SECTION 2

Export Competitiveness

South Africa’s exports have featured prominently in recent headlines, and the widening of the current account deficit over the last two years has brought the secular slowdown in export growth into sharp relief. Even as advanced economies are emerging from recession, South Africa’s export growth continues to disappoint.

Following the lifting of sanctions in the early 1990s, exports expanded rapidly, but by the mid-1990s the pace of growth had begun to slow. This slowdown accelerated quickly in the first half of the 2000s, and more quickly still after 2005, with real export growth (in U.S. dollars) falling to just 0.6 percent annually between 2005 and 2011, compared with the middle-income country average of 6.4 percent. The result is that South Africa’s share in global export markets stagnated at a time when other emerging markets like China, India, and the Russian Federation were seeing major gains (figure 2.1).

Policymakers are aware of the need to reignite export growth. The New Growth Path (2011), the National Development Plan 2030, the Industrial Policy Action Plan 2012/13–2014/15, and recent Monetary Policy Committee statements (2013) all identify export growth as a priority. Restarting the export engine is critical to reinvigorating growth—and to developing a more diversified export base to help reduce growth’s volatility. The National Development Plan aims to increase annual real GDP growth to about 5.5 percent, well above the 3.5 percent average in the decade preceding the crisis.

Exports are expected to be a key driver of the faster growth, with the National Development Plan targeting export volume growth of 6 percent a year.

A stronger export sector also drives job creation. Increasing exports, particularly in manufacturing, may be crucial for the low-skilled job creation needed to substantially reduce high overall and youth unemployment. And exports are especially critical amid South Africa’s widening current account deficit—and the external vulnerability arising from its reliance on volatile capital flows to fund the deficit.

This section aims to move beyond the headlines and assess the facts behind South Africa’s export performance and competitiveness, by drawing not only on aggregate trade figures but also on a unique dataset containing information on the exports of some 20,000 South African firms spanning 2001–12. In so doing, the section places South Africa’s export performance in a broader context, stripping out the impact of the large minerals sector where relevant and comparing the performance of goods exports with that of emerging market peers. This peer group includes South Africa’s BRICS partners (Brazil, the Russian Federation, India, and China) and Chile, Colombia, Thailand, and Turkey (countries with similar populations, incomes, and export baskets). The section also examines the performance of services exports. See box 2.1 for an overview of the section’s methodology, along with an acknowledgement of some limitations.

1 World Development Indicators (data base), accessed January 27, 2014.
2 Republic of South Africa 2011.
3 National Planning Commission of South Africa 2013.
4 Department of Trade and Industry 2010.
5 South African Reserve Bank 2013.
6 Minerals encompasses minerals, fuels, and base metals.
7 Chile is introduced in the firm-level analysis given lack of comparable firm-level data on a number of the peers.
**Figure 2.1** Export performance is failing to keep pace

**South Africa’s global export market share, 1992–2012**

Source: UN Comtrade (database) via World Integrated Trade Solution.

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**Box 2.1** Methodology and limitations

In analyzing export performance it is important to keep in mind that countries do not export—firms do. So understanding the dynamics of firms in export markets is critical for considering policy responses. This assessment’s methodology is based on the World Bank’s Trade Competitiveness Diagnostic Toolkit, which complements traditional aggregate trade analysis with firm-level techniques. The aggregate analysis draws data mainly from the United Nations Commodity Trade Statistics Database (UN Comtrade, via the World Integrated Trade Solution platform), supplemented by the International Monetary Fund, the United Nations Conference on Trade and Development, the International Trade Centre, the World Bank, and several South African sources (Statistics South Africa, the South African Revenue Service [SARS], and the South African Reserve Bank). The firm-level analysis draws on detailed customs transaction data received from SARS as part of the World Bank’s Exporter Dynamics Database. The SARS data cover more than 20,000 exporters over 2001–12 and include data on individual export transactions (value and volume) by product and destination.

The analysis has a few limitations. First, it depends on the coverage and quality of the data available from UN Comtrade and SARS. In both cases key data (such as on exports to Southern African Customs Union member countries) are largely missing (see box 2.3 below). There may well be other data limitations—systematic or otherwise, such as on export unit values—that will impact the robustness of the findings. Second, while the customs transactions data provide valuable insights into how individual firms enter and exit export markets, expand, and diversify, these data provide no information on firms’ other characteristics, including size, ownership, investment levels, and productivity. This update thus describes export performance and patterns but cannot test the determinants of the performance.
South Africa’s exports—five stylized facts

Fact 1. South Africa’s exports—mineral, nonmineral, and services—are underperforming
South Africa’s 20,000 exporters sell nearly 5,000 different products—covering more than 90 percent of all possible goods classified for trade. Yet just a small subset of these, encompassing the fuels, minerals, and metals sectors, make up around half of all exports by value and accounted for almost 90 percent of South Africa’s export growth over 2007–12 (figure 2.2, top panel). But this growth resulted mainly from the pull of high global commodity prices. In fact, mineral export volumes have been virtually flat since 2001 (figure 2.2, bottom panel).

South Africa’s nonminerals sector is underperforming and lagging behind that of its peers. Driven by chemicals, metal manufactures, and automotive and industrial machinery, with the latter aided by government support through the Automotive Production and Development Program (formerly the Motor Industry Development Program), nonmineral exports have grown more than 8 percent annually in nominal terms since 1999–2000 and have recovered from the crisis fairly well. But as with minerals, nonmineral volumes are flat, perhaps resulting from links to commodity prices in some sectors (metal manufactures and chemicals). But prices of differentiated goods have risen, which may reflect rising quality in others. Even so, since 1994 South Africa’s nonmineral export growth has been far slower than that of its peers (figure 2.3, top panel). A simple cross-country model that controls for country characteristics like per capita income, population, and the cost of exporting suggests that South Africa under-exported nonmineral goods by about 9 percentage points of GDP, around $34 billion, in 2011–12.

Services exports are also falling short of potential. South Africa is top among its peers in the contribution of services to the domestic economy. Over 2000–11 services accounted for 66 percent of GDP and 75 percent of growth—and were the main source of formal employment. Yet the country’s services exports are far below what its level of development would predict and have grown slowest among those of its peers since 2005 (figure 2.3, bottom panel). This weak performance seems surprising, given the proliferation of South Africa’s services brands across Africa over the past decade. One explanation is that South Africa’s outward foreign direct investment, most of which is in services, is acting as a substitute for direct exports—and that the data are not capturing the true extent of internationalization of South Africa’s services exports.

Fact 2. Exporters are highly concentrated—a few super-exporters dominate 20,000 minnows
The top 5 percent of South Africa’s exporting firms account for more than 90 percent of its exports. Among its peers, South Africa’s structure is more concentrated than all but Chile’s (figure 2.4, top panel). And this applies to more than just minerals. Compared with Brazil, Turkey, and Colombia, South Africa’s apparel and electronics sectors appear fairly diversified in their firm export structures (figure 2.4, bottom panel).

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8 Measured by the HS six-digit level classification
9 The gravity model of trade used here controls for country selection and firm heterogeneity, following Helpman, Melitz, and Rubinstein (2008). We regress the logged value of total non-mineral exports (averaged between 2011 and 2012) on the following bilateral characteristics with trading partners: distance, contiguity, common language, log of GDP, log GADP per capita, and log of Remoteness Index (computed by summing each country’s distance with every other country, weighted by the latter’s share in world GDP). We control for zero trade flows with the Heckman sample selection correction method.
South Africa stands out for not only the concentration at the upper end of its export sector but also the long tail at the back. The vast majority of the more than 21,000 South African firms that exported in 2012 did so on a very small scale, with the median exporter earning just $29,000 from exports, by far the lowest among the peer countries. While the average exporter among all incumbent firms has annual export earnings of around $5 million, serving 5 destinations with 20–25 products, the average firm in the top 1 percent of South Africa’s exporters has annual export earnings of around $400 million, serving more than 25 markets with 75–100 products.

This concentrated firm export structure is persistent. Over 2002–12 concentration increased slightly, with the share of the top 5 percent of exporters growing from 90 percent (85 percent for nonminerals) to 92 percent (87 percent for nonminerals). There was also limited movement across size categories—over the decade only around 100 of the nearly 7,000 exporters active in both 2002 and 2012 moved from the bottom 80 percent to the top 5 percent. South Africa has one of the lowest new firm entry rates into exporting among its peers (table 2.1).
Fact 3. Super-exporters are losing dynamism and competitiveness, but smaller, more dynamic exporters are not yet large enough to drive aggregate exports

The fairly strong experimentation, in the form of new product introductions and entry into new markets that characterized South Africa’s export sector before the crisis appears to have suffered more recently. As a result, the so-called intensive margin, which reflects the expansion of existing products into already-established markets, has become an even larger contributor to export growth, its share rising from 79 percent in 2006–08 to 88 percent in 2010–12. While the top 1 percent of exporters grew fastest across all regions in the precrisis years, the situation has since reversed. The largest exporters have grown the slowest, and some have declined, reflecting losses in existing products and markets and less success (or less ambition) with new product introduction. The top 1 percent of firms has seen a sharp drop in the contribution of new products to their markets in recent years (figure 2.5). Since 2010 the share of total exports (among the top 1 percent of exporters) coming from firms selling 10 or more products has fallen from 73 percent to just 64 percent. By contrast, smaller exporters are expanding in both products and markets. However, the high concentration in South Africa’s export sector means that the net impact of increased dynamism at the bottom end of the market fades into insignificance against the super-exporters’ retreat from experimentation.
Declining dynamism is also evident in the size and reach of South Africa’s export products. Over the last decade a number of high-value products that were exported to multiple markets—in many cases 20 or more markets—disappeared from the export basket (blue dots in figure 2.6, top panel). These include, for example, multi-ply paper and paperboard (HS480522 and HS482359) and bovine leather (HS410422). At the same time many new products entered the export basket (teal dots in figure 2.6, middle panel), but they were fewer than the products exiting, were lower in value, and reached substantially fewer markets.

![Figure 2.4: The top 5 percent of exporters dominate the rest (2004-08 average)](image)

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Source: Exporter Dynamics Database, based on data from the South African Revenue Service.
Declining dynamism can also be revealed through the tepid expansion of South Africa’s large nonmineral exporters into new global markets. The most successful global exporters (like China and Germany) exploit up to 70 percent of their potential export relationships, but South Africa reached just 20 percent of its potential in 2012. South Africa’s level is increasing (up from 15 percent in 2000) but much slower than that of most of its peers. A gravity model of bilateral trade can show how export levels compare with expectations, given location, size, sector structure, language, trade agreements, and other predictors. In a graphical representation of this model (figure 2.6, bottom panel), countries to which South Africa underexports appear above the 45-degree line, and those to which it overexports appear below the line. The results for nonmineral exports indicate that South Africa exports more than would be predicted with neighbors like Zimbabwe and Mozambique, as well as with small European countries like Belgium and the Netherlands and East Asian countries like the Republic of Korea, Japan, and Malaysia. South Africa appears to export almost as much as predicted with China and the United States. However, it underexports to Brazil, India, and populous African countries like Nigeria, Ethiopia, and Egypt.

**Fact 4.** Super-exporters’ sophisticated, technology-intensive exports play against South Africa’s comparative advantage in low-skilled labor—with implications for jobs

Unlike many resource-rich countries, South Africa has a strong base in manufacturing, requiring strong technological knowledge. A common measure of the technological sophistication of exports—EXPY—shows that while South Africa’s overall exports are slightly less sophisticated than what its income would predict, the story reverses when looking only at nonmineral exports (figure 2.7, top and middle panels). South Africa’s nonmineral exports are more sophisticated than those of all its peers except Turkey; services exports are also more sophisticated than would be expected.

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10 As measured by the Index of Export Market Penetration. The index looks at a country’s total number of exports and the number of markets that each export product reaches. Then, the number of countries in the rest of the world that import each product that the country of interest exports is counted. By pairing products and countries this way, the maximum potential number of export relationships a country can establish given its export portfolio can be obtained. The actual number of export relationships is then divided by the potential number to assess the proportion of export opportunities a country is exploiting.

11 EXPY measures the export baskets of countries by the incomes of all countries that produce similar products, weighted by the share of those exports in national total. The concept is that more sophisticated products are by and large, produced by richer countries. Hausmann and Klinger (2007) show that export sophistication is a good predictor of future economic growth.
Over time, exports have been shifting increasingly toward medium- and high-technology sectors, with corresponding demand for high skills and capital investment. In fact, the only two sectors in which South Africa has gained in both revealed comparative advantage and global market share since 2000 are among the most sophisticated—industrial machinery and transport equipment. In these sectors South Africa is competing largely on quality rather than price in global markets. By contrast, exports have performed least well in manufacturing sectors that are labor- and (in some cases) material-intensive. The factor content of South Africa’s exports reveals that exports are concentrated in products with human capital and especially physical capital intensity far beyond those in South Africa’s endowments (figure 2.7, bottom panel). For example, South Africa’s export basket is associated with products produced by countries in which 67 percent of the employed labor force has postsecondary education, but less than 21 percent of the employed South African labor force has at least some tertiary education.

The good news is that South Africa is not trapped in low-technology exports, giving it substantial scope for further upgrading and for competing on quality and price. The bad news is that the mismatch with endowments suggests that this positioning reflects a strategic response to domestic constraints rather than a strategy following comparative advantage. This raises concerns about the sustainability of South Africa’s competitiveness in nonmineral exports, especially over the longer term, and whether the export sector (under its current model of competitiveness) can contribute much to inclusive growth (box 2.2).

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12 This calculation uses a new United Nations Conference on Trade and Development database on revealed factor intensity for each good at the HS six-digit level (Shitrotori, Tumurchudur, and Cadot 2010). This assessment looks at the underlying human capital (proxied by average years of schooling of the adult population, as per Barro and Lee 2010) and physical capital (capital stock, which is constructed following the perpetual inventory method using investment series from version 6.2 of the Penn World Tables) of a country export basket.

13 Quarterly Labour Force Surveys; data as of 2013q3.
Fact 5. Sub-Saharan Africa has emerged as the dominant market for South Africa’s nonmineral exports
At the beginning of the 2000s nearly 60 per-cent of South Africa’s merchandise exports went to Organization for Economic Co-operation and Development (OECD) countries, most of that to Europe. But over the next decade exports to EU and OECD markets stagnated, while exports to BRICs, most notably China, exploded on the back of the commodities boom. By 2011/12 the
EU’s share of South Africa’s exports had fallen to just 21 percent, while the BRICs’ share had grown from less than 5 percent to more than 19 percent.

But stripping out mineral ores, metals, and fuels reveals that the Sub-Saharan African market is where South Africa’s real export dynamism lies. In nonmineral sectors the BRICs’ share of exports has grown only from 5 percent to 9 percent since 2000. By contrast, Africa’s share has grown from 19 percent to almost 29 percent, overtaking exports is important because these markets are in many ways substitutes for each other. The mix of South African exports by sub-sector is very similar across the two markets, with African markets more important for machinery and chemicals exports and European markets more important for material-based manufactures. Africa has grown more than Europe since 2002, but the 2008–09 crisis brought a substantial shift—exports to the European Union fell 39 percent, but exports to Africa fell only 16 percent. And exports to Africa (53 percent) have recovered much more than those to Europe (22 percent) since the crisis (figure 2.8, top panel). As a nearby market, Africa is also a natural entry point for new exporters. While new firm entry into European markets is down some 40 percent since 2004–06 (three-year average), entry into African markets has remained robust (figure 2.8, bottom panel). A new exporter is now more than three times as likely to start in Africa as in Europe.

The shift to Africa is a positive story for several reasons. It has diversified markets, reducing aggregate risk from adverse shocks; it cushioned the impact of the decline in Europe; and Africa’s rapidly growing consumer class and infrastructure needs have provided ample opportunities for South Africa’s exporters and investors. But the European market is still 30 times larger than the African market, and South Africa’s market share in much of Africa is already higher than its share in Europe across most sectors. So even with a large market share there are some limits to the scale of growth possible in Africa relative to traditional markets.

The structure of South Africa’s exporters to Africa differs substantially from the aggregate structure described in Fact 2. The top 1 percent of exporters to Africa account for just 46 percent of exports there (versus 90 percent of exports to BRICS and 80 percent to the European Union). Nearly 85 percent of new exporters to Africa have no export experience outside the region. A new export relationship to Africa in its first year is on average only around half the size of new export relationships overall. Moreover, the average export spell is shorter in Africa than elsewhere. And the average annual growth rate of exporters to Africa surviving five or more years is lower than for exporters operating elsewhere (table 2.2). On the other hand, nearly a third of exporters that started in Africa expand to a new region within five years, comparable to the rate for firms that start elsewhere and later expand into Africa.

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14 In this section “Africa” refers to Sub-Saharan Africa.
15 An export spell is a firm selling a specific product to a specific market. Over 2002–12 South African exporters were involved in at least 1.7 million export spells worth more than $1,000 each.
Exports are concentrated in sophisticated sectors beyond South Africa’s endowment base

2.7 Export sophistication

Log of GDP per capita, 2012

Log of GDP per capita, 2012

Revealed factor intensity, 2012

a. Export productivity and nonmonetary export productivity are in current dollars based on PROOF values averaged for 2009-11. Only 66 low- and middle-income countries with more than 1,000 exporters at the 6-digit level and with per capita income of greater than $2,000 in 2010/12 are included in this regression.

b. Bold lines are estimates of national capital endowments; dashed lines represent the factor content of median exports.

Source: Top and middle panels, UN Comtrade (database) via World Integrated Trade Solution; World Development Indicators (database). Bottom panel, Shinmini, Lavarde, and Caden (2010).
Exports, comparative advantage, and jobs

How does the mismatch between South Africa’s revealed comparative advantage and its factor endowments shape the prospects for exports to contribute to employment growth? The mismatch suggests that overall export growth is unlikely to have an especially large multiplier effect on employment and that demand would skew toward higher skilled employment. To assess this more specifically, this box tests two situations to see the potential implications on employment competing with China in global markets; and shifting exports to Africa.

Competing with China in global markets
While South Africa’s export basket is more physical capital- and human capital-intensive than that of most of its peers, China’s has overtaken it on both counts (box figure 1). China’s export basket is associated with products that pay lower wages but employ higher skills, more years of schooling, and greater physical capital. South Africa’s inability to compete with China on wages means that it must move into higher quality products to achieve greater value added.

Box figure 1. Human capital (education) and capital stock per worker of exports: South Africa and its BRICS peers, 2000–12

Source: Average years of schooling are from Barro and Lee (2010), and capital stock is constructed following the perpetual inventory method using investment series from version 1.5 of the Penn World Table (Heston, Summers, and Aten 2006).

Shifting exports to Africa
Despite being associated with a higher skills ratio, the recent rise in exports to Sub-Saharan Africa is associated with slightly lower wages, value added, and human capital (in years of schooling) than exports to traditional Organization for Economic Co-operation and Development markets like the European Union and the United States (box figure 2), suggesting that the rise was accompanied by a relative increase in labor demand for lower wage workers. On the other hand the physical capital of goods destined for Africa’s higher than those destined for the European Union, and so roughly on par with the capital intensity of exports to the United States. This suggests for goods destined to Sub-Saharan Africa a potential decline in overall labor demand in relative terms. Thus, the net labor impact of the relative increase in exports to Sub-Saharan Africa is unclear.

(continued)
The data on survival rates give some interesting insights into how exporters use the African market. While the survival duration of individual product export spells is lower in Africa than in other regions, the survival rates of firms exporting to Africa have risen well above the overall average in recent years. This finding, combined with the more modest growth and expansion trends for exporters to Africa, suggests that many firms use the African market in an ad hoc way—reacting when opportunities come rather than seeking them out. Given the fixed costs of entering export markets, this approach would normally cost firms too much. But the lower competitiveness in African markets may make this constraint less binding—even incurring higher costs exporters can still profit—and implies that regional export markets are not as effective in ensuring that the most efficient (productive) South African firms enter. African markets are less likely than European markets to demand higher standards and quality of exporters. In the short term this partly explains how easily South African exporters have expanded in Africa. But over the longer term it suggests that African markets may not compel firms to invest in innovation and productivity—and thus may not be an ideal springboard for preparing South African exporters for highly competitive global markets.

16 For example, a firm starts selling apples to Nigeria. That export does not survive, but the firm itself is still exporting, perhaps now selling apples to Ghana or pears to Nigeria.
17 Rankin 2013.
2.3 Exports to countries in the Southern African Customs Union

In November 2013 the South African Revenue Service revised its reporting of trade data to include exports and imports with its Southern African Customs Union (SACU) partners: Botswana, Lesotho, Namibia, and Swaziland. (Prior to this date, official balance of payments statistics included estimates of bilateral trade with Southern African Customs Union partners.) The effect was a deep cut into South Africa’s reported trade deficit. The reason for the revision is that trade data reported by South African customs authorities—including both to the United Nations (through Comtrade, its Commodity Trade Statistics Database) and through the Exporter Dynamics Database, the two principal sources used for this analysis—grossly underreport trade with SACU partners (by between 96.0 percent and 99.7 percent across years compared with the figures reported in the SACU Statistical Database). So, most analytical work on South Africa’s trade, including the analysis in this report, ignores trade with SACU partners. What is the nature of South Africa’s exports with its SACU partners, and how does it affect the broader story outlined in this update?

In 2011/12 the total value of South Africa’s exports to SACU partners was close to $12.7 billion, with Botswana and Namibia together accounting for more than 72 percent (box figure). Including exports to SACU countries has major implications for the export storyline:

- It nearly doubles the value of exports to Africa, making Africa easily the largest regional market for goods exports, at more than 25 percent of South Africa’s total.
- If fuels, ores, and metals are removed, SACU markets alone account for 19 percent of South Africa’s nonmineral exports, and Africa overall accounts for more than 50 percent.
- Manufacturing dominates the basket of goods exports to SACU markets, at more than 63 percent of the total, but it accounts for just 39 percent of exports to global markets.

Box figure. Manufacturing dominates South Africa’s exports to its Southern African Customs Union partners

Source: SACU Statistical Database.
Figure 2.8

Sub-Saharan Africa is displacing Europe as South Africa’s non-mineral export destination of choice.

Evolution of total exports to Africa and the European Union, 1995–2012

- European Union
- Sub-Saharan Africa

Average annual new exporter entry by selected target market

- European Union
- Sub-Saharan Africa

Source: Top panel, UN Comtrade (datakau) via World Integrated Trade Solution. Bottom panel, Exporter Dynamics Database, based on data from the South African Revenue Service.
Three opportunities for unlocking South Africa’s export potential

South Africa’s exports have a two-tier structure along several dimensions: minerals versus non-minerals; super-exporters versus the rest; global exporters operating on the technological frontier versus regional exporters competing less on quality (though still with high capital intensity). In the past South Africa’s top-tier exporters drove growth, but their competitiveness and dynamism appear to have stagnated. Smaller firms are struggling to grow, and new exporters are not emerging enough to offset declines at the top of the export sector, much less to drive aggregate growth.

Overcoming these export dynamics is not simple. Export success is not determined solely by trade-specific issues, such as tariffs and nontariff barriers, trade facilitation costs, and export promotion. Nor is it determined solely by the real exchange rate. Many causes shape firm and sector competitiveness, including deep, economy wide structural factors that impact how exports respond to real exchange rate movements. Indeed, addressing structural factors will be the key to ensuring a more competitive real effective exchange rate, by lowering domestic price levels and raising productivity.

In this respect government policy has an important role. The government’s main policy documents, including the National Development Plan, the New Growth Path, and the Industrial Policy Action Plan, target competitiveness through a wide range of interventions. Under the Industrial Policy Action Plan, both cross-cutting and sector-specific programs and policies are designed to address some of the factors shaping export underperformance. Sector-specific interventions have long featured prominently in South Africa’s policy toolkit— with mixed results. They have been at the heart of export growth in

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18 See South African Reserve Bank (2013) for a comprehensive menu of factors that impact the response of exports to exchange rate movements.
sectors like motor vehicles while having less impact in stemming decline in other sectors. The question is not whether to have sector-specific programs but about the relative investment in them and the specifics of how the programs are designed and implemented. But as the Industrial Policy Action Plan recognizes, the structural environment needs to be supportive for sector-specific interventions to be most effective.

This subsection looks at three opportunities that can help raise firm competitiveness at both ends of the export structure—and unlock the potential for greater export growth.

**Opportunity 1. Domestic market competition—to promote dynamism and the incentive to commit to export markets**

While the total factor productivity (TFP) of South Africa’s individual manufacturing firms places it among the leaders in a group of peer countries, the manufacturing sector performs poorly against these same peers in aggregate TFP (figure 2.9). This suggests that South Africa has low allocative efficiency in manufacturing—allocative efficiency is highest when the most productive firms in the sector have the highest market shares. But in South Africa the high domestic entry barriers in the various sectors documented by the South African Competition Authority and protection from imports preserve the market share of less productive and innovative firms in some sectors.  

The concentration of South Africa’s exports, along with the lack of extensive innovation, is consistent with the country’s higher concentration of export market share than that of its peers, and the higher price–cost margins associated with it.

Reducing industry concentration and improving allocative efficiency will depend in part on increasing competition. As the pool of new entrants includes operators that are potentially more productive than some incumbents, entry barriers generally weaken the link between a firm’s market share and its productivity. This is why the promotion of productivity growth has been a concern driving South Africa’s competition policy reforms.

Improving allocative efficiency also depends on trade and investment policy. It is through trade policy reforms that the South African government has probably had the biggest influence on competition. The trade and competition policy reforms of the 1990s reduced industry concentration, promoted greater competition, and drove growth in manufacturing TFP. However, progress on international trade liberalization has stalled while high non-tariff barriers remain. Recent research estimates that non-tariff barriers, in the form of restrictive rules of origin, import bans, and permit requirements, cover about a fifth of Southern African Development Community trade, with some of South Africa’s neighbors raising the highest

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19 The Competition Commission (2008) notes that most sectors of the economy remain highly concentrated, “with entrenched and dominant interests that are able to protect their position including by raising barriers to entry.” It also notes that “these barriers can be endogenous, that is the result of strategic behavior by dominant firms and of formal and informal links between potential rivals,” and it reviews barriers to entry among other anticompetitive practices, in the agriculture and agro processing, infrastructure, telecommunications and intermediate industrial products and forestry sectors.

20 The price-cost margin is the difference between price and marginal cost (a measure of profitability). The high price-cost margins (or “markups”) in South Africa are well documented. See for example, Roberts (2004), Fedderke and Bogetic (2006), and Competition Commission of South Africa (2006).

21 Fedderke and Bogetic 2006; Harding and Rattsø 2005.

There is now a need for a second wave of reforms through multilateral and regional initiatives.

How does insufficient competition undermine export competitiveness? First, it reduces the firms’ incentives to focus on export markets, which may offer more growth potential but at a lower margin. In protected markets successful corporates grow by opening a new business line domestically, where profits are higher, rather than by expanding an existing business globally and facing tougher competition. One result is the emergence of conglomerates, which are prevalent in South Africa’s export structure. Indeed, among the top 1 percent of South Africa’s exporters the average number of products is 75.

A second way that insufficient competition hurts export competitiveness is by influencing the strategic commitment of firms to exporting. Most South African firms export at a very small

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scale, but whether these are actually small firms or larger ones exporting a very small amount of their production is unclear. It is likely the latter—data from the 2007 World Bank Enterprise Survey indicate that even for firms classified as exporters (firms that export at least 10 percent of output), the domestic market accounts for an average of 72 percent of total sales, well above the global average of just 46 percent. Anecdotes from industry provide numerous examples of firms that export mainly as a response to temporary declines in domestic demand or to the exchange rate impact on domestic competition.24 This reactive approach to exporting is inefficient, as firms must incur fixed costs each time they reenter the market. It also undermines firms’ potential for becoming established as reliable suppliers.

Perhaps more important is the impact of insufficient competition on the distribution of firms that choose to export. In efficient markets only the most productive domestic firms can absorb the fixed costs and greater competition in export markets. But if the domestic market fails to condition firm competitiveness (for example, by allowing higher profits through protection or collusion) and firms export only when their domestic margins are threatened, the least productive firms, not the most productive, will turn to export markets first. This bodes badly for survival and growth in export markets. And though the lower competition in African markets may cushion South Africa’s exporters in the short to medium term, this cushion will not last forever.

Finally, because many large firms are upstream in the value chain (due in part to their starting as state-owned enterprises linked to resource sectors), inflated margins hinder the competitiveness of downstream (value-adding) industries that rely on these large firms for inputs.25 This impact is compounded by trade policies that reduce the profitability of exporting and tend to favor established industries and firms, raising the cost of inputs (especially for downstream sectors).

The structure of export firms raises a question about how government can best support an effective export market structure to balance efficiency with equity and short-term priorities with longer term ones. While greater consolidation by the largest and most productive firms is probably good for efficiency and more conducive to raising export volume in the short term (which may be a priority for objectives like reducing the current account deficit), the development of sustainable medium-size exporters may be critical for longer term goals like diversification and innovation and may generate more jobs at home (per rand of export). Box 2.4 explores how the policy implications of helping small and medium-size firms start exporting differ from those for enabling medium-size and larger firms to survive and grow.

Opportunity 2. Competitive inputs—to promote small and medium-size exporters and emerging sectors

Reducing input and trade costs is a priority for South Africa to raise productivity and develop its export capacity. Three areas of infrastructure need improvements to enhance export competitiveness, particularly of smaller firms and less established sectors and products: transport, electricity, and information and communications technologies (ICTs; figure 2.10). Research in OECD countries suggests that protecting these crucial inputs places export-oriented manufacturing sectors at a competitive disadvantage.26

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24 Interestingly, these firms do not describe the shifts to export markets as a response to improved price competitiveness from a weaker rand.
26 See, for example, Francois and Woerz (2008).
The structure of export firms raises a question about how government can best support an effective export market structure.

**Transport.** While transport and logistics infrastructure has the potential to become an important source of competitive advantage for South Africa’s exporters, the related access and pricing policies raise high barriers to many export sectors. Transnet, a state-owned enterprise, operates and controls South Africa’s freight infrastructure, with a monopoly in several transport areas. Despite various reforms since the 2000s, South Africa’s tariff pricing strategy for freight still reflects support for import substitution and cross-price subsidization, placing smaller, labor-intensive exporters at a disadvantage.\(^{27}\) For example, port tariffs on containers were 360 percent of the global average in 2012, while on bulk commodities they were 19–43 percent below the global average (table 2.3).\(^{28}\) Rail freight has similar price distortions—rail tariffs on iron ore are somewhat below U.S. prices, while those on general freight business are 4–7 times higher.\(^{29}\)

These price distortions discourage the development of new mineral sectors (manganese, for example), agricultural exports, and processed manufactures like steel (box 2.5). They also impose a heavy cost on small producers. For example, smaller automotive producers do not qualify for volume discounts at ports.

The price distortions also are mirrored in the allocation of infrastructure investment. For example, the iron ore rail lines are world class, with handling volumes that meet or surpass global benchmarks. But the rest of the rail system is in relatively poor condition. Likewise, the Port of Richards Bay (which handles coal exports) and the Port of Sal-danha (iron ore) are highly efficient, while the general terminal at Durban can handle just 17 containers (20-foot equivalent units) an hour, less than half the international norm of at least 35.\(^{30}\)

\(27\) Gumede and Chasomeris 2013.
\(28\) See Ports Regulator of South Africa (2012).
\(29\) OECD 2009.
\(30\) OECD 2009.
Beyond super-exporters: promoting entry of small and medium-size enterprises or the survival and growth of established exporters?

Exporting comes at a cost—firms must establish customer and distributor relationships, learn about changing market trends and regulations, and pay for licensing, customs, and shipping. This is why the survival rate of new export entrants tends to be low, particularly in developing countries. It is also why there is a sensible argument for government support in overcoming fixed costs and information asymmetries that act as barriers to entry and survival in exporting. But it is important to establish some criteria on which firms to support amid multiple priorities and limited resources.

The firm-level export data give some useful indications of the factors associated with the survival and growth of South African exporters. Two things seem to matter most: initial export value and experience (Box figure):

- **Value of initial exports.** Export spells that begin with an initial export value of more than $50,000 end up lasting much longer than lower valued shipments.
- **Exporting experience.** A firm having at least two years of experience more than doubles the chances that an export spell will survive at least two more years. This reflects the fact that firms and export relationships that have survived the first two years have overcome fixed costs, have proven themselves reliable and competitive, and are beginning to reap the benefits of learning by exporting.

What does this suggest about policies to support exporters? While there are sound reasons for helping small and medium-size firms export for the first time, many of these firms lack the scale or quality to compete in domestic markets let alone take on the added costs and uncertainties of exporting. It may be more efficient to focus on ensuring that firms that have already taken on the costs of entering foreign markets do not exit so easily—and that they have the incentive to invest in growth. Initial export survival can be seen as a market signal of firms that have the capacity to be future drivers of export growth and employment.

**Box figure. Initial export size and experience matter most for firms’ growth and survival**

Source: Exporter Dynamics Database, based on data from the South African Revenue Service.
Electricity. Unreliable power supply has become a key constraint to growth and competitiveness. Even in 2007, 30 percent of exporters identified electricity as a major constraint, 50 percent higher than reported by non-exporters and by far the constraint noted most widely by exporters.\(^{31}\) Yet the situation has since become much more problematic.

Eskom, the state-owned power utility, estimates that current electricity prices are two-thirds the level needed to cover costs, including capital. At just over $50 per megawatt hour for industrial users, South Africa’s prices compare favorably with those of most middle-income and advanced countries,\(^{32}\) even though electricity prices have risen almost twice as fast as the overall Producer Price Index since 2008. Still, following a major power crisis that year, Eskom manages power supply tightly—including by restricting supply to key industries—which has negative implications for export growth. A lack of municipal investment in distribution maintenance and refurbishment has compounded the supply problems.\(^{33}\) As a result of the constraints on power availability at multiple levels, South Africa now ranks 150th of 189 economies on the 2014 *Doing Business* indicator, “Getting Electricity.”\(^{34}\)

Information and communications technologies. Efficient ICTs are an important prerequisite for developing modern services exports that provide skilled jobs (call centers, for example). While South Africa’s telecommunications network is one of Africa’s most advanced, regulatory constraints restricting competition have hampered the sector’s growth.

South Africa’s ICT availability now stands on the low end of that of its peers. On the World Bank’s Knowledge Economy Index, South Africa’s rank on ICT infrastructure slipped from 55th in 2000 to 98th in 2012, due partly to low penetration. In 2011, for instance, South Africa had only 2 fixed broadband subscribers per 100 people, just one-sixth the level in China and the Russian Federation. The slippage also reflects a lack of access to key services, due partly to Telkom’s monopoly in South Africa’s communications industry. The telecommunications regulator is overburdened and restricted in its capabilities as handed down by the Department of Communications. Telkom has a monopoly on all international calls, excluding Voice over Internet Protocol, and all traffic over the SAT3 cable that provides most of South Africa’s international bandwidth. South Africa ranks 88th (of 169 countries) on fixed broadband prices, with prices (in nominal terms) almost twice the level of those in Mauritius.\(^{35}\)

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\(^{31}\) World Bank and IFC 2007.
\(^{32}\) OECD 2013.
\(^{33}\) Steyn 2011.
\(^{34}\) World Bank 2013
\(^{35}\) International Telecommunications Union 2013.
South Africa has solid transport infrastructure—but gaps in information and communications technologies and electricity remain

Note: The vertical line represents South Africa’s overall rank (53rd of 148 countries).

Table Comparing port tariffs: South Africa against the global average

<table>
<thead>
<tr>
<th>Tariff category</th>
<th>Global average</th>
<th>South Africa</th>
<th>South Africa’s premium or discount on the global average (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Container</td>
<td>$62,414.90</td>
<td>$287,217.80</td>
<td>360.2</td>
</tr>
<tr>
<td>Container (with rebate)</td>
<td>$67,414.90</td>
<td>$345,913.20</td>
<td>294.0</td>
</tr>
<tr>
<td>Automotive</td>
<td>$72,682.00</td>
<td>$300,253.60</td>
<td>224.0</td>
</tr>
<tr>
<td>Automotive (with rebate)</td>
<td>$72,682.00</td>
<td>$281,560.70</td>
<td>212.4</td>
</tr>
<tr>
<td>Iron ore</td>
<td>$257,113.20</td>
<td>$204,489.90</td>
<td>—18.9</td>
</tr>
<tr>
<td>Coal</td>
<td>$124,307.00</td>
<td>$7,049.60</td>
<td>—42.8</td>
</tr>
</tbody>
</table>

Note: Comparisons are based on a set of assumptions (standardized across ports included in the study) with regard to vessel size, load size, services, and the like.
Source: Ports Regulator of South Africa 2012.
As a major producer of minerals and exporter of metal-based manufactures, South Africa has opportunities for export expansion not only in processing more minerals and metals but also in raising the value of what is being processed. The average unit prices of metal exports vary widely, offering scope for countries to move to higher quality (and thus higher value) varieties, both across and within stages of production (Mandel 2011). Looking at the iron and steel value chain, however, South Africa’s exports seem to be moving in the opposite direction—toward basic production and lower quality (box figure).

In 2000 level 1 products (iron ore and concentrates) accounted for just 18 percent of exports (by value), but by 2012 their share had more than tripled to 57 percent. By contrast, the share of level 2 products (ferro-alloys) and level 3 products (semi-finished/finished steel) in exports declined dramatically, with level 3 products falling from 44 percent share to just 13 percent.

One reason for the shift was the growth in prices for basic commodities like iron ore. Another is that while participating in higher value-added segments should deliver a more stable premium over time, it also has costs—it requires investment in research and skills, access to raw materials, reliable and cost-effective power, access to imported technologies, and cost-effective, flexible transport to reach global export markets. Amid high transport costs for noncommodities (see Table 2.3 above), rising costs and declining reliability of power, and import parity pricing on key inputs, the economies of adding value do not add up.

Box figure. South Africa’s iron and steel exports are moving toward basic production and lower quality.

Distribution of exports in the iron and steel value chain by level of processing, 2000–12

Quality ladder of ferro-alloy exports to German market, 2011

a The quality ladder compares South Africa with other exporters to the German market in 2011. The x-axis plots the position of each country’s exports from lowest to highest in quality (unit price), with the highest toward the right; the y-axis indicates the average unit value (dollar per kilogram). The ladder excludes countries with exports of less than $100,000.

Source: UN Comtrade (database) via World Integrated Trade Solution.
Opportunity 3. Deeper regional integration— to open export opportunities and build supply-side competitiveness

Regional integration also holds the potential to unlock nonmineral and services exports. South Africa’s major growth in exports to Africa over the past decade came in a region where the barriers to trade are among the world’s highest. The cost of trading across borders in Africa is more than twice the cost in East Asia and OECD countries, and data from Doing Business show that in Sub-Saharan Africa it takes an average of 38 days to import and 32 days to export goods across borders, much higher than in other regions. This is the result of inefficient transport, border management, and logistics; cumbersome fiscal arrangements; poorly designed technical regulations and standards; and other nontariff barriers like import bans, permit requirements, and licensing. These barriers may actually have given South African firms, with their relative proximity and local knowledge, an edge over international firms. But reducing trade costs would not just create opportunities to directly expand services and goods exports. It would also promote the development of competitive value chains of production across Southern Africa that would plug the region into global production networks.

Expanding services exports. Services exports have perhaps the greatest potential to benefit from deeper integration. Even more so than for goods, the “gravity” of trade costs means that most services are traded with regional neighbors rather than across the globe. Up to 60 percent of South Africa’s services exports are estimated to stay in Africa. Given this regional emphasis, Africa’s trade barriers may explain why services export growth has been fairly weak. Professional services are a good example. South Africa has 48 accountants and 43 lawyers per 100,000 people; for Mozambique and Rwanda these figures are less than 1 and 5, respectively. These differences, reflected in disparities in salaries and training costs across countries, suggest substantial scope for large gains from trade. Yet documented regional exports remain minimal, held up by barriers like education and professional qualification requirements, restrictions on business structure and on multidisciplinary activities, ownership limits and restrictions on foreign presence, and restrictive policies on the labor mobility of skilled workers. Most African countries have barriers in all these areas. For South Africa, unlocking these restrictions will require pursuing more services trade and investment agreements, including by concluding the extensive negotiating agenda underway in the Southern African Development Community. It will also require supporting regional regulatory harmonization (for example, developing common standards in professional services activities and common criteria for professional qualifications).

Building supply-side capacity for Factory Southern Africa. Exploiting the untapped potential to develop a system of regional value chains, a Factory Southern Africa, in a world trading system increasingly dominated by global value chains that break down production processes and distribute them across countries in integrated production networks, may offer South Africa an important route to export competitiveness. Exporting in global value chains has been at the heart of East Asia’s success. With wages quickly rising in China, parts of these production networks are moving out. Indeed, over the next generation an estimated 85 million manufacturing jobs will leave coastal China. South Africa, with its abundant natural capital, large labor surplus, decent infrastructure, and high-quality institutions, should be well positioned to benefit.

37 World Bank 2011.
38 Dihel, Fernandez, and Mattoo 2011.
39 Lin 2011.
In fact, South Africa is already moderately integrated in global value chains. At 51 percent, South Africa is second among its peers on the Global Value Chain Participation Index,\textsuperscript{40} after Thailand (figure 2.11). Some sectors have seen major increases in the foreign content of their exports, including transport (from 22 percent in 1995 to 38 percent in 2009), electrical equipment (from 16 percent to 27 percent), and chemicals and nonmetallic minerals (from 14 percent to 27 percent). In agriculture, food and beverages, and transport equipment, South Africa’s share of foreign content in exports is near the highest among its peers.

But despite these increases South Africa remains a minor player on a global scale. It also operates at a long distance from final demand, not just geographically but also in production stages,\textsuperscript{41} suggesting that substantial scope remains for upgrading South Africa’s value chain (and value-added) position. Figure 2.12, an auto sector global network map, puts this in perspective.

Taking South Africa’s participation in global value chains to the next level—expanding its scope, increasing its scale, and upgrading its position—will entail raising competitiveness. Beyond domestic input costs, a key route to competitiveness can come through leveraging regional scale and exploiting the comparative advantages of regional economies—in natural resources, in key inputs, and in wages. This will not only reduce production costs but also allow firms to break up production processes and specialize in the processes where they can create competitive advantage, most likely in activities with higher knowledge and technology requirements and in facilitating services.

Turning South Africa’s role as a regional hub from a one-way trade relationship into an integrated regional supply chain will require major improvements in the environment for cross-border trade and in the movement of capital and labor. East Asia’s tightly integrated regional production networks stand in stark contrast to the situation in the Southern African Customs Union, whose production chains are among the world’s least integrated. Realizing a Factory Southern Africa will require much deeper and more effective integration arrangements (encompassing both policy and infrastructure), so that production networks can operate seamlessly across the region, minimizing transaction costs and lead times.

\textsuperscript{40} Under this measure, developed by Koopman and others (2011), the higher the foreign value added in exports and the higher the value of domestic inputs exported to third countries and used in their exports, the higher a country’s global value chain participation.

\textsuperscript{41} See Antrás and others (2012).
Conclusion

Over the past decade South Africa’s exports have underperformed. Export volume growth has stagnated, and South Africa’s exporters have made only limited inroads into global markets. Be it in minerals, non-minerals, or services, South Africa’s exports have lagged behind those of its peers and not lived up to their potential.

A few super-exporters dominate South Africa’s export sector, in both minerals and nonminerals, coexisting with a large pool of small, occasional exporters. But despite their dominance the super-exporters have been losing dynamism and competitiveness. Over the last decade some important products in South Africa’s export basket have died out—a natural process. But new, high-value products have not emerged at the scale needed to replace them. Since the global financial crisis the super-exporters have become less experimental in both markets and products, underexploiting large emerging markets in both Africa and the BRICs. Super-exporters trade products that are technologically sophisticated and highly capital-intensive. This has positive implications for competitiveness but underutilizes South Africa’s large pool of low-skilled labor, thus failing to create enough jobs to make the export sector a major direct contributor to employment growth and poverty reduction.

As trade patterns have shifted, particularly following the crisis, Sub-Saharan Africa has emerged as the key destination for South Africa’s nonmineral exports. This has created greater market opportunities for newer and smaller exporters. So far, exports to Sub-Saharan Africa have remained somewhat smaller and shorter lived than exports to traditional markets, suggesting that lower competitiveness in regional markets is allowing the less efficient firms to enter and exit opportunistically. This poses challenges in considering how best to support emerging exports.
Three areas present opportunities to promote the competitiveness and spur the growth in South Africa’s export sector:

- **Boosting domestic competition** would increase efficiency and productivity. By opening local markets to domestic and foreign entry, South Africa would enable new, more productive firms to enter and place downward pressure on high markups. This would lower input costs and tip incentives in favor of exporting by reducing excess returns in domestic markets. Competition would also stimulate investment in innovation and, over time, condition the market to ensure that firms entering competitive global markets have reached the productivity threshold to support their survival and growth.

- **Alleviating infrastructure bottlenecks, especially in power, and removing distortions in access to and pricing of trade logistics** in rail, port, and ICTs would reduce overall domestic prices and further enhance competitiveness. It would be especially beneficial for small and medium-size exporters and nontraditional export sectors, which these costs tend to hit harder.

- **Promoting deeper regional integration in goods and services** within Africa would generate the right conditions for the emergence of Factory Southern Africa, a regional value chain that could feed into global production networks. South Africa could play a central role in such a chain, leveraging the scale of the regional market, exploiting sources of comparative advantage across Africa to reduce production costs, and providing other countries in the region a platform for reaching global markets.

Progress on all three fronts would help catapult South Africa toward faster-growing exports, allowing it to realize the faster, more inclusive, job-intensive growth articulated in the National Development Plan.