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Is a 'Factory Southern Africa' Feasible? Harnessing Flying Geese to the South African Gateway

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Abstract

The countries comprising the Southern African Customs Union (SACU) are currently not very integrated into global value chains (GVCs), potentially missing out on important development opportunities. Accordingly, we explore high level options for promoting their integration. Given East Asia's spectacular success with integrating into GVCs, we first assess the probability that SACU can copy their flying geese pattern. That was initiated by Japanese multinational corporations (MNCs) investing in successive EastAsian countries thereby becoming the lead geese, to be joined subsequently by MNCs from other countries. We argue that the conditions for pursuing a flying geese approach are difficult to replicate in SACU. Therefore, we proffer and explore the proposition that South Africa could serve as the gateway for harnessing MNC geese flying from third countries into the SACU region, in time propelling regional development through knowledge and investment spillovers, and serving as a conduit into GVCs. However, there may be substantial obstacles to deepening this integration potential. Other African gateways are emerging as alternatives to South Africa. And some SACU governments would prefer to build regional value chains (RVCs) rather than prioritise GVC integration. We argue that RVCs are complements to GVCs. SACU countries, excluding South Africa, may not attract many world leading MNCs since their markets are small, but could attract smaller regional players from South Africa or elsewhere. Thus building RVCs in the short run could assist with integration into GVCs in the longer run. Overall, this requires harnessing South African and MNC geese to the South African gateway, in a mutually complementary strategy.

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Abbreviations

| | |
|--------|--|
| AfDB | African Development Bank |
| AGOA | Africa Growth and Opportunity Act |
| ANC | African National Congress |
| APEC | Asia–Pacific Economic Cooperation |
| ASEAN | Association of Southeast Asian Nations |
| BLNS | Botswana, Lesotho, Namibia and Swaziland |
| COMESA | Common Market for Eastern and Southern Africa |
| DBSA | Development Bank of Southern Africa |
| DTI | Department of Trade and Industry |
| EAC | East African Community |
| EFF | Economic Freedom Fighters |
| EPA | Economic Partnership Agreement |
| ESS | Enterprise Specific Skill |
| EU | European Union |
| FET | Further Education and Training |
| FTA | Free Trade Agreement |
| GCI | Global Competitiveness Index |
| GVC | Global Value Chain |
| IDC | Industrial Development Corporation |
| JSE | Johannesburg Stock Exchange |
| LPI | Logistics Performance Index |
| LSCI | Liner Shipping Connectivity Index |
| MNC | Multinational Corporation |
| NIE | Newly Industrializing Economy |
| NTB | Non-Tariff Barrier |
| OECD | Organisation for Economic Co-operation and Development |
| OEM | Original Equipment Manufacturer |
| R&D | Research and Development |
| RCA | Revealed Comparative Advantage |
| REC | Regional Economic Community |
| RSS | Relation Specific Skills |
| RVC | Regional Value Chain |
| SACU | Southern African Customs Union |
| SADC | Southern African Development Community |
| SEZ | Special Economic Zone |
| SMEs | Small and Medium Enterprises |
| TAZARA | Tanzania–Zambia Railway |
| TFTA | Tripartite Free Trade Agreement |
| UAFL | United Africa Feeder Line |
| UNECA | United Nations Economic Commission for Africa |
| UNCTAD | United Nations Conference on Trade and Development |
| UNDP | United Nations Development Programme |
| US | United States |
| WEF | World Economic Forum |
| WTO | World Trade Organization |

1 Introduction

Enhanced by multilateral liberalization as well as decreasing communication and transportation costs, deeper global economic integration has led to greater flexibility for firms. Production processes today are sliced or fragmented; and take place in global value chains (GVCs). This is important for developing countries in particular, since it means they can build competencies in particular aspects of the value chain without having to master the entire production cycle. This building of particular competencies can lead to rapid industrialization and broader development, as experienced in East Asia and Mexico in recent decades. Consequently, in recent years GVCs have risen to the forefront of the global trade and investment policy debate.

GVCs are concentrated in what Richard Baldwin (2012) terms “Factory North America”, centered on the US; “Factory Europe”, centered primarily on Germany; and “Factory Asia”, centered on Japan. The existence of these regional concentrations of value chain activity highlights the fact that much of what are called “global” value chains are in fact regional. One notable exception is China, which in recent decades has been the world’s key player in international production fragmentation, serving as the key location for processing and assembly of manufactured goods destined for global markets. However, with rising Chinese labour costs production is relocating, partly back to the US (Sirkin et al., 2011) or to countries like Vietnam, Cambodia and Mexico (Draper & Lawrence, 2013). It is this relocation process and potential that offers, in theory, opportunities to developing countries such as those in Southern Africa, particularly those comprising the Southern African Customs Union (SACU): Botswana, Lesotho, Namibia, Swaziland (BLNS) and South Africa.

Consequently, attention is turning to the possibility that Southern Africa may benefit from the geographic relocation of GVCs. The question, therefore, is whether a “Factory Southern Africa” is feasible, and if so what kind of policy mix would facilitate its development? We examine this question in light of international comparative experience, and with a particular focus on SACU countries. We use the term “Factory Southern Africa” to refer to the SACU countries throughout this report.

In the analysis we highlight the importance of regional value chains (RVCs) as a complementary analytical category to GVCs. In essence the value chain concept is the same, regardless of whether the analytical focus is regional or global. Nonetheless, the distinction we would draw between the two is that RVCs are primarily operated within a particular region, by regional actors, for regional markets. By contrast GVCs are primarily operated by global companies or multinational corporations (MNCs), transcend regional boundaries even though they may be concentrated in particular regions, and are oriented towards extra-regional (global) markets. RVCs may, however, constitute the first step towards establishing or tying into GVCs. Furthermore, we acknowledge that there are many different kinds of value chains, corresponding to different economic activities encompassing different economic sectors, from minerals extraction, to agriculture, manufacturing, and services. It is beyond the scope of this paper to delve into how SACU countries can orientate themselves within particular value chains, whether RVCs or GVCs. Our analysis is high level, and focused on the policy orientations appropriate to building participation in RVCs and GVCs, with application to SACU countries.

It is critical to locate the policy issues in international comparative experience. While there are numerous examples we could draw on, East Asia has been the standout success story in the evolution of GVCs so we focus on that region. At the heart of this story is the role played by Japanese MNCs, at least initially, in sparking the growth of, first, RVCs, and GVCs over time. This points to the importance

of a leading economy in the region concerned; in this case Japan drove the establishment of “Factory Asia”. Similarly the United States (US) drove the establishment of “Factory America”, while the origins of “Factory Europe” were more dispersed but are increasingly centered on Germany. It is our contention that if “Factory Southern Africa” were to emerge, South Africa would be at its centre.

Accordingly, Section 2 focuses on the “flying geese” pattern, centered on the role of Japanese foreign direct investment (FDI) and trade in driving East Asian economic integration and growth. We ask whether a comparable process could conceivably unfold in Southern Africa, led by South Africa as the “lead goose”. We argue that while South Africa is already driving regional investment to a significant extent it does not possess the requisite capacities to propel the region into sustained growth and global integration. Furthermore, we note that the SACU region possesses very different comparative and competitive advantages vis à vis East Asia. Consequently, we argue that a different kind of integration process is required in SACU.

In Section 3 we elaborate on this, centering on attraction to the region of MNCs from outside the region, using South Africa as their Southern African “gateway”. This draws on the later elaboration of the flying geese pattern, in which Japanese MNCs were joined by their US, European, and East Asian counterparts to drive the development of GVCs, centered increasingly on China. Since there is no China in Southern Africa, the orientation of South African and global MNCs would necessarily be different, and probably more oriented to regional rather than global markets. We briefly explore some contours of those differences.

In Section 4 we then ask how the SACU region is currently positioned, from a policy perspective, in relation to the “flying geese/gateway” proposition. This depends substantially on different countries’ comparative advantages, and the prospects for GVC-oriented industries to take root. A key issue for the BLNS states is that South African firms dominate their economic landscapes, with MNCs occupying most of the left over spaces. A central question, therefore, is how they can harness this dominance to their own advantage; an approach that requires niche-oriented thinking. Simply put, the BLNS governments need to actively identify the value chains they can realistically plug into, whether RVCs or GVCs, then consciously assist their companies to access them. Therefore, concerted state action is necessary, both to build the enabling institutional environment MNCs require before they will transfer higher order technologies, and to identify key lead firms for targeted investment promotion into the region.

Furthermore, the flying geese and gateway propositions require a liberal policy orientation – in order to attract FDI by “lead firms” that coordinate GVCs or RVCs, the region has to make itself more attractive by reducing transaction costs across the board. However, some SACU countries are pursuing a different policy vision, one more sceptical of FDI by MNCs. This policy approach is anchored in a view of RVCs that is akin to import substitution extended from the national terrain to the region. While we are sympathetic to the impulses behind this approach we argue that it would be to the region’s benefit to think about how to link RVCs to GVCs, rather than how to replace MNC activities in the region. This requires a facilitative approach, harnessing the gateway and actively promoting South Africa’s lead role; in other words working cooperatively with both South African and foreign MNCs rather than seeking to curtail their activities.

2 The Flying Geese Pattern

Here we focus on lessons that may be learned from East Asia since the 1960s. The essence of the “flying geese pattern” is that East Asian countries were incorporated into a largely Japan-centered regional production network. The lead goose was Japan, with Japanese companies “flying” first into Northeast and Southeast Asia, a process subsequently imitated by the four dragon economies (Hong Kong, Singapore, South Korea, Taiwan), and then to China when the latter opened up to FDI in the 1990s. This RVC picture took on a global dimension when the activities of Western MNCs, from the US and European Union (EU), were incorporated. They have participated enthusiastically in the opening up of the Chinese economy to FDI, so that many have established GVCs centered on final assembly in China. In doing so they also source parts and components from the East Asia region, thus blurring the distinction between GVCs and RVCs, since their activities extend well beyond East Asia. So China nowadays serves as the hub for production of parts produced in other countries in the region, to be assembled and exported as final products to world markets. It is estimated that intra-regional trade accounts for more than half of China’s total exports, and foreign investment into China’s exports are largely from other Asian neighbours (Gaulier et al., 2007). With inexorably rising labour costs for low value added operations in China, assembly and mass production are now being shifted to other countries such as Vietnam, India and Bangladesh; thus the geese are once more on the move.

As a consequence of these integration efforts, in the last few decades East Asia has been the region with the highest growth rates and development success in the world. The key to this success is the growing economic interdependence in the region through the formation of RVCs/GVCs, with intra-regional trade having been the fastest growing component of Asia Pacific’s total trade. In the period 1986–2007 import of non-oil products within the region rose from 40% of total trade to more than 60% (Athukorala & Kohpaiboon., 2009). In addition, we observe soaring exports of intermediate products, while the share of final products’ export remained under 45% from 1992 to 2007 (Athukorala, 2011). This indicates the growing importance of product fragmentation in this period, aligning with the formation of RVCs/GVCs.

Expanding intra-regional FDI flows, notably from richer countries such as Japan, South Korea and Taiwan to the ASEAN (Association of Southeast Asian Nations) countries and China, have played a key role in boosting trade and improving regional development. A complex industry that requires sophisticated chains can be fragmented into specialized production processes located in different countries, depending on their comparative advantages or endowments of labour, wages, skills, availability of capital and technology, and competitive advantages including levels of infrastructure, taxes and legislation in different industries, etc.

First we unpack the dynamics central to the flying geese pattern. Then we analyse how applicable it is to SACU.

2.1 MNCs and FDI

The flying geese metaphor of structural transformation was first coined by Japanese economist Kaname Akamatsu (1961) and later developed by many other theorists as one of the most important explanations for the emergence of RVCs in East Asia, with its legacy to be the theoretical grounding for the Asia Pacific Economic Community (APEC) (Kojima, 2000). Foreign MNCs from the US and Europe historically took an important role in the Japanese economy to transform the country into Asia’s leading powerhouse in the 20th century. Through licensing and original equipment manufacturing (OEM)

arrangements, Japanese firms successfully absorbed technology from overseas, mainly European and US MNCs (Ozawa, 1974), in what is described as the first and second patterns of flying geese (or domestic patterns) for Japan's learning-based approach to industrialization (Hayter & Edgington, 2004). After the Second World War and until recently Japan, as a source of advanced technological independence, was the leading goose in its third flying geese paradigm (or international pattern). Japanese FDI took the crucial role of developing its neighbours' economies and technology through the process of dynamic industrial shifting among countries in the region to form East Asia's RVCs (Chen, 1989). The most important impact of Japanese FDI was and is the dynamic change of factor endowments in East Asian host countries, which lift their industries to higher value chain production overtime through transfer of technology and knowledge from MNCs to their local partners. The MNCs' role is anchored in investment decisions made by profit-seeking entities, and trade is driven by import and export firms, not primarily by states (Memis, 2009).

Box 1: The Flying Geese Model in Retrospect

Investment from Japan to other Asian nations can be traced back to the 1960s, when the majority of initial Japanese FDI flew to Taiwan and later South Korea, two countries that had previous colonial links with and are geographically proximate to Japan. Sanyo was the first MNC to establish its business in Taiwan in 1963, initially producing electronics products for domestic demand and later exporting to the US and other markets (Hobday, 1995b, p. 104). South Korea, under military dictatorship and the "Heavy-Chemical Industry Drive" policies centered on large domestic firms (*chaebol*), initially practiced import substitution to the point that FDI was not legally permitted until 1959. It only opened for FDI inflow from 1960 under the Foreign Capital Promotion and Inducement Act, and promoted foreign investment from Japanese firms after the normalization of diplomatic relations with Japan in 1965 and the further reduction of FDI restrictions in 1966 (Chung, 2007, p. 173). Other important destinations for Japanese FDI included Singapore and Hong Kong (Edgington, 1993). Investment in this period concentrated on import substitution to serve local markets, driven by the lack of domestic production, reliance on imports of major appliances such as air conditioning, TVs etc., and import barriers. In the Malaysian case high tariffs on imported consumer goods such as TVs and refrigerators drove the inflow of FDI from Japan as early as the 1960s into these sectors (Lim & Pang, 1991). Japanese experience of the major "high yen" (*endaka*) period in 1985 and 1993 and rising domestic labour costs combined with the desire to circumvent mounting US import barriers to accelerate the process. Thus Japanese MNCs relocated their manufacturing facilities to lower cost ASEAN countries such as Thailand, the Philippines and Indonesia, this time for the purpose of exporting to global markets, in what was regarded as "pro-trade oriented FDI" (Kojima, 2000). However, the Asian financial crisis in 1997 caused major shifts of Japanese MNCs' operations to China and later Vietnam and India.

2.1.1 The lead goose and following geese

Within the flying geese framework, Japanese FDI moved into its proximate region and drove the elaboration of RVCs notably in the electronics and automotive sectors, accompanied subsequently by MNCs from other regions such as the US and Europe in a mimicking process greatly boosted by China's subsequent emergence and market potential. So it was not only Japanese firms taking the role of the lead goose in certain industries (e.g. electronics products), but also MNCs from other countries. This is a particularly relevant lesson for Southern Africa, since it is highly dependent on third country investors.

In Asian RVCs, Japan serves as the “growth pole” in initiating the dynamic development chain to create spill-overs to other countries, and China as a big player also takes the key part in formulating and duplicating RVCs into a massive “factory” as we are seeing today. In the SACU context South Africa, relatively, is analogous to Japan in terms of driving regional investment patterns and therefore RVCs. A key difference, however, is the absence of a China in the region to act as an attractor for GVCs, meaning that RVCs loom larger in SACU. Only Nigeria with its large and rapidly growing population and its dynamic domestic market is somewhat comparable to China in the early 1990s.

Furthermore, East Asia preserves significant comparative advantages for the development of its RVCs. Southeast Asia is geographically proximate to Japan, and now China, in terms of population density and easy, particularly sea-based, transportation. The structure of comparative advantage in the SACU region is quite different; a fact to which we return in 2.4.1. Nonetheless, the flying geese pattern is in essence based on the mechanism of “recycling comparative advantage” (Ozawa, 2009). Empirical studies to quantify the flying geese pattern are mostly based on the index of “revealed” comparative advantage (RCA), which ranks countries by degree of comparative advantage for each particular industry (Ballance et al., 1987). Results show that Japan not only loses its comparative advantage in traditional sectors over time but also in high-tech industries, whereas the newly industrialized economies (NIEs – Hong Kong, Singapore, South Korea and Taiwan) have gained competitiveness in both sectors. Members of ASEAN are losing comparative advantage in traditional products but gaining in high-tech industries. This process of “industrial shifting” is central to the flying geese pattern.

2.1.2 Driving forces of industrial shifting

The main driving forces of industrial shifting are dynamic comparative advantages (in labour-intensive, low cost manufacturing assembly operations) and competitive advantages (in logistics, business environment and policy suitability). Cheaper labour costs in less developed countries and the ability to engage greater local markets with lower transaction costs, i.e. transportation and tariffs, pushed efficiency and profit-seeking Japanese MNCs to rearrange their lower value added activities to their neighbours. From the host countries’ point of view, the need for welfare enhancement from not only production for domestic demand and exports but also job provision and corporate tax collection, or “FDI-led growth”, has pushed their governments toward trade and FDI policy liberalization. Moreover, the presence of foreign MNCs’ products raised domestic firms’ competition capability and quality of goods produced. In the longer term, late-comer countries should benefit from technology and knowledge transfer from foreign MNCs to climb up the value chains of production.

2.1.3 Reverse production cycle

In the short run, host countries can generally benefit from the establishment of MNCs’ factories, which not only create jobs for local inhabitants but also generate wealth and public revenues. In the longer run, transfer of technology and know-how from foreign MNCs pushes the economy up – RVCs as well as GVCs – from producing primary, labour-intensive products to mature, capital-intensive products. This process of technology transferring can be explained via the “reverse product cycle” model (Hobday, 1995a), as depicted in Figure 1 in the Annexure. It indicates a late-comer country’s ability to acquire technology for production by adopting a product’s production cycle, from simple skilled mass production and assembly operations (stage 1), to advanced, adaptive procedures that improve productivity and efficiency (stage 2), and finally core research and development (R&D) to build new products (stage 3).

At stage 1 or the “mature” stage, the competitive advantage of low labour cost in developing countries was the main driving force for Japanese (and later Taiwanese and South Korean) MNCs to establish their factories for assembly operations. China is currently the largest product assembling destination due to its abundance of low-skilled labour, but the potential is shifting to Vietnam, India and Bangladesh.

Stage 2 requires workers with “enterprise specific skills” (ESS) and “relation specific skills” (RSS) for faster growth and innovation (Koike & Inoki, 1990). ESSs are developed from workers with expertise and experience through dealing with both routine problems and being adaptive to new circumstances, which enhance productivity (Patchell & Hayter, 1995). RSSs foster innovation by the stable exchanges of technological knowledge and strong connections of core firms and their suppliers, which is at the heart of Japanese corporate systems’ competitive advantages (Patchell, 1993). This stage demands skilled labour to manufacture products rather than pure assembly operations.

Research and development makes stage 3 the most advanced but also the most difficult step to achieve. Mastery of it allows host countries to be independent from MNCs to initiate new products and become leading geese in particular value chains. From the host countries’ side, this requires highly educated personnel, the availability of technology and working conditions/environment for R&D to take off. Furthermore, this stage creates conflicts between MNCs and host countries in technology transfer since R&D is the core competitive advantage of profit-seeking MNCs (Hayter & Edgington, 2004). MNCs will no longer be needed when a country can domestically produce completed goods for local markets as well as export, thus stage 3 ends the “reverse production cycle”.

2.1.4 The technology transfer challenge

The stage 3 challenges highlight the fact that while foreign investment is a key channel for technology transfer through domestic spillovers, it is also by contrast a means of technology protection for MNCs when investing into competitor markets. Kiyoshi Kojima (1973, 1975) classified FDI into two types, “pro trade orientated” (complements) and “anti-trade orientated” (substitutes). In his view, the former represents post war Japanese investment, as Japan sought from abroad natural resources for its reconstructing industries and labour-intensive manufacturing platforms to export to third markets, hence creating trade and expanding comparative advantage in the host countries through technology transfer. He regards US investment, on the other hand, as emblematic of the latter, and being focused particularly on technology-based, capital-intensive production aiming at local host markets. In his view the production is too sophisticated for host countries to adapt, plus US firms are inclined to create entirely owned branches and import most of their raw materials and components. At the same time US investment reduces host countries’ potential comparative advantage gains by aiming only at production for domestic use, not for exporting purposes unlike in the Japanese FDI case (first export back to Japan and later to international markets). This pattern corresponds to the “monopolistic theory of FDI” (Ozawa, 2013), where MNCs offer little technology and knowledge transfer to host countries. The different types of operations by US and Japanese MNCs were based on different objectives of these firms at that time and even up until now.

In this light it is important to appreciate that in the 1980s and 1990s a vigorous intellectual debate was waged over the precise causes of East Asian industrialization, and the role played by the flying geese pattern. This debate can be observed in comparable intensity and directions today. In general critics argued that the explanation for the flying geese pattern privileges the role of FDI by MNCs, but neglects

or underemphasizes the role of host countries' policy, indigenous capital, and control over the formation of domestic industries (Edgington & Hayter, 2000; Rodan, 1993). Scholars argued that strong, developmental states pursuing interventionist industrial strategies characterized by targeting of industries and firms, plus selective trade protection and curtailment of FDI, were responsible for driving industrial development, first in Japan then the four "tiger" economies: South Korea, Taiwan, Hong Kong and Singapore (Amsden, 1989; Chang, 1994). Furthermore, these critics argue that the ability of late-comers to catch up with technology and move up the value chain depends on MNCs' willingness to transfer the technology and knowledge through stages of product development. Similarly, the "internalization" literature in international business theory (Caves, 1971; Dunning, 1988) argues that MNCs seek to control their technology through FDI. In this light the technology gap can narrow but the closer to the technology frontier the company/country concerned comes, the more difficult it is to eliminate (Hobday, 1995b). This scepticism is the basis for modern advocates of technology transfer policies, such as those pursued in Brazil, designed to force technology transfer from MNCs (Gereffi & Sturgeon, 2013).

On the other side of the debate various proponents argued that while some of the interventionist and protectionist policies advocated by critics were pursued in the 1950s and 1960s, by the 1970s and 1980s those states had turned to trade liberalization and opening up to FDI, which then drove their rapid economic growth and industrialization (World Bank, 1993, 1997). Furthermore, as GVCs linked to global markets bedded down in the region so these liberal policies became more important, in order to attract the "golden geese" or MNCs, constituting the flying geese pattern (World Economic Forum, 2012). Advocates argue that this policy mix has delivered rapid development success in developing countries that have implemented it.

Clearly East Asia exhibits very different experiences and approaches. After four decades of development along the reverse production cycle, South Korean *chaebol* attained the status of world class producers of electronics devices such as TVs, camcorders and CD players, while Taiwanese small and medium enterprises (SMEs) were successful with PCs, fax machines and calculators (Box 2) (Hobday, 1995a). Subsequently the late-comers South Korea and Taiwan, with their rising wages, could outsource low value added operations to less developed countries with comparative advantages in labour costs i.e. China and ASEAN.

Box 2: Technology Transfer in Korea and Taiwan

Using licensing, joint venture and OEM arrangements, local firms in Korea retained control of production and were able to upgrade their technology to catch up with higher value chain stages. These Japanese strategies to acquire technology and intensive training from the US in previous decades were adopted by late-comers in subsequent years (Kim, 1997). In the late 1970s, the South Korean government imposed policies to limit FDI per se into the country and shifted from general export promotion to a sectoral development strategy. Key policy instruments included cutting tax benefits for foreign firms and tightening selective, targeted industries to be invested in e.g. chemicals, basic metals, fabricated metal products and equipment (Chung, 2007, p. 274). Together with setting higher priority on joint ventures, these policies made licensing agreements become the only way for MNCs to access the local market.

Thus South Korea successfully absorbed foreign technology, mostly from Japan since Japanese MNCs dominated licensing agreements in this period. These policies prepared the ground for the “turning point” transition from the second to the third stage in the reverse production cycle, where product innovations were initiated.

Another way to obtain productivity is via OEM arrangements, in which Korean OEMs produced large scale, mass production, low cost standardized goods to serve customers in Japan and the US. Under the pressure of providing highest quality at the lowest prices, OEMs served as the training school for Korean industries to match international standards. Therefore, domestic OEMs not only acquired technology, staff training in quality, and engineering support from OEM buyers from Japan, but also enjoyed economies of scale and improving productivity under the pressure of providing highest quality at lowest prices (Hobday, 1995b). The government enhanced technology transfers also by means of education policy.

Taiwan experienced to some extent the same development path as South Korea, although the Taiwanese government did not intervene in the FDI flow like South Korea's. However, Taiwanese firms also eventually graduated from dependence on Japanese FDI by joining OEM agreements with US retail firms and Japanese trading companies, or *sogo shosha*, which work very closely with their *keiretsu* (business groups) partners (Hayter & Edgington, 2004). By combining investment on vocational training, overseas education and research projects from both the government and domestic firms, these two countries have set up large institutes for R&D to adopt foreign technologies.

The ASEAN story is different again. Although the region has still attracted a large amount of investment from Japanese MNCs owing to lower labour costs and big markets (Ernst, 2000), major ASEAN countries, notably the Philippines, Indonesia, Thailand and Malaysia, are at the lower tiers of RVCs, struggling to develop past the first stage of assembly operations. Mostly this is owing to lack of good institutional settings, notably low skilled, poorly educated workforces, weak government policies for industrial development, and domestic partners showing little interest in unlocking the secrets of foreign technology via reverse engineering (Hayter & Edgington, 2004). In addition, the technology and skills learning procedure has only taken place within Japanese MNCs rather than broadly across the entire country (Rasiah, 2003). This supports the view put forward by Hatch and Yamamura (1996) in their very influential book detailing how Japanese MNCs keep technology secrets within the firm by parceling out discrete bits of production to different ASEAN countries so that no country would be able to imitate the whole cycle.

China, as the latest host of East Asian geese, opened up its economy rather late compared to major Asian partners and subsequently has played a decisive role in the formation of East Asia's RVCs owing to its size and geo-political position. Beginning at the end of the 1970s with China's selective liberalization of its massive market, and associated workforce mobility, it received further boosts from the Japanese high yen period and the outbreak of the Asian financial crisis in 1997, both of which caused mass production and assembly operations to shift to China, as the flying geese pattern predicted. By contrast, China's failed 1950s attempt to leap frog into industrial development via the “Great Leap Forward” showed the difficulty for an economy to skip industrial development processes without the improvement of its institutional setting, of which the enhancement of human resources takes centre stage (Kwan, 2002).

This discussion surely does not have a final solution, but it teaches the importance of policies and governments. International lead firms or “lead geese” are dependent on an investment climate that is compatible with medium or long-term investment decisions. In other words, the institutional quality and governance structure of the host countries plays a role. Corruption, conflicts, poorly defined property rights and weak rule of law all have negative effects on MNCs’ choice of location to invest. It seems that Southern Africa in the past has suffered from deficiencies in this field, which certainly contributes to the explanation why the region did not experience a flying geese period. The flying geese pattern implicitly takes the institutional and policy requirements as given. In the following, we sketch out some criteria for its successful implementation in SACU.

2.2 Criteria for Successful Application within SACU

In our view the flying geese model is an ex-post analysis rather than intended strategy since industrial shifting was caused primarily by the private sector, in which MNCs took the crucial role. Nevertheless, to successfully use this approach and influence industrial shifting within RVCs in Southern Africa, in particular in SACU, requires a number of preconditions which can be identified by looking at East Asian experience. We identify four in our indicative (by no means exhaustive) list:

1. From the host countries’ point of view, “FDI-led growth” pushed East Asian governments toward trade and policy liberalization to open up the economy for FDI inflows, thus paving the way for better integration to GVC/RVCs, and being a functioning goose within the flying geese model.
2. The main driving forces of upgrading and industrial shifting are dynamic comparative advantages (in labour-intensive, low cost manufacturing assembly operations) and competitive advantages (in logistics, business environment, and policy suitability). Further analysis is provided in section 2.3.1.
3. Elaborating on 2, these dynamic comparative advantages are best developed with a skilled labour force. Labour skills levels decide where the country is allocated in value chains. The government’s impetus to adapt foreign technology, skills and knowledge transfer, determine the country’s ability to move up value chains. In this regard, human resources need to be improved via primary and skilled-base education. Furthermore, investment in research and technology are particularly important the closer the country gets to the knowledge frontier.
4. The role of the “lead goose” in the region is clearly important, but is not enough. Thus it is important to not only attract firms from the region itself but also from other regions. Further analysis is delivered in parts 2.3.2, 2.3.3 and section 3.

Other criteria for countries to participate in GVC/RVCs could be developed, for example those based on Draper et al. (2014), and shown in Table 1:

1. Technological readiness for the absorption and transfer of technology, measured by a number of indices in the World Economic Forum (WEF)’s Global Competitiveness Index (GCI) (Schwab, 2014).
2. Market access, comprising indicators from Global Enabling Trade Index, and including domestic and foreign market access plus efficiency and transparency of border administration. Domestic market access focuses mainly on tariffs and the share of duty-free imports. Foreign market access includes tariffs faced in destination markets and the margin of preference in destination markets (Hanouz et al., 2014).

3. Logistics performance, based on the World Bank's Logistics Performance Index (Arvis et al., 2014).
4. Institutional frameworks, as measured by the institutions sub index of the GCI, which takes account of a very wide range of public and private institutions (Schwab, 2014).
5. Quality of infrastructure index, taken from the GCI.
6. Work force development, encompassing the health and primary education, higher education and training, and labour market efficiency sub-indices from the GCI.
7. Business sophistication, drawn from the GCI.
8. Innovation capacity, which is especially important for stage 3 in the reverse production cycle., and can be approximated by the Innovation index from the GCI.

From the abovementioned criteria, a number of the determinants for application of the flying geese model to SACU will be discussed in detail in the next chapter, focused mainly on the comparison between SACU members and East Asian countries.

2.3 How does the SACU region measure up?

We defer the discussion of policy orientations towards FDI and trade liberalization to section 4, since section 3 reinforces the case for liberal approaches. Here we concentrate on comparative and competitive advantages, including the structure of the labour force, and South Africa's potential to play the role of the "lead goose".

2.3.1 Comparative and competitive advantages and the production cycle

Table 1 draws together key comparative indicators as referred to in Section 2.2. Interestingly, on most indicators there is not much to choose between SACU countries and the selected Asian peer group. Nonetheless, table 1 shows that, in the longer term, leading industries in SACU need to improve their human capital quality and capacity with similar pace to what East Asia did with its education system. As said above, the enhancement of human resources is the key institutional prerequisite for value chain upgrading. As shown in detail below, South Africa's performance in education is weak.

The evident lack of big differences on the range of indicators highlighted in 2.2 highlights the crucial role of demographics in differentiating the countries. Simply put, Southeast Asia and China have a comparative advantage in population size that Southern Africa will probably never enjoy. Having said that, overall African demographics are moving, potentially, towards a favourable dividend. Mubila (2012) from the AfDB estimates the continent's total population would peak at 1.6 billion in 2030. However, that is largely an East and West African phenomenon, potentially making those African regions more suited to labour-intensive, assembly-based manufacturing down the line. At the moment, South Africa has a substantial population of approximately 55 million but, by Southeast Asian standards, let alone Chinese standards, it is of average size. Furthermore, the BLNS countries have small populations, averaging around two million people each. In comparison, Southeast Asian countries have large populations of more than 600 million.

The labour pool in SACU is sharply limited relative to that on offer in East, or Southeast Asia, yet Southern Africa has the lowest population growth rate within Sub-Saharan Africa, with a 2% fertility rate in 2012 compared to much higher rates of about 2.5% in West, East and Central Africa. However, lower fertility rates bring an advantageous facet for Southern Africa: the region is also projected to have the highest ratio of working age over non-working age population in the continent by 2050. It is

predicted that by then per non-working person (e.g. children or seniors) there will be 2.3 times more people capable of being in the labour force. The ratio in Southern Africa is much higher than its Central (1.9), Western and Eastern (1.6) peers (Mubila, 2012). This also reflects the emerging middle class in Southern Africa as the main factor for rising consumers and potential booming markets. However, consumption within the SACU region will never come close to East and Southeast Asian levels given the vast population differentials. Furthermore, the high unemployment rate is a key hindrance. In addition, quantitative surveys of SMEs in low manufacturing sectors from Global Development Solutions (2011) shows African workers are relatively less productive than workers in East Asia, although in some sectors productivity is comparable to average firms in China or Vietnam e.g. polo shirts or leather loafers.

The core of the flying geese pattern lies in manufacturing and industrial sectors. However, the share of manufacturing in SACU's GDP is still limited compared to its East Asian peers, from the largest economy in the region South Africa (11.56%) to its neighbours: Botswana (5.68%), Lesotho (12.99%), Namibia (13.05%), while developing East Asia records much higher rates: China (31.83%), Thailand (32.94%), Indonesia (23.70%) and Malaysia (23.97%). The only country within SACU that has a high manufacturing rate is Swaziland at 43.83% (Table 2).

These factors render a labour-intensive manufacturing development path difficult to initiate; we elaborate further on this in Section 4.1.3 with respect to comparative unit labour costs. So it seems that even stage 1 of the reverse production cycle model is challenging for Southern Africa given the demographic and human resources disadvantages the region faces relative to East Asia in particular. Consequently, for the SACU region at its current developmental trajectory, stage 2 seems the utmost the region can achieve. Stage 3 of product innovation requires intensive investment in research and development, which is difficult to achieve if relying solely on foreign investment. Outside of South Africa, the potential for such investment is limited.

Finally, it has to be acknowledged that the problems with respect to education, but also other shortcomings such as health problems and infrastructure deficits in the region depend on the quality of institutions. Although they may not directly affect the return on investment on FDI, indirectly they render many potential projects unsuccessful. So the first and foremost task of SACU governments is to improve, inter alia, the quality of administration, the enforcement of property rights and the broader rule of law – all essential prerequisites for a market economy.

2.3.2 Can South Africa be the lead goose?

South Africa is undoubtedly, and by a large measure, the leading economy in Southern Africa and the one in the region with the most potential to drive a flying geese pattern of industrialization. It is rightly considered the growth pole of the region owing to its relative economic weight and sophisticated corporate capabilities, as reflected in its regional FDI and trade footprints. Its companies are significant investors in the BLNS economies, and beyond in Southern Africa, in a range of sectors reflecting South African relative comparative and competitive advantages (Naidu & Lutchman, 2004), from natural resources extraction, through basic industries and utilities, to manufacturing and services (Page & te Velde, 2004); (Draper et al., 2010). South Africa is also the largest foreign investor in Lesotho, Botswana and Swaziland. Only South African companies have the potential to drive RVCs in these sectors; other countries in Southern Africa such as Angola, Botswana or Zambia have infrastructure and capacity primarily for extracting natural resources (Ogunleye, 2011).

Clearly post-Apartheid South Africa is not comparable to 1960s Japan on a number of levels, beginning with economic capacity and reach, traversing through very different labour forces and population sizes, into fundamentally different domestic political economies and associated constraints. South Africa cannot emulate Japan in terms of scale of FDI, size and sophistication of home firms. The Japanese outward FDI footprint is comprehensive, huge and powerful, as befits the third largest economy in the world. South Africa lacks the necessary economic, political, and technological capacities to copy it. It also has a limited (in global economic terms) presence.

Finally, the demographic structure in East Asia supports the flying geese pattern: Japan's population is aging and costly to maintain, which encourages relocation of low value added, labour intensive operations to lower income, labour abundant neighbouring countries. However, South Africa may not suit the role of Japan in the region since the former's population is young, and the country has been dealing with a stubborn structural unemployment rate of approximately 25% (World Bank, 2014e) for two decades while the youth unemployment rate stands at approximately 45%, one of the highest in the world (Biavaschi et al., 2012). Consequently capital is urgently needed in South Africa itself.

Therefore, relying on larger MNCs from outside the region is a necessary alternative.

2.3.3 China and/or the West as the lead goose?

One feasible scenario for the flying geese pattern to work in Southern Africa is from Chinese, US or European investment into the region. This is particularly relevant in cases where South African companies are not able to act as lead geese. International lead firms within GVCs could, as we elaborate in Section 3, use South Africa as gateway and act as lead goose in the value chain.

In this regard Western companies are of importance in a number of sectors (see section 3.3). However, though some Western MNCs are still active in Africa, in general they are losing relative impact in the region. Over three decades, Western Europe's share in all international trade with Africa decreased from 51 to 28 percent (Luyten, 2013). Nevertheless, the declining European share in international trade does not necessarily indicate that the influence of Western companies is decreasing, since the role that companies play in value chains is more important; in other words European companies may simply be sourcing more from their host bases in the region or indeed from Asia instead of sourcing from Europe. One example is the automobile components industry in the Eastern Cape and Gauteng regions of South Africa, which on the surface has been well integrated into GVCs through automobile OEMs. However, the potential for SACU to form RVCs in SACU in this particular industry is ambiguous, since component exports are largely limited to one African country, Zimbabwe, the remainder being destined for the West (Barnes & Kaplinsky, 2000).¹

By contrast, although recently they have been heavily investing in Africa, Chinese companies so far do not act as lead firms within GVCs. Nevertheless, China, in its quest for natural resources via FDI and development aid, has been picked by the World Bank as the most promising investor to help build

¹ From the BLNS's standpoint, this is notable as in the period covered in Barnes and Kaplinsky's study they barely participated in the regional automotive value chain. It is possible that SACU's population structure plays the crucial role in forming the RVCs. South Africa's overwhelming population of 55 million is able to supply far more components than its neighbours, with populations of 2 million each. This compares unfavourably to East Asia's population structure where Japan's size is comparable to its partner "geese". Thus it is notable that Zimbabwe with its population of 13 million, rather than the BLNS, is able to take part in automotive chains with South Africa.

Africa's manufacturing base (Ozawa & Bellak, 2011). However, Africa's development benefits from Chinese investment are questionable, for example in terms of environmental and labour standards, the need for improving institutional settings such as promotion of human rights and combating corruption. Furthermore, Chinese infrastructure investments often are also claimed to be poorly built (Scholvin & Strüver, 2013). Nonetheless, based on their experience with labour-intensive, massive production of footwear, textiles and electronics, Chinese firms could establish factories in Southern Africa, a process which seems to be underway as China-led special economic zones (SEZs) have been established in a number of African countries, including Southern Africa (Davies et al., 2014), although not South Africa. But as we argued above, labour costs in Southern Africa do not compare favourably with Chinese neighbours such as India, Vietnam, Pakistan, Bangladesh and newly liberalized Myanmar. Those countries also are located closer to China, in terms of population and availability of regional supply chain.

Relying on China, therefore, may neither deliver the quality nor the quantity of investment needed. Therefore, a combination of investors from different home countries is required. Rather than a single, dominant South African flock, a multitude of smaller flocks is necessary.

2.3.4 Is the flying geese model applicable?

Despite the caveats mentioned so far, we are slightly optimistic. Regarding the overall success of East Asia's RVCs development, in our view if the "flying geese" model could be successfully applied to SACU, the implications would be substantially positive. The region would become a centre of export-oriented industrialization, generating a virtuous circle of investment with attendant spillovers into domestic economies. But as we have noted above Southern Africa does not have a Japan-equivalent economy ready to drive rapid development in this way. While it clearly has some capacity to drive regional development, not least through its own MNCs investing into the region, far more FDI than South Africa can supply is required. But why would MNCs from outside the SACU region want to engage in FDI there? To answer this question we turn now to the "gateway model".

3 Attracting Flying Geese: The Gateway Model

At the BRICS Summit in New Delhi in March 2012, President Jacob Zuma referred to South Africa as the "gateway into the [African] continent". It spearheaded Africa's economic integration and "provide[d] guidance on African economic development opportunities" for overseas companies, Zuma said (Mail & Guardian, 2012). Hence, the gateway affords MNCs from outside the region enhanced access to regional markets. Since African markets, including some in Southern Africa, are growing rapidly in relation to other parts of the world, outside Asia, this is an attractive proposition.

3.1 What is a gateway?

Gateways are hinges between the regional and the global level. They open their hinterland to external influences – goods, services, people and ideas – and possess a nodal function. Regional clustering occurs around them. The American geographer Saul Cohen (1982, 1991), who coined the term "gateway", argues that gateways have to be analysed by their success in achieving "nodality". Links to extra-regional partners are crucial for nodality; so is regional connectivity. In other words, the notion of South Africa being a gateway complements the flying geese model because it plugs RVCs into GVCs, or at least has the potential to do so. Key components of a gateway are hence transport infrastructure

and advanced producer services, such as banking and consultancy, which enables MNCs to coordinate their businesses.

Krugman (1991a, 1991b; Krugman & Venables, 1992) argues that location, i.e. proximity, matters for international trade and that regional economic processes tend to favour polarisation, for example between a gateway and its periphery, because of economies of scale and associated agglomeration. The World Development Report 2009 confirms this hypothesis: location and “economic distance”, meaning distance measured in cost and time of transport, matter. Trade intensity and proximity correlate (World Bank, 2009) – at least for most of South Africa’s neighbours. Distance as an obstacle to trade may be reinforced by “division”, i.e. tariff and non-tariff barriers. With regard to the special role of gateways, the World Bank (2009) introduces the term “leading area” and calls for clustering around strong markets such as South Africa. Leading areas are marked by “density”, meaning the concentration of economic activities. Density accounts for agglomeration advantages and economies of scale. Hence, it exerts a self-enforcing effect on economic dynamics.

Gateways matter so much to peripheral places because they enable the latter to connect to global markets via GVCs. Furthermore, through trade and FDI spillovers peripheral places will be incorporated into RVCs, even if initially at the lower end of the scale. FDI in the lower stages leads to knowledge spillovers via demonstration effects, vertical linkages, staff turnover, and competitive pressures, allowing firms integrated into MNCs value chains the possibility to upgrade. Similarly, imports of relatively advanced machinery and intermediate goods via MNC networks promote knowledge transfers over time (World Bank, 2011a). In addition, competition via imports and FDI promotes productivity increases. Since knowledge is the key to participation in value chains, and productivity is key to long term growth and development, these effects are crucial to long term success.

3.2 Policy Implications

Translating density, distance and division into policy advice, politicians in the gateway (in our case South Africa) and in the target countries (BLNS) should facilitate economic density by reducing distance and division. This way, key industries will concentrate in some places. Dealing with distance and division is a multi-scalar task: On the urban scale, people who want to do business in a gateway/gateway city should not be prevented from doing so by obstacles such as crime and inadequate public services. On the national scale, there is a need for legislation that eases cross-border business, for example visa regulations. In addition, remedies of institutional weaknesses such as corruption, lack of property rights and the like may harness the gateway function. Mostly on the regional scale, tariff and non-tariff barriers to flows of goods and services have to be reduced because they hamper the interaction between the gateway and its periphery. Hence, free trade areas encompassing goods and services ought to be a key policy goal; so should adequate transport infrastructure (airports, ports, railway lines and roads) as well as efficient border stops/customs controls. On the international scale, the gateway has to be connected well to the cores of the global economy, most importantly by direct flights and shipping lanes.

This advice boils down to factor mobility. If factors of production are mobile, they will concentrate, generate economies of scale and (at a later point of time) account for economic impulses that are beneficial to the periphery. There is one restriction to this statement though: Migration of unskilled labour should occur for economic motivations and not in search of public services. The same condition applies to the spatial concentration of economic activities. For this reason, institutions – in the broadest

sense – ideally have to be “spatially blind”, meaning that they apply equally to an entire state or regional community. If politicians increase the attractiveness of a specific place by providing incentives to capital and labour that are not available elsewhere, the developmental outcomes will be of doubtful sustainability or even outright counterproductive.

Having said this, it may well be advisable to set up SEZs when it is politically not feasible to liberalise certain markets because of vested interests. If the SEZ takes off, political pressure may evolve in other regions or the whole country to reform the respective policy. Another reason for special treatment of regions or sectors may lie in the lack of knowledge about the correct scope and scale of regulations. In this case, the SEZs can be treated as elements of trial and error. Thus, policy competition within the same country or region can be created. It must, however, be made sure that this yardstick competition leads to a final adoption of the most adequate regulation for all. In other words, the application of different regulations must be planned as a temporary phenomenon.

Another challenge to policies that boost a gateway is that many of them must be coordinated amongst all regional states, including not only national but also provincial and municipal governments. Economic activities concentrate in a gateway and trigger growth impulses for the periphery. Yet, there is a time lag between the concentration of economic activities in the gateway, which partly happens at the expense of the economic development of the periphery. Moreover, if lagging and leading places are brought together in value chains, those that take a subordinate role in the value chain will experience fewer benefits, initially, than those that take a superior role. This is evidently a political challenge, in particular for the periphery that benefits later and less than the gateway.

Offsetting these political and economic challenges is the fact that over time agglomeration forces will compel dispersion of economic activity into the peripheral region, once the cost structure in the leading area rises beyond an optimal level. This is analogous to the flying geese pattern, which originated in rising Japanese domestic costs and propelled Japanese MNCs into their region. There is evidence of such forces being in play in Southern Africa, as we briefly indicate below.

So notwithstanding the challenges, South Africa’s gateway role is essential for its neighbourhood. Southern Africa has a tremendous opportunity to transform its resource wealth and the present resource boom into economic development. In order to integrate the resources, which are located in the Southern African periphery, into GVCs, the region needs a gateway that provides and manages transport infrastructure and can coordinate the management of value chains, as we show in the following sub-sections. The realisation of value addition within the region instead of merely exporting unprocessed goods depends largely on South Africa’s globally competitive and technologically sophisticated enterprises; foreign MNCs; and regional policy approaches (more on this in Chapter 4).

3.3 South Africa as the Southern African Gateway

South Africa fulfils the gateway notion in two ways: transport infrastructure and the business environment. These are widely identified in the literature as crucial for participation in global value chains (see inter alia the AfDB, the OECD and the UNDP (2014)). In sub-sections 3.3.1 to 3.3.3, we show that:

- Southern Africa, especially the members of SACU, depend on South African harbours in order to connect to world markets, particularly Durban and Richards Bay. By African standards, the broader Southern African region is connected very well to South Africa by railway lines and road corridors.

The North–South Corridor is crucial for the overseas trade of landlocked countries (Botswana, Lesotho, Malawi, Swaziland, Zambia and Zimbabwe). South Africa's strength in physical infrastructure is reinforced by a sophisticated business environment for the logistics sector. Regarding air transport, even the entire sub-Saharan region is tied to South Africa's major airport, O. R. Tambo in Johannesburg, which interlinks regional and global flights.

- South Africa's two global cities, Cape Town and Johannesburg, are the key locations for overseas companies that establish regional headquarters in order to coordinate their sub-Saharan African business. The reason for this is excellent corporate services available in Cape Town and Johannesburg. Durban is the principal logistics gateway for container shipping, centred on its port, but largely fails to attract headquarters investments.
- South Africa also plays a critical role as a regional services hub, supporting a range of productive activities throughout the region. For example, the Johannesburg Stock Exchange (JSE) is a conduit for financial flows from the rest of the world to the entire African continent. Private banks and telecommunication companies provide excellent African networks. The Development Bank of Southern Africa (DBSA) and the Industrial Development Corporation (IDC) are by far the most liquid regional providers of credits for economic projects.

Nevertheless, there are some pitfalls ahead: South Africa, which is located at the southern edge of the African continent and at great distance to the cores of the global economy, is not the only possible gateway to Southern Africa. South Africa implements a range of tariff and non-tariff barriers. Domestically, there is a severe lack of skilled labour. Visa and work permits for foreigners are not easy to obtain. In addition to this, the South African government does not appear to have a coherent gateway strategy. Some of its policies and the general political climate in South Africa work against the country's gateway status. We address these problems in Section 3.4.

3.3.1 South Africa as a Transport Hub

During the colonial era, there were numerous small gateways in Southern Africa. The British, German and Portuguese conquests started at harbours, usually bays that offered protection from ocean currents and storms or at least places that allowed unloading of goods. In the late 19th and early 20th centuries, the colonial powers built railway lines to the ports in order to export crops and mining products from the hinterland. These railway lines also reinforced their territorial control. Accessing the interior of Southern Africa soon became much easier, although the Great Escarpment, a region that features tremendous changes in elevation, sharply separates the narrow coastal strip from plateaux at an altitude of about 1,000 metres. However, the transport infrastructures built by the colonial powers were not meant to integrate the different parts of their colonies. They rather fragmented them, individually linking several corridors to Europe via their respective gateways. For example, railway lines and road corridors from the colonial era connect harbours in Angola (Lobito, Luanda and Namibe), the two Congos (Matadi and Pointe Noire), Mozambique (Beira, Maputo and Nacala), Namibia (Lüderitz and Walvis Bay) and Tanzania (Dar es Salaam, Mtwara) to the nearby hinterland. Only the Coast2Coast Corridor from Maputo to Johannesburg to Walvis Bay and the North–South Corridor from Durban via Johannesburg, Harare and Lusaka to Lubumbashi bind the regional countries together, and in both cases reinforce South Africa's gateway role. Furthermore, the quality of regional infrastructure is poor. Roads tend to be filled with potholes. Sometimes they are untarred, for example about half the way from Mozambique's port of Nacala to Blantyre in Malawi. Railway tracks date back to the colonial era.

In central Mozambique, trains that transport coal from Tete Province to Nacala go as slowly as 20 kilometres per hour on average (Scholvin & Plagemann, 2014). In the worst cases, tracks are overgrown by vegetation, for instance between Kolwezi in the DR Congo and the Angolan border (Senior officials of the DBSA, 2011). All this highlights the crucial role of South African infrastructure (Box 3).

Box 3: The Crucial Role of South Africa's Ports

Within this regional transport network, South Africa's ports play a critical role. First, they are relatively well interconnected by the two just-mentioned corridors. A study by the World Bank indicates that 59% of the roads between Lubumbashi and Durban, which are completely tarred, are in good condition, meaning that there is no immediate need for maintenance work. As a comparison, the same study rates 72% of the roads from Harare to Beira as in fair condition, with the remaining 28% not rated (Ranganathan & Foster, 2011). Moreover, because of much higher port capacities, which account for economies of scale, advanced equipment/technologies and more efficient management available there, the bulk of the overseas trade of South Africa's direct neighbours, Malawi and Zambia passes through Cape Town, Durban, Port Elizabeth and Richards Bay. Map 1 shows major harbours in East and Southern Africa as well as their connections to the interior of the region. It also indicates the volume of goods handled at each harbour, demonstrating South Africa's dominance.

The advantages of South Africa's ports that result from equipment/technology and management are exemplified by container dwell time, which is four days on average in Durban. Cape Town, Port Elizabeth and Namibia's port of Walvis Bay reach slightly higher values with six to eight days. The corresponding figures for Beira, Luanda and Maputo are 20, 22 and 12 days respectively (AICD, 2011). The port of Dar es Salaam, which constitutes the main alternative gateway for the Congolese–Zambian Copperbelt, is congested and hence suffers from enormous delays. A World Bank study that concentrates on the foreign trade of the landlocked regional countries shows that delays at Dar es Salaam make Durban the faster option for Zambia's exports and imports. Dar es Salaam has, however, an advantage in terms of costs for rail transport – not necessarily time – because of being physically closer to Zambia. The advantages of Durban are even clearer in comparison to Beira, which is the seemingly natural gateway for Zimbabwe and played this role prior to the Mozambican civil war (Ranganathan & Foster, 2011). Hence, South African ports do particularly well for transshipments, linking the harbours of the regional countries to extra-regional trading partners. South Africa's ports serve as hubs insofar as large container vessels from overseas are sent there, mostly carrying goods destined for the South African market. A few goods are then reloaded onto smaller vessels that go to ports nearby in order to service small local markets. Furthermore, port congestion boosts South Africa's role in transshipments: South Africa's transport company Transnet is entering into port-pairing arrangements, most notably with Luanda. These set in where the smaller non-South African ports do not have the capacity to handle incoming cargo, meaning they redirect such cargo to South Africa either via mooted regional feeder lines or land transport (Senior official of the DPE, 2012). Adding another example, United Africa Feeder Line (UAFL), a regional shipping company, links the Mozambican ports of Beira, Maputo, Pemba and Nacala to Durban, offering MNCs, in particular those from the mining sector, an alternative to road transport.

Related to this, the high level of economic development in South Africa has brought about an environment that facilitates business activities, including transport. The World Bank's Logistics Performance Index (LPI), as shown in Table 2, reveals that South Africa offers better conditions for transport than other regional countries. By global comparison South Africa belongs to the first tier of

countries, on the same level as New Zealand, South Korea and Turkey. Its neighbouring countries belong to the third and fourth tiers, which are almost exclusive to the world's least-developed countries.

It is unlikely that South Africa's dominance for the transport of goods in large quantities will cease in the near future. A major reason for this is that the development of corridors that bypass South Africa, especially regarding transport by rail, is hardly economically feasible because of the low quantity of transported goods (TradeMark Southern Africa, 2012). China's massive investment in transport infrastructure does not appear to constitute a challenge yet because of insufficient quality: Angolans speak of "disposable roads" built by Chinese construction firms as they wash away after one rainy season (Scholvin & Strüver, 2013).

Even where overseas companies seek to export tremendous amounts of goods, as coal miners do in central Mozambique, alternative gateways will probably remain limited to the sub-national scale and niches: a coal terminal handles bulk goods and does not help much for containers. Presently, alternative gateways within the region face the obstacle of insufficient port infrastructure. Corridors to the hinterland require intense rehabilitation. The Tanzania–Zambia Railway (TAZARA), the main project to bypass South Africa during the apartheid era, is hampered by the unfavourable geography of the East African Rift Valley: in addition to high elevations, mudslides frequently block the track. Tanzania Railways Ltd operates at 50 per cent of its capacity and TAZARA is indebted (Hirschler & Hofmeier, 2010). South Africa's rail company Transnet contrariwise maintains the highest level of productivity of any railway in sub-Saharan Africa, and is in the early stages of a massive capacity expansion.

South Africa's outstanding connectivity in terms of maritime transport is revealed by the Liner Shipping Connectivity Index (LSCI) which measures, using various variables, how well the ports of a country are connected internationally on a scale of 0 to 100. As Table 2 shows, South Africa's ports are much better interlinked than those of any other country in East and Southern Africa.

Yet, there is more to transport infrastructure than railway lines, roads and harbours, especially when thinking about gateways. An overseas company that seeks to invest somewhere in South Africa's periphery or has to manage an investment project there, needs to send in its managers from time to time. New business contacts usually require face-to-face interaction. Hence, the question of how individuals from the cores of the global economy can reach the periphery matters. Data compiled by Draper and Scholvin (2012) on flight connections from O.R. Tambo, which is South Africa's main international airport, reveals that this air hub (Box 4) not only interlinks South Africa globally (see Map 2). O.R. Tambo also provides excellent regional flight connections (see Map 3).

Box 4: O.R. Tambo as Central Hub

While practically every economically relevant city in the SACU region can be reached directly from Johannesburg several times a day, and even smaller towns — in particular in Mozambique — are well connected to Johannesburg, flight connections become thinner beyond Southern Africa. Nonetheless, O. R. Tambo offers direct flights to major cities in sub-Saharan Africa at least once per day. Airports there provide links to towns nearby. North of the Sahara, only Cairo can be reached directly. Beyond Africa, the old and new cores of the global economy are well connected to Johannesburg, with a clear dominance of flights from Europe.

South Africa's excellent flight connections also matter for moving goods; albeit less bulky ones than those usually transported by rail and road – gold, platinum or even vegetables as opposed to coal. Dettmer, Freytag and Draper (2014) show that South Africa exports a much larger share of products with high air cargo relevance to Mozambique, Zambia and Zimbabwe than to industrialised countries. Hence, air cargo transport appears to be a valuable option to overcome trade barriers associated with land transport, including corruption at border stations (more on this in section 3.5). This reinforces South Africa's gateway role insofar as airports in neighbouring countries are even less connected with non-African places than ports.

As these considerations suggest, linking with South Africa eases overseas trade for Southern African, and particularly SACU, countries. While Namibia has its own access to the sea via the port of Walvis Bay, Botswana, Lesotho, and Swaziland are landlocked. This adds significantly to their trade costs, but those costs would be much higher if they had to rely on the infrastructure and organizational capacities of other countries in the region. For example, fully exploiting Botswana's coal resources is currently limited by the fact that the landlocked country does not possess a sufficient rail link from its coalfields to a nearby port. Linking Botswana's coalfields to those of South Africa, which are already connected by rail to Richards Bay, would significantly increase development opportunities for Botswana (Scholvin, 2014).

3.3.2 South Africa's Global Cities

Even if overseas companies decide to use transport infrastructure in South Africa's neighbourhood, seemingly bypassing the gateway such as the Brazilian mining giant Vale in central Mozambique, South Africa will remain crucial for them. The business environment that Cape Town and Johannesburg provide are the reason for this – Vale does not coordinate its Mozambican business from an office in Beira or Maputo. Its executives work in Gauteng, South Africa. In other words, being linked to the South African gateway is beneficial for the regional countries insofar as South Africa makes them accessible for transnational companies.

There are various components of what appears to be a regional headquarters function. Johannesburg and surrounding Gauteng is the largest urban economy in sub-Saharan Africa. It is the centre of sophisticated services networks, which underpin a range of economic activities increasingly centred on regional markets. Network services, comprising communications, finance and transport; arguably constitute the backbone of Johannesburg's competitive proposition. They are readily available at relatively reasonable cost compared with other sub-Saharan countries. Energy supply is secure, at least by African standards. These location advantages also apply to Cape Town; albeit it plays a secondary role compared to Johannesburg and has to specialise in niche sectors such as oil and gas.

Over time, this sophisticated economic structure of Cape Town and Johannesburg has been supplemented by agglomerations of other services that enable the complex business processes required to run modern economies and associated MNC networks. Those related services encompass a wide range of activities, from professional services such as legal and accounting, through consulting, the education services provided by South Africa's relatively sophisticated business schools and well-endowed universities, the widespread availability of various news and analytical services through numerous and growing channels, to the vibrant free press that underpins these. Such knowledge services are critical to head office functions, enabling knowledge accumulation at the centre in order to better manage subordinate activities in satellite countries (Draper & Scholvin, 2012).

These factors must at least partly explain why office space provision has grown rapidly in Johannesburg, with a range of foreign companies setting up offices there since the end of apartheid. It is difficult to establish empirically the extent to which those foreign operations represent regional headquarters coordinating a network of regional activities, as opposed to operations based in South Africa and targeting the local market. Nonetheless, Parnreiter et al. (2013) calculate that non-South African companies comprise 39 per cent of the headquarters of 181 large companies located in the metropolitan area of Johannesburg. In Midrand, they are even dominant with a share of 53 per cent.

Moreover, soft factors reinforce South Africa's attractiveness to foreigners. The country offers a Western style and standard of living, or what one commercial diplomat called the "golf course effect", whereas other sub-Saharan destinations such as Angola or Nigeria are regarded as "hardship posts" (Commercial attachés of the British, Japanese and US embassies in Pretoria, 2012). Some interviewees from Cape Town even suggested that overseas managers "fight in the boardroom" for the opportunity to supervise a project there because of the city and its surroundings being a highly attractive tourist destination with a Mediterranean climate. They also pointed out that the attractiveness of Cape Town has a strong monetary expression: well-paid managers from overseas are willing to go to the office of their company in Cape Town, working for the salary they used to earn in their home country. In order to get managers to other places in Africa, multinational companies have to offer them considerably higher salaries (Managers of a maritime supply company, 2014).

Cape Town and Johannesburg should not only be seen as entry points for companies and managers from overseas. The sophisticated business environment and excellent producer services they offer are essential for companies from the regional periphery seeking to plug into global value chains. What is more, the region's highly skilled labour force is, at least partly, formed in Cape Town and Johannesburg, as the large number of SACU and SADC (Southern African Development Community) students at South African universities demonstrates. Related to this, businesspeople and politicians from the region seek consultancy advice in South Africa, simply because cities like Lusaka and Windhoek do not possess a strong knowledge economy. If economic development in Southern Africa is to be based on skilled entrepreneurs who have access to advanced producer services that allow them to grow their businesses and globally interlink them, the South African gateway will be a *condicio sine qua non*.

3.3.3 South Africa as a Services Hub

Although South Africa possesses the strongest manufacturing sector in Africa, its gateway role rests more on producer services such as consultancy and finance. One should not underestimate the relevance of producer services as they make the manufacturing sector more competitive. OECD/WTO data shows that the value created directly and indirectly by services as intermediate inputs represents more than 30% of the total value added in manufactured goods. Countries that have open and competitive services markets tend to be more competitive in manufacturing (AfDB et al., 2014). Producer services also tend to be marked by a high local/regional component: research on Latin America indicates that around four-fifths of the service component of manufacturing exports consists of domestic value added (OECD et al., 2013).

The recent acquisitions of Massmart Holdings by Walmart, of Absa Bank by Barclays Bank PLC and Vodacom by Vodafone in the retail, financial services, and telecommunication sectors respectively, indicate that South African MNCs have built African networks that are of strategic interest to global

MNCs. By purchasing South African enterprises and their regional networks, companies from overseas use South Africa as a gateway.

Given the relatively large size and sophistication of South Africa's financial sector and the liquidity of its financial markets, especially the JSE, intuitively the proposition that South Africa channels financial transactions from overseas to Africa makes sense. Relative to its African peers the JSE is the giant, with an average day's trade being more than the annual trade of Mauritius and Nigeria put together. The single listing of Telkom SA at USD 11 billion roughly equals the total capitalisation of the Nairobi Stock Exchange. Total assets of deposit-taking banks and of financial intermediaries in South Africa are significantly larger than the combined value of assets in the other SACU members. In terms of institutional investment, South Africa is similarly predominant with about 80% of the total pension assets of sub-Saharan Africa (Irving & Manroth, 2009).

By contrast, South Africa's fellow SACU members are marked by relatively shallow financial sectors with low ratios of deposits to gross domestic product, embryonic capital markets with limited competition and a deficiency of long-term finance. Their regulatory frameworks and market support institutions are in most cases still under development. Financial skills are limited. The assessment of credit access for enterprises in the World Bank's (2014b) Doing Business Report, as shown in Table 4 demonstrates these differences in SACU. It also indicates that South Africa does quite well on access to credit by global comparison.

Foreign investors can theoretically use South African financial markets for at least two purposes from the gateway perspective: to invest in South African companies, in other words portfolio investment, in order to access an African growth story by leveraging South African corporate networks; or to raise finance in South Africa directly for their own African operations. As far as the JSE is concerned the first proposition dominates and in that sense South Africa, the JSE specifically, is an African gateway, but the sources of funds are primarily portfolio in nature. Senior officials of the JSE (2012) do not see the second proposition as having much traction with respect to MNCs moving into the region. MNCs tend to have their own sources of finance, and South African exchange control regulations make the exercise difficult. The JSE is also exploring how best to link African commodity markets to South African and potentially global buyers (Draper & Scholvin, 2012).

What is more, South Africa has a number of long term development finance institutions – in particular the IDC, which finances industrial development projects largely in South Africa but also continent-wide, and the DBSA, which funds infrastructure projects in the SADC area. These two institutions co-finance with both the private and public sector, including FDI. They provide advice and skills transfer to African partners in areas such as due diligence, risk management and governance. They also contribute to the development of the financial sector through risk reduction mechanisms such as guarantees, provision of credit lines to, and co-financing with, other financial institutions.

All this means that being tied to the South African financial sector enables SACU countries to generate investment capital. The relevance of these links is exemplified by large-scale energy projects. Not only does South Africa's power utility Eskom often guarantee to purchase a certain amount of electricity from yet-to-be built power stations in neighbouring countries, which makes their construction possible in spite of tiny domestic markets, but loans for these projects are usually provided by the aforementioned financial institutions or at least channelled through them (Maupin, 2015).

In terms of lending and investment, the IDC and the DBSA are by far the largest regional development finance institutions, with capacity to co-finance larger scale industry and infrastructure investment. The IDC (2013) is currently sustaining an average financing level of approximately ZAR 13 billion, largely for minerals, energy and industrial projects. The DBSA (2014) is operating at a current level of ZAR 8.0 to 9.0 billion per annum, of which 40 to 50% is for projects outside South Africa. According to available annual reports, the DBSA's exposure in Botswana, Lesotho, Namibia and Swaziland amounts to approximately 20% of its loan portfolio outside South Africa; a significant proportion. We could not establish similar figures for the IDC.

3.4 How Could SACU Countries Benefit From The South African Gateway?

The BLNS countries already benefit from South Africa's gateway status through the access afforded to superior transport infrastructure and services; global cities that offer conduits to and from the developed world and beyond; and access to sophisticated producer services that support their own economic development processes. If South Africa, particularly its global cities, reinforces its gateway role, intensified FDI into South Africa and associated investment flows into the region, will result. In other words, a functioning South African gateway can be expected to deepen investment in the region and, provided that certain tariff and non-tariff barriers are eased (see Section 4), also the regional division of labour intensive manufacturing. Along with FDI comes knowledge transfers, or at least the potential for knowledge transfers since the nature and extent of such transfers depends, crucially, on the absorptive capacities of the host state. Those capacities are generally weak in the BLNS countries, with skills shortages in particular occupying the dubious position of primary bottleneck (World Bank, 2011a, pp. 117 - 118). Assuming those absorptive capacities can be enhanced, then the BLNS countries could be well-placed to leverage off the South African gateway by plugging into RVCs and GVCs, and over time upgrading within them. That should create a virtuous growth spiral which contributes substantially to addressing the major development challenges the region faces, in particular high unemployment levels amongst youths.

3.5 Emerging Challenges to the South African Gateway Strategy

Despite the highly favourable conditions analysed above, South Africa's gateway role is hampered in several ways. First, some MNCs have decided to run their African business from their global headquarters considering the relatively small size of African or SACU markets. They connect directly with the periphery and do not use a gateway; at least not as a location for a regional headquarters. This appears to be the case for some European enterprises which benefit from the historically developed African networks available in London and Paris, in particular. Enterprises from the Far East and North America contrariwise depend more on an office located in Africa; also because of being in a different time zone, which considerably reduces the overlap of business hours.

Second, some offshore locations have arisen as rivals to South Africa. Dubai offers an excellent business environment, including a globally interlinked airport with direct flights to many African destinations and a financial hub with its own set of attractions all subject to English law. Mauritius, which sees itself as the hinge between Africa and Asia, benefits from its extensive double tax agreement treaty network and favourable corporate tax treatment. South Africa, by contrast, imposes relatively high restrictions on inward investment. For example, Cross-border acquisitions of local entities financed wholly or in part by the exchange of shares in the foreign company, or mergers that create domestic shareholdings in a new merged foreign entity, fall under exchange control approval processes. Related to these

controls on the externalisation of South African assets, the re-domiciling of South African companies is subject to approval from the minister of finance.

Third, South Africa faces considerable geographical obstacles: Being located at the southern edge of the African continent, South Africa does not lie between African countries and extra-regional trading partners – which would boost its role as a gateway – but rather outside of these main geographic currents. Even as a node for RVCs South Africa's location is unfavourable because it lacks centrality, or is distant from the cores of the global economy and most African countries (World Bank, 2009). For the BLNS countries in SACU such considerations clearly matter less, given their physical proximity to South Africa.

Fourth, borders in Africa, which fall into the World Development Report's category of "division", massively hamper trade between the SACU region and Southern Africa. For example, while Botswana and Namibia possess one-stop border posts that take 20 minutes for lorries, transport from Windhoek to Lubango in southern Angola can take up to 15 days because of border controls, involving corruption, and insufficient roads in Angola (Advisor of the Namibian Agricultural Trade Forum, 2010). Similarly, a recent World Bank report indicates that delays at Beitbridge on the border of South Africa and Zimbabwe were on average 34 hours for traffic northwards and eleven hours for traffic southwards, while at Chirundu on Zimbabwe's border with Zambia, lorries waited another 39 hours if they went north and eleven hours if southbound. Goods transported along the entire North–South Corridor spent about one third of their total transport time waiting at borders (Curtis, 2009). Taken together, delays at Beitbridge and Chirundu equalled a 25% surcharge on transport costs (Teravaninthorn & Raballand, 2008). While matters have improved recently, significant progress has not materialised mostly owing to bureaucratic obstacles and problems in applying technologically sophisticated procedures at borders (OECD & WTO, 2012).

Beyond transport, tariff and other non-tariff barriers are serious obstacles for the South African gateway too. Even within SACU, quality standards are applied arbitrarily, constituting a tool of market protectionism. The BLNS countries in SACU regularly invoke the 2002 agreement's "infant industry" clause to erect internal trade barriers to other SACU states (but principally South Africa's) exports. Furthermore, the BLNS countries impose a wide variety of import bans on agricultural and agro-processed goods from South Africa. For its part South African customs officials reportedly regularly interdict goods moving across the BLNS countries borders into South Africa (World Bank, 2011b). Beyond SACU, two member countries of SADC are effectively not part of the free trade area that this organisation officially forms (Senior officials of the DTI, 2013). These officials regard the Tripartite-Free Trade Area (TFTA), which may be formed by the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC) and the SADC, as a means to deal with ongoing trade facilitation challenges and thus boost economic growth through a larger regional market and regional commodity chains.

Fifth, South Africa has to address considerable domestic challenges in order to maintain or even expand its gateway role. The first is the lack of skilled labour. The recent "National Skills Development Strategy" stresses the inadequate skill levels and poor work readiness of people leaving secondary and tertiary education. It points to the inadequate link between institutional and workplace learning. Synergies

between universities, Further Education and Training (FET) colleges² and government training centres are poor. The country's progression towards intermediate and higher skills required for growth sectors in a knowledge economy is considered insufficient (Department of Higher Education and Training of South Africa, 2012). It is, therefore, not surprising that South Africa suffers from vacancies in the professional and technical fields as well as in accounting and other business-related professions (see Table 5). In spite of this, South Africa's immigration and work permit acquisition procedures remain challenging for foreigners, and a source of constant complaint from foreign companies. Regulations apparently fail to list skills eligible for the newly instituted critical skills work visa. It therefore appears that overseas missions are presently unable to process "legal" visa applications until they have more clarity (Business Day, 2014).

The second domestic problem is a combination of a non-existent gateway strategy and conflicting policies. South Africa does not appear to possess a coherent strategy that would boost its gateway role. For example, the National Treasury has apparently been working on a strategy to promote Johannesburg as the financial gateway to Africa for at least ten years, apparently without sustained results (Senior official of the DBSA, 2012). South Africa's huge infrastructure build programme is targeted primarily at the domestic coal, iron and manganese railway lines and associated port infrastructure, whereas it appears no one at the Department of Transport or at Transnet is currently thinking systematically about the gateway vision. Rather, the domestic infrastructure programme is primarily about poverty reduction (Former advisor to the Minister for Public Enterprises, 2012; Senior official of the DBSA, 2012).

What is more, an explicit gateway strategy could throw up some surprises in terms of existing government approaches to the role of transport state-owned enterprises. For example, South African Airways appears to exercise a hold over the Department of Transport's allocation of flight licences, which it allegedly uses to minimise competition (Senior official of Wesgro, 2014). A gateway strategy might, however, require an expressly liberal approach in order to maximise passenger and cargo movements through O.R. Tambo and other airports. In other words, because of vested interests and a different vision for economic policy, Cape Town seemingly faces enormous difficulties to increase its global connectivity by air.

Conflicting policies go much further and have a serious, negative impact on South Africa's political climate. The just-elected African National Congress (ANC) government is under great pressure to enact socially transformative economic policies, especially regarding ownership of agricultural land and mines. Such policies could be incompatible with South Africa's role as a gateway because they come along with the possibility of nationalisation in other economic sectors or at least strong governmental interference. For example, the draft "Protection and Promotion of Investment Bill", which would remove national treatment for MNCs wishing to invest into South Africa and make it subject to a prior screening test, also pushes in this direction and is the subject of much discussion in diplomatic circles and their associated business interests. The bill also seeks to redefine expropriation in order to subject it much more firmly to "public interest" considerations (South African Institute for International Affairs, 2014).

² FET refers to education and training provided from Grades 10 to 12, including career-oriented education and training offered in technical colleges, community colleges and private colleges.

Notwithstanding these various challenges to the gateway strategy, we still think it is an eminently suitable approach for South Africa and its SACU neighbours; one that accords with obvious economic and geographic realities. Crucially for our argument, it also fits, broadly, with the flying geese pattern. So where do both fit within the regional policy debate, and in relation to other options? We turn to this next.

4 South Africa, SACU, and the RVC/GVC Policy Debate

We argued above that attracting flying MNC geese requires a liberal trade and investment policy orientation, and that this is consistent with a gateway strategy since conduits for value chains need to minimise bottlenecks. However, South Africa seems to be pursuing a different strategy, in which GVCs appear to be regarded as somewhat threatening to domestic and regional industrial capacity. South Africa's policy priority is rather to coordinate regional economic policies and set up RVCs in the industrial sector (Draper & Scholvin, 2012). This could be construed as wishing to extend import substitution into the region. Furthermore, the Department of Trade and Industry's (DTI) approach to regional economic integration, labelled "regional developmentalism", is not primarily about tariff barriers. It rather concentrates on economic policy coordination in order to set up RVCs (preferably in the industrial sector). This perspective is strongly influenced by the DTI's thinking on industrial strategy at the domestic level which draws heavily on the "developmental states" explanation for East Asian success (see Section 2.1.4), rather than the "flying geese" approach. In the developmental state approach, both domestically but also at the regional level, manufacturing is emphasised but services are minimised. This minimises the comparative advantages that the gateway model confers on South Africa, and on the region.

In this light we next identify two "visions" for regional integration emerging from intra-SACU debates and our elaboration of the "flying geese" pattern and "gateway" model. The first is anchored in import substitution at the regional, but also national, level, and seeks to build on comparative advantage in resource extraction to promote upgrading through beneficiation. This can be thought of as a coercive or perhaps "developmental" policy approach, since it seeks to compel upgrading through the use of (primarily) negative incentives. The import replacement strategy works with restrictions in order to strengthen RVCs. The output of RVCs is then supposed to be sold both within the region and globally. We offer a short critique of this approach with application to SACU, and the BLNS. The second approach links RVCs to GVCs via MNCs. It can be considered a facilitative approach that works with and not against MNCs, by offering incentives/support to MNCs so that they plug partners from SACU into their GVCs. Hence these MNCs tie RVCs into GVCs. Thus, the liberal strategy seeks to respond to MNC concerns rather than to compel outcomes; an approach we believe offers better prospects for success.

4.1 A Developmental Approach? Import Replacement and Beneficiation

Central to the import replacement approach is the claim that MNCs capture most of the gains from GVCs, and flowing from this more value addition in higher stages of production needs to take place in the region/country concerned. In this perspective the primary policy objective is either to oblige MNCs to invest in value chain upgrading in the country or region, or to minimise competition from them so as to favour domestic firms' upgrading strategies. A mix of these objectives is also conceivable.

In SACU the RVC dimension could be characterised by South African companies, since they have the corporate capabilities, sourcing inputs from their neighbours for fabrication and export initially into

regional markets; or relocating the less skill-intensive parts of their value chains into SACU neighbours. Given the prominence of global MNCs in the South African marketplace, and in many cases their regional orientation linking increasingly to the “Africa rising” proposition, it is to be expected that MNCs in certain industries would play similar roles to South African companies in SACU. By virtue of being MNCs many have global sourcing and production strategies and therefore would approach the regional proposition differently to their South African counterparts. Either way, the BLNS countries would need to plug into these South Africa-centric or MNC-centric value chains by providing resources or, where possible, niche components. For example, such an approach could be attempted in the clothing and textiles sector, with South Africa providing capital-intensive textiles to labour-intensive clothing factories in Lesotho, using cotton grown in Swaziland. Another theoretical example could be for Namibia and Botswana to build tannery capacity, leveraging off their respective substantial cattle herds, to provide hides for the South African automotive leather industry, in turn supplying leather seats to the MNC original equipment manufacturers (OEMs) present in South Africa. Possibilities such as these are being actively explored in a study for a SACU member states’ task team on a potential SACU industrial policy currently underway.³

4.1.1 Import replacement and beneficiation

The import replacement perspective manifests in “temporary” import protection in order to give domestic and regional companies the space to acquire the requisite capacities to expand and grow their competitiveness. Typical policy instruments include, inter alia: import tariffs or selective use of trade defence instruments such as anti-dumping duties or safeguards; preferential government procurement particularly through use of local content provisions; and ownership restrictions designed to favour domestic ownership. These arrangements could also be extended to the regional level, generally under the rubric of regional economic communities (RECs). The extent to which they apply across borders within RECs depends on the degree of institutional integration of the RECs and the RECs’ overall orientation towards outside investors and imports.

Since SACU is a customs union, not a common market, the primary collective policy instrument applicable to the member states is the import tariff.⁴ In the import substitution model the tariff should be configured to protect final product production, and could allow for sourcing required components to import. In the first instance this would require agreement amongst the member states on which value chains to prioritise and how the value chain would be “parcelled out” amongst the members, so to speak, and corresponding import tariffs reviewed. As the overall objective is to increase exports, careful thought would have to be given to which segments of the value chain to protect in order to build domestic/regional capacities, in relation to the overarching competitiveness of the end product exported from the region.

Beneficiation prioritises adding value to resources, or, through promotion of resource retention. Since resources are at the origin of manufacturing value chains, this is an upgrading strategy. The strategy also applies to the agricultural processing sector, for example in the beef/leather value chain. The policy objective is to oblige those MNCs that rely on imported resource inputs to invest in forward integration

³ Unfortunately the study is still being concluded, and is confidential, and therefore the results cannot be reported on here.

⁴ Interestingly MNCs looking to access the SACU market apparently do not pay much attention to tariffs. Rather tax regimes and associated profit repatriation are at the top of their checklists, with tariffs generally featuring last of all. Comment received from Duane Newman, former partner at Deloitte South Africa.

in the country/region that is the origin of the resource in question. Strictly speaking this concerns orientation to GVCs, but in some cases consideration might be given to sourcing regional inputs as an extension of the broader beneficiation strategy. So iron ore beneficiation into steel, for example in South Africa, might involve regional sourcing of inputs, for example coal from Botswana, to support the strategy.

There are several policy instruments that can be used. First, export restrictions, either through taxes or quantitative measures (quotas or bans). The essential idea is to impose punitive penalties on exports of the resource in question in order to disincentivize exports and retain the resource for domestic processing.⁵ Second, a more extreme, nationalist variant would require that only domestically owned companies undertake beneficiation, thus bringing investment policy (restrictions) into the equation. So the government might declare a particular resource to be “strategic”⁶ and place inward FDI into that resource on a negative list whereby national treatment for the foreign investor is not automatically accorded. This would typically require establishment of an inward investment screening agency, so that potential foreign investors would have to apply to invest in that resource. Then assuming permission was granted, it would be done on condition that further processing takes place according to agreed value-added percentages, for example. This is probably an important impulse behind the DTI’s draft Promotion and Protection of Investment Bill.⁷

4.1.2 Which export markets?

In arriving at decisions on which value chains, and segments of those value chains to target, consideration would also have to be given to the destination market. In some ways the SADC market can be considered an extension of the SACU market since SACU enjoys preferential access into most SADC markets by virtue of the SADC FTA. Hence the import substitution model, via a trade diversion mechanism⁸, arguably extends into SADC. As renegotiation of the SADC FTA does not look feasible for the foreseeable future, this would essentially have to take the SADC FTA tariff schedule as given. One substantial exception is Angola, which does not participate in the SADC FTA yet but as the region’s second largest economy offers some prospects to exporters. A similar logic would apply to the TFTA involving SADC, COMESA and the EAC, except that the TFTA is currently under negotiation and may take some years to conclude given the number of countries involved. Within the TFTA the key target market for SACU exporters would be the EAC members, especially Kenya which is the largest economy – and Tanzania already participates in the SADC FTA. Consequently there is a small prospect of more carefully targeting particular value chain components, depending on whether SACU were able to cohere a common plan in time. However, the markets concerned are relatively small. Overall, it could

⁵ This policy has been implemented in the scrap aluminium industry. International Trade Administration Commission “Export Control Guidelines Pertaining to the Exportation of Ferrous and Non-ferrous Waste and Scrap Metal”, B2/71/1/1, available at <http://www.itac.org.za/docs/GUIDELINES%20EXPORTATION%20OF%20FERROUS%20AND%20NON%20FERROUS%20WASTE%20AND%20SCRAP.pdf>; accessed 22nd September, 2014.

⁶ This is foreseen in the Minerals and Petroleum Resources Development Act (2008) Amendment Bill that was passed by South Africa’s National Assembly prior to the 2014 general elections. Government of South Africa (2013) “Mineral and Petroleum Resources Development Amendment Bill”, Government Gazette No. 36523, May.

⁷ Department of Trade and Industry (2013) “Promotion and Protection of Investment Bill 2013”, Government Gazette, Notice 1087 of 2013, 1st November.

⁸ Since SACU exporters enjoy preferential access into SADC markets, relative to non-SADC exporters, the preference effectively deflects trade to SACU producers.

theoretically make sense to target these markets as an extension of the import substitution model since regional competition levels are relatively low, but the size of the export gains on offer is not compelling, at least in the short to medium term.

A different proposition is to leverage external markets as envisaged in the Economic Partnership Agreement (EPA) with the EU, or the African Growth and Opportunities Act (AGOA) extended by the US; or markets in Asia such as India and China. Since the markets are large they offer the prospect of export-oriented industrialization as advocated by Gereffi and Sturgeon (2013), *inter alia*. However, in the case of the EU and US while the trade diversion logic pertains by virtue of the preferential access afforded by these two developed economies to SACU producers, these are arguably the most competitive and advanced markets on the planet. Furthermore, since producers developed countries are at the cutting edge of most value chains, whereas Asian competition hinges on comparative and competitive advantages not available to the SACU region (as discussed in Section 2.3.1 and Section 4.1.3 below); competing successfully in those markets is a very challenging proposition. So it is unlikely that a SACU policy approach based on import substitution in key components of RVCs, which necessarily entails increasing costs and therefore undercutting competitiveness, would be fruitful if targeted at these markets. This highlights the importance of the RVC/GVC interface, to which we return in section 4.3. Next we briefly apply the policy logics inherent to this approach, as elucidated here, to SACU.

4.1.3 Application to South Africa and the BLNS

For these approaches to work the companies at the centre of them need to be competitive relative to their global peers. This is partly a function of comparative advantage, and partly a microeconomic issue.

Regarding comparative advantages South Africa's arguably does not reside in manufacturing, relative to low cost East Asian producers or high cost but technology-intensive developed world producers. Rather, overall South African manufacturing appears to be squeezed between the two with no obvious exit route in either direction. This general picture is subject to some exceptions, since the country does have a base of technologically-sophisticated manufacturing firms in certain industrial pockets such as manufacture of capital equipment. However, and broadening this argument to the SACU region, wage structures are relatively higher than in East Asia; the labour pool is not particularly large nor as productive; skills shortages are severe and structurally embedded. Table 6 shows the relative unit labour cost of SACU countries compared to East Asian peers in 2005 (Clarke, 2011). For exporting sectors, in 2005 SACU countries, but particularly South Africa, generally had much higher unit labour costs. Except for Lesotho (\$441), the rest of SACU could not rival Asian competitors in terms of labour cost, for example China (\$1,466), Indonesia (\$965), Vietnam (1,108). Hirano (2014) also claims that consumer price levels in Africa are substantially higher than in Asia, especially in cereal and meat prices, due to lower productivity of agriculture which pushes labour costs higher than GDP per capita, for example in the case of South Africa.

Indeed South Africa and the region's comparative advantage in the production of goods arguably lie in resource-related production, and agriculture in certain cases especially in the wetter Eastern regions. In the case of resources South Africa, Botswana, and Namibia are particularly well-endowed with a range of commodities ranging from coal to diamonds to uranium. An export-oriented agricultural sector would also create jobs in large quantities – something urgently needed in all SACU countries. Furthermore, as we argued above South Africa has built strong comparative advantages in certain “gateway” services industries. Given this picture, it is not obvious why manufacturing should be

accorded primacy in an RVC strategy for SACU, especially if that strategy imposes higher costs on the constituent economies. In this light it is important to bear in mind that trade liberalization is a crucial driver of productivity gains (Freytag, 2011); whereas productivity gains are the *sine qua non* of long term economic progress.

Regarding microeconomic factors, problems seem to be equally apparent. For example in the automotive sector, long held up as the great success story of import-substitution industrial policy in South Africa, outside of the SACU market the region freely imports second hand automobiles meaning there is little demand for relatively expensive South African built new cars. Furthermore, those cars are built by OEMs – that is MNCs - not South African companies. Those OEMs all operate GVCs and will look to leverage their global networks wherever feasible since South Africa does not possess a comprehensive production base incorporating all tiers of parts production and components supply.⁹ This is a function of the relatively small South African market. By contrast Brazil, which implements a similar policy approach to South Africa, has a huge domestic production system and market. But Brazil's exports are overwhelmingly Brazilian or "made in Brazil", whereas MNC competitors' are "made in the world" (Ferraz, 2014). The consequent productivity gaps in both the Brazilian and South African cases may have to be plugged through increasingly higher levels of effective protection, which would undermine efficiencies and cost competitiveness. For BLNS countries looking to plug into the automotive value chain these dynamics sound a strong cautionary note.

Another microeconomic factor undermines the import substitution/RVC approach. Key industrial inputs into South African manufacturing, such as steel and chemicals, are characterized by monopoly pricing based on import parity prices. In fact the problem of price-leadership based on oligopoly prices, and associated collusion, is apparently significant in South African manufacturing (Govender & Holland, 2013). Furthermore, in labour-intensive areas of production South Africa's strong trade unions and relatively high cost structures greatly inhibit production for regional markets. This dynamic nonetheless affords the BLNS countries, particularly Lesotho with its tradition of labour-intensive export-oriented manufacturing in clothing, an opportunity to take advantage of industrial shifting from South Africa. Lesotho is already succeeding to some extent in this endeavour, by consciously courting South African clothing manufacturers to relocate across the border.¹⁰ Clearly Lesotho's strategy does not rely on South African compliance or assistance, and may in fact be succeeding despite official South African policy. Nonetheless, coordination of RVCs with final assembly in South Africa, while it may alleviate some constraints on the input side, will run up against the same competitiveness issues in South Africa.

Overall, the main challenge with this model concerns its potential drawbacks regarding the promotion of globally competitive industries. As is well known, import substitution can, and frequently does, undermine long term competitiveness, not least because it generates powerful interest groups invested in the policy regime, which resist subsequent reform. Strong (in the institutional sense) East Asian states may have been able to manage policy transitions away from this trap, but it is not clear that countries in the Southern African region possess the requisite capacities to do so. If they cannot, then the region risks becoming trapped in a siege economy cycle, suffering from declining competitiveness, growth,

⁹ The CEO of Ford South Africa remarked recently that the company's margin on South African built cars averages R2,500; very thin indeed. Frontier Advisory Forum: "The Future of Manufacturing in South Africa", Johannesburg, August 6th, 2014.

¹⁰ This insight is taken from the SACU industrial policy study referred to earlier, and authors' conversation with the former head of the Lesotho National Development Corporation on June 15th, 2014, in Johannesburg.

and development. Furthermore, Sub-Saharan African markets are small, albeit growing reasonably quickly. This means import substitution opportunities will be relatively quickly exhausted. And at the same time the "Africa growth" story is attracting greater levels of investment into the region from outside it. Hence competition is likely to intensify, meaning the regional market cannot be relied on. So the region has to face up to the need to compete globally, sooner rather than later.

The approach has additional institutional and political problems. At the regional level the key policy issue is to identify a workable division of industrial effort amongst the countries concerned, and to afford countries in the region sufficient relative protection or compensation to make the effort worthwhile. This is where matters become complex very rapidly. Since each sovereign government wishes to promote maximum economic advantage for its citizens, and generally this means favouring manufacturing development, it is as likely to see its neighbours as a threat as an opportunity. Within this, South Africa's BLNS partners are very unlikely to be satisfied with merely serving as spokes in South African dominated value chains, no matter how practical or theoretically sound this approach might be. In addition, not all SACU states share the vision of regional import substitution industrialization since they recognise that they pay part of the cost. Therefore, it is likely that perceptions of relative gains and losses arising from this approach to RVC development will bedevil intra-SACU negotiations, potentially drawing them out and making it difficult to reach mutually rewarding compromises.

Consequently, rather than a coercive approach a facilitative approach would minimise intra-regional politicking, and therefore enjoy greater chances of success.

4.2 A Facilitative Approach: RVC/GVC Interlinking

The general idea of development through value chains is that subordinated players in a value chain first provide hardly processed goods and standardised services strictly specified by their superior partners. Being part of the value chain, they successively acquire knowhow and become able to operate with less guidance. They process the goods that they provide to GVCs and work more and more independently, meaning that their producer services become more complex. This is not only beneficial to players that realise an according upgrading. It also allows their superior partners to outsource more tasks, concentrate on their core business and hence work more efficiently. The Africa Economic Outlook (AfDB et al., 2014) accordingly argues that integrating further into value chains can increase human development in Africa.

In this light, the RVC model should be linked to the GVC model. In Southern Africa, RVCs could be driven by MNCs investing into the region in order to produce sub-components or final products for regional and/or global markets. This RVC/GVC model, in essence a flying geese model, also links to the gateway model. Thus South Africa serves as the gateway for MNCs to invest into Southern Africa, in the process supporting those investments but also enabling its own companies to participate in RVCs oriented towards GVCs and regional markets.

An important dynamic in this approach is inward investment promotion, namely attraction of lead MNCs to establish in the country/region. So the central policy objective is to facilitate investment by MNCs, primarily, but extending to South African companies, into sourcing from regional markets in particular niches that plug into GVCs. Since production is ultimately for GVCs oriented towards global markets, a different policy orientation than the essentially coercive import substitution model would be required. Its foundation would be akin to the country/region recognising that it is in a "beauty

contest” with other regions to make the country/region more attractive to MNCs that are weighing many options. Key external markets would move into the frame, notably the US and EU whose companies are at the origin of most GVCs, towards which end leveraging trade arrangements such as AGOA and the EPAs could be advantageous, not least because the MNCs would ensure that components sourced from the region meet the standards for those markets.

Practically, there are two broad policy dynamics entailed in this approach. First, promotion of a competitive proposition in order to afford MNCs a favourable location in which to base their facilities. And second, clear targeting of lead MNCs for sustained inward investment promotion. South Africa and its SACU neighbours are quite challenged on the competitiveness front, particularly in manufacturing, as we noted in section 4.2. This necessitates a niche strategy¹¹, working from areas of comparative advantage such as agro-processing – for example of specialty leathers derived from beef herds; certain manufacturing niches such as low cost clothing for the South African market, and services such as tourism. All of this has to be buttressed by a strong focus on building competitive network services infrastructure – telecommunications, energy, transportation - to support the economy as a whole in the first instance, and the targeted niches in particular, and allow MNCs to link with local partners. The investment promotion dynamic builds on those policy imperatives, but also requires a targeting process as outlined for the import substitution variant. The country/region still needs to have a strategic perspective on which value chains to promote and why; which segments of those value chains are amenable to competitive regional sourcing; and which lead MNCs driving those value chains might be amenable to “wooing” – and why. In other words the state would still play a strong, developmental, role, but in a facilitative sense rather than a coercive one.

Without a strong competitiveness proposition at both macro and micro levels the promotional effort will struggle. But assuming that proposition is in place then, as with all countries/regions, an attractive company specific investment proposition still needs to be formulated. This could consist of, inter alia, a mixture of financial and tax incentives, suitable land, access to industrial facilities, SEZs, and all the other locational factors that MNCs consider when choosing their investment site. Such instruments must, of course, be designed to facilitate inward FDI and not to import it at all costs, potentially leading to a race to the bottom.

Strong investment promotion agencies must reside at the apex of this organizational effort. They should be empowered to drive the process in government. Not only would they require technical capacity to understand the GVCs and MNCs being targeted, but they would also require strong political support within government to overcome the inevitable political and bureaucratic hurdles that will arise in the process of negotiating with lead MNCs. And assuming that FDI attraction is a central feature of economic policy, such agencies would need to be central players in the policy formulation process, since they would contain critical tacit and explicit knowledge of how foreign investors think; how they perceive the country; and the issues that constrain establishment of productive facilities through FDI.

Since two countries in the SACU region, South Africa and Namibia, are moving towards legislating more restrictive approaches to inward FDI, it is worth raising an important exception to the facilitative approach outlined here. Clearly not all investment is good, and not all MNCs operate according to high ethical constraints. Furthermore, some MNCs are closely associated with the national security

¹¹ The examples are taken from a consulting study currently being considered by a SACU task team investigating regional industrial policy options. As it is confidential at the time of writing it cannot be referenced.

establishments in their countries of origin. Therefore, states may need to implement safeguards to protect against these potential hazards. But this should be predicated on the assumption that FDI is generally good. In other words coercive FDI-related legislation should operate under as much transparency as possible, and according to clear institutional parameters and operational guidelines.

All of this is relatively easy to envisage at the national level. Translating it into the regional context is much more challenging. Flowing from the competitiveness proposition, it is clear that MNCs favour minimal transactions costs, in their broadest sense. That entails relative freedom to move goods, services, capital, and people across national borders within SACU and the broader Southern African region in order to maximise intra-firm efficiencies while minimising costs. This would facilitate sourcing from within the REC, in principle. And it points to a common market approach to building the REC. Theoretically this approach could extend to joint targeting of lead firms, but in practice that is likely to prove a bridge too far in most regions. Furthermore, as we argued earlier, there are many NTBs inhibiting intra-SACU trade, and a few tariff barriers too. In addition, some policy makers are deeply sceptical towards the deeper integration that a common market approach would require, fearing loss of sovereignty in particular. Consequently it is not easy to see how this approach could actually be adopted.

5 Summary and Conclusions

Southern Africa, in particular the group of countries comprising SACU, is currently not appropriately integrated into the global division of labour or, more precisely, into GVCs. As a consequence, the region suffers from unemployment and development problems. Several options for SACU to integrate closer are discussed in this think piece.

We first assessed the probability that SACU can copy the Asian flying geese pattern, which was initiated by Japanese MNCs that invested in several East and Southeast Asian countries and became the lead geese. This investment was accompanied by technological transfer and spillovers, leading to a catching-up process termed the reverse production cycle. It is also obvious that the flying geese pattern was supported by stable political governance – albeit not necessarily in Western style liberalism – educational efforts, export orientation and subsequent market opening. It built on third-countries' investors who also behaved like lead geese.

The conditions for the flying geese pattern to be transferred to SACU are not given. Neither is the manufacturing base existent in South Africa, nor does the level of education in the SACU members enable a reverse production cycle. Simply speaking, South Africa cannot play Japan's role.

Therefore, it is sensible to check another potential model to link SACU to the rest of the world. This is the gateway model, implying that a country, in SACU's case South Africa, is the gateway for trade and investment into the region. This can indeed be seen as a realistic option, at least regarding transport infrastructure (airports, harbours, railway lines and roads), which is the best in the region. In addition, South Africa can be regarded as services hub in the region. Here the gateway idea is already realised: companies from overseas purchase South African enterprises, which themselves have created African networks. In addition, South Africa's two major cities – Cape Town and Johannesburg – are the most attractive places in sub-Saharan Africa in which to locate regional headquarters. Thus, South Africa

could be the gateway for MNCs from third countries, who could play the role of lead geese. Thereby, the flying geese and the gateway models become compliments.

However, there are substantial obstacles to this approach. Problems first occur with respect to trade across borders in the region: there still are many NTBs to be removed, and customs procedures are burdensome. These problems are intensified by a current policy stance in some SACU governments in favour of import substitution over export orientation, advertising the idea of RVCs as opposing to GVCs. Experience in Latin America and India throughout the 1970s and 1980s suggests that this policy model has enormous information requirements and cuts off the economy from the latest innovations.

Nonetheless, we are convinced that RVCs can well have a value when seen as complements to GVCs. Indeed, it may well be the case that the SACU members do not attract too many world leading MNCs but rather regional players (from South Africa, China or elsewhere). By building regional networks, the countries may benefit from technological spillovers, education and the like in the short run and qualify for integration into GVCs in the longer run. Nevertheless, this still requires an investment friendly climate and trade openness. Then a Factory SACU can be feasible.

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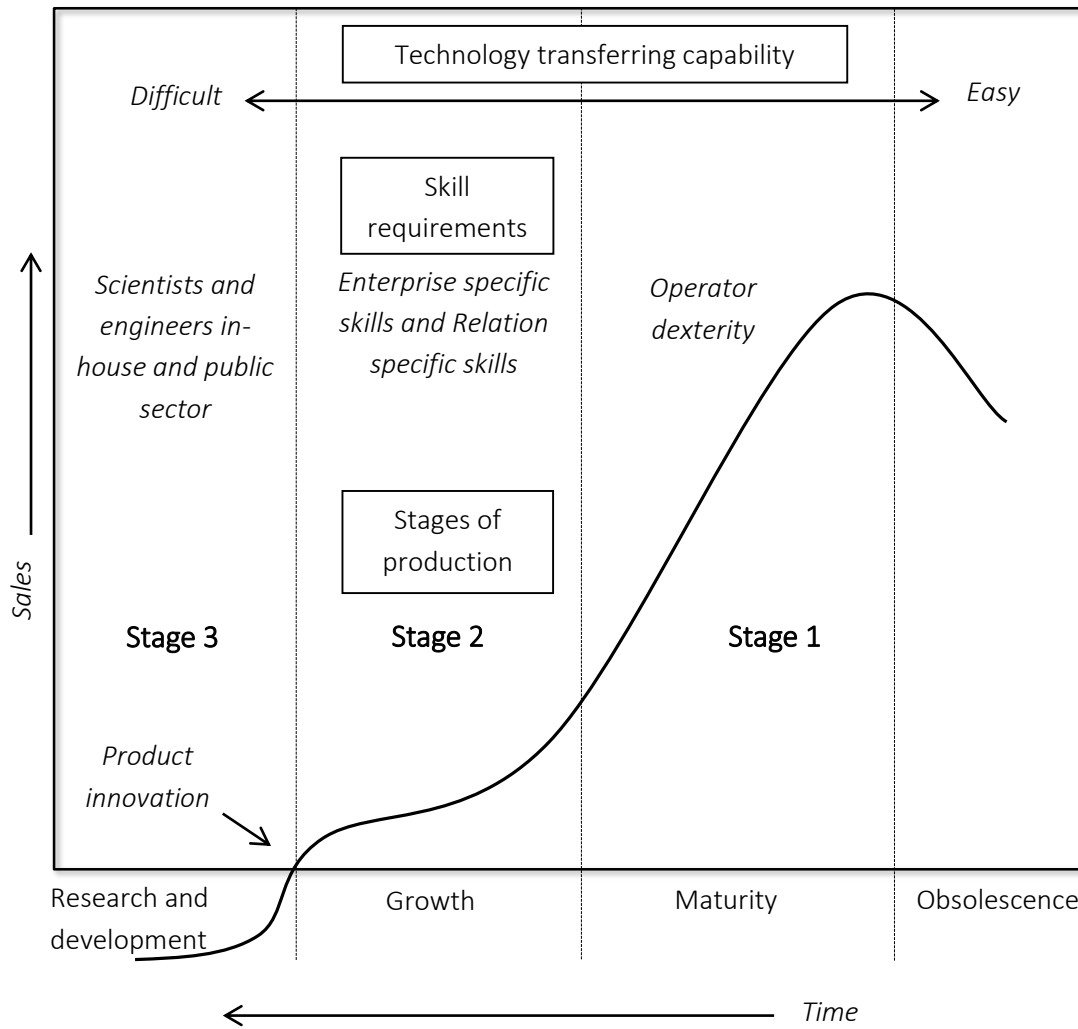
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7 Annexures

Figure 1: The reverse production cycle



Source: Hayter and Edgington (2004)

Table 1: Selective indicators for GVC/RVCs integration, 2014

| Index | South Africa | Botswana | Lesotho | Namibia | Swaziland | China | Vietnam | Bangladesh |
|---|--------------|----------|---------|---------|-----------|-------|---------|------------|
| Ease of doing business (ranking) ¹ | 41 | 56 | 136 | 98 | 123 | 96 | 99 | 130 |
| Global Competitiveness Index ² | 4.35 | 4.15 | 3.73 | 3.96 | 3.55 | 4.89 | 4.23 | 3.72 |
| Enabling Trade Index ³ | 4.2 | 3.7 | 3.5 | 3.9 | - | 4.3 | 4.0 | 3.4 |
| Logistics Performance Index (1-5) ⁴ | 3.43 | 2.49 | 2.37 | 2.66 | - | 3.53 | 3.15 | 2.56 |
| Technological readiness ² | 3.9 | 3.6 | 2.4 | 3.4 | 2.7 | 3.5 | 3.1 | 2.7 |
| Firm-level technology absorption ² | 5.4 | 4.3 | 3.5 | 4.9 | 3.9 | 4.7 | 3.9 | 4.1 |
| FDI and technology transfer ² | 4.8 | 4.2 | 3.5 | 4.7 | 3.8 | 4.5 | 4.2 | 3.9 |
| Domestic market access ³ | 5.0 | 5.4 | 4.1 | 5.4 | - | 4.2 | 4.8 | 3.4 |
| Foreign market access ³ | 2.2 | 1.9 | 3.7 | 2.5 | - | 1.9 | 3.6 | 4.2 |
| Efficiency & transparency of border administration ³ | 4.8 | 3.5 | 3.6 | 3.8 | - | 4.9 | 4.0 | 3.2 |
| Infrastructure ² | 4.3 | 3.2 | 2.8 | 4.2 | 3.3 | 4.7 | 3.7 | 2.4 |
| Institutions ² | 4.5 | 4.5 | 3.9 | 4.2 | 3.9 | 4.2 | 3.5 | 3.0 |
| Health and primary education ² | 4.0 | 4.1 | 4.0 | 4.6 | 3.7 | 6.1 | 5.9 | 5.3 |
| Higher education and training ² | 4.0 | 3.6 | 3.2 | 3.2 | 3.2 | 4.4 | 3.7 | 2.9 |
| Labour market efficiency ² | 3.8 | 4.6 | 4.2 | 4.3 | 3.9 | 4.6 | 4.4 | 3.7 |
| Business sophistication ² | 4.5 | 3.5 | 3.4 | 3.7 | 3.6 | 4.4 | 3.6 | 3.5 |
| Innovation ² | 3.6 | 3.0 | 2.9 | 3.1 | 2.9 | 3.9 | 3.1 | 2.6 |

Source: ¹ World Bank (2014b); ² Schwab (2014); ³ Hanouz et al. (2014); ⁴ Arvis et al. (2014).

Table 2: Manufacturing as share of GDP, 2013

| SACU | | East Asia & Pacific | |
|--------------|-------|---------------------|-------|
| Botswana | 5.68 | China* | 31.83 |
| Namibia | 13.05 | Philippines** | 20.55 |
| South Africa | 11.56 | Thailand | 32.94 |
| Swaziland* | 43.83 | Indonesia | 23.70 |
| Lesotho** | 12.99 | Malaysia | 23.97 |

* Data in 2011; ** Data in 2012

Source: World Bank (2014e)

Table 3: LSCI and LPI for East and Southern Africa, 2011 and 2014 year

| Country | LSCI | LPI |
|--------------|------|------|
| Angola | 13.8 | 2.54 |
| DR Congo | 4.0 | 2.08 |
| Kenya | 11.4 | 2.81 |
| Mozambique | 10.2 | 2.23 |
| Namibia | 15.5 | 2.66 |
| South Africa | 43.0 | 3.43 |
| Tanzania | 11.1 | 2.33 |

Sources: World Bank (2014a), viii. Draper and Scholvin (2012); World Bank (2014c).

Table 4: Access to Credit Ranking of the SACU members

| Country | Access to Credit World Rank | |
|--------------|--------------------------------|------|
| | 2013 | 2014 |
| South Africa | 24 | 28 |
| Namibia | 52 | 55 |
| Lesotho | 154 | 159 |
| Botswana | 71 | 73 |
| Swaziland | 52 | 55 |

Source: World Bank (2014b)

Table 5: Industrial vacancies by occupational group 2003

| Employment Category | Vacancy % |
|---|-----------|
| Senior officers and managers | 10.0 |
| Professionals | 38.3 |
| Technicians and associate professionals | 22.4 |
| Clerks | 20.4 |
| Service workers and shop and market sales workers | 4.5 |
| Skilled agricultural and fishery workers | 0.0 |
| Craft and related trades workers | 3.0 |
| Plant and machinery operators and assemblers | 1.5 |
| Elementary occupations | 0.0 |

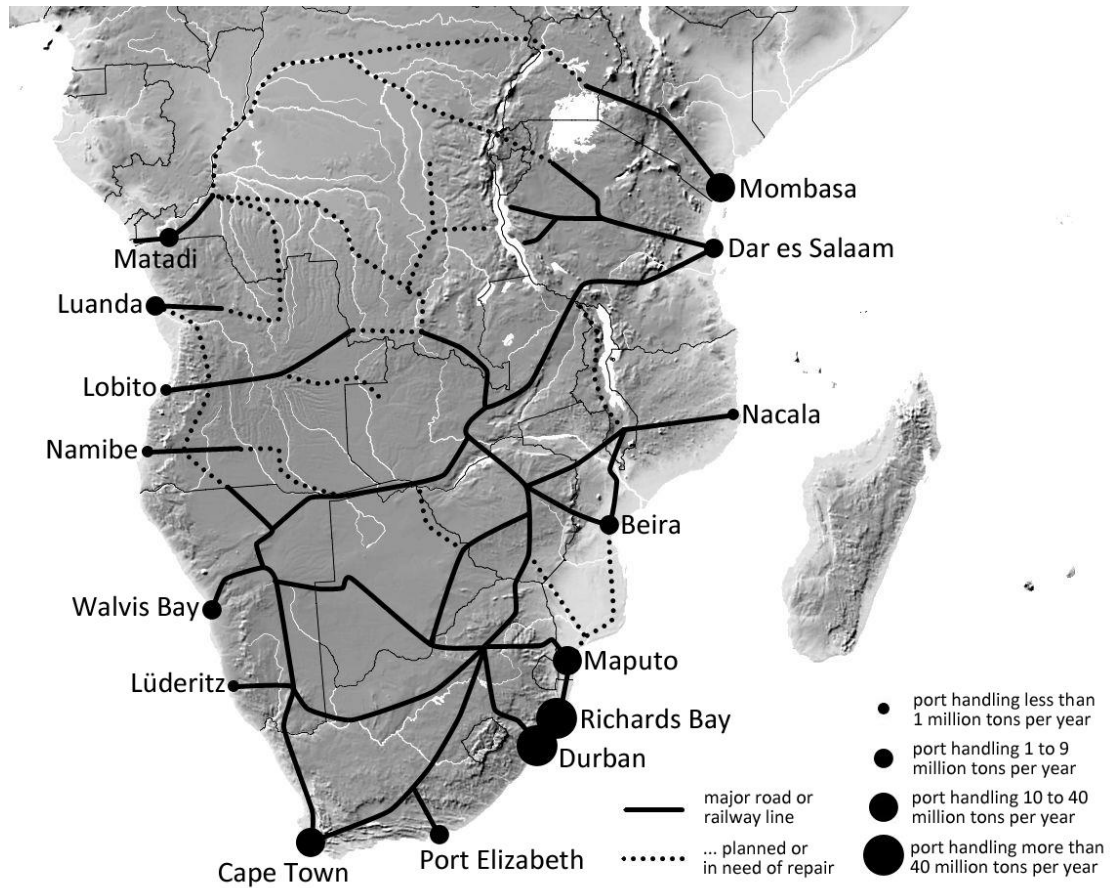
Source: Department of Labour [of South Africa] (2003), 28.

Table 6: Labour costs for importers and exporters in USD, annually, 2005

| Labour costs | Non-Exporters | Exporters |
|--------------|---------------|-----------|
| Botswana | \$2,503 | \$3,069 |
| South Africa | \$7,290 | \$12,161 |
| Namibia | \$3,593 | \$6,621 |
| Lesotho | \$1,077 | \$441 |
| Swaziland | \$2,590 | \$1,986 |
| China | \$1,148 | \$1,466 |
| Indonesia | \$520 | \$965 |
| Vietnam | \$1,097 | \$1,108 |
| Thailand | \$1,405 | \$1,951 |

Source: Clarke (2011) using Data from World Bank Enterprise Surveys

Map 1: Harbours and transport corridors in East and Southern Africa



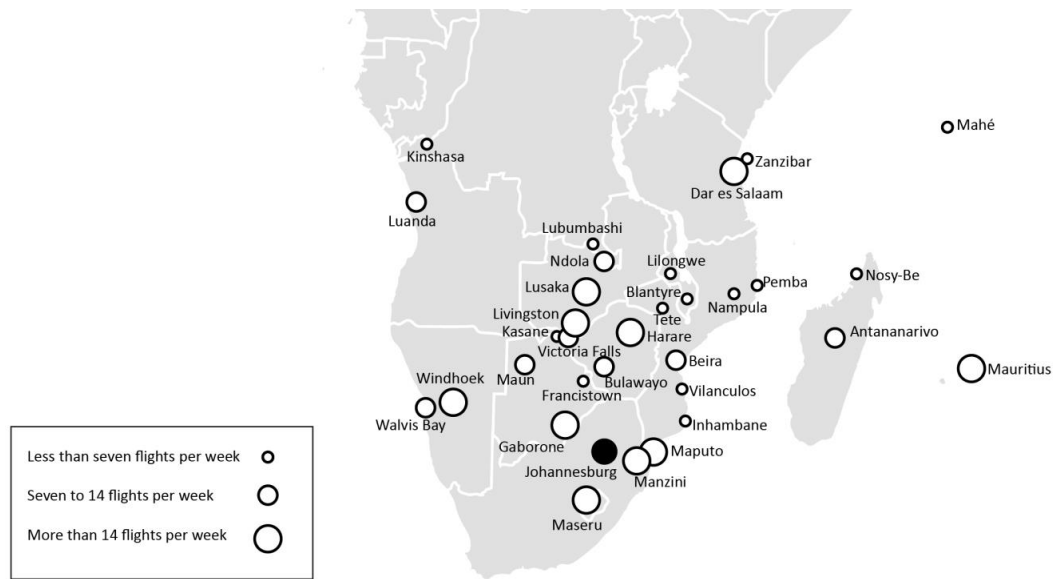
Source: Authors' own draft.

Map 2: Global flight connections starting at O. R. Tambo



Source: Draper and Scholvin (2012), 22

Map 3: Regional flight connections starting at O. R. Tambo



Source: Draper and Scholvin (2012), 21