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by Ron Sandrey

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BRICS: South Africa's way ahead? Summary

by Ron Sandrey

In cooperation with the National Agricultural Marketing Council (NAMC) tralac has prepared this book to examine the South African involvement with the so-called 'BRICs' of Brazil, Russia, India and China. The emphasis is on agriculture, but in some chapters the scope has been widened to become more comprehensive. This summary will sequentially report on the chapters in this publication and endeavour to give a stand-alone presentation that leaves much of the detail in the respective chapters. We note at the start that the nomenclature surrounding the BRICs can get confusing with South Africa now a member, so we use the term 'BRICs' to refer to the original configuration and the term 'BRICsS' to refer to the new configuration that includes the extra 'S' for South Africa.

The book starts with three background chapters. The first of these examines the trade and economic profile of the BRICs and examines how South Africa measures up to the BRICs in this respect. It concludes that in many ways it does not measure up, but then perhaps neither Brazil nor Russia measure up to the standards set by China and to a lesser degree India in recent times. The second of these scene-setting chapters examines how the BRIC growth is impacting upon Africa, and in particular how the demand for raw materials from especially China and India is generating valuable new trade and investment opportunities for Africa. Can this be regarded as a new scramble for Africa in a post-colonial era? The third chapter follows on from this to look at South Africa's foreign investment profile (both liabilities for foreign investment in South Africa and assets for the converse of South Africa investments in foreign countries). Recent data confirms that Europe was the main destination for assets and the main source for Liabilities, and that is followed by the Americas for both. Both Africa and Asia are more important as an investment destination than an investment source, with China is becoming an important destination for South African foreign investments.

This section is followed by three papers focussing on trade and trade related issues. The first of these looks at Chinese manufacturing exports to Africa and how these exports are squeezing South Africa's manufacturing sector in three ways. These are firstly by direct competition in South Africa, secondly by vigorous competition in South Africa's 'home market' of Africa, and thirdly by restricting

South Africa's ability to compete in the US market outside of auto products. The second of these papers examines BRIC agricultural exports to Africa to assess how they are competing against South Africa's exports to Africa. South Africa has been losing market share to the original BRIC members in virtually all African markets except Zimbabwe, and in all products except fats and oils. Brazil is the biggest overall threat to South Africa, but China and India are competing strongly in different markets and products. Importantly, Brazil, China and India are all becoming increasingly competitive in most of the value-added processed food products. Finally, we look at the mirror image of South African agricultural exports to the BRICs. These exports are modest, and in recent years they have been around a slowly increasing 6% of the total agricultural exports. China is the main BRIC destination, followed by Russia, India and then a distant Brazil. These markets are not very important but they are growing much faster than the traditional markets and often where their export values are high market share analysis shows them to be more important to South Africa than just the raw data would indicate.

Next are two chapters that examine the agricultural profile and performance of firstly Brazil and the Russia, India and China. In Brazil we find that dramatic growth in agricultural production and exports in recent years has been fuelled by two major factors. The first is the policy environment of both the whole economy and the agriculture sector as Brazil underwent major changes in the late 1980s – early 1990s that enabled agriculture to flourish. The second was the major investment in Research and Development that turned the Brazilian Savannah from extensive cattle grazing to highly productive crop lands. A background on agriculture in Russia, India and China is given in the next Chapter. It starts with a comparative description of the agricultural sectors in these three countries before discussing their production and trade and concludes with perspectives on their agricultural policies. Agriculture is very important to both India and China, while Russia is still recovering from the turmoil of the 1990s. Both Russia and India would seem to offer few lessons for Africa, but certainly Chinese agriculture can. Their dramatic increase in production started from an enabling macroeconomic and policy environment and was fuelled by an impressive research and development programme that focussed on new plant varieties and the associated inputs to support their improved performance.

This is followed by two chapters relating to agricultural trade policy in South Africa. The first looks at agricultural imports by sources and growth rates to set the scene. It then goes on to examine the import tariff regime and analyse how the WTO and trade preferences severely restrict the ability of

South Africa to increase agricultural tariffs. The second examines the traditional trade remedies of anti-dumping measures, countervailing duties and safeguards and how these legal instruments are used by BRICS countries to protect their domestic industries against foreign imports.

The final three chapters do not follow a related theme between them. The first chapter looks at total factor productivity (TFP) in South African agriculture and examines the question of 'what would the impacts be of raising the relatively low TFP in South African agriculture to nearer that of China and India in particular'. The results from the agriculture-only computer simulations indicate that the whole economy stands to benefit as incomes will increase from increases to factor endowment, allocative efficiency, increase technical change, and other effects. Overall, while the increase in South Africa's agriculture TFP will have positive but minimal changes to the whole economy there are profound positive changes to the agricultural sector.

The second of this final suite of chapters looks forward from the BRICs 'into the MIST' for the next grouping of emerging global economies that are likely to become increasingly influential in the future. The 'MIST' is Mexico, Indonesia, South Korea and Turkey, and their trading and agricultural profiles are examined along with how they link with South Africa. Finally, recognising the close linkages between South Africa and the fellow SACU BLNS countries of Botswana, Lesotho, Namibia and Swaziland the last chapter examines their often meagre direct trading relationships with the BRICs and puts that in perspective alongside their general reliance on the EU and to a lesser extent the US their export markets.

South Africa's way ahead: are we a BRIC?

This scene setting paper details the background to South Africa's invitation to join the BRIC nations of Brazil, Russia, India and China. On the face of it this is indeed an honor, and it supports the case made by many that South Africa is one of the emerging countries of the future. But does South Africa match up with Brazil, Russia, India and China in economic and trade performance or is it trying to crash the party as an imposter? Is the recent GDP growth and trade performance worthy of being at the party? What has been the relative performance of South Africa in recent times and how does that performance rate vis a vis the BRICs? An emphasis has been placed upon GDP growth and trade, as it is these criteria generally associated with the BRICs.

We find the first point is that South Africa has a significantly smaller economy than the BRICs, with a GDP around one quarter of the Indian and Russian economies, and its population of around 50 million is around one quarter to one third of Brazil's and Russia's respectively but well behind the billion plus in both China and India. It does however sit comfortably in the upper-middle of the GDP per head statistics by both conventional and purchasing power parity measures. The real Achilles heel for South Africa is the very high unemployment rate. Merchandise trade as a percentage of GDP, an indication of openness in an economy, is actually the highest in the group.

Contrary to general perceptions, the BRICs have not had uniformly spectacular GDP growth in recent years. Since 1980 Chinese and Indian growth (along with Botswana's) is in the top four globally, but both Brazil and South Africa with almost identical growth paths since 1992 have been just above the bottom third of the roughly comparable global economies. Russia spent the early years of this century rebuilding the extreme hit it took in the 1990's. GDP growth is clearly neither a necessary nor sufficient condition for BRIC membership despite the popular myth.

By any imaginable measure China's export performance since 1980 has been remarkable and significantly better than the other countries studied. Over this same period India has about tripled its global export share while Brazil has regained the levels it had in the 1980s. South Africa has steadily and consistently lost global share, while Russia has done very well since 1999. The EU is the major export destination for all the five countries except for China where the US is marginally ahead. Similarly the EU is the major source of imports for the most recent trade data, although the fastest growing source of imports is invariably China. There are few discernable patterns in the merchandise profile of intra-BRIC/South African imports other than perhaps iron and steel products, fuel and ores. Surprisingly, levels of intra-BRIC/South African trade are very low for exports from each member to the other four, but are higher for imports as universally the percentage of imports from China is between 11.2 and 17.9 percent¹ raises the average for the other BRICs/South Africa.

We can make the generalizations from the study that South Africa does not 'measure up' in terms of economic size, but fits the middle patterns of GDP growth in recent years where the perceived concept of the BRICs dynamic GDP growth is biased by the spectacular growth of China and India. South Africa also does not 'measure up' in terms of trade levels and its performance has been below that of the other members. Overall, the BRIC 'club' is not one where South Africa belongs as of right

¹ 2010 data

given the measures we have assessed membership against. But then measuring up to the economic performance of both China and India in recent years is a big ask, albeit one that Brazil has come close to.

The BRICs and Africa: the bigger picture

In the next chapter we examine how since the beginning of the new millennium we are increasingly noticing the influence on the structure of the world economy of the BRICs. Their role in the global arena, from an economic and political perspective, has raised concern in the developed world about the manner in which their influence is shaping or shifting the balance of power. Concerns about the impact on the environment and governance issues have also been raised. However, in Africa, the role of some of these countries under the auspices of the so-called South–South alliances can be viewed as an opportunity to enhance cooperation with other developing countries, playing a significant role in the economic and social development of the region.

Poverty, poor infrastructure, lack of productive capacity and transfer of technology, the emerging threats associated with climate change as well as the food, energy, financial and economic crises, have been identified as areas where Africa can enhance its capacity by cooperating with other developing countries. Furthermore, the increased bargaining power of developing countries in multilateral negotiations, as reflected in the current Doha negotiations of the World Trade Organisation (WTO), has been cited as another reason for cooperation. It is against this background that since 2000, African countries have entered into new partnerships and arrangements with the South, increasingly driven by economics rather than politics. The new partnerships are often based on formal frameworks with dialogue forums and action plans.

The agenda behind the renewed and increased global economic interest in Africa, a continent that was once dubbed ‘hopeless’ should be considered. In historical representations Africa has been regarded as underdeveloped and poor, but of late Africa has been regarded as a continent brimming with potential and opportunities. The need of boom economies, like China and India, for raw materials, is generating valuable new opportunities. Can this be regarded as a new scramble for Africa in a post-colonial era? Concern should be raised if this increased interest goes unchecked, as

this could be no different from the way in which Africa was previously colonised for the sake of its resources.

This argument is certainly plausible if one looks at the majority of investments in Africa from the so-called emerging markets. These are concentrated in the traditional resource-rich primary sectors. The difference, however, is that this renewed economic interest in Africa is enabling African countries to add terms and conditions into the mix such as concessions attached to infrastructure development projects. Furthermore, this renewed interest in Africa has provided a front line for competition between the traditional investors – the United States of America (US) and the European Union (EU) on the one hand, and other emerging players, such as the BRICs and South Africa on the other.

Africa's cooperation with especially the emerging markets such as the BRICs and South Africa offers new options that can be turned into opportunities. These opportunities are not automatic and African countries need to create an environment conducive for tapping into the benefits that accrue. A proactive approach that allows for the development of cooperation strategies that are in line with national and regional development goals is needed.

The chapter provides a summary of the key factors in the involvement of the BRICS and Japan with Africa. Highlights of the analysis include:

The BRICS have made significant policy reforms over the past five decades in their trade policies, and moving from inward-looking protectionist policies to outward-looking market oriented policies has been one of the strong factors behind them becoming new major global economies. Japan, on the other hand, has also maintained its outward-looking policies with the objective of ensuring its competitive edge in high-value manufactured products.

Developing economies featured strongly in 2010 both as recipients of Foreign Direct Investment (FDI) and as outward investors; they absorbed more than half of global FDI inflows and account for 29% of global FDI outflows. Africa is now both a new frontier of economic and other opportunities and host to some of the fastest-growing economies in the world as the Real Gross Domestic Product of Africa increased by 5.2% annually in the past decade, compared with 2.3% in the 1990s (WEF, 2011). Investments in Africa are diversified, albeit still concentrated in infrastructure and commodities, but we currently see an increase in investment in services. Sectors receiving special

investment attention include telecoms (towers, broadband services), financial services (commercial banks, insurance, ancillary services such as ATMs), agribusiness, infrastructure, oil and gas (marginal fields, oil field services, gas development), mining, and electric power (energy infrastructure, energy services). Similarly, intraregional FDI in Africa is increasing as the share of African host countries in the outward stock of South African FDI has increased from less than 5% before 2000 to 22% in 2008, reaching almost \$11 billion.

Individually, the BRIC countries' trade growth with Africa has outpaced global trade and BRICS' trade with the rest of the world (UNCTAD, 2012). India and China's trade with Africa as a proportion of GDP in 2012 is 1.4% and 1.6% respectively, while Brazil's stands at 1.2% and Russia's at 0.3% (CIA Factbook, 2012; World Trade Atlas, 2013). South Africa has the highest trade with Africa with its proportion of GDP estimated at about 4% for 2011. China – the largest trading partner with Africa – has increased trade with Africa from US\$3.5 billion in 1990 to over US\$198 billion in 2012, which equates to roughly 61% of Africa's total BRICS trade (World Trade Atlas, 2013). Given Russia's significant natural resource reserves and South Africa's economic dominance in the region, the two are the only BRICS countries with an overall trade surplus with Africa. Main products from BRICS to Africa feature diversified value-added products while exports from Africa to BRICS are mainly resource-based primary products with little or no value addition.

Meanwhile, African countries continue to liberalise their investment environments. In the past few decades, Africa has made significant strides toward democratic governance, transparent economic systems, and the elimination of some of the crippling bureaucratic barriers to trade and investment. Recognising that an investor-friendly admission phase has a beneficial effect on the subsequent relationship between host and investor, a number of countries have reformed their admission procedures by introducing one-stop shops. Similarly a number of African countries have reformed their tax systems, often reducing corporate income taxes, while other governments have acted to remove some of the key constraints on attracting and benefiting from FDI.

So what does this mean for Africa?

The important question is “What can African firms do to compete with the emerging giants of Asia and / or the Americas?” Can the solutions be found through infrastructural development, export incentives promoting, technology development and or transfer, or is it simply through simple free market competition?

The success stories of Asian economies span five decades, with China following suit as the new emerging economy and potential market. This also begs the questions, “What can Africa learn from these stories?”

Given the trend towards liberalized trade within a rules-based system, African firms can no longer call on Government to impose protectionist measures. Only in a few instances will this be legally possible and economically appropriate. Indeed, narrow firm and sector interests must be weighed against wider interests that are usually not expressed as vocally.

Long-term careful and innovative strategic planning with clear objectives is therefore required to succeed in this new trading environment. This is also important for African firms competing with imports from countries such as China as well as competing against China in the rest of the world.

China, India and Brazil amongst others have indicated their willingness to enhance technology transfer and investment cooperation with African countries. Such collaboration is imperative in the development of strategic and important sectors for Africa such as Agriculture, Mining and Medical industries.

There nevertheless remain many challenges for African firms to face in exploiting these opportunities. These include extending beyond Africa’s current advantage in primary and resource based goods to include competitively manufactured products. In the long-run, African firms should thus seek out value-adding opportunities.

In light of this, these challenges and opportunities should be addressed with the recognition that Government cannot protect uncompetitive firms. There are, however, policy options for providing a more business-friendly working environment through wider infrastructure development available to Governments.

Foreign Direct Investment in South Africa: the BRIC perspective

The next chapter follows on by presenting a recent view of investment for **South Africa**, both in inflows (liabilities) and outflows (assets), with a concentration of the role of the BRIC countries in these flows. It starts by recognising that investment is the fuel of economic growth, and in a closed economy domestic savings are the only source of investment. However, in an open economy these domestic savings may be augmented by borrowing from abroad (the savings of others).

As a starting point there are three categories of investment recorded by the South African Reserve Bank. These are:

Foreign **direct** investment (FDI) as defined by the net inflow of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in a country's balance of payments.

FDI is distinct from **portfolio** investment, which is considered to be the purchase of stocks, bonds, and money market instruments by foreigners for the purpose of realizing a financial return, which does not result in foreign management, ownership, or legal control.

In general terms, any foreign investment that is not direct or portfolio investment is considered "**Other** investment" (loans, trade finance, currency & deposits and other assets with unaffiliated parties), and in contrast to FDI, both foreign portfolio and "other investments" have no controlling interest in their investment.

Our analysis found that South Africa has somewhat less of a call on funds held offshore (assets) than others have on their funds held in South Africa for each of the three years from 2008 to 2010 examined. Based on 2010 data Europe was the main destination for assets (59.8%) and the main source for Liabilities (63.3%), with this followed by the Americas for both. Both Africa and Asia are more important as an investment destination than an investment source. Changes over the period show that Asia had the biggest increase in assets by percentage but Europe remained the largest increase by value. For liabilities or inbound Europe was again displayed the largest increase but in percentage terms Europe, Americas and Asia were very similar. In 2010 most of the total South African **assets** (43%) were held in portfolio assets abroad, followed almost equally by direct and

other. By region most of the 2010 portfolio is held in Europe (77%) while in Africa, Asia, the Middle East and Oceania it is predominantly direct.

The comparable picture for **liabilities** (investments held in South Africa by others) shows that overall more held in portfolio than direct for each year. European and Asian money in South Africa is held more in direct (54% and 69% respectively), while the American money (85%) is concentrated in portfolio investments.

Examining the **BRIC** countries we find that China was the fourth most significant destination for South African assets held abroad, with most of these assets direct investments associated with banks. A very similar position is found for Chinese investments in South Africa (ranked at number 9 in 2010), where the majority are direct investments associated with banks. South African investments in Brazil are predominantly portfolio investments associated with banks, while in India they are more associated with 'other' and banks.

Chinese domination of the African industrial goods market

While a succession of Asian countries have exhibited dramatic growth over the last thirty to fifty years, Africa has largely stagnated. This Asian expansion has been driven by manufacturing exports to the United States (US) in particular, and has been enabled through an overall constructive policy package that opened markets, implemented favourable trade and exchange rate policies, and provided a sound and stable government that inspired investment and secured property rights. Conversely, Africa has been unable to put the full package in place, and this has resulted in a manufacturing sector whose contribution to both GDP and export shares is significantly below the continent's developing-country peers. Growth in natural resource-rich developing countries in general has lagged behind those with a manufacturing focus, and this is especially the case in Africa with its poor linkages to unskilled labour and its appetite for rent-seeking activities. Africa's industrial base is not as robust as theory suggests it should be. Except for South Africa, manufacturing exports are notably absent, with only textiles and clothing featuring in those countries where manufacturing also features. Importantly, Africa has failed to capitalise on its significant tariff preferences into the US.

South Africa, with its undoubted industrial capacity, should have some advantage in its own 'backyard' of the African continent. The objective of this chapter is to assess the recent export performance of South African industrial goods to the African market against the rise of China in particular in that same market. This is done by analysing the World Trade Atlas data for both South Africa and China over the period, both at the aggregate level to assess the big picture, and, at the more detailed levels, to examine the niche markets where South Africa may be outperforming China, or, in a more pessimistic scenario, examine where South Africa at least is doing comparatively better. All data is sourced from the Global Trade Atlas for exports from the respective BRIC countries and South Africa, with the data standardised by netting out BRIC exports to SACU to give a consistent base of non-SACU Africa.

While there is a possibility that a third party may be doing even better than China we consider that given China's global dominance assessing South Africa against the Chinese benchmark provides an adequate analysis of South Africa's industrial performance in Africa. We do however introduce manufacturing exports to Africa from the other BRIC of Brazil, Russia and India. Indian growth of manufactured exports to the world in recent years is greater than that of China's, and marginally below China's growth to Africa. Exports to the world are very similar for both Brazil and Russia, with both around fifty percent above South Africa's, while their growth to the world is similar for all three countries. China clearly dominates exports to Africa, followed by India and then South Africa, with modest exports from Brazil and especially Russia. As expected, South Africa has the largest share of its manufacturing exports destined for Africa, with Russia the lowest.

In recent years at the detailed level the main exports from South Africa have been vehicles for the transportation of goods (trucks and vans), where South Africa dominates the market. Next is the export of passenger vehicles, and here both China and India are making inroads. In some other lines South Africa is the dominant trader, but in every instance China is gaining export share.

To get a global picture of manufacturing exports² we examined the Global Trade Analysis Project (GTAP) database. During the period 2000 / 2001 Chinese exports were 6.8% of the total global exports to the world, 5.3% of the global exports going to Africa (including South Africa) and the same 5.3% of the global exports destined for South Africa. By the 2008 / 2009 period China held a 13.4% of the global manufacturing exports, a 15.4% of the exports to Africa and 16.3% of the exports to

² Albeit with a slightly different definition of 'Manufacturing'.

South Africa. Global exports as a percentage share had almost doubled, while those to Africa in total had almost tripled! Similarly, over the same period South Africa's relative share of global exports has increased from 0.36 percent to 0.39 percent, but the share to Africa has declined from 5.17% to 3.63%. Meanwhile, India's share to the world, Africa and South Africa all roughly doubled over the same period.

The key policy issue here is that Chinese dominance of the African market makes it difficult for Africa to develop an industrial base. Firstly, China is making serious inroads into South Africa itself. Secondly, it is making it extremely difficult to exploit the 'home' markets in Africa, and finally it is also making it difficult to develop exports outside of South Africa's high-tech auto sector to the US, the traditional developing country manufacturing export market.

The BRICs and agricultural exports to Africa: are they a threat to South African interests?

Since South Africa has become a member of the BRICS there has been considerable interest in South Africa's performance relative to the earlier members. The original BRIC countries have become increasingly powerful global exporters of agricultural products, Brazil (3rd in the world when the EU is regarded as a single entity) is the largest agricultural exporter among the group, followed by China (5th), India (12th), Russia (21st) and South Africa (28th) in 2009. Crucially, this growth is especially apparent in BRIC exports to Africa. South Africa's agricultural exports into the rest of Africa have been growing rapidly, and South Africa regards the African market as strategically important. The object for this chapter is to examine the performance of these BRIC exports to Africa, and in particular how they may be threatening South Africa's agricultural interests in the continent. . This is done by assessing export data from the BRIC and South Africa to the continent from 1997 to 2011 inclusively, using data from the Global Trade Atlas and the Global Trade Analysis Project (GTAP) database.

Overall our analysis shows that South Africa has been losing market share vis á vis the original BRIC members in virtually all African markets except Zimbabwe in recent years, and in all products except fats and oils. While Brazil is the biggest overall threat to South Africa, China and India are competing strongly in different markets and products. Russian grain exports are not really in competition with

South Africa. Crucially, when the BRIC competition in the important processed food products is examined Brazil, China and India are all becoming increasingly competitive in most of these value-added products. Overall there are few bright spots in South Africa's recent agricultural export performance on the continent.

The main conclusions that are drawn from the detailed analysis are:

1. BRICS agricultural exports to the rest of the world are increasing rapidly. In 2008/09 the BRICS exported 11.5% of global agricultural exports, 14.6% of global exports to Africa and 18.1% of global exports to South Africa, up from 9.5%, 8.2% and 9.0% in 2000/01 respectively.
2. In 2011, South Africa (27.2%), and Russia (24.1%) had the highest proportionate shares of their total agricultural exports going to Africa, followed by Brazil (10.3%), India (9.2%) and China (4.4%). Nevertheless, Brazil was responsible for 48% of BRICS agricultural exports into Africa, and South Africa for only 11.3% in 2011.
3. The agricultural exports of the BRICS countries are also concentrated by destination: 22% went to Egypt in 2011, with 54% going to the largest five destinations (Egypt, Algeria, Nigeria, South Africa and Angola).
4. South Africa dominates agricultural exports into Zimbabwe, followed by Mozambique, Angola and Kenya, but has no presence in North Africa. Russia has a strong presence in Egypt, Tunisia and Kenya, while India dominates in Sudan and has a strong share in both Ghana and Kenya. Brazil dominates across the continent, except in Zimbabwe, Mozambique, Kenya and Sudan. South Africa is losing market share in all markets excepting Zimbabwe, although the losses have generally been very small over the past decade.
5. Sugar, cereals and meat made up almost two thirds of the BRICS countries' agricultural exports into Africa in 2011. These three commodities were 86% of Brazil's exports into the continent, 89% of Russia's and 67% of India's, but only 6% of China's and 16% of South Africa's. Brazil, India and China gained market share over the BRICS total for the period 2000-2011 for the top 15 export commodities, while Russia and South Africa lost. Russia dominates wheat exports and Brazil the exports of meat.
6. South Africa's export portfolio into Africa is very diverse, with sugar, maize and food preparations all taking a turn as the largest over the past decade. The fastest growing exports into Africa are wine and apples

7. Some 16.5% of South Africa's agricultural imports originate from the BRIC countries, up from 7.5% a decade ago. These imports have increase more rapidly than imports from the EU and from Argentina, South Africa's biggest source of imports. Rice has traditionally been the largest import, but was overtaken by wheat in 2011. When the oilseeds and oilcake are combined, these make up the largest import category.
8. South Africa's agricultural exports have tripled since the average for the period 1996-2000, but have increased fourfold to China and Russia (agricultural exports to Brazil and India are negligible). Nevertheless, these exports still constitute only 5.3% of South Africa's agricultural exports to the biggest 20 destinations, smaller than exports to Zimbabwe, which have grown almost eight-fold since the average for 1996-2000.
9. South Africa's exports of processed agricultural products into Africa can be divided into three categories: a) where South Africa faces no competition from the BRIC countries (products such as citrus fruit, soups etc., beer, wine and fermented beverages, making up some 21% of these exports); b) where there is emerging competition that is potentially threatening (e.g. grapes and apples from China, prepared cereals from China and India, waters from Brazil and China, making up 19% of the exports); and c) where there already is serious competition that has grown dramatically in recent years (including malt extracts, bread and similar products, processed vegetables from China, fruit juices from both China and a lesser extent Brazil, sauces from China, food preparations not elsewhere specified (nes), ethyl alcohol from Brazil and India, animal feeds from the three BRICs, and cigarettes and tobacco.

Updated data shows that the global agricultural exports from Brazil declined by 33% during 2012, with sugar and soybeans showing massive declines while maize exports doubled. Brazilian agricultural exports to Africa declined by a slightly greater 37%, and those to SACU by a lesser 23%.

South African agricultural export prospects to the BRICs

The objective of this chapter is to examine the current South African agricultural export trade profile to the BRIC countries and to explore potential future prospects for the expansion of this trade. We again use the Global Trade Atlas data for all direct trade flows between South Africa and the BRICs, or, more correctly, perhaps between the BRICS as South Africa is now a member of the BRIC configuration. The data is expressed in US dollar (million) values, and the World Trade Organisation (WTO) definition of agriculture is used for compiling the data. We will start by showing the extant exports from South Africa to the BRICs and follow this up with an analysis of the relative importance of South African trade to the BRICs and complete the paper with a presentation of the tariff barriers and non-tariff measures that may be inhibiting this trade.

In summary, South Africa's agricultural exports to the BRIC countries are modest, and in recent years they have been around a slowly increasing 6% of the total agricultural exports. China is the main BRIC destination, followed by Russia, India and then a distant Brazil. BRIC total as a percentage of South African exports has ranged from a low of 1.29% in 2000 to a 2010 high of 6.15%. South Africa's global agricultural exports increase by 2011 was 3.22 times the 2000 values, while the BRIC countries of China, Russia and India were well above that increase and only Brazil significantly below the average. Therefore these markets are not very important but they are growing much faster than the traditional markets. Importantly, when the trade data is examined by the percentage of the particular HS 6 line that has gone to the BRICs over the entire period, we find that where the export values are high they are more important to South Africa than just the raw data would indicate.

China and Russia were each the destination of around \$200 million during 2011, with India taking some \$43 million and Brazil an insignificant \$12 million. Wool, oranges and sugar have been the main exports, with other fruit to Russia and wine in general also important. From a BRIC perspective, South Africa is a minor source of agricultural imports, and in no instance has South Africa supplied even as much as 1% of the total: in most cases well below this.

Tariffs do not seem to be a major problem, although there are some instances such as New Zealand's duty-free access for wool into China rather than the reported 38% general duty, they are a barrier. In recent years wool has consistently been over half of exports to China, with wine, fish meal and sheepskins becoming increasingly important. Next in order of importance is Russia, these exports are almost exclusively fruit products (if you classify grape wine as a fruit product). Oranges have been

the star performers, followed by increasing exports of lemons, grapefruit, pears, grapes and mandarins. Sugar, in the lower row, has been included because it has been important in some years. Wool almost completely dominates the exports to India, although there is some activity in the fruit trade and sugar was important in the early years. South African agricultural exports to Brazil are, at best, modest. There are two lines of alcohol dominating the trade, and in the early years ethyl alcohol was important.

There are high tariffs in several of the trade lines exported to China, and in particular the 38% on wool, a common tariff for each importer except New Zealand as New Zealand has a Free Trade Agreement (FTA) with China. This FTA also gives New Zealand a preference on hides and skins. Chile has a preference in grapes and tinned peaches (where South Africa has an overwhelming market share) and Thailand in macadamia nuts. South Africa appears to have a preference in oranges, an import where it has a significant market share.

With exports to Russia there are differences in the reported tariffs, although these are minor except for 1) South Africa's high tariffs on oranges, 2) the variation in pears with South Africa being the highest, and 3) Uzbekistan's preference in grapes and Serbia's free entry of apples. The latter is of special interest as South Africa faces high tariffs despite a market share of 88%. India has low (5%) tariffs on fruit for all but high (30%) and similarly even tariffs for all on most lines of wool. South Africa is competing well in pears on a 'level playing' field with the same tariff for all importers.

NTMs can be defined as all measures other than normal tariffs and mainly include trade-related procedures, regulations, standards, licensing systems, and even trade defence measures such as anti-dumping duties, which have the effect of restricting trade between nations. Non-tariff measures are a problem in these BRIC markets, but South Africa is not alone in facing these measures. For individual countries, the WTO Trade Review Mechanism Reports (TPRM) are valuable sources of information, especially on agricultural barriers. A comprehensive collection of publicly available information on non-tariff measures is available at the Trade Analysis and Information System (TRAINS) developed by the United Nations Conference on Trade and Development (UNCTAD), where information on trade, tariffs and NTMs by Harmonised System (HS) tariff line can be found. The chapter provides a detailed summary of NTMs facing South Africa in the BRICs, and notes that unfortunately, these barriers seem to be increasing.

The rise and rise of Brazilian agriculture: what does it mean for South Africa?

A feature of global agricultural trade in recent years has been the export performance from Brazil, and this chapter conducts an analysis Brazilian production, the policies that have driven Brazil's performance, how this performance may impact upon South Africa in the future and what lessons South Africa may learn from Brazil. We clearly find that the performance of Brazil as an exporter meets that ultimate test of international competitiveness (and especially so when this takes place in a non-subsidised environment, as the chapter shows). Examining this growth of the Brazilian exports relative to South Africa from 1997 to 2011 inclusive we find that from 1997 through to 2003 the ratios tracked relatively closely but then from 2004 Brazil significantly outstripped South Africa's performance.

Looking at Brazilian exports as ranked on 2011 trade data we find that: 1) the EU has consistently been the number one destination; 2) the rapidly growing market of China was then number two; and 3) the share of the top-10 markets declined from 74 percent in 1997 through to an around 65% in the two most recent years as Brazil achieved a broader export diversification. By commodity, the top-5 exports represented 64.1% of all exports in 2011. Soybeans, sugar, coffee and poultry dominate the commodities, with large increases from others such as beef, corn and cotton. China was the number one destination for soybeans, while sugar exports were more diversified but with Russia and China the main markets. For coffee the main destination was the US, while for nine of the top eleven commodities the main destination was the EU. Importantly for South Africa, for refined cane sugar exports six of the top ten destinations were African countries.

Beef, sugar and soybeans have consistently been the top three products by production value, while chickens have moved to number four as a result of the growth in recent years. They are followed by pigmeat and cow's milk. Brazil is the number one world producer of sugar cane, oranges and coffee; number two in beef and soybeans; number three in chicken meat and maize; number four in cow's milk; number five in pigmeat; and number nine in rice. Importantly, as discussed more fully in the chapter, while sugar is a significant percentage of the output in Brazil it is also used for ethanol fuel production.

An update shows that the global agricultural exports declined by 33% during 2012, with sugar and soybeans showing massive declines while maize exports doubled. Agricultural exports to Africa declined by a slightly greater 37%, and those to SACU by a lesser 23%. Agricultural exports to China

declined by a massive 78%, with the 2011 top-two commodity exports of both soybeans and sugar virtually ceasing.

To put the growth of Brazilian agriculture over the period from 1985 to 2010 in perspective we compared the indexed growth for Brazil with selected other countries. Brazil had a commendable performance but was marginally below that of India and particularly the spectacular performance of China. South Africa's performance has been just above the world average since 2004 – 2006 but below the average before then. The difference between India and China on one hand and Brazil on the other is that the former boosted domestic consumption while Brazil was able to focus on exports.

Examining policy we find two distinctive periods of Brazilian agricultural policies in recent years. The first period through to the early 1990s was characterised by policy interventions to promote industrialisation through an import substitution regime that resulted in both direct and indirect taxation of the agricultural sector. This led to a chronically overvalued exchange rate that was accentuated by direct export taxes. Agriculture remained effectively closed to trade thanks to the set of trade policy instruments that skewed prices on import-competing crops by direct intervention and unintended consequences. The legendary inflation of the time created problems for the rural sector that have not yet been fully dissipated. The second (and overlapping) period, from around the very late 1980s, has seen macroeconomic stability and most importantly a stable exchange rate coupled with trade liberalisation and generally much less intervention in agricultural markets. Post-2000 when a devaluing local currency and higher international prices allowed the larger commercial farmers with their technological enhancements to significantly increase production and consequently agricultural exports. Brazil increasingly became a major international player with much of this result credited to enhanced productivity flowing from fresh investment in agricultural research and currency stability in a more neutral policy environment.

The end result was that Brazil went from a regime that was detrimental to the agricultural sector to one that is neutral to slightly supportive overall. The Producer Support Estimate (PSE) that was used in the OECD to measure supports to agriculture is low, and Brazil is in the group of countries of New Zealand, Australia, Chile and South Africa that provide minimal support to agriculture. Conversely, the highly protected EU agricultural market has a much higher PSE. The salient point is that Brazilian agricultural expansion has not been driven by direct supports.

In examining what has driven Brazilian agriculture we find that it is accepted that public research and infrastructural policies have made a major contribution by enhancing on-farm technical efficiency, and, that furthermore, Brazil has ample capacity for further productivity improvements. The development of the Brazilian savannah (Cerrado) into agricultural land required a portfolio of technologies that have made the region one of the top grain and beef-producing regions in the world. These technologies concentrated upon biological nitrogen fixation for soybeans on poor acid soils of the Cerrado; new plant varieties and hybrids and the use of no-tillage systems; and the integrated crop-livestock systems and the adoption of double-cropping where possible.

A crucial question is the extent to which the expansion of Brazilian soybean and sugar production is contributing to Amazon Basin land clearing. The answer seems to be an unequivocal “yes and no”. No because the crop area seems to be taking over previous pastoral land that was being used for cattle production. Yes because this in turn is pushing the cattle ranching further north and at times into newly cleared land in or contiguous to the Amazon forests. Meanwhile, there remain problems in agriculture such as extreme disparities between the export-oriented large scale commercial sector to the very poor and numerically strong subsistence sector.

Of special interest to South Africa is the dramatic growth in the Brazilian sugar sector, and here future growth depends on both sugar exports and domestic sales of ethanol as the sugar / ethanol ratios of cane use have been somewhat equal in recent years. Early government intervention was a trade mark of the ethanol industry for many years, but this was phased out after 1990. Brazil remains the lowest cost sugar producer in the world, but this cost competitiveness has been affected by the valuation of the Brazilian *real* during the 2000s and Brazil no longer has much of an advantage.

Also, Brazil's ability to raise more than 40 million people into middle-class income categories and the lowering of abject poverty levels from 23% to 8% in less than two decades should serve as a source of inspiration for South Africa. And looking to the next forty years, the *Economist* 2012 succinctly considered that:

“if you were asked to describe the sort of food producer that will matter most in the next 40 years, you would probably say something like this: one that has boosted output a lot and looks capable of continuing to do so; one with land and water in reserve; one able to sustain a large cattle herd (it does not necessarily have to be efficient, but capable of improvement); one that is productive without

massive state subsidies; and maybe one with lots of savannah, since the biggest single agricultural failure in the world during past decades has been tropical Africa, and anything that might help Africans grow more food would be especially valuable. In other words, you would describe Brazil”.

Agriculture in Russia India and China

The aim of this chapter is to provide some background on the agricultural sectors in Russia, India and China. It starts with a comparative description of the agricultural sectors in these three countries from a global perspective before giving more details on agricultural production and trade in Russia, India and China, and concluding with perspectives on their agricultural policy.

We find that the BRICS are providing a slowly increasing share of world production; (42.4% in 2010), with China the dominant producer in the group. Similarly, some BRICS sit at the top table for world trade, with Brazil and China the second and third leading agricultural exporters respectively and India just making the top ten. China and Russia are both top-five importing countries. Overall, agriculture is very important to both India and China as measured by their direct contribution to GDP, but this has been steadily declining in the three economies examined. Meanwhile, despite recent spectacular Gross Domestic Product (GDP) growth rates, there is a range in the Gross National Income (GNI) per capita in the BRICS: from India's \$3,620 as the lowest to Russia's \$19,940 as the highest, with South Africa, China and Brazil having very similar figures about half-way between India and Russia.

Examining the individual agricultural sectors we find that since the breakup of the old Soviet Empire in 1991 Russian agriculture has been in turmoil, with agricultural production still lower than in 1990 even though Russia currently ranks amongst the top twelve producers globally in all of its major commodities. Livestock production declined more than the overall sector but cattle products (cow's milk and beef) still dominate overall production, followed by wheat and then chicken and pig meat. Meanwhile, grain and related crops dominate Russian exports, with wheat increasing to be some 40% of the total while exports of commodities such as sunflowers and sunflower oil, rapeseed oil and maize have increased from virtually zero to emphasise the emergence of a new agricultural system in Russia. The European Union (EU) is becoming less important as a destination as Africa (and Egypt in particular) is taking its place, and the linkages to the old Soviet Empire remain important. Import sources are globally widespread, with the EU remaining in the top spot. Brazil has become an

active trading partner, while Africa as an entity would be just ahead of China in fourth place. Russia remains a net importer of agricultural goods, with exports (\$9bn) barely a quarter of imports by value with Russia importing relatively higher value products (dairy and fresh fruit) as opposed to the grain exports.

Aggregate agricultural production in India has increased steadily in recent years, with most of the main products being familiar. The product rankings are consistent, reflecting a country with centuries of established agricultural expertise. The EU is India's major export market (but closely matched by challenges from China, the United States (US) and Vietnam) and is losing market share as India's total agricultural exports have increased some fivefold in little more than a decade. Africa as a whole would be in fourth place. Rice is both the largest commodity produced and exported in most years, but other exports such as cotton, beef, cane sugar and maize are increasing. Palm oil from Indonesia and soybeans from Argentina are the main imports.

China, home to some 1.33 billion persons, is a mountainous country with high plateaus and deserts in the west constraining arable land for permanent crops, a constraint that is accentuated by scarce water resources. Nevertheless, China has made dramatic strides in agricultural production in the last few decades and now produces nearly one-quarter of the world's agricultural output by value with most of the main commodities produced having global ranking of number one or two. China's biggest export destination is Japan, and if Africa was a country it would be ranked at fifth. Africa in aggregate would be in eleventh position as an import source while India has been the big import mover, followed by a similar growth from Indonesia, Argentina and, at number two, Brazil.³ The composition of imports is changing as China's income growth has spurred changes in demand for more luxury-type foods. This is exemplified in the imports of protein for animal feeds, as soybean products and palm oil now constitute nearly 43% of China's agricultural imports.

Related to agricultural policies is the issue of farm structures. Here, Brazil, Russia and South Africa all exhibit dualistic farm structures while in both China and India (very) small holdings dominate. Also interrelated with policies is the issue of technology in the agricultural sector. Here, the performance of India's agricultural sector has been erratic over the past decades: output recorded a quantum leap in growth during the Green Revolution of the 1960s to the 1980s in response to the widespread

³ We note from recent 2012 Brazilian data that there has been a steep decline of almost 80% in Brazil's agricultural exports to China – chiefly as a result of a dramatic decline in exports of soybeans and related products. This is confirmed from Chinese import data for 2012.

adoption of new seed and fertiliser-based technologies, but in recent years agricultural growth has slowed while the agricultural population has continued to increase. In China, once the overall enabling policy framework was in place, the agricultural expansion was driven by technology. This has been mainly new plant varieties, augmented by the associated increases in inputs. Production rose sharply, poverty fell dramatically, and the level and quality of food consumption improved significantly.

Examining the general picture for support to agriculture, we find that both South Africa and Brazil join New Zealand, Australia and Chile as the least subsidised global agricultural producers. Support to Indian agriculture is hard to ascertain but seems to be around that of the Organisation for Economic and Cooperation Development (OECD) average, which would put it on a par with China but possibly just below Russia. In China transfers to specific commodities vary widely, while in India the tension between the desire to raise food prices for farmers but lower them for consumers leads to heavy intervention. In Russia support has increased through a tightening of border protection and an increase in budgetary transfers to the sector.

What can Africa learn from these three BRICs? Both Russia and India would seem to offer few lessons for Africa, but certainly the dramatic increase in Chinese agriculture can offer more. This increase started from an enabling macroeconomic and policy environment and was fuelled by an impressive research and development programme that focused on new plant varieties and the associated inputs to support their improved performance. Also, but not discussed in this chapter, China instigated an impressive extension service to deliver these technologies to every farmer. The threat from BRIC agricultural exports to Africa is discussed elsewhere in this book, while the increases in imports of higher-value products and wine into Russia, India and China as the wealth of their consumers increase offers export opportunities for South Africa.

South African agricultural imports and policy space

This chapter starts with an examination of South African agricultural imports, and then assesses the degree to which South Africa has policy space to provide tariff protection against these agricultural imports.

The EU remains the main source of agricultural imports, followed by the South American region bloc of Brazil, Argentina, Uruguay and Paraguay (Mercosur), the ten nation Asean regional bloc, the four BRIC countries of Brazil, Russia, India and China (although Brazil is listed twice here, as it is in both Mercosur and BRIC), and then the African sequence of firstly whole of Africa, then the so-called East-African tripartite FTA group with its associated sub-regional SADC grouping. Argentina tops the rankings for the individual countries, followed by Brazil and then Thailand and the United States, while SADC accounts for most of the South African agricultural imports from the entire African continent⁴.

Since 2000 the EU has gained share modestly, while both Mercosur and Asean have strongly increased. China is also growing strongly, and these general shifts in sources have been in part at the expense of the United States. At the HS 6 line level wheat was the main import in 2011, although in earlier years rice had been the main import and in 2010 both palm oil and soybean cake were above wheat. These four commodities dominate the list. Palm oil, soybean oil and chicken cuts have been fastest growing imports in recent years.

The top import from the EU was whisky, with soybean oil increasing dramatically to challenge for that top spot while chicken cuts similarly increase from a zero base. Imports from Mercosur show that soybean oilcake for animal feed is the number one line, followed by wheat and then chickens and chicken cuts. Imports of the latter have increased dramatically, while both sugar and soybean oil have grown off a zero base in the last ten years. ASEAN imports are dominated by palm oil (again for animal feed) and rice. Africa was the source of cotton, tobacco and tea, almost exclusively from SADC.

Wheat is generally regarded as a generic international commodity and this trade has been sourced from four main suppliers of Argentina, US, Australia and the EU in recent years. Imports of rice have also been sourced from a variety of countries in recent years. The EU has virtually ceased to be a

⁴ Note that intra-SACU trade from Botswana, Lesotho, Namibia and Swaziland is not included in this analysis.

source, while Thailand has become the main supplier with India consistently in second place. Palm oil is almost exclusively from Malaysia and Indonesia, while until 2010 Argentina and Brazil had been virtually the exclusive suppliers of soybeans and soybean oilcake but since then the EU has become a major supplier of soybean oil. Similarly, the EU and United States have a domination of the whisky market. Finally, chicken cuts are from dramatically changing import sources, as the United States has dropped away as imports from both the EU and Brazil have increased sharply.

In general South African agricultural imports are often very concentrated by both product and sources, and this has major implications for trade policy options and in particular the tariff policy space available.

Sandrey et al (2008) discussed how under trade liberalisation of the 1990s South African border tariffs were reduced and export subsidies were eliminated through unilateral reductions that went beyond the mandatory requirements negotiated under the Agreement on Agriculture. This was however somewhat balanced by the introduction of the WTO tariff rate quota (TRQ) regimes for several. They went on to analyse individual agricultural imports to assess whether the policy space exists for an option of increasing agricultural tariffs to afford some protection to domestic producers. The critical parts of this analysis were commitments given to multilateral trading partners through the World Trade Organisation (WTO) and regional partners through the Trade and Development Cooperation Agreement (TDCA) with the EU and preferences granted to SADC, along with the space that South Africa had reserved through its WTO Bound rates. In general, policy space available to South African agriculture was limited. The objective for the second part of this chapter is to move on six years and re-examine the policy space issue based upon 2011 agricultural imports.

Two aspects of the WTO are important. One is bound versus applied tariff rates, while the other is the TRQs. Bound tariffs are those where South Africa has made a commitment to WTO members that it will not exceed these rates, while the applied tariff is the one that is actually 'applied' or levied at the border. Associated with applied rates is the MFN or most favoured nation rates that 'applies' to all imports not under some special concession preferential rates. The applied rate is usually but not always below (and in some instances substantially below) the bound rates, thus giving 'policy space' where the applied could be raised to the bound rates. TRQs are special access commitments where a country agrees to imports of a commodity line that has reduced TRQ rates that are below the MFN rate, and in South Africa's case the TRQ rate is a maximum of twenty

percent of the bound rate for the agreed quantity of imports, after which the MFN rate will apply. Complicating TRQs in South Africa's case is the situation where, although technically under TRQ administration, many of the TRQ lines are operating in an environment where the restrictions operate in name only and the applied rate is actually the TRQ rate or below and not the higher bound rate. They still however present challenges for policy changes.

To put tariffs in perspective, based on the Tariff Schedule the 2011 agricultural imports would have attracted \$309.5 million in duties, with all but \$6,45 million of this from non-EU or SADC imports. This gives an overall tariff rate of 4.89%. Thus, increasing government revenues cannot realistically be considered a motive for such a move, leaving purely protectionist motives and a reversion from South Africa's liberalisation moves of the immediate post-Apartheid period.

Examining policy space to increase border taxes we found **firstly** that some \$1,667 million or 26.5% of the total was effectively immune from increased tariffs as at least 40% and in many instances 100% of imports in the particular lines were sourced from EU with TDCA rates or from SADC with its associated zero duty access, and **secondly** that \$2,203 million or 34.8% of the total was associated with Tariff Rate Quota (TRQ) lines where increasing applied tariffs may be complicated.

Another \$863 million (13.6% of imports) were in lines where the applied rates are equal to the bound rates at zero, while a further \$72 million (1.14%) were where the applied rates were above zero but still equal to the bound rates.

This left only \$1,867 million or 29.5 percent of the imports where there was clear policy space to increase tariffs. However, some \$845 million (13.5 % of total imports) were in four lines of animal feeds that are direct inputs into South African domestic animal or poultry raising sectors and as such increasing tariffs would raise domestic costs, and another \$121 million are actually processed fishery products. Deleting these animal feeds and fishery imports reduces strictly agricultural policy space to \$901 or 14.3% of the total agricultural imports. The clear-cut policy space is limited. Notably some \$245 million of these imports are in HS 020714, frozen chickens and chicken cuts from Brazil and the EU, products that are causing consternation in trade policy circles.

Trade remedies

Trade remedies are legal instruments countries use to protect their domestic industries against foreign imports. Traditionally trade remedies consist of anti-dumping measures, countervailing duties and safeguards. Over the last decades there has been a significant change in the countries that implement and are affected by anti-dumping measures, countervailing duties and safeguards. Since the launch of the Uruguay Round of Multilateral Trade Negotiations there has also been a significant change in the number and variety of countries using trade remedies and safeguards. Prior to the Uruguay Round the primary users of these instruments were developed countries, however, the composition has changed dramatically over the last decades. Since 1995 developing countries have become the main users of both anti-dumping measures and safeguards, while developed countries have always been the main users of countervailing duties. It also seems that developing country exports have always been the main target of anti-dumping and countervailing investigations by all other WTO member countries.

The BRICS countries are some of the most prominent users of trade remedies and safeguards. Out of all the developing countries these are also the economies mostly affected by anti-dumping measures, countervailing duties and safeguards, especially exports from China. The statistical databases of the World Trade Organisation on anti-dumping measures, countervailing duties and safeguards show the prominent role BRICS countries play in the utilisation of multilateral trade remedies and safeguards:

- Between 1995 and June 2012 China was affected by 24 percent of all anti-dumping measures implemented by other WTO members; the most measures implemented on the exports of a WTO member over the time period.
- India not only implemented the most anti-dumping measures of all WTO members, between 1995 and June 2012, but also the most number of safeguards between 1996 and April 2012.
- 47 percent of all countervailing measures implemented after 1995 was on exports from BRICS countries, mostly China and India.

South Africa's economy-wide effects as result of increased total factor productivity (TFP) on the country's agricultural sector: a preliminary investigation

The world economy is expected to grow moderately over the period to 2025 with South Africa's real GDP growth rate average estimates of 3.5%. During the same period South Africa's population growth is anticipate to average 0.5% average annually with total factor productivity (TFP) increases of 0.2% annually. Importantly, both China and India are expected to have annual TFP growth rates significantly above the South African 0.2% figure, and this chapter examines the impacts of South Africa being able to increase its TFP in agriculture to be nearer that of the Chinese overall TFP levels. There is no doubt that productivity has been the driving force in Brazil's spectacular growth in recent years (see the Brazilian agriculture paper in this publication), while similarly the same has held for Chinese agriculture.

Sandrey et al 2010 found that, by keeping everything else constant and increasing TFP across the board to 0.6 percent, the South African economy increased by an additional four percentage points over the 2007 to 2020 time period. This lead to South Africa's aggregate welfare being around \$250 billion higher over this period than it otherwise would have been. Most of this gain was from increased capital as investment flowed into the more efficient South African economy, and the gains were concentrated in the manufacturing sectors - partially at the expense of agriculture. To undertake this current analysis we use the GTAP AEZ model and examine changes to the agricultural sector only. It is an augmented standard GTAP model where the land account is disaggregated into 18 agro-ecological zones enabling substitution of crops and livestock by land type to be shown. We simulated the effects of enhanced TFP from 0.2 to 0.6% across all agricultural (and forestry and fisheries) sectors only.

The results from the agriculture-only simulations indicate that the whole economy stands to benefit as incomes will increase from increases to factor endowment, allocative efficiency, increase technical change, and other effects. The dominance of the share of output by livestock in the agricultural sector continues through the relative share of pasture land in South Africa. The crop area harvested will shift between agricultural commodities as relative returns result in substitution for the fixed land supply, with wheat in particular expected to gain. The value of output in South Africa is expected to increase even for non agricultural products as a more efficient agricultural sector drives a wider expansion. The value of aggregate exports in South Africa as a result of the policy changes is

expected to increase while the value of aggregate imports is expected to decrease. The South Africa position in terms of self sufficiency is expected to improve considerably, and even for traditionally import-augmented products such as wheat. The paper indicates that increase total factor productivity in South Africa's agriculture will have positive but minimal changes to the whole economy but profound positive changes to the agricultural sector.

Importantly, the annual growths in both skilled and unskilled labour are however too small for a country where the current level of unemployment at around 24% is expected to only reduce by one percentage point over this period with enhanced TFP. That these simulated TFP increases do not have meaningful impact on unemployment gives a clear indication that increasing agricultural total factor productivity is only a partial answer to the country's unemployment challenge.

South Africa's way ahead: into the MIST?

Much interest and high expectations have been associated with South Africa's entry into the BRICS club of developing economies (Brazil, Russia, India and China). An examination of this club and how South Africa compares to the other members is presented in Chapter 2. Although South Africa has a significantly smaller economy, with a GDP around one quarter of the Indian and Russian economies, and its population of around 50 million is around one quarter to one third of Brazil's and Russia's respectively and well behind the billion plus in both China and India, it does compare well in GDP per capita by both conventional and purchasing power parity (PPP) measures. South Africa's merchandise trade as a percentage of GDP, an indication of openness in an economy, is the highest in the group, but the real Achilles heel for South Africa is the very high unemployment rate. Contrary to general perceptions, the BRICs have not had uniformly spectacular GDP growth in recent years. It seems that GDP growth is clearly neither a necessary nor a sufficient condition for BRIC membership.

The aim of this chapter is to start from the concept of the BRICs at their birth and follow their progress through to 2011, and to speculate through for the next few years. Has South Africa profited from the BRIC growth? Next, we introduce the latest acronym MIST, and from there seek in the mist and among possible 'dark horses' for the next BRICs. We find that the MIST countries Mexico, Indonesia, South Korea and Turkey are, in effect, the 'next cabs off the rank' as far as developing countries ranked by total GDP are concerned, with all four tightly grouped and ranked between

fourteenth and eighteenth place on the world GDP table. All four have had consistently good GDP growth rates, and except for agricultural exports to Turkey, all four are becoming increasingly important as South African trading partners. Overall their trade and economic performance has not been as strong as that of the BRICs, and their trading relationships with South Africa are generally not as strong as the BRICs, but then the Chinese data strongly influences overall BRIC data for just about every indicator. Nonetheless, combined with the BRICs the MIST effectively embraces most of the so-called South-South trade between developing countries, and especially those outside of Africa. Given the current economic woes of the EU, South Africa's largest trading partner, and the muted current performance and future prospects for the US, it is inevitable that South-South trade will become more important for South Africa.

Fellow African countries have not been included in the analysis, which has however been extended to Argentina and Saudi Arabia as 'countries of interest'. It behoves South Africa to maintain an interest in these two countries as both have exhibited solid economic growth in recent years.

BLNS: the BRIC Trading relationships in perspective with their US and EU trade

In considering South Africa's trading relationships we must always be careful to recognise that South Africa is one of five members of the Southern African Customs Union (SACU), and that the interests of the other four SACU members of Botswana, Lesotho, Namibia and Swaziland (BLNS) must be taken into account. This chapter examines the merchandise trading relationships between these BLNS and the BRIC countries of Brazil, Russia, India and China. It starts with an overview of the BLNS 2011 trade and then sets the BLNS relationships with the BRICs against their trading relationships with the United States (US) and the European Union (EU). To obtain consistent and timely data we have used the Global Trade Atlas (GTA) data as sourced from the BRIC country authorities and the EU and the AGOA trade data as sourced from the tralac website for the US data rather than using the difficult to obtain BLNS data directly. All data is expressed in US dollars.

With the BRICs, China is heavily engaged in trade with both Botswana and Namibia, while both Lesotho and Swaziland are exporting moderate values to China. India is exporting to the four BLNS countries and importing from all excepting for the minor values from Lesotho. Russia is only engaged in importing from Namibia and exporting small values to that country, while Brazil is really

only exporting to Namibia and importing from Swaziland. In general outside of South Africa, the EU is the main trading partner for all except the case of Lesotho where almost all of the 'external' exports are clothing destined for the US.

We have not tried to analyse the BLNS trading relationships with South Africa, but recognise that this relationship is crucial as (a) the imports from South Africa into the respective BLNS countries forms the basis for their shares of the common SACU revenue pool and that this in turn provides a significant share of their external revenues, and (b) this trading relationship distorts and potentially underestimates the import flow from third parties such as the BRICs as South Africa may be a transit source.

In general the relationship with the EU dominates for exports from (imports into EU) Botswana, Namibia and Swaziland and imports from (EU exports to) Namibia. Lesotho is heavily dependent on the US for its exports while for the other three BLNS countries their exports to the US are the second most important behind the EU and well above any BRIC trade as reported. Conversely, for BLNS imports (partner exports) the US features as between the second most important for Lesotho to the fourth most important for Swaziland. Botswana's trade with India has grown significantly, with Indian imports rising dramatically from a very low base. India is actively exporting to all but importing virtually nothing from Lesotho as imports from the other three countries increased from around 2005. Data for both the growth rates and total trade between Russia and the BLNS confirms the 2011 position of imports from Namibia being the only real engagement, while the more recent 2012 data from Brazil confirms an engagement with exports to Namibia and some imports from Swaziland in both of 2010 and 2011 as the only meaningful trade.

The individual Brazilian trade shows that sugar and sugar products feature with both Botswana and Namibia, while the largest individual HS 6 line is the exports to Namibia of furniture and warships to Namibia. Namibia also features as having the largest bilateral trade with Russia, as Russian imports from the BLNS are almost exclusively 2011 for uranium imports from Namibia – although an encouragingly a gradual build-up over the last few years for imports of grapes from Namibia and oranges and grapefruit from Swaziland is recorded. The Indian trade is diverse by both partner and commodity. Indian imports of diamonds, gold minerals and wool feature, while the major Indian exports to the BLNS focus on medicaments, fabrics, wire, vehicles and motorcycles, sulphuric acid and oil. The Chinese relationship is important and becoming increasingly so – also, however, at the same

time many of the HS lines have been consistent in recent years. General and electrical machinery, fabrics and clothing, television sets and 'special category' are all important exports from China, while imports into China from BLNS feature ores, diamonds, some electrical parts, wood pulp, fish meal and wool.

The US data again shows the BLNS trade from the partner mirror perspective and highlights US imports of (1) the textile and clothing trade from Lesotho and a lesser extent Swaziland and then Botswana, and (2) the significant values of minerals and fuels from both Namibia and Botswana in particular but also Lesotho. There is little else. Exports from the US to the BLNS are firstly generally below the import into the US values and often significantly below them, and secondly more diversified. The EU data is similar to the US pattern in that exports from the EU to the BLNS are also firstly generally below the import values and usually significantly below them. They are however unlike the US in that agricultural products do feature in EU imports although diamonds and ores dominate excepting for Swaziland where agriculture (sugar) dominants. Exports from the EU to the BLNS are not surprising - except for perhaps exports of (1) diamonds to Botswana and (2) copper ores to Namibia.

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