal of Economics, vol 73, n.2 (June), 2005. The views expressed in this article are those of the authors and do not necessarily represent those of the IMF or IMF policy.

[2] References to Africa throughout the paper relate to SSA.

[3] Arora and Vamvakidis are the IMF Resident Representatives in SA and Croatia respectively.

[4] See Grossman and Helpman (1991), Rivera-Batiz and Romer (1991), and Romer (1990).

[5] These include trade agreements such as SACU and political initiatives such as the New Partnership for Africa's Development (NEPAD).

[6] Arora and Vamvakidis (2004) discuss a similar analysis of the impact of US economic growth on the rest of the world.

[7] Authors' calculations, based on IMF World Economic Outlook data.

[8] The weighted average was equivalent to 1.5% of African GDP. It was smaller than the simple average because SA's economic links have generally been stronger with some of the smaller African countries (such as its neighbours) than with the larger ones (such as Nigeria).

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The share was substantially larger in neighbouring countries, ranging from 9% to 20% of GDP in Lesotho, Mauritius, Mozambique, Namibia and Swaziland. Notwithstanding its relatively large economic size, the extent of SA's trade with the rest of the continent has been relatively small, in part reflecting trade patterns that prevailed under the *apartheid* regime. Although SA's relative importance in regional trade has grown since 1994, it remains small compared with, for example, the regional trade shares of the US in other western hemisphere countries and of China and Japan in the rest of Asia.[9]

During 1994 to 2002, the average share of SA in the rest of Africa's external trade rose to three times its 1970 to 1993 average, but it was still only 2% of the total. As a percent of GDP, the rest of Africa's trade with SA during 1994 to 2002 rose to four times its 1970 to 1993 average level, but it was equivalent to only 1.5% of GDP.

The relative importance of SA in the trade of individual African countries varies substantially across the continent. Trade with SA accounts for around three-quarters of the total trade of neighbouring Lesotho and Swaziland, with which SA participates (along with Botswana and Namibia) in SACU.[10]

During 1998 to 2002, trade with SA accounted on average for 26% to 56% of the foreign trade of other neighbouring countries, namely Botswana, Malawi, Mozambique, Namibia, Zambia and Zimbabwe. And it accounted for over 5% of foreign trade in Comoros, the Democratic Republic of Congo, Kenya, Mauritius, Seychelles and Tanzania. In Nigeria, Africa's second-largest economy, trade with SA was equivalent to 1.25% of total trade. In countries that are geographically distant from SA or that are former French colonies, trade with SA has generally accounted for less than 1% of foreign trade.[11]

A simple measure that captures the direct effect of trade on a country's growth is the contribution to growth of its net exports. Specifically, the growth contribution can be calculated as the change in real net exports in the current year as a percentage of real GDP in the previous year.[12] By extension, the direct effect of trade with SA on a country's growth can be calculated as the growth contribution of the country's real net exports to SA.[13]

Table 1: SA in the African economy, 1970-2003 (%)

	1970	1980	1990	2003
Proportion of SSA's GDP accounted for by SA:				
At market exchange rates	34.2	28.6	35.7	37.8
At purchasing-power parity	33.8	35.2	33.6	31.8
Share of merchandise trade with South Africa in other African countries:				
Total merchandise trade	0.8	0.4	0.7	2.3 *
GDP	0.4	0.2	0.4	1.6 *

[Sources: IMF Direction of Trade Statistics and World Economic Outlook]

** Data are for 2002, and include both sub-Saharan and North Africa.*

On this basis, while overall net exports made on average a negative contribution of -0.4 percentage points in the selected countries during 1999 to 2002, net exports to SA made a small positive contribution (0.1 percentage points). The growth contribution was significantly larger in countries with close trading links with SA (for example, Comoros, Mozambique and Zimbabwe). In several countries, where SA is more important as a source of imports than as a destination for exports, net imports from SA were reflected in a negative net contribution to growth.

However, the direct impact of net exports to SA represents only part of the overall impact of SA growth on growth in other countries. In particular, even if they run bilateral deficits, countries may benefit from trade with SA as a result of factors such as greater efficiency, economies of scale and technological gains associated with such trade.

Also, the effects of SA economic growth are likely to extend beyond just the trade effect, including through such channels as economic sentiment and financial linkages. A more complete analysis of the impact of SA growth thus requires a formal econometric analysis.

Empirical methodology and estimation

Methodology

The impact of SA growth on growth in the rest of Africa can be quantified by estimating a panel regression.[14] The panel approach allows one to control for other explanatory variables in the growth regression and to test the robustness of the results to changes in model specification.

Estimation

The empirical framework follows Arora and Vamvakidis (2004a). It starts with a growth regression specification that is standard in the literature:[15]

$$(Real\ GDP\ per\ capita\ growth)\ i = c_i + \beta X_i + u,$$

$$for\ country\ i = 1,.....,n$$

The dependent variable is the average per capita real GDP growth rate; c_i is the matrix of constant terms for each country i; β is the matrix of parameters to be estimated and u is the error term. X_i is the matrix of independent variables that includes the variables that are standard in growth regressions:

- Convergence (the logarithm of per capita real GDP in the initial year of the period under consideration);[16]
- Demographic developments (age dependency ratio);
- Investment in physical capital (gross domestic investment as a percent of GDP);
- Human capital (primary and secondary school enrolment ratios);
- Macroeconomic stability (inflation); and
- Trade openness (the share of external trade in GDP).[17]

To account for variables that have been found to be statistically significant in explaining growth in Africa, X_i includes:[18]

- Foreign aid as a percent of GDP;
- The infant mortality rate;
- A dummy variable for landlocked countries; and
- Ethnic fractionalisation.

[9] In 2002, the US accounted for 60% of the total external trade of other North American and South American countries. China and Japan accounted for over 10% and 15%, respectively, of other Asian countries' external trade.

[10] This is based on historical data cited in the countries' official statistics and in the UN Comtrade database, since the countries do not report bilateral trade data to the IMF *Direction of Trade Statistics*.

[11] Such countries include Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Côte d'Ivoire, Ethiopia, Gabon, Guinea, Guinea-Bissau, Mauritania, Niger, Senegal and Togo.

[12] The bilateral trade data in the *Direction of Trade Statistics* are available only starting in 1998.

[13] That is, the contribution of a country's real net exports (NX) to its real GDP (Y) growth in a year (t) can be calculated as $\Delta NX_t/Y_{t-1}$, and the contribution of its net exports to SA (NX^{SA}) can be calculated as $\Delta NX_t^{SA}/Y_{t-1}$.

[14] A simple cross-country estimation would not be valid since growth in SA enters for all countries in the sample.

[15] See, for example, Barro and Sala-i-Martin (1995).

[16] Caselli, Esquivel and Lefort (1996) have argued that initial GDP per capita is endogenous. However, excluding it from the regressions in the present analysis did not change the conclusions.

[17] The trade share is one of the most broadly used measures of openness in the literature and among the most robust (see Levine and Renelt, 1992). One of its main advantages is that it varies over time.

[18] See, for example, Bloom and Sachs (1998).

In addition, to estimate the impact of growth in SA on the rest of Africa, X_i includes:

- The growth rate of real per capita GDP in SA; and
- The growth rate of real per capita GDP in each of the other African countries (one in each specification) to test whether any of the other countries also act as an engine of growth for Africa.

Finally, in order to test whether the results are driven by global or regional trends, X_i includes:

- World real per capita GDP growth;
- Growth of real per capita GDP in trading partners; and
- Regional growth.

All data are from the Global Development Network Growth Database.[19] The growth model is estimated for two periods, 1960 to 1999 and 1980 to 1999. All 47 countries in SSA with available data are included in the sample. SA is excluded from the sample as its growth rate is one of the independent variables.

Each observation is a five-year average except for the initial GDP per capita, which takes the value of the first year of each five-year period, and the variables that do not change over time.

The use of a fixed rather than a random-effects model is justified by a Hausman test, which rejects the hypothesis that the individual effects are uncorrelated with the other regressors for most specifications.

Empirical results

A simple specification is initially estimated with per capita GDP growth in each African country as the dependent variable and per capita GDP growth in SA as the independent variable.

Then, in order to test the robustness of the results, the model is estimated first with other independent variables, and then with only those variables that turn out to be statistically significant. Finally, a number of different specifications are tried as additional tests of robustness.

A notable difference between the present analysis and several previous analyses is that it examines variations in growth across African countries, rather than between Africa and the rest of the world. One implication of this is that, although all of the determinants included in the regressions have been found to be statistically significant in studies of growth across countries worldwide, some of the variables turn out not to be statistically significant in the present analysis. That is, some variables that are significant in explaining differences in growth between Africa and other parts of the world may not help to explain growth differences within Africa.

For example, a factor that has been emphasized in accounting for Africa's weak growth relative to other regions is the relatively high trade barriers in most African countries.[20]

However, if most African economies are relatively closed, then while this might help to explain Africa's growth relative to other regions, it should not be expected to explain much of the growth variation within Africa. This indeed turns out to be the case.

Results

Results for the pooled panel for the period 1960 to 1999 are presented in Table 2. The first four regressions present results from specifications that add different growth determinants.[21]

The first regression includes only the growth rate in SA, while the second adds the initial GDP per capita and the investment share. The third adds other variables that have been found to explain cross-country growth differences in the literature.

The fourth regression adds variables that are more specific to Africa and have been found to explain growth differences between African and non-African countries, as well as variables that control for world growth trends. Finally, the fifth regression includes only the statistically significant variables.

The results suggest that growth in SA is a statistically significant determinant of growth in the rest of Africa, after controlling for other growth determinants. The estimates suggest that a rise in growth in SA by one percentage point is correlated with a rise in growth in the rest of Africa by 0.4 to 0.7 percentage points.

The same exercise is repeated in Table 3 for the period 1980 to 1999. The results still hold. In fact, the estimate of the growth impact of SA is actually larger for this period than for 1960 to 1999 in some specifications. A one percentage point increase in SA growth is correlated with a 0.4 to 0.9 percentage point increase in growth in the rest of Africa, depending on the specification.

Discussion and robustness tests

The results suggest that growth in SA and in the rest of SSA are closely correlated. The results are robust to changes in the sample period and to changes in the specification to include GDP growth, rather than per capita GDP growth, in SA.[22] The results are not driven by global trends or shocks. All tables present specifications that control for world growth and for growth in trading partner countries.

The estimate of the impact of growth in SA on the rest of Africa remains statistically significant in these specifications. The results do not differ for the period after 1994. An increase in economic integration between SA and the rest of Africa after the end of *apartheid* might have been expected to result in greater spill-over effects.

However, an interaction term of growth in SA with a dummy variable for the second half of the 1990s does not turn out to be statistically significant. This is consistent with the fact, noted above, that although SA's relative importance in regional trade has grown since 1994, it remains small.

The results do not seem to depend on the size of countries' bilateral trade with SA, or their distance from SA. These results are not surprising, given the relatively small trade flows between other African countries and SA. They suggest that channels not directly related to trade could explain the growth spill-overs from SA to the rest of Africa.

Conclusions

The significant estimated impact of SA growth on the rest of Africa lends substance to the popular view of SA as an engine of African growth. Based on data for the period 1960 to 1999, the panel regression results indicate that a one percentage point increase in SA economic growth is correlated with a half to three-quarter percentage point increase in growth in the rest of Africa.

The coefficient remains significant when non-SA growth is included in the regression, and it is larger than that of non-SA growth, suggesting that the influence of SA growth is distinct from any common regional shocks that may affect growth across different African countries and also that it dominates the effect of any such shocks.

References

Arora, V., and A. Vamvakidis, 2004, "The Impact of U.S. Economic Growth on the Rest of the World: How Much Does It Matter?" *Journal of Economic Integration*, Vol. 19 (March), pp. 1-18.

(continued on page 12)

[19] http://www.worldbank.org/research/growth/GDNdata.htm

[20] See Sachs and Warner (1995)

[21] This is also how subsequent results are presented.

[22] The results of this and other robustness tests are available from the authors on request. All of the results are robust when the standard errors are adjusted according to the methodology suggested by Moulton (1990) for units with common characteristics. See Arora and Vamvakidis (2004) for a discussion.

Table 2: Impact of growth in SA on growth in the rest of SSA: pooled panel, 1960-1999

Independent Variables	(1)	(2)	(3)	(4)	(5)
Constant	0.47 (2.16)	-3.60 (-1.40)	-4.15 (-0.73)	5.12 (0.81)	-0.70 (-0.70)
Per capita GDP growth in South Africa	0.42 (4.13)	0.67 (5.59)	0.71 (4.92)	0.76 (3.31)	0.72 (5.67)
1n (initial GDP per capita)		0.06 (0.14)	0.47 (0.68)	-0.29 (-0.38)	
Investment/GDP		0.20 (4.91)	0.20 (4.65)	0.32 (5.91)	0.15 (5.36)
Age dependancy ratio			-0.68 (-0.23)	-3,49 (-1.18)	
Trade/GDP			-0.01 (-0.68)	-0.03 (-2.06)	
Primary school enrolment			-0.01 (-0.62)	-0.02 (-1.25)	
Secondary school enrolment			-0.00 (-0.07)	0.00 (0.10)	
Inflation rate			-0.001 (-8.32)	-0.001 (-8.83)	-0.001 (-8.50)
Aid/GDP				0.04 (1.28)	
Infant mortality rate				-0.02 (-2.60)	-0.01 (-1.90)
Landlock dummy				0.24 (0.46)	
Ethnic fractionalisation				-0.00 (-0.45)	
Growth in trading partners' GDP per capita				0.42 (1.07)	
World GDP per capita growth				-0.01 (-0.02)	
Adjusted R-squared	0.04	0.33	0.36	0.45	0.31

Notes: Dependent variable: real GDP per capita growth (1985 constant US$). Heteroskedasticity-consistent t-statistics in parentheses.

Table 3: Impact of growth in SA on growth in the rest of SSA: pooled panel, 1980-1999

Independent Variables	(1)	(2)	(3)	(4)	(5)
Constant	0.31 (1.01)	-4.91 (-1.69)	-5.87 (-0.79)	5.95 (0.78)	0.48 (0.46)
Per capita GDP growth in South Africa	0.59 (2.38)	0.44 (2.15)	0.64 (3.02)	0.90 (3.12)	0.58 (2.97)
1n (initial GDP per capita)		0.24 (0.50)	0.52 (0.55)	-0.56 (-0.60)	
Investment/GDP		0.19 (3.68)	0.17 (3.76)	0.27 (3.34)	0.11 (3.36)
Age dependancy ratio			0.74 (0.21)	-4.81 (-1.33)	
Trade/GDP			-0.01 (-0.85)	-0.03 (-1.75)	
Primary school enrolment			-0.00 (-0.30)	0.00 (0.07)	
Secondary school enrolment			0.01 (0.24)	0.01 (0.12)	
Inflation rate			-0.001 (-7.47)	-0.001 (-7.53)	-0.001 (-8.71)
Aid/GDP				0.07 (1.69)	0.05 (2.62)
Infant mortality rate				-0.02 (-1.97)	-0.03 (-3.18)
Landlock dummy				0.60 (1.10)	
Ethnic fractionalisation				0.00 (0.41)	
Growth in trading partners' GDP per capita				0.35 (0.77)	
World GDP per capita growth				0.13 (0.18)	
Adjusted R-squared	0.03	0.30	0.30	0.35	0.30

Notes: Dependent variable: real GDP per capita growth (1985 constant US$). Heteroskedasticity-consistent t-statistics in parentheses.

(continued from page 11)

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Agricultural Trade Reform and the Doha Agenda[1]

This article by **Kym Anderson** and **Will Martin**[2] examines the extent to which various regions, and the world as a whole, could gain from multilateral trade reform over the next decade. The World Bank's LINKAGE model of the global economy is employed to examine the impact first of current trade barriers and agricultural subsidies, and then of possible outcomes from the WTO's Doha round. The results suggest that moving to free global merchandise trade would boost real incomes in SSA and Southeast Asia (and in Cairns Group countries) proportionately more than in other developing countries or high-income countries. Real returns to farm land and unskilled labour, and real net farm incomes, would rise substantially in those developing country regions, helping to reduce poverty. A Doha partial liberalisation could take the world some way towards those desirable outcomes, but more so the more agricultural subsidies are disciplined and applied tariffs are cut, and the more not just high-income but also developing countries choose to engage in the process of reform.

Why all the fuss over agriculture?

Agriculture is yet again causing contention in international trade negotiations. It caused long delays to the Uruguay Round in the late 1980s and 1990s, and it is again proving to be the major stumbling block in the WTO's Doha round of multilateral trade negotiations (formally known as the Doha Development Agenda, or DDA). For example, it contributed substantially to the failure of the September 2003 Trade Ministerial Meeting in Cancún to reach agreement on how to proceed with the DDA, after which it took another nine months before a consensus was reached on the Doha work programme, otherwise referred to as the July Framework Agreement (WTO 2004).

It is ironic that agricultural policy is so contentious, given its small and declining importance in the global economy. The sector's share of global GDP has fallen from around one-tenth in the 1960s to little more than one-thirtieth today. In developed countries, the sector accounts for only 1.8% of GDP and only a little more of full-time equivalent employment. Mirroring that decline, agriculture's share of global merchandise trade has more than halved over the past three decades, dropping from 22% to 9%. For developing countries, its importance has fallen even more rapidly, from 42% to 11% (*see Figure 1*).

Since policies affecting this declining sector are so politically sensitive, there are always self-interested groups suggesting it be sidelined in trade negotiations – as indeed it has in numerous sub-global preferential trading agreements and was in the GATT[3] prior to the Uruguay Round.[4]

However, sidelining agriculture in the Doha round would do a major disservice to many of the world's poorest people — those in farm households in developing countries. It is precisely because agricultural earnings are so important to a large number of developing countries that the highly protective farm policies of a few wealthy countries are being targeted by them in the WTO negotiations. Better access to rich countries' markets for their farm produce is a high priority for them.[5]

Some developing countries have been granted greater access to developed-country markets for a selection of products under various preferential agreements. Examples are the EU's provisions for former colonies in the ACP programme and, more recently, for Least Developed Countries (LDCs) under the Everything But Arms (EBA) agreement. Likewise, the US has its Africa Growth and Opportunity Act (AGOA) and Caribbean Basin Initiative (CBI). These schemes reduce demands for developed-country farm policy reform from preference-receiving countries, but they exacerbate the concerns of other countries excluded from such programmes and thereby made worse off through declining terms of trade. They may even be worsening rather than improving aggregate global and even developing country welfare.

Apart from that, many in developing countries feel they did not get a good deal out of the Uruguay Round. From a mercantilistic view, the evidence seems to support that claim: Finger and Winters (2002) report that the average depth of tariff cut by developing countries was substantially greater than that agreed to by high-income countries. Also, developing countries had to take on costly commitments, such as those embodied in the SPS[6] and TRIPS[7] agreements (Finger and Schuler 2001). They are therefore determined in the Doha round that they get significantly more market access commitments from developed countries before they contemplate opening their own markets further.

Greater market access for developing countries' exporters, and especially for poor producers in those countries, is to be found in agriculture (and to a lesser extent in textiles and clothing). Developing country exporters face an average tariff (even after taking account of preferences) of 16% for agriculture and food, and 9% for textiles and clothing, compared with just 2.5% for other manufactures. The average tariff on agricultural goods is high not just in high-income countries but also in developing countries, suggesting even more reason why attention should focus on that sector (along with textiles) in the multilateral reform process embodied in the DDA.

If agriculture were to be ignored in the Doha negotiations, there is the risk that agricultural protection would start rising again. That is what happened throughout the course of industrial development in Europe and Northeast Asia (Anderson, Hayami and Others 1986, Lindert 1991). It was only with the establishment of the WTO, in 1995, that agricultural trade was brought under multilateral disciplines via the Uruguay Round Agreement on Agriculture (URAA).

(continued on page 16)

[1] This article is an abridged version of a paper by the same name, presented at a TIPS/WITS School of Economics and Business Sciences Seminar entitled "Putting Development Back into the Doha Agenda: Implications for Sub-Saharan Africa", held on behalf of the World Bank in April 2005. The full paper is to appear in The Global Trade Policy 2005 issue of *The World Economy*, Vol. 28(9), September 2005, and is a summary of a book to be published by the World Bank during the second half of 2005, also entitled *Agricultural Trade Reform and the Doha Development Agenda*, edited by W. Martin and K. Anderson. The views expressed in this article are the authors' alone.

[2] Respectively lead economist (trade policy) and research manager, Trade Unit, Development Research Group, World Bank.

[3] General Agreement on Tariffs and Trade.

[4] The rules of the GATT are intended, in principle, to cover all trade in goods. However, in practice, trade in agricultural products was largely excluded from their remit as a consequence of a number of exceptions. Details are to be found in Josling, Tangermann and Warley (1996) and in Anderson and Josling (2005).

[5] According to the UN's Food and Agriculture Organisation (FAO), 54% of the economically active population is engaged in agriculture in developing countries, which is nearly five times larger than the sector's measured GDP share (FAO 2004, Table A4). While some of that difference in shares is due to under-reporting of subsistence consumption, it nonetheless implies that these people on average are considerably less productive and hence poorer than those employed outside of agriculture.

[6] Sanitary and Phytosanitary Standards.

[7] Trade-Related Aspects of International Property Rights.

SA TRADE @ TIPS A GLANCE

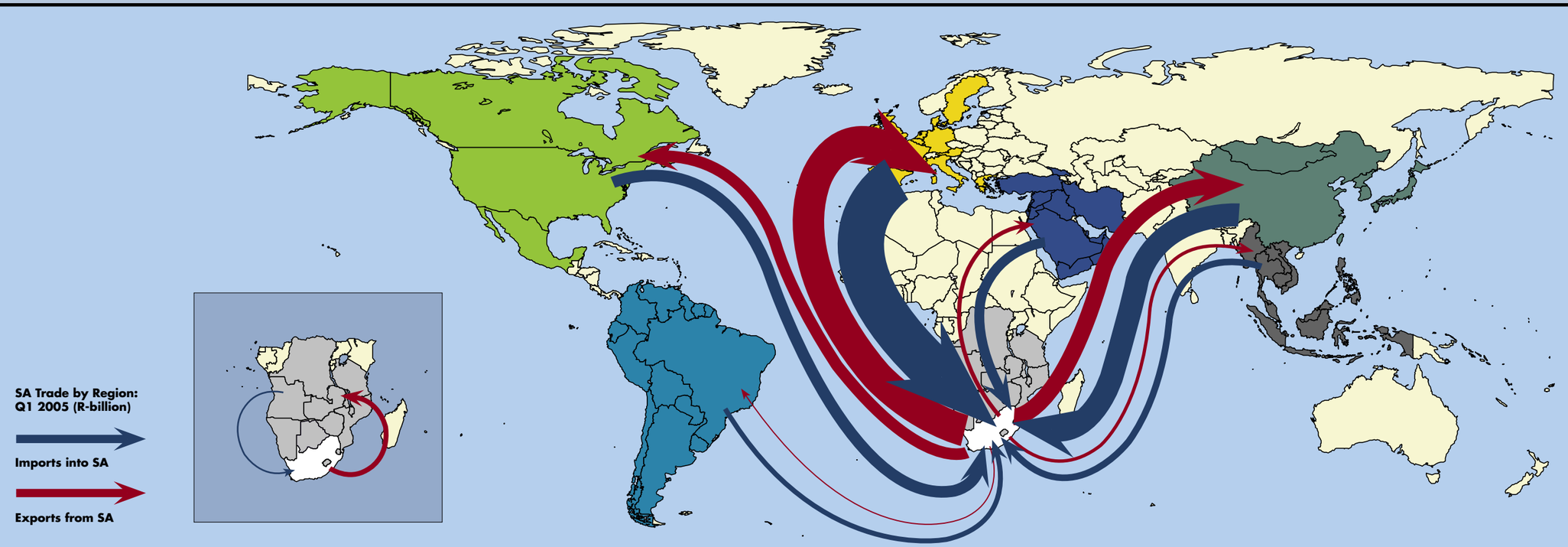
SA Trade Flows to the World

	Q1 2004		Q1 2005		Q4 2004		Q1 2005	
	Rbn	US$bn	Rbn	US$bn	Rbn	US$bn	Rbn	US$bn
Total Exports	67.25	**9.95**	69.15	**11.53**	78.71	**13.05**	69.15	**11.53**
Total Imports	64.08	**9.48**	75.50	**12.58**	84.55	**13.95**	75.50	**12.58**
Trade Balance	3.17	**0.48**	-6.35	**-1.06**	-5.84	**-0.89**	-6.35	**-1.06**

SA Trade with the World: Percentage Growth Rate

	Q1 2004 – Q1 2005 (%)	Q4 2004 – Q1 2005 (%)
Total Exports	**2.82**	-12.15
Total Imports	**17.82**	-10.71

Note: Growth rates have been calculated on the Rand values



Top Three Non-Mineral Exports from and Imports to SA from Regions (HS4, Q1 2005)

Region	Exports			Imports		
	Products	Value (Rbn)	% Share	Products	Value (Rbn)	% Share
EU	Ferro-alloys	1.92	8.00	Motor vehicle parts	3.53	11.20
	Centrifuges	1.67	7.00	Vehicle transport (except buses)	2.94	9.30
	Motor vehicles	1.09	4.50	Aircraft	2.58	8.20
East Asia	Ferro-alloys	1.73	16.10	Motor vehicle parts	2.06	16.00
	Motor vehicles	1.20	11.20	Vehicle transport (except buses)	1.06	8.30
	Rolled stainless steel	0.45	4.20	Computers	0.83	6.50
NAFTA	Ferro-alloys	0.88	12.10	Motor vehicles	0.35	5.60
	Titanium oxides	0.37	5.10	Aircraft	0.27	4.40
	Motor vehicle parts	0.15	2.00	Medical instruments	0.20	3.30
SADC	Structures, parts of iron/steel	0.27	4.40	Nickel ores and concentrates	0.32	11.30
	Commercial vehicles	0.17	2.80	Cotton	0.17	5.90
	Maize (corn)	0.15	2.40	Copper wire	0.07	2.50
Middle East	Hot-rolled iron	0.07	3.00	Polymers of ethylene	0.10	1.90
	Aluminium plates	0.07	3.00	Radio and TV transmitters	0.09	1.60
	Tobacco	0.06	2.60	Mineral or chemical fertilisers	0.08	1.60
South-East Asia	Rolled stainless steel sheet	0.23	11.30	Motor vehicle parts	0.44	15.20
	Chemical wood pulp	0.16	8.00	Computers	0.29	9.80
	Semi-finished iron products	0.10	4.80	Office machine parts	0.25	8.40
South America	Ferro-alloys	0.10	15.10	Motor vehicle parts	0.50	23.50
	Acyclic hydrocarbons	0.03	4.30	Wheat and meslin	0.20	9.60
	Synthetic filament yarn	0.02	3.70	Soya-bean oil-cake	0.17	8.20

Note: Share refers to the proportion of total exports/imports from the specified trade partner.

EU
East Asia
NAFTA
SADC
Middle East
South-East Asia
South America

Top 10 Export Markets and Import Sources (Q1 2005), all products

Exports			Imports		
Country	Value (Rbn)	Share (%)	Country	Value (Rbn)	Share (%)
UK	**7.7**	11.1	Germany	**11.7**	15.5
US	**6.6**	9.5	China	**6.1**	8.1
Japan	**6.0**	8.6	US	**5.9**	7.8
Germany	**4.8**	6.9	Japan	**5.1**	6.8
Netherlands	**3.2**	4.6	UK	**4.5**	6.0
Belgium	**2.2**	3.2	France	**4.5**	6.0
Australia	**1.9**	2.7	Saudi Arabia	**3.6**	4.7
India	**1.7**	2.4	Iran	**2.7**	3.6
Italy	**1.7**	2.4	Italy	**2.2**	2.9
Spain	**1.5**	2.2	Korea	**1.9**	2.5
Total	**37.11**	53.7	**Total**	**48.18**	63.8

Note: Share refers to the proportion of total exports/imports

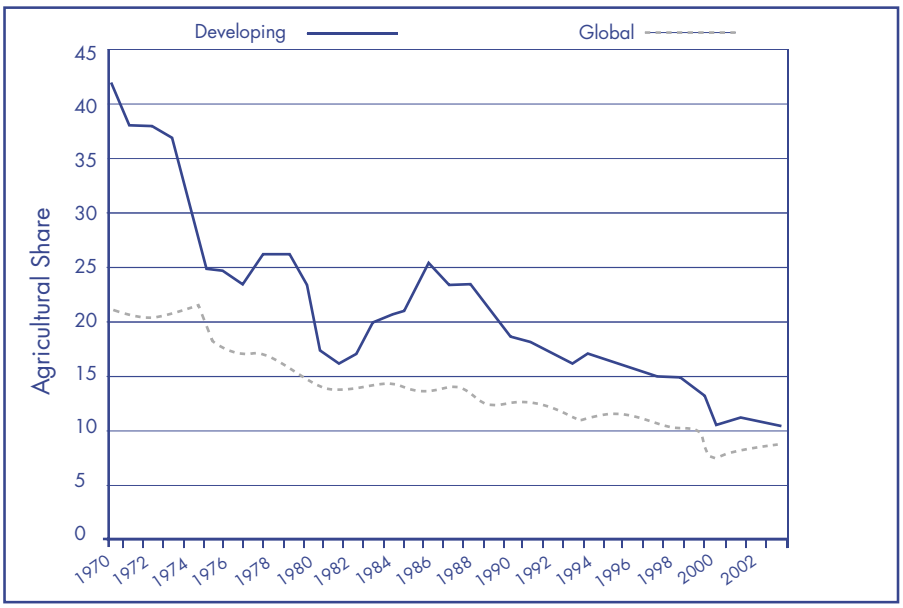
SA Trade with the World: Top 10 Products (HS2; Q1 2005)

Products	Total Exports (Rbn)	% of Total Exports	Products	Total Imports (Rbn)	% of Total Imports
Precious metals	**19.6**	28.3	Machinery and boilers	**12.5**	16.6
Iron and steel	**9.2**	13.3	Mineral and fuel oils	**8.6**	11.4
Mineral and fuel oils	**6.3**	9.1	Electrical machinery	**7.4**	9.8
Vehicles	**4.9**	7.1	Vehicles other than railway	**7.1**	9.4
Machinery and boilers	**4.3**	6.2	Motor vehicle parts	**6.7**	8.9
Aluminum	**2.5**	3.6	Aircraft	**3.5**	4.6
Citrus fruit	**1.9**	2.8	Medical & surgical equipment	**2.5**	3.3
Inorganic chemicals	**1.7**	2.5	Plastic	**2.0**	2.6
Ores, slag and ash	**1.6**	2.3	Precious metals and stones	**1.9**	2.5
Organic chemicals	**1.3**	1.8	Pharmaceutical products	**1.6**	2.1
Total	**53.24**	77.0	**Total**	**53.80**	71.3

SA Trade by Region (Rbn)

	Q1 2004		Q1 2005		Q4 2004		Q1 2005	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
EU	21.44	**29.61**	23.97	**31.59**	24.35	**32.62**	23.97	**31.59**
East Asia	11.07	**12.45**	10.72	**14.89**	14.74	**17.08**	10.72	**14.89**
NAFTA	7.07	**6.44**	7.24	**6.50**	8.52	**7.79**	7.24	**6.50**
SADC	5.39	**1.38**	6.05	**2.83**	7.08	**2.10**	6.05	**2.83**
Middle East	1.97	**2.47**	2.46	**5.25**	2.52	**7.19**	2.46	**5.25**
South-East Asia	2.10	**2.85**	2.04	**3.35**	2.22	**3.57**	2.04	**3.35**
South America	0.69	**2.42**	0.66	**2.62**	0.69	**3.01**	0.66	**2.62**
Rest of Africa	2.70	**0.55**	2.87	**0.74**	3.40	**1.31**	2.87	**0.74**
Rest of the World	14.82	**5.92**	13.15	**7.73**	15.19	**9.86**	13.15	**7.73**

Figure 1: The declining share of agriculture and food in world and developing* countries' merchandise exports, 1970-2003 (%)



[Source: COMTRADE data in the WITS database (see www.wits.worldbank.org)]

** Developing countries here do not include East Asia's newly-industrialised economies of Hong Kong, Korea, Singapore and Taiwan*

(continued from page 13)

That URAA was ambitious in scope, converting all agricultural protection to tariffs, and limiting increases in virtually all tariffs through tariff bindings. Unfortunately, the process of converting non-tariff barriers into tariffs provided numerous opportunities for backsliding that greatly reduced the effectiveness of the agreed disciplines (Hathaway and Ingco 1996). In developing countries, the option for 'ceiling bindings' allowed countries to set their bindings at high levels, frequently unrelated to the previously prevailing levels of protection. Hence agricultural import tariffs are still very high in both rich and poor countries, with bound rates half as high again as Most Favoured Nation (MFN) applied rates.

Also, agricultural producers in some countries are supported by export subsidies (still tolerated within the WTO only for agriculture) and by domestic support measures. Together with tariffs and other barriers to agricultural imports, these measures support farm incomes and encourage agricultural output to varying extents. The market price support component also typically raises domestic consumer prices of farm products.

Nonetheless, the achievements of the URAA provide some scope for optimism about what might be achieved via the WTO as part of the DDA and beyond. The current Doha round has the advantage over the Uruguay Round of beginning from the framework of rules and disciplines agreed in that previous Round. In particular, it has the three clearly identified 'pillars' of market access, export subsidies and domestic support on which to focus. True, it took more than three years to agree on a framework for the current negotiations, reached at the end of July 2004 (WTO 2004), but now that July Framework Agreement is likely to guide the negotiations for some time. It therefore provides a strong basis for undertaking *ex ante* analysis of various options potentially available to WTO members during the Doha negotiations.

The *ex ante* analysis used in the research on which this article is based focuses on the core aspects of the July Framework Agreement from the viewpoint of agriculture and developing countries, taking account also of what might happen to non-agricultural market access and the other negotiating areas. It does so in an integrated way by using the new GTAP Version 6 database (amended to account for key protection changes to early 2005) and the latest version of the World Bank's global, economy-wide LINKAGE model, details of which are documented in Van der Mensbrugghe (2004).

What core questions are addressed in this article?

Among the core questions addressed in the study from which this article flows, are the following:

- What is at stake in this Doha round, in terms of efficiency gains foregone by the various regions of the world because of current tariffs and agricultural subsidies?
- How much are each of the three 'pillars' of agricultural distortions contributing to those welfare losses, compared with non-agricultural trade barriers?
- How might the demands for Special and Differential Treatment (SDT) for developing and LDCs be met without compromising the potential gains from trade expansion for those economies?
- What are the consequences, in terms of opening up to imports, of alternative formulas for cutting bound agricultural tariffs?
- In the case of products whose imports are subject to tariff rate quotas, what are the trade-offs between reducing in-quota or out-of-quota tariffs versus expanding the size of those quotas or the in-quota tariffs?
- To what extent would the erosion of tariff preferences, which necessarily accompanies MFN trade liberalisation by developed countries, reduce the developing countries' interest in agricultural and other trade reform?
- What should be done about agricultural export subsidies, including those implicit in export credits, food aid and arrangements for state trading enterprises?
- Based on recent policy changes in key countries, how might domestic farm support measures be better disciplined in the WTO?
- What are the consequences of reducing the domestic support commitments made in the Uruguay Round, in terms of cuts to the actual domestic support levels currently provided to farmers?
- In particular, how might reductions in cotton subsidies help developing country farmers in West Africa and elsewhere?
- What difference does it make to expand market access for non-agricultural products at the same time as for farm goods under a Doha agreement?
- Which developing countries would have to reduce their farm output and employment as a result of such a Doha agreement?
- In the light of past experience and our understanding of the political economy of agricultural policies in rich and poor countries, how might reform of those policies best be progressed during the DDA negotiations?
- What would be the overall market and welfare consequences by 2015, for various countries and regions as well as globally, of the alternative Doha reform commitments considered in addressing each of the above questions?

What have we learned?

The potential gains from further global trade reform are huge. Global gains from trade reform post-2004 are estimated to be large even if dynamic gains and gains from economies of scale and increased competition are ignored. Freeing all merchandise trade and agricultural subsidies is estimated to boost global welfare by nearly US$300bn per year by 2015, plus whatever productivity effects that reform would generate.[8]

Developing countries could gain disproportionately from further global trade reform. The developing countries (as defined by the WTO) would enjoy 45% of the global gain from complete liberalisation of all merchandise trade, well above their share of global GDP. Their welfare would increase by 1.2%, compared with an increase of just 0.6% for developed countries. The developing countries' higher share is partly because they have relatively high tariffs themselves (so they would reap substantial efficiency gains from reforming their own protection), and partly because their exports are more concentrated in farm and textile products whose tariffs in developed country markets are exceptionally high – notwithstanding non-reciprocal tariff preferences for many developing countries, which contribute to the losses associated with terms of trade deterioration.

Benefits could be as much from South-South as from South-North trade reform. Trade reform by developing countries is just as important economically to those countries as is reform by developed countries, including from agricultural liberalisation (see Table 1b). Hence choosing to delay their own reforms or reforming less than developed countries, and thereby holding back South-South trade growth, could reduce substantially the potential gains to developing countries.

Agriculture is where cuts are needed most. To realise that potential gain from opening up goods markets, it is in agriculture that by far the greatest cuts in bound tariffs and subsidies are required. This is because of the very high rates of assistance in that sector relative to other sectors. Food and agricultural policies are responsible for more than three-fifths of the global gain foregone because of merchandise trade distortions (column 1 of Table 1a) – despite the fact that agriculture and food processing account for less than 10% of world trade and less than 4% of global GDP. From the point of view of welfare of developing countries, agriculture is at least as important as it is for the world as a whole: their gains from global agricultural liberalisation represent almost two-thirds of their total potential gains, which compares with just one-quarter from textiles and clothing and one-ninth from other merchandise liberalisation (Table 1b).

Subsidy disciplines are important, but increased market access in agriculture is crucial. Extremely high applied tariffs on agricultural relative to non-farm products are the major reason for food and agricultural policies contributing 62% of the welfare cost of current merchandise trade distortions. Subsidies to farm production and exports are only minor additional contributors: four and one percentage points respectively, compared with 56 points due to agricultural tariffs.[9] This is even truer for developing countries than for developed ones (compare columns 1 and 2 of Table 2). Disciplining those domestic subsidies and phasing out export subsidies is nonetheless very important, so as to prevent re-instrumentation of assistance from tariffs to domestic subsidies and to bring agriculture into line with non-farm trade in terms of not using export subsidies.

In developing countries, the poor would gain most from multilateral trade reform. Full global merchandise trade liberalisation would raise real factor returns for the poorest households most. Since farmers and other low-skilled workers constitute the vast majority of the poor in developing countries, such reform would reduce both inequity and poverty.

Large cuts in domestic support commitments are needed to erase binding overhang. Commitments on domestic support for farmers are so much higher than actual support levels at present that the 20% cut in the total bound AMS[10] promised in the July Framework Agreement as an early instalment will require no actual support reductions for any WTO member. Indeed, a cut as huge as 75% for those with most domestic support is needed to get some action, and even then it would only require cuts in 2001 levels of domestic support for four WTO actors: the US (by 28%), the EU (by 18%), Norway (by 16%) and Australia (by 10%) – and the EU and Australia have already introduced reforms of that order since 2001, so may need to do no further cutting under even that formula.

(continued on page 18)

Table 1: Effects on economic welfare of full trade liberalisation from different groups of countries and products, 2015 (%)

(a) Distribution of effects on global welfare

From full liberation of: / Percentage due to:	Agriculture and food	Textiles and clothing	Other manufactures	All goods
Developed[a] country policies	46	6	3	55
Developing countries' policies	16	8	21	45
All countries' policies	**62**	**14**	**24**	**100**

(b) Distribution of effects on developing countries' welfare

From full liberation of: / Percentage due to:	Agriculture and food	Textiles and clothing	Other manufactures	All goods
Developed[a] country policies	30	17	3	50
Developing countries' policies	33	10	7	50
All countries' policies	**63**	**27**	**10**	**100**

[a]*Developed countries included the transition economies of Eastern Europe and the former Soviet Union.*
[Source: Anderson, Martin and Van der Mensbrugghe (2005, Table 12.4)]

Table 2: Distribution of global welfare impacts of fully removing agricultural tariffs and subsidies, 2001 (%)

Agricultural liberalisation component:	*Beneficiary region* High-income[a] countries	Developing countries	World
High-income[a] countries' liberalisation of:			
Import market access	66	27	93
Export subsidies	5	-3	2
Domestic support	4	1	5
All meaures	**75**	**25**	**100**

[a]*High-income countries include the newly industrialised East Asian customs territories of Hong Kong, Korea, Singapore and Taiwan, as well as Europe's transition economies that joined the EU in April 2004.*
[Source: Summarised from Hertel and Keeney (2005a, Table 2.7)]

[8] There is strong evidence that trade reform in general is also good for economic growth and, partly because of that, for poverty alleviation (Winters 2004, Dollar and Kraay 2004, Winters, McCulloch and McKay 2004).
[9] This result is very similar to that reported from a partial equilibrium study by Hoekman, Ng and Olarreaga (2004). In our initial empirical analysis we also included crude estimates of implicit forms of farm export subsidisation such as via food aid, export credits or state trading enterprises, but even that was not enough to raise that export subsidy share above 1%.
[10] Aggregate Measurement of Support.

(continued from page 17)

Large cuts in bound rates are needed to erase binding overhang in agricultural tariffs. There is substantial binding overhang in agricultural tariffs: the average bound rate in developed countries is almost twice as high as the average applied rate, and in developing countries the ratio is even greater. Thus large reductions in bound rates are needed before it is possible to bring about *any* improvements in market access. To bring the global average actual agricultural tariff down by one-third, bound rates would have to be reduced for developed countries by at least 45%, and up to 75% for the highest tariffs, under a tiered formula.

Even large cuts in bound tariffs do little if 'Sensitive Products' are allowed, except if a cap applies. If members succumb to the political temptation to put limits on tariff cuts for the most sensitive farm products, much of the prospective gain from Doha could evaporate. Even if only 2% of HS6 agricultural tariff lines in developed countries are classified as sensitive (and 4% in developing countries, to incorporate also their 'Special Products' demand), and are thereby subject to just a 15% tariff cut (as a substitute for the tariff rate quota, or TRQ, expansion mentioned in the Framework Agreement), the welfare gains from global agricultural reform would shrink by three-quarters. However, if at the same time any product with a bound tariff in excess of 200% had to reduce it to that cap rate, the welfare gain would shrink by 'only' one-third.

TRQ expansion could provide additional market access. Only a small number of farm products are subject to tariff rate quotas, but they protect over half of all developed countries' production and 44% of their agricultural imports (De Gorter and Kliauga 2005). Bringing down those products' (out-of-quota) MFN bound tariff could be supplemented by lowering their in-quota tariff or expanding the size of the quota. While this may increase the aggregate rent attached to those quotas and hence resistance to eventually removing them, the extent of binding overhang is such that quota expansion may be the only way to get increased market access for TRQ products in the Doha round – especially if they are among the ones designated as 'sensitive' and hence subject to lesser cuts in their bound tariffs.

Cotton subsidy cuts would help cotton-exporting developing countries. The removal of cotton subsidies (which have raised producer prices by well over 50% in the US and EU – see Sumner 2005) would raise the export price of cotton (although not equally across all exporters because of product differentiation). If those subsidies were removed as part of freeing all merchandise trade, that price rise is estimated to be 8% for Brazil but less for SSA on average. However, cotton exports from SSA would be a huge 75% larger, and the share of all developing countries in global exports would be 85% instead of 56% in 2015, vindicating those countries' efforts to ensure cotton subsidies receive specific attention in the Doha negotiations.

Expanding non-agricultural market access would add substantially to the gains from agricultural reform. By adding a 50% cut to non-agricultural tariffs by developed countries (and 33% by developing countries and zero by LDCs) to the tiered formula cut to agricultural tariffs would double the gain from Doha for developing countries. That would bring the global gain to US$96bn from Doha merchandise liberalisation, which is a sizeable one-third of the potential welfare gain from full liberalisation of US$287bn. Adding services reform would of course boost that welfare gain even more.

Farm output and employment would grow in developing countries under Doha. Only in the most protected developed countries of Western Europe, Northeast Asia and the US would these levels fall – and even there it is only by small amounts, contrary to the predictions of scaremongers who claim agriculture would be decimated in reforming countries.

Adding non-agricultural tariff reform to agricultural reform helps to balance the exchange of 'concessions'. Agricultural reforms would boost the annual value of world trade in 2015 by less than one-quarter of what would happen if non-agricultural tariffs were also reduced. The latter's inclusion would also help to balance the exchange of 'concessions' in terms of increases in bilateral trade values: in that case developing countries' exports to high-income countries would then be US$62bn, which is close to the US$55bn increase in high-income countries' exports to developing countries. With only agricultural reform, the latter's bilateral trade growth would be little more than half the former's.

Most developing countries gain, and the rest could if they reform more. Even though much of the developing country gains from that comprehensive Doha scenario go to numerous large developing countries, notably Brazil, Argentina and Other Latin America plus India, Thailand and SA, the rest of SSA gains too. This is particularly so when developing countries participate as full partners in the negotiations. An important part of this result comes from the increases in market access – on a non-discriminatory basis – by other developing countries.

Preference erosion may be less of an issue than commonly assumed. Some LDCs in SSA and elsewhere appear to be slight losers in our Doha simulations when developed countries cut their tariffs and those LDCs choose not to reform at all themselves.[11] These simulations overstate the benefits of tariff preferences for LDCs, however, since they ignore the trade-dampening effect of complex rules of origin and the grabbing of much of the rents by developed-country importers. Even if they were to be losers after correcting for those realities, it remains true that preference-receiving countries could always be compensated for preference erosion via increased aid at relatively very small cost to current preference providers – and in the process other developing countries currently hurt by LCD preferences would enjoy greater access to the markets of reforming developed countries.

Farm output and employment would grow in developing countries under Doha. Despite a few low-income countries losing slightly under our Doha scenarios when they choose to reform little themselves, in all the developing countries and regions shown the levels of output and employment on farms expand. It is only in the most protected developed countries of Western Europe, Northeast Asia and the US that these levels would fall – and even there it is only by small amounts, contrary to the predictions of scaremongers who claim agriculture would be decimated in reforming countries. Even if there was a move to free merchandise trade completely, the developed countries' share of the world's primary agricultural GDP by 2015 would be only slightly lower at 25% instead of 30% (but their share of global agricultural exports would be diminished considerably more – from 53% to 38%).

Poverty could be reduced under Doha. Under the full merchandise trade liberalisation scenario, extreme poverty in developing countries (those earning no more than US$1/day) would drop by 32-million in 2015 relative to the baseline level of 622-million, a reduction of 5%. The majority of the poor by 2015 are projected to be in SSA, and there the reduction would be 6%.[12] If only agriculture was reformed, there would be much less poverty alleviation globally and none at all in SSA. This shows the importance for poverty of including manufactured products in the Doha negotiations.

[11] As warned by Panagariya (2004) among others, some low-income countries' terms of trade could deteriorate either because they would lose tariff preferences on their exports or because they are net food importers and so would face higher prices for their imports of temperate foods.

Developing countries could trade off SDT for more market access. If developing countries were to tone down their call for SDT (see Josling 2005) in terms of wanting smaller cuts and longer phase-in periods, reciprocity means they could expect bigger tariff and subsidy cuts from developed countries. Similarly, if they were to forego their call for lesser cuts for 'Special Products', they could demand that developed countries forego their call for some 'Sensitive Products' to be subject to smaller tariff cuts. The economic payoffs for low-income countries even if high-income countries do not reciprocate with larger offers are considerable. Moreover, by embracing those options to reform more in the context of the Doha round would make it harder for high-income countries to resist the call to respond with larger reforms themselves.

Key policy implications

Among the numerous policy implications that can be drawn from the above findings, the following are worth highlighting.

Prospective gains are too large to not find the needed political will to make Doha a success. With gains of the order of US$300bn per year at stake from implementing the July Framework Agreement (even if no reforms are forthcoming in services and if the counterfactual would be the *status quo* rather than protectionist backsliding), the political will needs to be found to bring the round to a successful conclusion. Multilateral cuts in MFN bindings are also helpful because they can lock in previous unilateral trade liberalisations that otherwise would remain unbound and hence be vulnerable to backsliding; and they can be used as an opportunity to multi-lateralise previously agreed preferential trade agreements and reduce the risk of trade diversion from those bilateral or regional arrangements (as stressed in Sutherland 2004).

Since developed countries would gain most, and have the most capacity and influence, they need to show leadership at the WTO. The large developed countries cannot generate a successful agreement on their own, but nor can the Doha round succeed without a major push by those key traders. Their capacity to assist poorer economies could hardly manifest itself more clearly than in encouraging global economic integration via trade reform, and in particular in opening developed country markets to the items of greatest importance to poorer countries, namely farm (and textile) products. The more that is done, the more developing countries will be encouraged to reciprocate by opening their own markets more – accelerating South-South trade in addition to South-North trade.

Outlawing agricultural export subsidies is the obvious first step. That will bring agriculture into line with the basic GATT rule against such measures, and in the process help to limit the extent to which governments encourage agricultural production by other means (since it would raise the cost of surplus disposal). China has already committed not to use them, and other developing countries too can find more efficient ways of stabilising their domestic food markets than by dumping surpluses abroad.

Agricultural tariff and domestic support bindings must be cut hugely to remove binding overhang and provide some genuine market opening. Getting rid of the binding overhang that resulted from the Uruguay Round, particularly with 'dirty tariffication', must be a priority.[13] The highest-subsidising countries – the EU, US and Norway – need to reduce their domestic support, not just for the sake of their own economies but also to encourage developing countries to reciprocate by opening their markets as a *quid pro quo*. But more than that is needed if market access is to expand. If a choice had to be made, reducing MFN bound tariffs in general would be preferable to raising tariff rate quotas, because the latter help only those lucky enough to obtain quotas and crowd out non-quota holders. Exempting even just a few 'Sensitive' and 'Special Products' is undesirable as it would reduce hugely the gains from reform and would tend to divert resources into, instead of away from, enterprises in which countries have their least comparative advantage. If it turns out to be politically impossible not to designate some 'Sensitive' and 'Special Products', it would be crucial to impose a cap such that any product with a bound tariff in excess of, say, 100% had to reduce it to that cap rate.

A disproportionately high share of the potential gain from liberalising merchandise trade, and especially agricultural trade, is available for developing countries. Moreover, the poorest people – farmers and unskilled labourers – in developing countries appear to be most likely to gain from global trade liberalisation.

Expanding non-agricultural market access at the same time as reforming agriculture is essential. A balanced exchange of concession is impossible without adding other sectors, and it needs to be more than just textiles and clothing (which also benefit developing countries disproportionately) even though they are the other highly distorted sector. With other merchandise included, the trade expansion would be four times greater for both rich and poor countries – and poverty in low-income countries would be reduced considerably more.

South-South 'concessions' are also needed, especially for developing countries, which means reconsidering the opportunity for developing countries to liberalise less. Since developing countries are trading so much more with one another now, they are the major beneficiaries of reforms within their own regions. Upper middle-income countries might consider giving LDCs duty-free access to their markets (mirroring the recent initiatives of developed countries), but better than such discriminatory action would be MFN tariff reductions by them. Even LDCs should consider reducing their tariff binding overhang at least, since doing that in the context of Doha gives them more scope to demand 'concessions' (or compensation for preference erosion, or other contributors to terms of trade deterioration) from richer countries – and yet would not require them to cut their own applied tariffs very much.

Conclusions

There is a great deal to be gained from liberalising merchandise – and especially agricultural – trade under Doha, with a disproportionately high share of that potential gain available for developing countries (relative to their share of the global economy). Moreover, it is the poorest people – farmers and unskilled labourers – in developing countries that appear to be most likely to gain from global trade liberalisation.

To realise that potential gain, it is in agriculture that by far the greatest cuts in bound tariffs and subsidies are required. However, the political sensitivity of farm support programmes, coupled with the complexities of the measures introduced in the Uruguay Round Agreement on Agriculture and of the modalities set out in the Doha Framework Agreement of July 2004 ensure that the devil will be in the details of the final Doha agreement. It is for that reason that *ex ante* empirical analysis of the sort provided in the study summarised above is a prerequisite for countries engaged in the Doha round of negotiations.

What emerges from our analysis is that developing countries would not have to reform very much under Doha, because of the

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[12] The approach here has been to take the change in the average per capita consumption of the poor, apply an estimated income-to-poverty elasticity, and assess the impacts on the poverty headcount index. We have done this by calculating the change in the real wage of unskilled workers, deflating it by a food/clothing consumer price index which is more relevant for the poor than the total price index. That real wage grows, over all developing countries, by 3.6%, or more than four times greater than the overall average income increase. We are assuming that the change in unskilled wages is fully passed through to households. Also, while the model closure has the loss in tariff revenues replaced by a change in direct household taxation, the poverty calculation assumes – realistically for many developing countries – that these tax increases only affect skilled workers and high-income households. While these simple calculations are not a substitute for more-detailed individual country case study analysis using detailed household surveys as in, for example, Hertel and Winters (2005), they are able to give a broad region-wide indication of the poverty impact.

[13] As Francois and Martin (2004) have shown, any binding cut is useful for the long run even if it brings no immediate cut in applied rates.

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large gaps between their tariff bindings and applied rates. That is even truer if they exercise their right (as laid out in the July Framework Agreement) to undertake lesser tariff cuts than developed countries. In that case, they gain little in terms of improved efficiency of national resource use. Yet, as Panagariya (2004) and others have warned, for a non-trivial number of low-income countries their terms of trade could deteriorate. For some that is because they would lose tariff preferences on their exports. For others it is because they are net food importers and so would face higher prices for their imports of temperate foods.

To realise more of their potential gains from trade, developing and LDCs would need to forego some of the SDT they have previously demanded, and perhaps also commit to additional unilateral trade (and complementary domestic) reforms, and to invest more in trade facilitation. High-income countries could encourage them to do so by being willing to open up their own markets more to developing country exports,[14] and by providing more targeted aid. To that end, a new proposal has been put forward to reward developing country commitments to greater trade reform with an expansion of trade-facilitating aid, to be provided by a major expansion of the current Integrated Framework which is operated by a consortium of international agencies for LDCs (Hoekman 2005a,b).

This may well provide an attractive path for developing countries seeking to trade their way out of poverty, not least because linking aid to greater trade reform would help to offset the tendency for an expanded aid flow to cause a real exchange rate appreciation (see Commission for Africa 2005, pp. 296-97). As well, it is potentially a far more efficient way for developed countries to assist people in low-income countries than the current systems of tariff preferences.

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[14] Limao and Olarreago (2005) suggest preference erosion could be addressed by replacing the current margin of preference with an equivalent import subsidy for products from preference-receiving countries, thereby retaining the preference status quo while taking away this reason not to undertake MFN tariff cuts.

China's Leap into the Heart of the 21st Century

The People's Republic of China (PRC) is in the midst of a transformation of global significance. From a closed economy in which the state was the only economic actor of significance, China has moved rapidly towards a system that the Communist Party of China (CPC) defines as 'market socialism', where a sizeable state sector exists side by side with private enterprises and foreign investors. **Michael Sachs**[1] calls China's leap – which will lift the most populous country on earth into the heart of politics and economics in the coming century – a reality to which we must all adjust.

"Development is the absolute principle"

Rejecting the 'ultra-leftism' and extreme egalitarianism that characterised the decade of the cultural revolution (1966-1976), Deng Xiaoping inaugurated a new policy in 1978 advancing the slogan: "Development is the absolute principle". Developing the 'forces of production' was established as the paramount objective of all government policy. Since then, Chinese reforms have advanced one step at a time in a systematic and logical manner that relies on a detailed analysis of objective reality and policy adjustment at each stage of transformation.

Double-digit growth in GDP has been sustained for more than a decade, much of it driven by vast quantities of Foreign Direct Investment (FDI) and public infrastructure investment. The scale of recent development in Shanghai is awesome. Today, Shanghai bears little visible resemblance to a third-world city. The new development area, Pudong district, has arisen with dizzying speed into a vast agglomeration of finance and industry on the east bank of the Huangpu river, which is lined by towering dock cranes that lift US$202bn worth of trade each year. But it does not end here: awesome plans are in motion to invest billions in social development and economic infrastructure to accommodate the city's growing population, which has already reached 17-million.

Figure 1 illustrates the spectacular nature of China's growth, while also placing it in historic context. The stagnation and volatility of GDP per capita during the era of the 'great leap forward' and the 'cultural revolution' form the backdrop to China's shift towards 'market socialism'. But it would be wrong to write off the revolutionary period as an aberration that delayed the realisation of China's potential as a market economy. Rather, it was the revolutionary mobilisation of the people, the radical redistribution of assets (particularly land) and large investments in human capital that laid the basis for sustained and widespread economic development in the recent period.

Also of crucial significance was the fact that, prior to the revolution, China had been mired in a century of disunity, chaos and rule by war-lords. The Communist Party's achievement was to unite the people around a common programme and construct a powerful and centralised state apparatus capable of safeguarding China's national interests, even in the context of rapid integration with the global economy.

A number of *economic* factors can be identified as lying behind China's rapid growth. These include a virtually unlimited supply of cheap and educated labour, well-developed human resources, very high rates of saving, a stable currency, relatively closed capital markets and favourable geographic location.

But it is the *politics* of the developmental state that lies behind the Chinese 'miracle'. The state's role in the economy is not simply a function of the size of the public sector, which is growing smaller, albeit from a very large base. Rather, it is the capacity of the state to lead and direct the economy that is significant. The state is able to mobilise vast resources and direct them to where they are most needed, guided by a long-term vision that informs a set of clear and detailed short- to medium-term plans.

Government's development role includes:

- Massive investment in public and economic infrastructure to leverage private investment, both foreign and domestic, toward clearly identified development priorities.
- The use of non-economic (political) measures to control key prices, such as the interest rate, the exchange rate, wages and the prices of agricultural products and domestically sourced natural resources. The state also maintains strategic subsidies and price controls to facilitate poverty alleviation (for example, subsidised micro-credit) and rein in the cost of basic foodstuffs.

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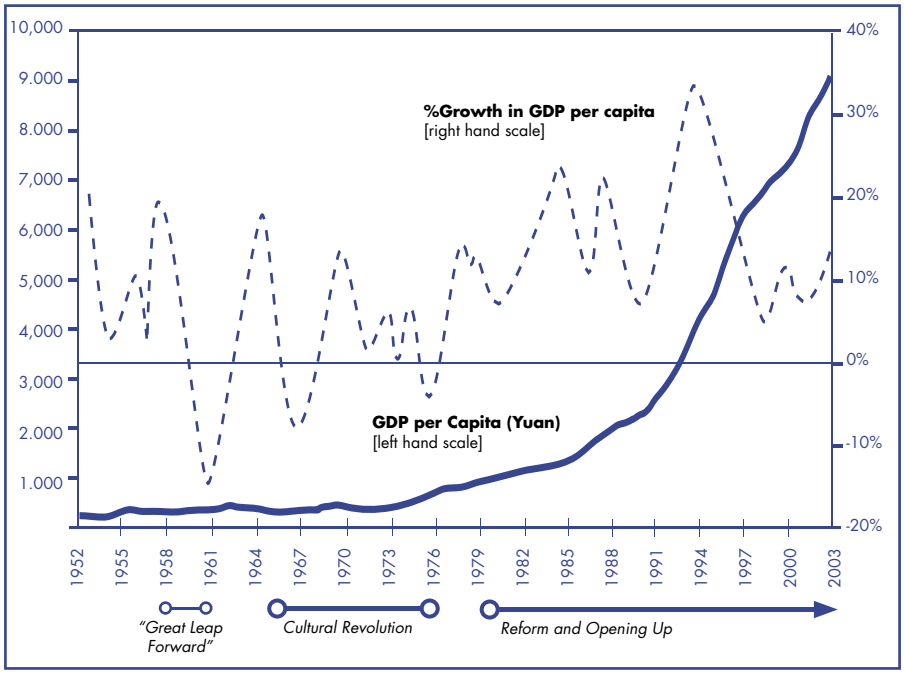
Figure 1: China's GDP per capita in historical perspective



[Source: Data derived from China Facts and Figures (2004)]

[1] Michael Sachs is research co-ordinator at the head office of the ANC and participated in an alliance visit to study China's growth and development during September 2004. This article reflects his views alone.

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- Facilitation, co-ordination and direction of private investment across economic sectors and geographic regions, in a manner that builds horizontal and vertical linkages and ensures the transfer and diffusion of technology through strong industrial policies and detailed plans in selected 'pillar industries'.

- Linked to the above is the directing role of the state in credit and capital allocations, which is achieved through state control over banking institutions. Aligned to this has been a strategic approach to capital account liberalisation, which is required to accommodate the resulting inefficiencies in the banking sector, which include large quantities of non-performing loans.

- Investment in human capital, with a particular emphasis on science and technology, and a sustained commitment to 'learning by doing' (that is, ensuring that foreign investments lead to the transfer of technology and the acquisition of skills amongst Chinese themselves).

Social gains (and strains) of development

For the vast majority of Chinese there have been rapid and sustained improvements in the material conditions of their existence in a short period of time. Over the last 20 years, China has witnessed a massive growth in *per capita* income and a significant reduction in absolute poverty. In terms of the national poverty line, the number of people living in absolute poverty has declined from 250-million in 1978 to only 29-million in 2003, a shift from 30.7% of the population to only 3.1%.

Nevertheless, inequality, relative poverty and unemployment are on the rise, and in 2003, a rise in the number of absolute poor was recorded for the first time. A significant worsening of inequality between urban and rural dwellers is also apparent, a matter of grave concern in a country where 70% of the population still live in rural areas. Furthermore, there are rising disparities between the fast-growing eastern provinces, where the bulk of industrial development is located, and the western and central regions, which are the traditional sources of natural resources and agricultural products.

Professor Justin Yifu Lin of the Centre for Economic Research at Peking University believes that one of the reasons for this widening gap has been the suppression of agricultural and natural resource prices, which in turn is one of the factors that has enabled rapid development in the East. In effect, the poor provinces have been subsidising accumulation in the richer provinces.

Against the background of these widening inequalities, vast numbers of migrants have left their villages to seek work in the cities. Numbering more than 100-million, these young and relatively educated people increasingly fall between the cracks of society. A form of 'influx control' is maintained, albeit weaker than in the past. Many state services are provided only to registered 'citizens' of a particular area and denied to 'temporary migrants'. But in some areas, migrants already constitute one-third of the urban population, exercising powerful downward pressures on wages.

Severe strains are also emerging in relation to health care for the poorest, while education appears to be increasingly inferior for those still mired in poverty. In part this reflects significant problems of fiscal decentralisation in China, where municipalities have considerable financial autonomy. Fiscal transfers from the centre to under-financed municipalities and regions (funded on a project-by-project basis) have had an impact, but the lack of fiscal capacity in poorer districts has taken a severe toll on services.

According to government, the number of workers employed in State-owned Enterprises (SOEs) has declined from 74-million to 36-million over the last 20 years, as the SOEs have been forced to adjust to a market environment. The PRC expects the development of new economic sectors to begin mopping up surplus workers who have been laid off in the course of rapid economic restructuring. In addition, a number of active labour market policies are deployed to ameliorate the worst effects of unemployment and promote self-employment and small business. The laid-off workers from the SOEs are given particular attention. They maintain a contract with their former employers, have access to subsidised loans and are given a 'minimum living allowance', while government provides dedicated programmes to assist with re-employment.

The fate of the global economic system hangs precariously on Chinese and Asian developments, with global growth in the coming decade depending to a large degree on continued Chinese expansion.

While state intervention to mitigate the worst features of poverty and unemployment are strong, the Chinese clearly believe that it is economic growth that will provide the final solution to these problems. The CPC aims that China should quadruple its GDP by 2010 to become 'a relatively well-off society' and that the project of modernisation should be completed by 2050. Assuming that developments continue along the same path, it is quite possible to imagine that these awesome feats will be accomplished well before the target dates.

But the pace and scope of China's transformation will undoubtedly generate new tensions and challenges within Chinese society. Whereas countries such as Britain and Japan transformed themselves into industrial societies over a period of 150 years, China expects to complete its modernisation process in half that time. Britain (and others) industrialised with the help of colonies, which provided cheap raw materials on the basis of forced labour and also enabled the mass migration of their surplus populations of the poor and unemployed to distant lands. China enjoys none of these 'benefits'.

Already, the process of 'opening up and reform' has led to massive and rapid changes in Chinese society. New productive and social forces are likely to pose serious problems to future political and social stability, even assuming that growth continues apace. But perhaps the greatest danger of a systemic crisis would be presented by a slow-down in growth.

A quiet rise and a noisy decline?

Given the abundance of labour and current low levels of GDP *per capita* relative to the developed countries, there is no objective reason why China should not continue to grow rapidly for at least another two generations. This would mean that China is destined to become the largest economy in the world by the mid-21st century.

Razeen Sally of the London School of Economics regards China's growth and global integration, together with that of India, as an epoch-making event:

> *"What makes the crucial difference to economic globalisation today, and probably for the next half century, is the dramatic opening of first China and then India. They are the world's second and fourth largest economies respectively (at purchasing-power parity): China accounted for 12% and India for 5.7% of global GDP in 2002. Together they are home to 40% of humanity…*
>
> *With still low levels of per-capita income… they have the potential for stellar catch-up growth rates for decades ahead. Their integration into the world*

economy, still in its early stages, promises to be more momentous than that of Japan and the east Asian Tigers, and perhaps on par with the rise of the US as a global economic power in the late nineteenth century." (Sally, 2004)

Already the fate of the global economic system hangs precariously on Chinese and Asian developments, with global growth in the coming decade depending to a large degree on continued Chinese expansion. What is more, the single most significant imbalance in today's global economy is the US' vast current account deficit, which must be balanced by equally vast capital inflows from the rest of the world.

In order to consume more than it produces (which is the logical corollary of the current account deficit) the US must continue to attract inflows of foreign savings. A large and rising share of these savings come from China, which, to maintain its currency on par with the dollar, must buy US dollars. Already in 2002, China was the second-largest foreign holder of US long-term debt securities, accounting for US$165bn, or 6.5%, of total foreign holdings (IMF, 2004). US imports, too, are increasingly sourced from China. During the recent recovery of the global economy, the structure of American imports changed significantly, with imports from China growing by 52% between 2001 and 2003 (UNCTAD, 2004).

Some economists regard the relationship between China and the US as similar to the old Bretton Woods system of fixed exchange rates that prevailed for 30 years after the Second World War:

"Once again, America is at the centre of the system. The old periphery consisted of Europe and Japan, which used undervalued currencies, supported by capital controls and the purchase of dollar reserves, to rebuild their economies after the war. But the new periphery is made up of China and other Asian economies which, it is argued, also peg their currencies to the dollar at artificially low rates". (The Economist, 2004)

Unlike the Bretton Woods system, however, these arrangements have not been explicitly negotiated, and the vast global imbalances we have described cannot be sustained. The question is not if, but when and how the inevitable unwinding of this global disequilibrium will take place: in an orderly and negotiated manner, or through a series of volatile and unpredictable shocks.

What is certain is that, as these economic imbalances 'unwind', they will do so against the political backdrop of the emergence of a new global super-power. Rather than a simple acceleration of current imperatives toward 'globalisation', the scale of Chinese integration points to a revolutionary transformation of the global system.

Indeed, the emergence of the US ultimately led to a transfer of global leadership from the then hegemonic power, Britain, and a thorough reconfiguration of global capitalism. But whereas the transition from British to US world hegemony was facilitated by a common language and culture (indeed, the US itself was an offspring of British capitalism) there are no such cultural factors to lubricate the likely transfer of leadership from the US to China.

China is the only developing country that is a member of the UN Security Council, and its voice in world economic and political forums will become increasingly strong. Given that it has opted for 'market socialism', China's voice may also give impetus to heterodox approaches to the resolution of development problems facing the post-colonial world.

The Chinese believe that it would be much better if its 'rise' were a peaceful and quiet one. The CPC says, "China's national development will contribute to world peace and stability; and world peace and stability will contribute to China's national development". But the real cause for concern is not China's quiet rise but America's noisy decline. On this score, the quagmire into which the US has voluntarily plunged itself in Iraq does not bode well.

As a result of US strategy since 9/11, it is likely that a 'clash of fundamentalisms' rather than a direct challenge between China and the US will pose the greatest threat to global peace and stability. On the one hand, Anglo-Christian fundamentalism aligned with the most reactionary elements of US capital will staunchly resist the ebb of American power. On the other hand, an equally reactionary Islamic fundamentalism will seek to answer the global crisis by taking the Muslim world back to an imagined past and thus turn the clock back on modernity itself (Ali, 2003).

In this context, China could well emerge as a moderating force. In sharp contrast to both the US' unilateral aggression and the Islamicist's rejection of universal values, China believes that its national interest is objectively aligned with multi-lateralism and world peace.

SA's integration into the global economy has historically been driven by 'Anglo-American' capital, and a hegemonic shift towards the East will have momentous consequences for the politics and economics of African development as a whole.

China, Africa and SA

These global transitions form the strategic context in which SA must consider its relations with the PRC. Politically, there is much to gain from a strengthened bilateral co-operation. China regards SA as a strategic partner in building multilateralism and strengthening the position of the South in the global order. Already China has made clear its commitment to these goals, for example by providing significant development assistance to the African continent and cancelling US$1.27bn worth of debt owed by Africa.

China is also the only developing country that is a member of the UN Security Council, and its voice in world economic and political forums will become increasingly strong. China, too, clearly recognises the importance of the African bloc in multi-lateral forums (Alden, 2004). Given that it has opted for 'market socialism' rather than American-style free market fundamentalism, China's voice may also give impetus to new and heterodox approaches to the resolution of development problems facing the post-colonial world.

China's economic interest in Africa has grown significantly over the last 10 years: trade with the continent has almost doubled, while Chinese firms and SOEs have made significant investments in a range of African countries. These are focussed on China's national priorities, including securing its access to raw materials, such as oil, cementing its ties to African states through significant infrastructure and construction investment, and ensuring food security through the purchase of agricultural lands and enterprises (Alden, 2005).

Continued flows of Chinese savings, both private and official, could become increasingly important to the African continent, while political alignment on a number of key global concerns, such as US unilateralism, make the political imperatives of our relations with China very strong. But these political imperatives for co-operation could come into tension with the economic consequences of China's emergence. For SA, and for Africa as a whole, the economic implications of China's growth and the consequent reconfiguration of the global economy are somewhat contradictory.

On the one hand, China's growth is likely to sustain a global boom in the prices of primary commodities that are produced in Africa. Already, the prices of commodities such as steel, coal, minerals and agricultural raw materials have risen significantly on the back of Chinese

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demand. Also significant are the indirect consequences of China's rapid growth. For example, although China is the world's largest coal producer, the scale of its own consumption has reduced the quantities of Chinese coal available for export, thereby putting upward pressure on global prices (UNCTAD, 2004).

On the other hand are the global consequences of increasing Chinese domination of labour-intensive manufactured products. China's unparalleled capacity to supply these goods at lower cost will significantly reduce their prices on world markets. While SA and African consumers would benefit significantly from these lower prices, the consequences in terms of employment could be significant. 'Hollowing out' of domestic industries is a strong possibility, especially for sectors relying on unskilled labour (IMF, 2004).

Conclusion

There is much that SA can learn from Chinese growth, particularly the unifying and directing role of the developmental state. But the character of SA's political economy means that wholesale replication of a Chinese 'model' is simply not possible. Indeed, in the context of our democratic constitution, it is impossible (and undesirable) for SA to replicate the coercion of both labour and capital that continues to form a key component of this model. SA's development must rely to a much greater extent on the construction of a 'shared vision' through the mobilisation of consent.

At the same time, the political and economic implications of China's growth and development cannot be avoided or ignored. SA's integration into the global economy has historically been driven by 'Anglo-American' capital, and a hegemonic shift towards the East will have momentous consequences for the politics and economics of African development as a whole. How we balance the economic and political imperatives implied by this shift will be key to securing our future in a 21st century world with China at its heart.

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TIPS Training on TradeMap and ProductMap

TIPS will be running several training course on using the Geneva-based International Trade Centre's (ITC's) Market Analysis Tools, **TradeMap and ProductMap,** throughout 2005.

The courses will focus on the use of ITC's tools for market analysis in the development of international trade strategies, both from a business and policy perspective.

About ITC Market Analysis Tools

TradeMap SA operates in a web-based interactive environment and covers the trade flows of all products between 180 countries and territories. It allows SA exporters, for example, to analyse present export markets, pre-select priority markets and review opportunities of market, product and supplier diversification, as well as to identify existing and potential bilateral trade with partner countries. TradeMap also provides important information on tariff and non-tariff barriers.

Complementary to TradeMap SA, an additional online tool, ProductMap, is now available in SA. ProductMap offers extensive market and business information on 72 industry platforms.

These services have helped countries such as Vietnam, the United Arab Emirates, Chile and now SA to design new trade strategies, promote regional trade, diversify exports, target investments and assess trade performance.

Thanks to financial support from TIPS and the Dutch and Swiss governments, TradeMap and ProductMap are available to all interested users in SA.

To attend these courses or for further information, please contact Matthew de Gale:

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TradeMap

FOCUS ON DATA

SA / India Trade: Patterns and Potential[1]

In this **Focus on Data** report, TIPS economist **Owen Willcox** takes a detailed look at various aspects of merchandise trade between SA and India. He finds that SA's total trade (exports and imports) with India is growing faster than its trade with the rest of the world, except for a decline in 2003, from which the country bounced back strongly in 2004. Basic processed goods dominate both exports to India and imports from India, although advanced manufacturing goods more than doubled its share of SA exports to India between 1995 and 2004, albeit off a low base. With India being a possible powerhouse of the 21st century, Willcox points out that SA should be strengthening its economic relations with India.

Introduction

India and SA are the fourth- and 21st-largest economies in the world, yet trade between these two countries is low. This article analyses such trade in an attempt to understand the forces driving trade and to identify commodities which show the potential to increase exports.

India was one of the fastest-growing economies in the world during the 1990s, averaging 6% per annum after a macroeconomic crisis in 1991, which forced the country to move away from protectionist economic policies. India's openness to trade (measured as the sum of exports and imports as a percentage of GDP) increased from 16.6% in 1980 to 24.2% in 1999 (Srinivasan & Tendulkar, 2003). This growth, combined with the fact that India is the second-most populous country in the world, means that India is a large and potentially lucrative market for SA exporters.

This article takes a detailed look at various aspects of merchandise trade between the two countries. Trade in services, investment, non-tariff measures, competition policy and other issues typically considered in modern FTAs or PTAs are not discussed here, and should be considered separately.

Aggregate trade flows between SA and India

Table 1 shows that SA's trade with India is growing significantly faster than SA's trade with the rest of the world. Over the period 1995 to 2004, imports from India have been growing at 18.5% per annum, compared to an average of 13.4% per annum for total imports.

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Table 1: SA's aggregate trade with India and the World, 1995-2004 (Rm)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Growth '95-'04 (%)
SA imports from India	711	1,112	1,561	1,630	1,512	1,765	2,113	2,941	3,126	4,547	18.5
% growth	70.4	56.5	40.4	4.4	-7.2	16.7	19.8	39.2	6.3	45.5	
SA imports total	101,054	116,903	129,834	143,976	147,383	188,064	215,441	274,458	258,431	306,368	13.4
% growth	29.8	15.7	11.1	10.9	2.4	27.6	14.6	27.4	-5.8	18.5	
India's share of SA imports	0.7	1.0	1.2	1.1	1.0	0.9	1.0	1.1	1.2	1.5	4.5
SA exports to India	727	1,020	1,339	1,624	2,350	2,942	3,110	3,759	2,914	3,662	19.4
% growth	48.7	40.2	31.3	21.3	44.7	25.2	5.7	20.9	-22.5	25.6	
SA total exports	100,447	114,133	137,339	142,740	161,508	208,285	215,248	277,993	255,560	291,129	13.0
% growth	13.7	13.6	20.3	3.9	13.1	29.0	3.3	29.2	-8.1	13.9	
India's share of SA exports	0.7	0.9	1.0	1.1	1.5	1.4	1.4	1.4	1.1	1.3	

[Source: Customs and Excise and own calculations]

Table 2: Total trade between SA and India, 1995-2004 (Rm)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Growth '95-'04 (%)
SA's trade balance with India	17	-92	-222	-6	837	1.177	997	818	-212	-886	
SA's trade balance	-607	-2,770	7,505	-1,236	14,126	20,220	-193	3,535	-2,871	-15,239	
SA trade with India	1,438	2,132	2,900	3,254	3,862	4,706	5,223	6,700	6,040	8,209	19.1
% growth	58.7	48.2	36.1	12.2	18.7	21.9	11.0	28.3	-9.9	35.9	
SA total trade	201,501	231,036	267,173	286,715	308,891	396,349	430,689	552,451	513,991	597,497	13.2
% growth	21.2	14.7	15.6	7.3	7.7	28.3	8.7	28.3	-7.0	16.2	
India's share of SA trade	0.7	0.9	1.1	1.1	1.3	1.2	1.2	1.2	1.2	1.4	

[Source: Customs and Excise and own calculations]

[1] This is an abridged version of the original paper prepared by TIPS in 2004. All data is in nominal prices. The analysis makes use of trade data from SA's Customs and Excise and UNComTrade, as well as tariff data from the International Trade Centre's (ITC's) MacMap.

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Although these figures would seem to suggest that imports from India have always grown more quickly than total imports, this is not the case. Imports from India has experienced very fast growth from low levels from 1995 to 1997.

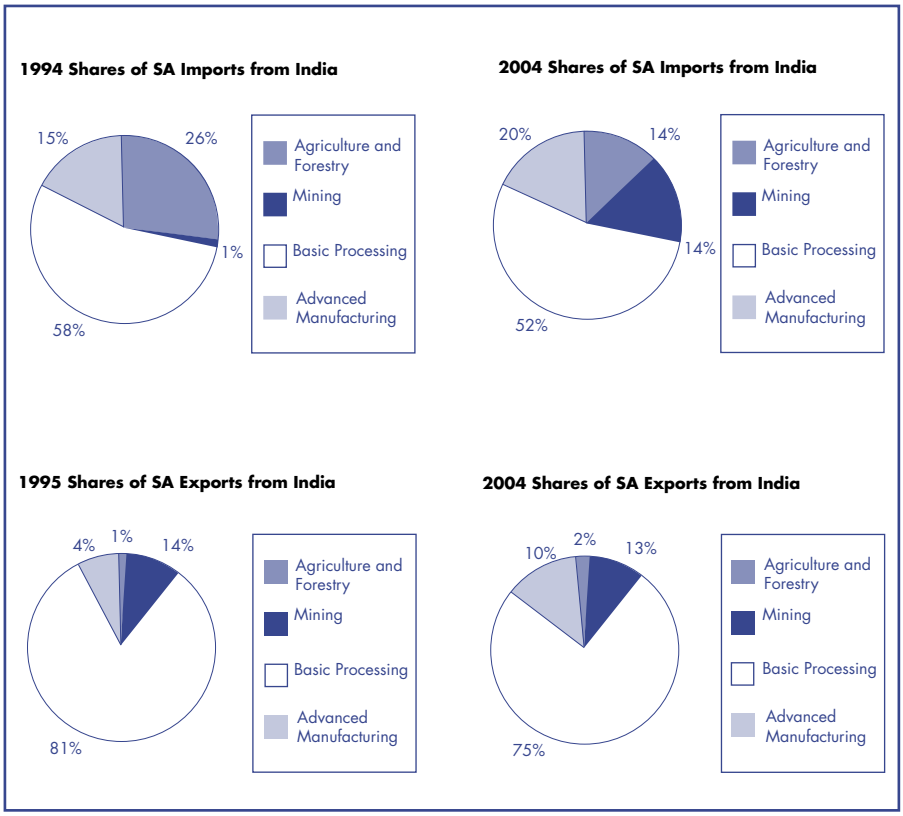
1998 saw a marked slow-down in growth, possibly associated with the Asian crisis and the effect this had on the SA rand. Imports even declined in 1999, while 2000 saw the return of import growth – more moderate than before, except in 2002, when imports increased by 39%. The share of imports from India in total imports peaked at 1.5% in 2004, mainly due to a large increase in imports from India in that year. Imports from India increased in 2003, despite the drop in total imports due to the strengthening of the rand.

SA exports to India have also grown much faster than total exports, but, as in the case of imports, this growth has not been steady. India's share of total SA exports reached its highest level in 1999 (1.5%), a level which was maintained until 2002 but then fell off as exports to India declined by 22.5%, due to the strong rand pricing SA products out of the Indian market.

Growth in exports to India has been higher than 20% per annum every year except in 2001, when growth was only 5.7%, and in 2003, as mentioned above. Total exports also fell in 2003 but by only 8.1%. SA's exports to India can thus be characterised as being more volatile than its total exports.

Trade between SA and India has mostly been on an even footing, with neither country able to sustain large long-term trade surpluses. The most recent years in our sample – 2003 and 2004 – saw India obtain a small trade surplus, although SA has had the upper hand for most of the previous 10 years. This trade surplus was small in 1995 and became negative between 1996 and 1998, but from 1999 to 2002, SA achieved trade surpluses of more than R800m.

Figure 1: Changes in the composition of SA's trade with India, 1995-2004



[Source: Customs and Excise and own calculations]

Structure of SA's trade with India

Figure 1 shows a very broad disaggregation, breaking up trade into only four categories. The beginning and end points of our sample allow us to see how trade between the two countries has evolved in a rudimentary way. India and SA form interesting case studies, as both countries were emerging from relatively autarkic periods during the mid- and early-1990s. Therefore, any observable shifts in trade patterns are probably due to these countries moving towards the goods in which they have a comparative advantage.

Imports from India remained relatively constant over the period under discussion, with the majority of imports consisting of basic processed goods. Advanced manufacturing imports increased slightly and mining imports more substantially, at the expense of basic processing and agriculture.

SA exports to India have also remained fairly stable. Advanced manufacturing goods more

Table 3: High export potential codes and descriptions

Potential exports code	Growth in SA exports to India	Growth in SA total exports	Growth in India total imports	Comment
5	0 or -	+	+	High potential in India but not realised by SA exports in that market, although significant SA exports occur elsewhere.
4	+	+	+	High potential in India, realised by SA exports in that market, with significant SA exports elsewhere.
3	+	0 o r -	+	High potential in India, realised by SA exports in that market, but with export supply constraints elsewhere.
2	0 or -	0 or -	+	High potential in India, not realised by SA exports in that market and with export supply constraints elsewhere.
1	+	+	0 or -	Low potential in India, realised by SA exports in that market, with significant SA exports elsewhere.
0	0 or -	+	0 or -	Low potential in India but not realised by SA exports in that market, although significant SA exports occur elsewhere.
-1	0 or -	0 or -	0 or -	Low potential in India but not realised by SA exports in that market, with export constraints elsewhere.

Table 4: 21-chapter SA goods with high export potential in India (2002, US$'000)

	Chapter Code	Description	ITP	SA exports to India	SA exports to the World	India imports from the World	Tariff (%)	No. of HS6 commodity groups
1	14	Precious Metals	468,154	298	468,451	1,103,852	35.0	2
2	16	Machinery	313,179	3,552	1,397,338	3,091,095	21.7	16
3	06	Chemicals	165,034	43	195,293	375,507	29.3	8
4	07	Plastics	55,179	639	55,818	150,931	34.7	3
5	17	Vehicles	52,928	46	1,774,791	52,973	27.7	2
6	15	Base Metals	40,081	120	252,715	68,477	32.6	3
7	04	Prepared Foods	34,324	11	34,335	61,630	52.4	2
8	11	Textiles	30,686	773	31,766	101,190	22.3	3
9	18	Scientific Equipment	24,731	95	24,826	206,676	24.3	2
10	10	Wood Pulp & Paper	18,717	-	18,717	112,859	20.0	2
11	02	Vegetables	11,505	47	18,353	76,074	36.7	2
12	05	Mineral Products	201	-	201	70,401	16.9	1
13	01	Live Animals	-	-	-	-	40.5	0
14	03	Animal or Vegetable Fats	-	-	-	-	86.8	0
15	08	Leather	-	-	-	-	20.4	0
16	09	Wood Products	-	-	-	-	7.2	0
17	12	Footwear	-	-	-	-	35.0	0
18	13	Stone & Glass	-	-	-	-	33.3	0
19	19	Arms & Ammunition	-	-	-	-	35.0	0
20	20	Misc. Manufactures	-	-	-	-	34.1	0
21	21	Art & Antiques	-	-	-	-	35.0	0

[Source: UNComTrade (trade), ITC MacMap (tariffs) and own calculations]

than doubled its share at the expense of basic processed goods, albeit off a low base. However, basic processed goods still dominate exports to India.

Potential trade analysis

Our analysis involves targeting product groups in which SA may have export potential in the Indian import market. Such an analysis introduces the concept of *potential supply capacity*, which determines the lesser of Indian total imports and SA total exports of a particular commodity. In other words, we determine the most that SA could export to India, constrained either by total export supply or import demand. From this we subtract actual current SA exports to India to arrive at *indicative potential trade*.

Indicative potential trade therefore shows the size of the as yet untapped Indian import market. We then rank all HS6 commodity groups according to the measurement of indicative potential trade.

Next, we introduce growth and size dimensions into the framework. Weighted average annual growth rates are calculated for SA exports to India and to the world, and for Indian imports from the world for the period 1998 to 2003 for each HS6 commodity group.

If for any of the observations during this period trade is measured as zero, we assign a zero growth rate to this commodity group. Each commodity is then classified according to these growth rates.

As indicated, the analysis is performed at the HS6 level. Table 4 contains the results after aggregating the data up to the chapter level. Most of the potential for *Ch. 14: Precious Metals* is in diamonds. Note that an advanced manufacturing chapter, *Ch. 16: Machinery*, contains the majority of HS6 commodity groups with potential. Increasing exports of this chapter could lead to learning effects and hence greater efficiency, which in turn could benefit local production. Most of the product groups identified as having high potential face significant tariffs, which means the gains from an FTA with India could be quite large.

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