

INTRA-FIRM TRADE AND AFRICA'S COMPETITIVENESS IN THE GLOBAL PROFESSIONAL SERVICES

Victor Konde
(ATDF)

Abstract

Many African countries have improved their legal and regulatory regimes over the last two decades to attract and retain investment to increase their participation and integration in world trade. Despite these efforts, Africa's competitiveness in trade in services remains limited. This overview highlights some of the key connections between intra-firm trade and Africa's development and competitiveness in the global economy. It shows that Africa's trade in services is small but growing while its trade in professional services is limited by the type of FDI it has been attracting. This paper uses a number of examples to highlight alternatives that could enable African countries to participate in the growing trade in business and professional services.

1. Introduction

Competitiveness may be seen as the ability of a country to achieve a sustained high rate of growth in gross domestic product (GDP) per capita or the degree to which a country produces goods and services which meet the test of international markets, while simultaneously sustaining and expanding the real incomes of its people over the long-term in a free and fair market. In a way, competitiveness is the ability to generate sustainable and relatively higher revenues from a country's investments in production of goods and services while achieving a steady rise in living standards of most of its citizens.

There are many aspects that may determine the competitiveness of a country. For instance, the World Economic Forum's Global Competitiveness Index (GCI) focuses on 9 pillars: 1) institutions, 2) infrastructure, 3) macroeconomy, 4) health and education, 5) higher education and training, 6) market efficiency and 7) technology readiness, 8), innovation and 9) business sophistication.

The first seven are thought to account for about 90% of most developing countries' competitiveness (less than \$9000 per capita). Most African countries fall within this group of countries and they compete in the global market place on prices of basic commodities. According to the WEC Global Competitiveness Report 2007-2008, 19 of the 24 countries in SSA included in the assessment are among the 25 least competitive economies largely attributed to poor infrastructure, low levels of higher education and inadequate technology preparedness.

While it is acknowledged that a country's competitiveness is determined by its technological infrastructure, sophistication of its domestic demand and inward foreign domestic investment, there is some evidence that export perform-

ance in services is determined by different comparative advantages. A recent publication showed a number of developing countries (e.g. India, Egypt, Mexico and Pakistan) enjoy similar or higher comparative advantages in some service sectors than developed countries. One of the recent observations has been the rapid growth in the export of services and the globalization of business and professional services once thought to be the preserve of the headquarters of transnational corporations (TNCs).

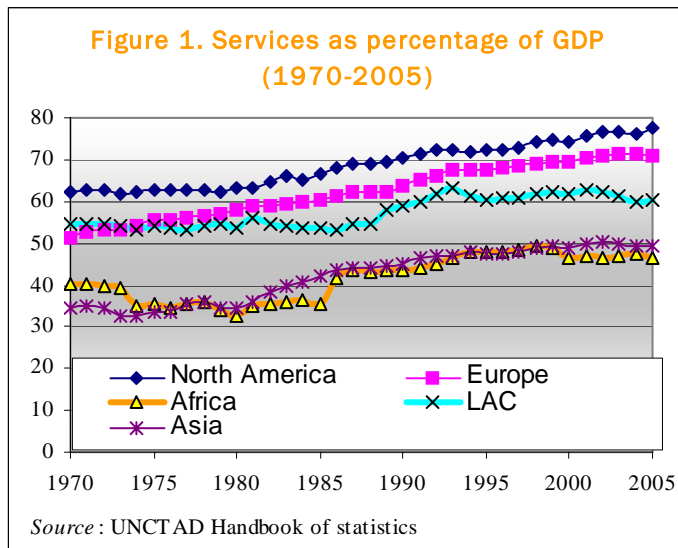
The competitiveness of countries in professional services may be based on criteria such as:

- ⇒ The ability of professional services firms to set global standards and promote good corporate governance
- ⇒ The skill levels across the economy that benefit both professional service firms and their client companies
- ⇒ A tradition for quality and expertise with flexible working practices to deliver innovative products and services and global attraction for international professional services firms
- ⇒ Exploitation of opportunities for synergies with other major professional services centres, particularly in emerging markets
- ⇒ Capacity to develop an open and constructive relationship with government.

Table 1. Comparison of key global competitiveness index scores

| | N. Africa | SSA | LAC | Asia |
|-------------------------------------|-----------|------|------|------|
| Institutions | 4.13 | 3.65 | 3.69 | 4.08 |
| Infrastructure | 3.53 | 2.45 | 3.25 | 3.12 |
| Macro economy | 4.57 | 4.00 | 4.2 | 4.61 |
| Health & basic education | 6.44 | 4.04 | 6.51 | 6.3 |
| Higher education | 3.69 | 2.84 | 3.92 | 4.09 |
| Market efficiency | 4.03 | 3.86 | 4.13 | 4.64 |
| Technology readiness | 3.03 | 2.71 | 3.42 | 3.3 |

Source: WEF (2006) Africa Competitiveness Report 2007, World Economic Forum.



2. Services and Africa's competitiveness

2.1 Defining services

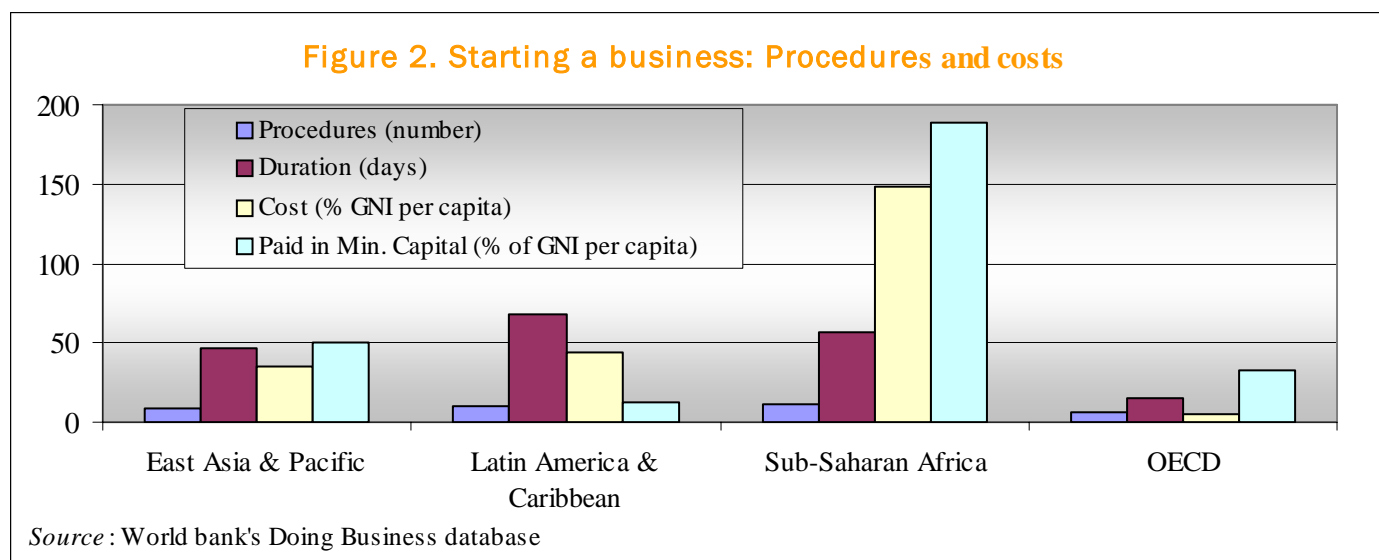
The Manual on Statistics of International Trade in Services defines services as “heterogeneous outputs produced that typically consist of changes in the condition of the consuming units realised by the activities of the producers at the demand of the customers. By the time their production is completed they must have been provided to the consumers.” Services include wholesale, retail, hotel, transport, postal, telecommunication, financial, insurance, real estate, computer-related, research, professional and marketing.

Services already account for a substantial proportion of the global GDP (about 50%). Europe has seen the contribution of services to its GDP increased from about 51% to 70% between 1970 and 2005 while that of the United States increased from 62% to 78% over the same period (See figure 1). Africa and Asia are the only regions where the contribution of services to their GDPs is the lowest but

has generally increased steadily from about 34% to 50% between 1970 and 2005.

The low contribution of services to GDP of Asia and Africa may be linked to the openness to FDI in the services. It was noted that restrictions on FDI in the service sectors are higher in Africa and Asia than in Latin America and the Caribbean. For example, foreign ownership limits are common in services such as banking, communication, energy and transport. In addition, many developing countries did not allow private participation, either domestic or foreign, in a number of services such as insurance, telecommunications, electricity and transportation until the privatization and liberalization movement of the 1990s. Take together, the services sector remains under-invested and uncompetitive.

It has been noted that regulatory barriers could influence the structure and concentration of industry. Firms may prefer to expand the acquisition of existing firms rather than develop independent ones in sectors or countries where regulatory entry barriers are high. Many of these are related to government services such as registration, export and import, taxation, land acquisition, licensing and judicial procedures, among others. The number, complexity and efficiency at which these services are delivered by government departments, such as revenue and company registration authorities, could increase the cost of doing business or producing goods and services (see Figure 2). Improving these services may not involve a huge investment. For instance, Mozambique now permits company registration to take place online. Such a move could also provide extra business for specialized internet cafés that could help individuals conduct name search, fill-in company forms on-line, decongest company registration offices, facilitate company formation, increase access, provide extra internet content and build confidence in information technology. With minimal investment, the cascade of benefits may be huge.



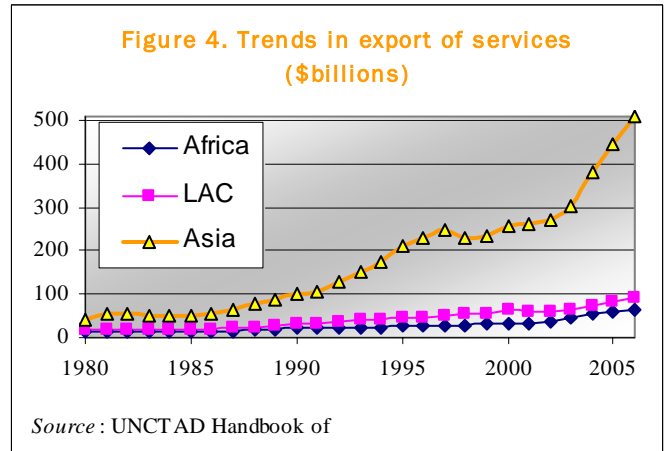
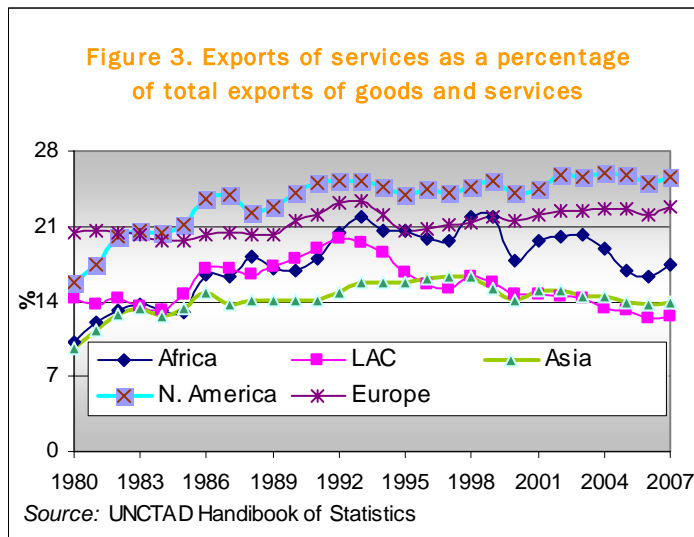
Services offer a helping hand to other sectors of the economy. For instance, equity financing and stock markets play a key role in raising cheaper capital for mergers and acquisitions, development of new products and the creation and expansion of enterprises. Insurance and pension schemes, in addition to helping individuals and firms to recover from disasters, provide an essential reduction of uncertainty necessary for risky investment decisions in new and emerging technologies. Furthermore, services develop the skills, knowledge and resources needed to make projects work, broker deals, protect investments and technologies, design and develop capital-intensive investment projects. Moreover, they offer employment to a large proportion of the total work force.

3. Competitiveness in trade in services

3.1 Trends in global trade in services

At the global level, exports of services have grown from \$391 billion to \$2,735 billion between 1980 and 2006 and its share of global exports of goods and services has increased from about 17% to 22% over the same period, according to UNCTAD database. At the regional level, Europe accounts for about 50% of global services exports, developing Asia 18%, Canada and the United States 17%, LAC 3% and Africa 2%. Regarding the percentage of total trade in goods and services for the regions, exports of services have grown faster for North America (Canada plus United States) and Africa (see figure 3) in the 1980s and 1990s. However, North America and Europe are the major exporters of services.

In terms of value, Asia spectacular growth in trade in services parallels its growth in exports of manufactured products. Between 1980 and 2006, Asia's exports of services have increased 10-fold from \$49 billion to \$509 billion (see figure 3) while that of merchandise exports increased about 6-fold (from \$365 billion to \$2,384 billion). Asia's share of global services exports increased from about 10.8% to 18.6% over the same period while that of Africa declined from about 3.4% to about 2.4%.



Africa's trade in services is however growing fast, especially in the last five years. Exports and imports have almost doubled between 2002 and 2006 (see figure 4). There is also some relationship between growth rates of the economy in general and trade in services. More interestingly perhaps, the share of services in exports of goods and services for Africa has increased from about 10% in 1980 to about 16% in 2006 and peaked in 2002 at nearly 20%. In simple terms, Africa's export of services has grown faster than exports of goods until the last 4 years (when the commodity boom drove goods exports much faster).

The poor economic performance of most African economies in the 1980s and the limited international investment flows may have affected the service sector. The increased economic growth rates and increased liberalization in Africa's service sector in the last decade seem to have provided a stimulus for service growth and exports. Africa may have to look at services as another way of diversifying exports.

It may be important to breakdown the services exported by country and by category. At the national level, the top service exporters in Africa include Egypt, South Africa,

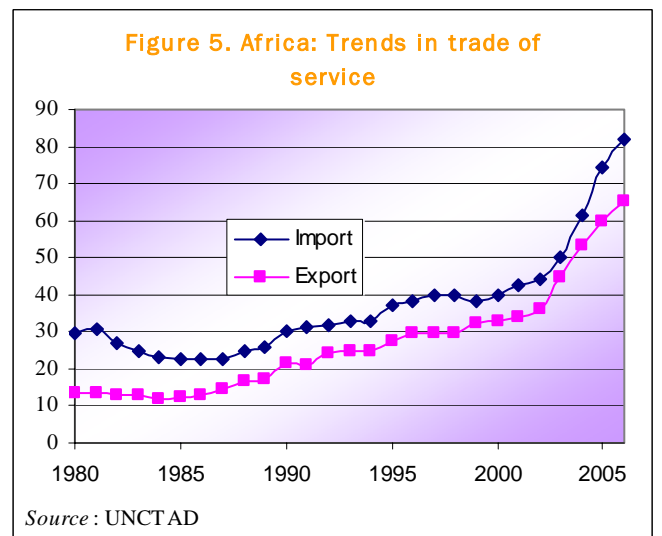
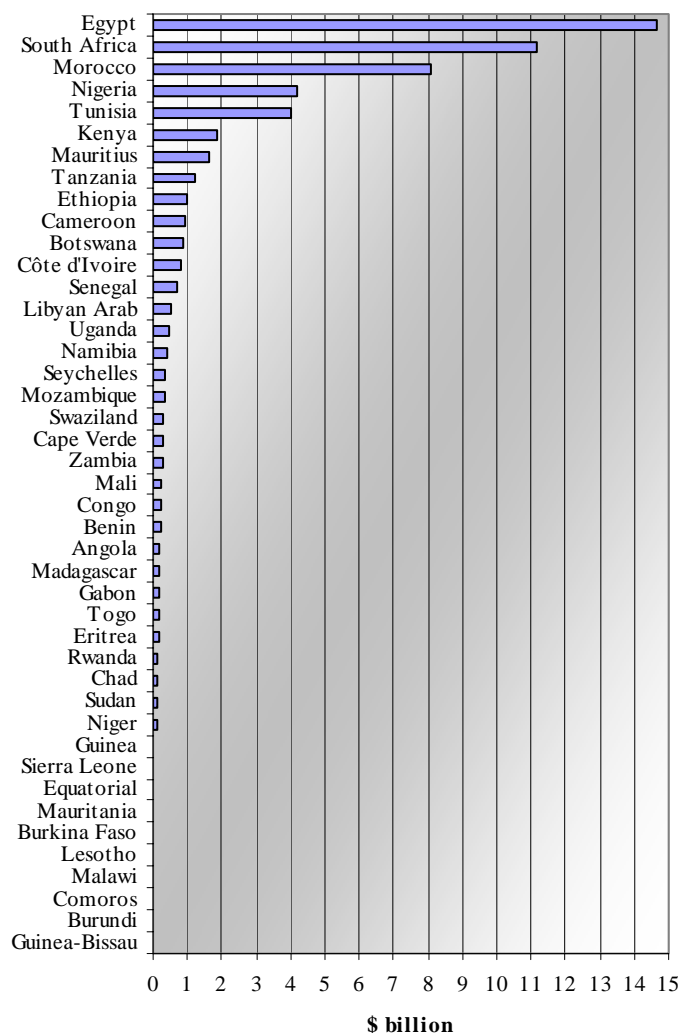


Figure 6 Exports of services



Source: UNCTAD

Morocco, Nigeria and Tunisia that together account for over 70% of the continent's exports of services. There are roughly ten countries whose annual export of services is above \$1 billion (see figure 5). The rest of the countries are yet to realize their full potential in trade in services.

The composition of traded services varies widely from one country to another but there are some general similarities. Here we compare two African countries (Egypt and South Africa) and two Asian countries (China and Singapore) at different levels of technological advancement and manufacturing capabilities (see table 2). In general, travel and transportation services account for over 40% of service imports and exports. All four countries are net importers of insurance, computer and information services, intellectual assets and government services.

There are wide differences too. Egypt and South Africa are net exporters while China and Singapore are net importers of services. Travel services constitute about 65% of South Africa's export of services but only 11% of Singapore's exports. In addition, South Africa and Singapore export more financial services than the other two. Royalties and licensing fees make up a larger proportion of Singapore's services imports than the other three. These differences may reflect the differences in economic, industrial, technological and financial bases of the four countries.

3.2 Trade in professional and technical services

Professional and technical services include architecture, engineering, consulting, installation, research, development, management, operational leasing, financial and

Table 2. Comparison of the composition of trade in services of selected developing countries

| | Egypt | | South Africa | | China | | Singapore | |
|----------------------------|---------|---------|--------------|---------|---------|---------|-----------|---------|
| | Imports | Exports | Imports | Exports | Imports | Exports | Imports | Exports |
| Transportation | 37.2 | 28.3 | 42.6 | 14.6 | 34.0 | 19.3 | 35.6 | 36.2 |
| Travel | 15.7 | 43.1 | 30.6 | 65.3 | 26.5 | 41.2 | 19.2 | 11.2 |
| Communications | 2.8 | 2.9 | 1.4 | 1.9 | 0.7 | 0.7 | | |
| Construction | 2.1 | 2.9 | 0.0 | 0.3 | 1.9 | 2.4 | 0.5 | 1.2 |
| Computer and information | 0.3 | 0.2 | 0.8 | 0.9 | 1.7 | 2.6 | 0.6 | 1.0 |
| Insurance | 7.3 | 0.3 | 3.8 | 1.1 | 8.5 | 0.6 | 4.4 | 2.8 |
| Financial services | 0.3 | 0.5 | 1.4 | 4.4 | 0.2 | 0.2 | 1.3 | 5.3 |
| Royalties and licence fees | 1.3 | 0.7 | 8.6 | 0.4 | 6.2 | 0.4 | 15.7 | 1.1 |
| Other business services | 25.8 | 19.6 | 5.9 | 5.7 | 19.3 | 32.0 | 16.4 | 35.4 |
| Personal services | 0.2 | 0.5 | 0.0 | 0.9 | 0.2 | 0.1 | 0.5 | 0.4 |
| Government services | 6.9 | 1.1 | 2.6 | 2.5 | 0.7 | 0.6 | 0.4 | 0.2 |
| Total \$ billions | 8.0 | 14.2 | 1.0 | 9.7 | 7.2 | 6.2 | 5.0 | 4.7 |

Source: UNCTAD

Table 3 Trends in the United States' international trade in business and professional services (in US\$ millions)

| | Receipts | | Payments | |
|--------------|---------------|---------------|---------------|---------------|
| | 2001 | 2004 | 2001 | 2004 |
| Intra-firm | 30,744 | 37,236 | 20,966 | 28,218 |
| Inter-firm | 28,169 | 33,773 | 9,452 | 12,519 |
| Total | 58,913 | 71,009 | 30,418 | 40,737 |

The United States' international inter-firm trade in business and professional services by region (in US\$ millions)

| | Receipts | | | Payments | | |
|---------------------------|----------|-------|--------|----------|-------|-------|
| | 1986 | 1996 | 2004 | 1986 | 1996 | 2004 |
| NA (Canada) | 335 | 1,637 | 3,305 | 283 | 727 | 2,873 |
| Europe | 1,203 | 6,005 | 13,474 | 467 | 2,634 | 5,224 |
| Africa & Middle East | 680 | 2,677 | 3,383 | 29 | 342 | 1,047 |
| Asia and Pacific | 1,319 | 5,929 | 9,170 | 334 | 1,625 | 2,320 |
| Latin America & Caribbean | 807 | 2,916 | 4,396 | 70 | 342 | 1,055 |

Source: US Bureau of Economic Analysis

NB: Data for trade in services between affiliated firms is available only from 2001.

analytical testing services, among others. These services may be required to upgrade skills, get the most out of capital goods imports, stay abreast with the next generation of technological developments and improve the efficiency of running a business. More importantly, services play a role in the transfer of tacit knowledge and organizational systems that are often not easy to acquire.

However, it is difficult to monitor the flows in these classes of services globally as most national governments do not seem to breakdown the import and export of services to a level where one can discriminate those that have very little to do with technology (e.g. advertisements and travel) to those likely to play a role in technology development (e.g. industrial engineering services). However, one can use the trends in the leading exporters of business and professional services to monitor emerging trends.

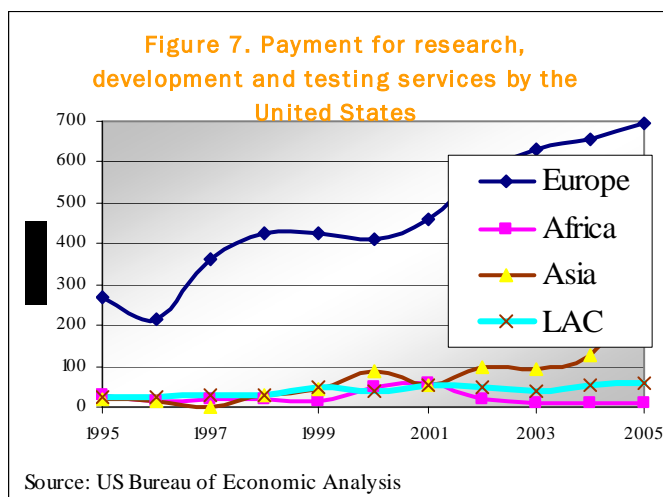
The top five exporters of global services are the United States, United Kingdom, Germany, France and Japan (in order of value of exports). The United States accounted for about 15.2% of global services exports in 2004 followed by the United Kingdom (8.1%). Though a poor proxy for several reasons (e.g. 15.2% is a small fraction, trade links could skew observations and geography can play a major role), it is perhaps one of the few sources likely to have complete information in professional services.

Trade in business and professional services between the United States and the rest of the world had grown at varying speeds, as shown in table 3. LAC's share of payment to the United States has decreased from about 18% in 1986 to about 13% in 2004 of the total, while that of Europe has increased from 28% to 40% over the same period. Similarly, the share of business and professional services provided to the United States (i.e. payments by the United

States to other regions) has increased from 2.5% in 1986 to 8.4% in 2004 for Africa and the Middle East, and from 5.9% to 8.4%, over the same period, for LAC. Asia and Oceania's share has declined both in terms of exports and imports.

However, it is important to note that only business and professional services provided to or by unaffiliated firms (inter-firm) is broken by country or region, and it constitutes about 48% for receipts and 31% for payments of their respective totals. This perhaps explains why trade in services between Asia and Oceania, given the high growth of investment flows over the last 3 decades, may have declined between unaffiliated firms but is likely to have increased between affiliated firms, especially in terms of payments.

Another service that seems to be growing rapidly is trade in research, development and testing services. Although



data is still emerging, there is some evidence that Asia is emerging as a major supplier of research, development and testing services while Africa and LAC are lagging behind (see figure 6). Although a lion's share of trade in such technology services is concentrated in developed countries, it offers developing countries with the basic technological foundation a chance to learn and become global suppliers.

4. Options for improving Africa's competitiveness

4.1. Filling the skills gap to compete in services

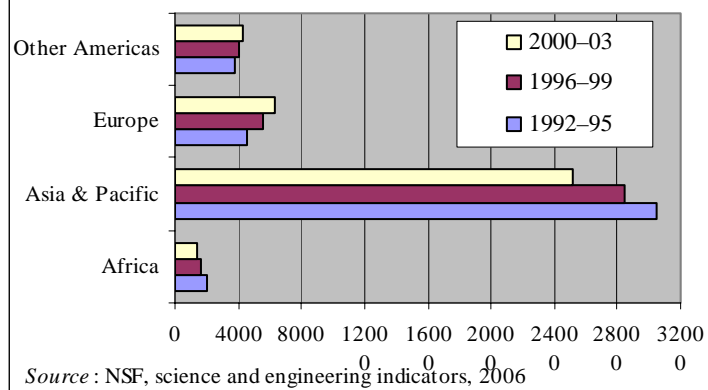
Africa's competitiveness in providing business and professional services is quite low at present as it lacks the skills and technologies needed to participate in this growing trade. Asian countries, such as China and India, have openly declared education, science and technology as the strategic engines for economic and social development. China and India have attracted the world's major corporations and their investments, expanded post-graduate training and are specializing in knowledge-intensive services. For instance, the number of science and engineering doctoral degrees awarded by China increased from about 1,000 in 1991 to 8,000 in 2001.

In addition, China, India and Taiwan are benefiting from professionals trained or worked abroad, especially in the United States, returning home or serving home country facilities. The movement of such professionals bring business and technological alliances and understanding of global markets. Such professionals may also serve as local contacts. In the case of Taiwan Province of China, the number of returnees increased from an average of about 400 in the 1970s to about 2800 in 1990 and peaked in 1994 at about 6500. Such numbers are higher than many African countries could graduate a year.

International foreign students could also play a role in skills development in Africa. They may acquire emerging skills, develop relations and understand both home and host country barriers, among others, that could facilitate diffusion of knowledge, industrial development and promote trade and investment. For example, Africa Online, one of Africa's largest Internet Service Providers (ISP), was developed by three Kenyan students at the Massachusetts Institute of Technology (MIT) in 1994. One of the students returned to Kenya in 1995 to establish and manage the first local office, and its first major investor was an American ISP. It now operates in about eight African countries.

As the gaps between basic and applied research and experimental development narrow in some knowledge-intensive fields, international students in higher education institutions could serve as technology transferors as well as facilitators of business deals and development. Currently, about 25% of foreign students are registered in the United States, 11% in the United Kingdom, 10% in

Figure 8. Foreign recipients of United States science and engineering doctoral degrees



Germany, 9% in France and 8% in Australia, and the remainder are hosted in 126 countries. [] According to United States data, about 80,000 science and engineering doctorates were issued by its universities to Asian students between 1992 and 2003 compared to about 5,000 to African students over the same period. CHowever, current trends suggest that the number of foreign students awarded PhDs in science and engineering in the United States has been falling for Africa and Asia but has increased for Europe and the other Americas (See figure 7).

There may also be a need to carefully assess the need for foreign skilled workers (see box 1). Unlike manufacturing, services tend to be skills and knowledge intensive. While academic qualifications may provide prestige, they may not always equip its holders with the technical knowledge skills and experience that are required by financial, insurance, investment and communication firms, among others. Allowing foreign experts to take up temporary positions or promoting attachments abroad could be useful. Several developed and developing countries have developed such policies.

Box 1. Examples of policies on recruitment of international migrants.

Malaysian skilled worker program:

Malaysia plans to attract 5,000 skilled workers a year as part of their knowledge-economy master plan for 2001 (Wong 2000).

South Africa loosening restrictions

The government plans to make immigration laws less restrictive, hoping to address the difficulty of getting short-term work permits for skilled foreign workers.

Canadian permanent skilled worker targets

In the 1990s, Canada raised the number of immigrants and those admitted for certain skills to more than half the inflow. Now it plans to target skilled immigrants and workers from China, India, Pakistan, Philippines and South Korea.

Source: Lowell B. L, (2001) Policy responses to the international mobility of skilled labour, International Migration Papers 45, ILO, Geneva

To promote skills development, Africa may also rethink its cooperation with other countries. It could request that a proportion of its assistance aid be provided in the form of places in the partner country's MSc, PhD and post-doctoral programmes in science and engineering and bringing its university up to acceptable international standards, whether private or public. If targeted, such programmes could enable more African countries to leverage their national efforts and raise the necessary skills.

4.2 Filling the infrastructure gap

There are several ways of filling the Africa's infrastructure gap. The most important is for government to provide strategic direction in all the key service sectors. This could be achieved by developing clear policies and guidelines on investment in infrastructure, especially if the private sector is to participate. Experience of the last decade reveals that private sector participation in telecommunication has increased from about 20 million in 1992 to \$4.6 billion in 2005. The existence of clear and predictable, though not necessarily the best, policies has had a profound effect in attracting private sector investment for the growth of telephone services (see figure 9) and in making Africa one of the fastest growing mobile phone markets.

A recent study outlined some of the key aspects that have to be addressed even in developed countries if private sector investment is to be attracted for infrastructure projects:

- ⇒ "Identifiability: The object to be financed should be clearly identifiable in geographic and economic terms to allow for efficient risk sharing between the private and public sectors;
- ⇒ Stable demand: Given the long service life of infrastructure investments – investors will expect reliable long-range planning of demand for the relevant infrastructure;
- ⇒ Low risk of substitution: Investors become interested in infrastructure projects when risks related to introducing competing solutions and technologies remain low across the entire duration of the project;
- ⇒ Flexible contract design: Contracts governing public-private partnerships should be based directly on the re-

quirements of the individual project rather than on standardized stipulations;

⇒ A low risk of "politicization". Private investors generally shun projects with infrastructure solutions that may become election campaign tools"

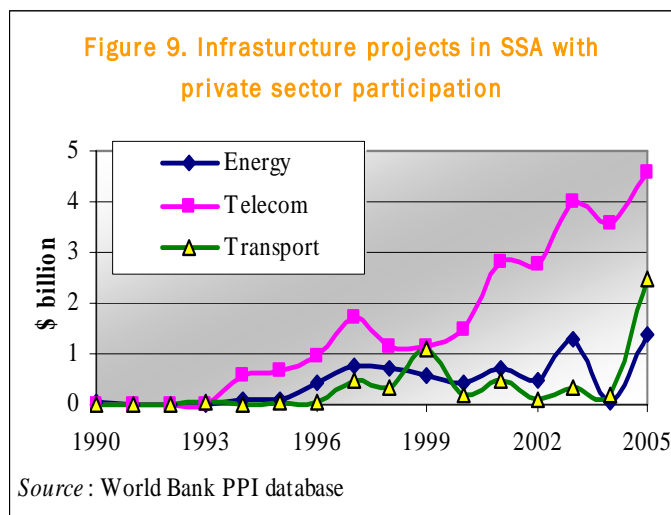
It is, therefore, possible to attract investment into other infrastructure projects if the regulations take into account the needs and risks involved. In the energy sector, the unbundling of vertically integrated electricity monopolies is a necessary step to enable potential independent power producers (IPP) to emerge and promote competition. This is important as electricity cannot be produced, stored and sold a few days later. Unbundling will also induce retailers to focus on connecting new customers and ensure that distributors deliver enough power to the retailers and producers on generating enough energy to meet the demand. The same applies to ports and airports where competition could be created within the facility to improve efficiency.

For instance, the leasing of the container terminal at the port of Dar es Salaam (Tanzania) to the Hong Kong-based Hutchison Whampoa has improved efficiency and increased business opportunities for hotels, banks, insurance, consulting and clearing and forwarding firms. About US\$7 million has been spent in modernizing the facility and the number of ships visiting the port has increased from 30 to 50 and the number of containers cleared has increased from 100,000 per year to 165,000 per year since the lease was finalized in 2000.

However, public investment in infrastructure will remain the main stay for meeting most of the challenges. Countries could cooperate in developing expensive infrastructure. The Namibia-Zambia (Katima mulilo inaugurated in 2004) bridge may not be very attractive to the private sector but has already resulted in increased use of Walvis Bay port by Congo, D.R. and Zambia. However, most of the traffic to and from South Africa is passing through Botswana and plans to build another bridge across the same river are underway. Again, this project may not be attractive to the private sector because the current heavy traffic may fall once Zimbabwe is back on its feet (fuel and foreign currency shortage is forcing truckers to avoid the more direct route).

As private investment in telecommunications and energy picks up, resources that are saved may have to be directed to transport, basic and higher education, health and industrial parks or zones, especially in peri-urban and rural areas where there is little knowledge about the complexity involved in setting up a business in the formal sector. In addition to the bilateral projects, Africa may also need to address some of its infrastructure needs at a regional level. The design of power pools should be extended to the sharing of telecommunication networks and co-management of infrastructure.

The scientific and technological infrastructure needed to survive and compete in the knowledge economy may



also need significant attention. Many African universities, research centres, technical colleges and secondary schools as well as science parks and incubators may require investment. Just like bridges and airports, they serve as the breeding and testing grounds for new technologies. Currently, they are not providing the products or knowledge that stimulate the increasingly sophisticated businesses.

The idea that African R&D centres could somehow focus on "second-grade" (often term *appropriate*) technologies relevant to the poor presupposes that the poor will not need a cell phone but rather a mail-man. Above all, it does not make any sense to build a road for ox-carts if the people prefer buses and railways or the country seeks to catch up with the rest of the world. Some R&D centres and universities may increasingly be alienated if existing and developing industries do not find them useful.

Along with infrastructure, trade logistics services are indispensable to the international competitiveness of countries (see table 3). As more businesses and services rely on just-in-time models of production and real time monitoring of business activities, logistics support services become critical. Currently, Africa is not performing well as measured in international logistics performance index (LPI). Singapore is ranked top in the world while South Africa (top in Africa) is ranked 24 and Rwanda (worst in Africa) is at position 148, two places from the bottom. Some of the key services that need to be addressed, such as tracking and tracing, competence and timeliness could be provided by domestic firms on behalf or support of government or independently, just like infrastructure.

4.3 Improving the performance of institutions

Although often seen as legal entities, government institutions are actually administrative agencies. There is a growing volume of evidence within Africa that professionalizing the key institutions that provide services to firms is perhaps easy or at least possible. For example, Zambia

restructured its tax authority in 1993/94, created a new administration whose board included accountants, lawyers, bankers and members of industrial associations and government. Tax revenues that had fallen from 30% (11% from mining firms) of GDP to 13% between 1970 and 1990, have risen to 18% of GDP despite the huge tax incentives given to large mining firms. More importantly, the tax authority has, in general, consistently surpassed the revenue targets set in the national budget.

This achievement has been attributed to simplified procedures, elimination of taxes that contribute very little but are expensive to collect, and to the autonomy the tax authority now enjoys. Similar efforts in Kenya and Nigeria have resulted in substantial increases in revenue collection in the last few years. Other institutions, such as patent and company registration offices that are autonomous, have reduced the number of procedures, improved their efficiency and continue to expand their facilities to other locations. The establishment of one-stop boarder posts, investment centres, company registration services and regional cooperation should help cut down costs.

Cutting the number of procedures and elimination of unnecessary ones may help but is not the end. For example, overzealous and corrupt police, veterinary and immigration personnel could undo any gain achieved by one-stop-border posts. Similarly, the company registration may take one week but obtaining a bank account and municipal certificates may take a longer time. A general improvement in all institutions may be necessary.

Improving the performance of R&D institutions may be required. Enabling or making some of their funding conditional to partnering with private sector and working with the community may improve their performance in the long run. Simple as it sounds, evidence seems to suggest that for government-industry-academic relationship to be sustained, some level of autonomy is necessary, the management must be clearly committed, political support is needed and a common problem/interest to be addressed identified. It is these

Table 4. International Logistics Performance Index 2007 of selected economies

| Country (Rank) | LPI | Customs | International shipments | Logistics competence | Tracking & tracing | Domestic logistics costs | Timeliness |
|--------------------------------|------|---------|-------------------------|----------------------|--------------------|--------------------------|------------|
| Singapore (1) | 4.19 | 3.9 | 4.04 | 4.21 | 4.25 | 2.7 | 4.53 |
| Netherlands (2) | 4.18 | 3.99 | 4.05 | 4.25 | 4.14 | 2.65 | 4.38 |
| South Africa (24) | 3.53 | 3.22 | 3.56 | 3.54 | 3.71 | 2.61 | 3.78 |
| Rwanda (148) | 1.77 | 1.8 | 1.67 | 1.67 | 1.6 | 3.07 | 2.38 |
| Regional comparison | | | | | | | |
| East Asia & Pacific | 2.58 | 2.41 | 2.64 | 2.54 | 2.53 | 3.04 | 3.01 |
| LAC | 2.57 | 2.38 | 2.55 | 2.52 | 2.58 | 2.97 | 3.02 |
| SSA | 2.35 | 2.21 | 2.36 | 2.33 | 2.31 | 2.98 | 2.77 |

Source: World Bank 2009

common challenges or opportunities that keep them interested in working together until solved.

In addition, clear regulations on sharing of any benefits and royalties resulting from the collaborative work may have to be clearly spelt out. Institutions that wish not to compensate entrepreneurial individuals may just discourage them from working within their institutions. In Kenya and Uganda, some universities takes additional self-sponsored students and those departments that teach them get compensated. In Zambia, the main referral hospital allows its doctors to admit private patients and then share the fee. In a way, it helps keep the doctors and lecturers within the institution and the institutions gets more out of the arrangement in terms of services. The same mechanisms should be adopted in encouraging knowledge generation, technology commercialization and industrial arrangements.

4.4 Deepening Africa's financial markets

African financial markets are growing at a fast rate and can no longer be dismissed. Although they are still small in size compared to the top world markets in London and New York, they are substantial with respect to the GDP of their countries. For example, the assets of the Kenyan pension fund is estimated to at about US\$4 billion or about 26% of GDP. Insurance and equity financing institutions as well as banks have mushroomed since the 1990s

African stock markets were initially dismissed as too small even in percentage of GDP or in comparison to large ones. The Zambian stock market grew from less than 5% of GDP to over 32% of GDP in the last 3 years. More importantly, the growth is not driven by stock from the mining sector but rather manufacturing, agriculture and services. There is general excitement as the lucrative mobile firms near their contractual obligation to list on the local markets (e.g., Safaricom in Kenya and Celtel in Zambia). There is little wonder a recent Forbes article headlined *African Stock Safari* has noted that "Africa's stock markets outperformed world averages in 2006... Sub-Saharan Africa is growing faster than most of Asia (*without China and India*)".

African banks that were notoriously rigid in lending money are now beginning to play their rightful role. As African government bonds and treasury bills become less attractive, they are turning to entrepreneurial activities. For the first time, three Zambian banks provided a syndicated loan to a private local airline company to purchase 2 Boeing 737-200 aircrafts. Confidence is returning and the financial institutions are beginning to become drivers of industrial growth.

However, with few exceptions (e.g. Kenya and South Africa), the number of people investing in the stock markets remain a small fraction of the total population and, in value terms, foreign portfolio investors remain the key movers of trades. Most African firms are family-owned and

managed. Most investors prefer public firms (not as in state-owned) to family-managed ones. Finally, the stock markets are tailored for reasonably large firms while most African firms are small and medium-sized. These challenges may have to be addressed.

5. Conclusion

There is a growing realization that the service sector is a major source of employment and a key contributor to GDP and exports. The rapid diffusion of mobile technology, growth of supermarket chains and expansion of financial services in Africa has been impressive and created many opportunities. For instance, the rise in supermarkets has been associated with investment in construction of modern shopping malls. South Africa, for example, is one of the main sources of investment in supermarket chains. Well established names such as Shoprite and Game have expanded to several countries in Eastern, Southern and Western African countries.

Intra-firm trade is particularly common in the service sector. For example central sourcing of goods for supermarket chains ensures that quality is maintained by all the shops belonging to the chain. This presents many challenges: small scale farmers may not achieve and assure a constant supply of the desired volumes and quality of good needed by large supermarkets. On the other hand, supermarkets also serve as export channels for emerging firms.

African countries may have to develop comprehensive strategies for growing and expanding their service sectors if they are to successfully compete in the growing trade in services. Some of the areas where Africa may have a comparative advantage in commercial services include transport, travel, financial and business services. To realize this potential, significant investment and policy interventions may be required. This will also require the development and emergence of entrepreneurial, efficient and reliable private sector. This is particularly important if Africa will have to participate in the global value chains of knowledge intensive products.

Africa has an emerging contract research and manufacturing market especially in field and clinical trials and in information and communications. The chances for countries such as Egypt and South Africa to compete in contract research and manufacturing with established destinations such as India and China will depend on the levels of investment in human, institutional and enterprise development.

Africa may also have to encourage their firms to adopt international manufacturing standards if they are to integrate in the global production networks. Such a push could help firms maintain manufacturing excellence needed to partner with globally reputable firms. For instance, AMANET, an NGO based in Tanzania, is playing a key role in helping selected R&D institutions to meet

Good Clinical Practice (GCP) standard for undertaking vaccine clinical trials in malaria (<http://www.amanet-trust.org/>). A number of the centres have already achieved this status and are participating in clinical trials. There is no reason why governments cannot help or at least push pharmaceutical firms, for example, to meet the basic international standards.

Services are important to the development of Africa especially given its location from major markets in the North. If Africa has to become a manufacturing base, it will have to quickly fill the education, health, financing and infrastructure gaps. Of these, infrastructure and higher education restrain undermine Africa's competitiveness not only in commercial services, especially professional services.

Footnotes

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