



DNA Economics

Identifying the offensive interests of African  
Least Developed Countries (LDCs) in WTO  
Services Negotiations

iDEAS Centre

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## KEY POINTS

- African LDCs are very different in size, income and industrial structure and their trade interests are also likely to differ markedly. To be acceptable and beneficial to all of these countries, the waiver will need to be very broad.
- The export interests of African LDCs are largely confined to modes 1 and 4, and are likely to involve the outsourcing of semi-skilled work from developed and developing countries to workers in Africa, or the movement of semi-skilled workers to these countries.
- To have a real impact, the waiver will need to be supported by measures that go beyond market access in modes 1 and 4, and seeks to establish an improved mechanism to enable the mutual recognition of qualifications and professions across a broad range of sub-sectors.
- The existing data and available information tells us little about the real offensive interests of African LDCs. Further in-country work is clearly required to synthesise the export interests of African service providers (companies and individuals) and identify the actual barriers they face in foreign markets.

## 1 INTRODUCTION

The 8th WTO Ministerial Conference adopted a waiver which releases developing and developed-country Members from their legal obligation to provide non-discriminatory treatment to all trading partners (GATS Article II: Most-Favoured-Nation Treatment). This gives them legal cover to provide preferential market access to LDCs in trade and services negotiations. The waiver will last 15 years from the date of adoption. While other non-market access preferences are not automatically covered, they can be authorised by the Council for Trade in Services (CTS). This decision stands to benefit 31 LDCs, 25 of which are located in Africa.

There are two main ways in which this waiver can be operationalized. Firstly, LDCs should collectively and systematically identify preferences which would meaningfully benefit their services exports, and then translate these into concrete demands to WTO Members. In addition, both developed and developing country members of the WTO should pro-actively consider possibilities for granting preferences to LDCs.<sup>1</sup>

It is against this background that this paper seeks to assess the potential offensive interests of African LDC and LDC-like member states (mainly in the Southern African region) across the services sector. Specifically, the intention is to identify sub-sectors, modes of supply and instruments (i.e. quotas) that might be of export interest to African LDCs in key developed markets. In attempting to identify these sectors, several approaches were used. These include a survey of the available literature, an assessment of services data and an assessment of the services requests made by LDCs in other trade fora.

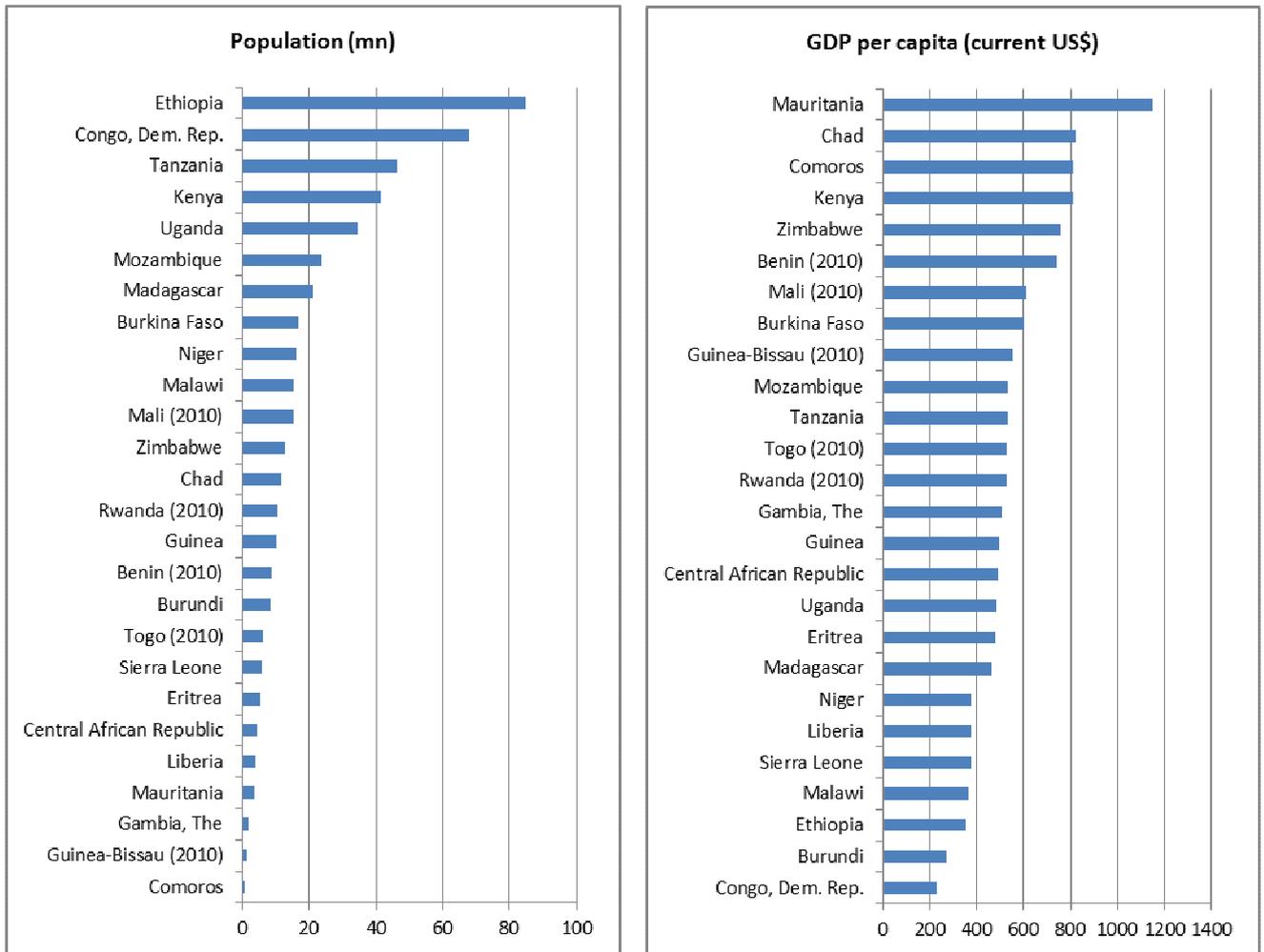
## 2 WHAT DO WE KNOW ABOUT AFRICAN LDCS?

Perhaps the most important feature of African LDCs is how different they are. This loose grouping of countries (not all of whom are WTO members) is spread widely across Africa and over multiple geographic, language and climate zones. It extends from the very large and populous countries of Ethiopia and the DRC, to the tiny Island economy of the Comores. Whereas all of these countries rank amongst the world's poorest, aggregate levels of poverty in Kenya and Zimbabwe differ markedly from those in Liberia and Sierra Leone, for example. GDP/capital in Mauritania is four times that of Burundi.

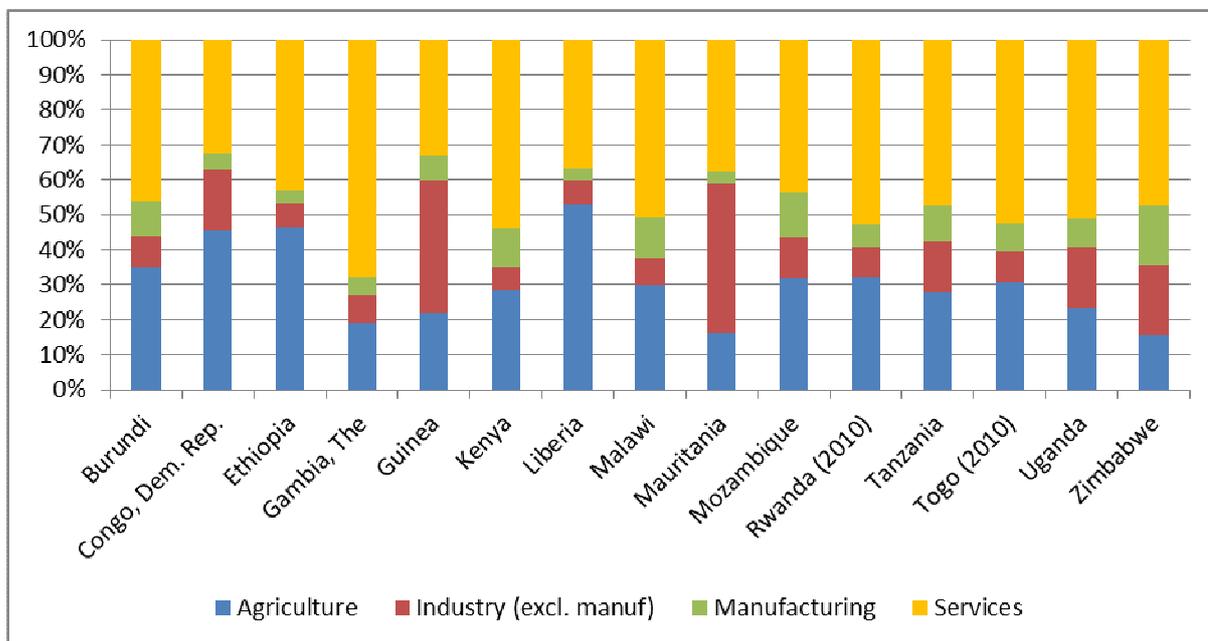
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<sup>1</sup> Hannes Schloemann, 'The LDC services waiver: Making it work', Bridges Africa Review 1, no. 4: 2012.

Figure 1: African LDCs – differences in size and wealth



Thus, although these countries share a common economic classification, in most other aspects their economic interests are likely to be quite diverse. This is clearly illustrated in figure 2 below. Whereas agriculture accounts for almost half all economic activity in Ethiopia and Liberia, it is much less important in the Gambia or Zimbabwe. Conversely, Guinea and Mauritania have a substantive industrial base (largely mining), whereas Liberia and Ethiopia have almost none. Most countries appear to have a sizable services sector, but this would largely be explained by government and infrastructure services.

**Figure 2: African LDCs – differences in economic structure**

UNCTAD goes further in categorising the exports of African LDCs. See Box 1. Again, a diverse picture emerges. Whereas most countries specialise in primary products, this group is largely split between agricultural and mineral exporters. Only Lesotho, which has a reasonable clothing and textile industry, is classified as an exporter of manufacturers. Interestingly, five members of this group 'specialise' in services trade. This includes Djibouti and the Gambia, which provide significant maritime and port services to their respective regions, and Madagascar and Rwanda, both of which have niche but fast-growing tourism industries.

#### Box 1: Export Specialisation of the WTO's African LDC Member States<sup>2</sup>

**Agricultural and Food exporters:** Benin, Burkina Faso, Guinea-Bissau, Malawi, Uganda.

**Fuel exporters:** Angola, Chad.

**Manufactures exporters:** Lesotho.

**Mineral exporters:** Democratic Republic of the Congo, Guinea, Mali, Mauritania, Mozambique, Sierra Leone, Zambia.

<sup>2</sup> Adapted from UNCTAD, The Least Developed Countries Report 2012: Harnessing Remittances and Diaspora Knowledge to Build Productive Capacities, United Nations: New York and Geneva, 2012, xii.

**Mixed exporters:** Burundi, Central African Republic, Niger, Senegal, Togo, United Republic of Tanzania.

**Services exporters:** Djibouti, Gambia, Madagascar, Rwanda.

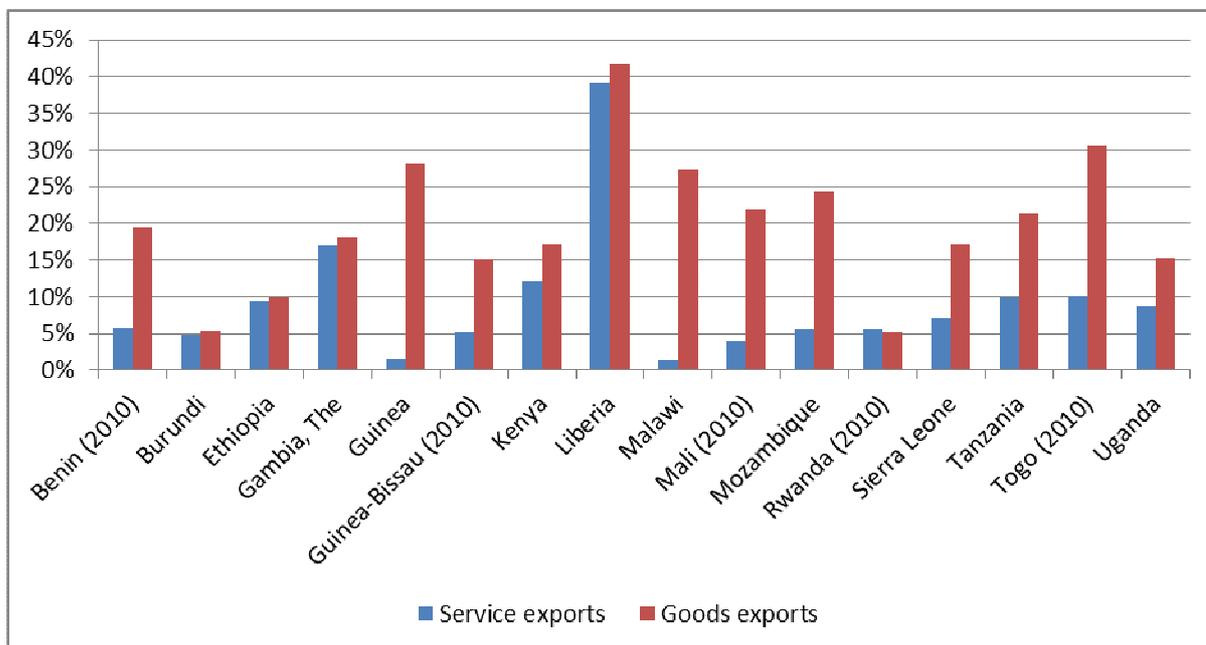
### 3 WHAT CAN WE TELL FROM THE DATA?

According to the available statistical data, many African LDCs are active service exporters, and many countries depend on the services sector for a substantial portion of their overall trade. With reference to figure 3 below, service industries account for around half of total exports in Rwanda, Burundi, Ethiopia, The Gambia and Liberia; and exceed 5% of GDP in almost all of the countries reviewed. Although this data confirms the importance of services negotiations for African LDCs, it is not helpful in identifying their specific interests in this sector. This is for a number of reasons:

- In most cases, disaggregated data is not available, and when it is, it usually does not extend beyond a few large infrastructure services (telecoms, transport and finance). Moreover, the largest sub-sector is almost inevitably 'other', which usually accounts for most trade in this sector.
- The fact that a country might export substantial amounts of services in some sub-sectors, does not necessarily mean it is competitive in this sub-sector. In telecoms for example, export revenues are largely a reflection of the international connection fees charged by the local operator. The higher these charges, the more the country exports.
- The classification of data on trade in services, even by official statisticians, is often incorrect. This is because it can be extremely difficult to match financial transactions to the underlying trade. For example, if a domestic bank provides trade finance in support of a construction project to be undertaken by a domestic engineering firm in a foreign country, it is likely that the transaction will be recorded under financial services when the bank is repaid, and not as an export of construction services.
- Some exports of particular interest to LDCs may not be recorded in the official data. Specifically, the earnings of domestic citizens in foreign countries may be recorded as remittances, but in LDCs, it is unlikely that all of this revenue flows in money form or through the formal banking sector. Likewise, the official trade in services data would not account fully for trade that takes place through investment.

This has not prevented some authors from trying to use this data to determine the trade interests of LDCs. For example, in a recent unpublished paper, Trang Lu and Joy Kategekwa calculate the revealed comparative advantage (RCA) across three LDCs to inform discussions on the WTO waiver. The results, which do not account for any of these data short-comings, are incomplete and in cases misleading. For example, they conclude that for all three countries, their highest RCA (and greatest opportunity) is in communications. In reality, as indicated above, this result more likely confirms the very high cost (and lack of competitiveness) of international telecommunications in these countries.

Figure 3: African LDCs – exports of goods and services (per cent of GDP)



### 3.1 Business Services

Surprisingly, some African LDCs do provide quite detailed information on trade in services. For example, Madagascar distinguishes between five main categories of services, including ‘other business services, which in 2010 accounted for US\$ 129 million in exports (more than 10% of total service exports). This data is broken down further, and within this category, Madagascar exported US\$ 1.48 million in accounting, auditing, bookkeeping, and tax consulting services. See Table 1. Between 2006 and 2010, with the exception of 2007 and 2008, Madagascar registered small surpluses in trade in services in this sub-sector. Similarly, data from Lesotho reveals that it exports business and management consulting and public relations services.

Table 1: Madagascar’s Imports and Exports of Accounting, Auditing, Bookkeeping and Tax consulting services

Period	Trade Flow	Reporter	Partner	Trade Value (US \$)
2003	Import	Madagascar	World	2,892,192
2003	Export	Madagascar	World	216,598
2004	Import	Madagascar	World	293,449
2004	Export	Madagascar	World	163,796
2005	Import	Madagascar	World	279,248
2005	Export	Madagascar	World	105,213

2006	Import	Madagascar	World	180,593
2006	Export	Madagascar	World	433,340
2007	Import	Madagascar	World	270,870
2007	Export	Madagascar	World	234,462
2008	Import	Madagascar	World	1,842,326
2008	Export	Madagascar	World	1,025,107
2009	Import	Madagascar	World	241,997
2009	Export	Madagascar	World	733,664
2010	Import	Madagascar	World	918,315
2010	Export	Madagascar	World	1,483,089

Source: UN Service Trade Database, 2013.

Thus, although it seems possible to obtain useful and near 'product' level data on trade in services, this data is the exception to the rule, and should still be treated with caution. At most, it provides some clues as to where further digging is required. But without understanding the specific nature of the service being 'exported', it would be dangerous to use this data for negotiating purposes.

## 4 WHAT CAN WE TELL FROM THE AVAILABLE LITERATURE?

With little or no data to guide negotiations, the best source of information is from service industries and operators themselves, and this can only be obtained through country consultations and case studies. Numerous studies have been undertaken throughout the continent with the explicit purpose of trying to identify the service interests (defensive and offensive) of African LDCs, and it is beyond the scope of this note to obtain and review them all. Moreover, many of these studies have been commissioned by Governments and remain under wraps. Nevertheless, from those papers that we have immediate access to, some common sector themes emerge.

### 4.1 Tourism

LDCs are still minor players in world tourism; however, the growth of their market share is indicative of their comparative advantage in this area.<sup>3</sup> In 2009, they represented 3 per cent of total travel exports from developing countries and 1 per cent of total world exports. Most of the barriers to trade in tourism services are regional; with operators complaining about the ability of tourism guides and agents to move seamlessly across borders. This is unlikely to be an issue in trade with more distant and developed countries.

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<sup>3</sup> World Trade Organisation, 'Market Access for Products and Services of Interest to LDCs: Note by the Secretariat', WT/COMTD/LDC/W/48, October 1, 2010, 20.

Many developing countries have however expressed concern about the ability of foreign-based tour operators to appropriate most of the value in the supply of tourism services, especially in those circumstances where the client purchases a complete tour package in their home country spends little directly in the destination country.<sup>4</sup> As such, countries like Uganda have been advised to request that the European Community and other developed countries include commitments to allow for travel agencies and tour operators from East Africa to establish abroad. The extent to which they are any existing limitations or barriers in this sub-sector would need to be assessed.

## 4.2 Education

A number of LDCs appear to have an interest in exporting higher education services. For example, Uganda, on the basis of the international recognition of its educational standards and the reputation of Makerere University as a center of excellence for higher education in Africa, is seeking to export such services to the East African Community and the Common Market for Eastern and Southern Africa (COMESA).<sup>5</sup> Similarly, the Zambian Centre for Accounting Studies (“ZCAS”) has a student body of around 2 500, of which around 10% are from neighbouring countries. The size of the campus is being expanded in order to create another 1 500 places and regional expansion is an explicit part of the ZCAS growth strategy<sup>6</sup>.

Other LDCs are seeking to develop specialised training linked to more traditional sectors such as mining. Rwanda for example would like to make use of the Kigali Mineral Campus to provide an array of value-addition services such as training and certification to the region.<sup>7</sup> The key mode for the provision of these services would be through mode 2; but in almost all cases, the target market is likely to be limited to the region.

## 4.3 Health-related and Social Services

The 2012 Talent Shortage Survey identifies nurses as among the top 10 per cent most difficult jobs to fill in the USA, and a number of European Community member states.<sup>8</sup> A number of LDCs, such as Malawi, Tanzania and Zambia, are likely to have an interest in exporting these services through mode 4.<sup>9</sup> Other areas in which LDCs may be able to benefit from mode 4 trade include midwives, nurses and paramedics.

But export opportunities in this sector need not be limited to the migration of health personnel. Uganda is seeking to capitalise on its success in managing diseases such as HIV/AIDS and other

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<sup>4</sup> Seatini, ‘The ESA-EU EPA Negotiations: Technical Issues in the 6 Negotiating Clusters: A guide for ESA countries’, Kampala, 2005, 50.

<sup>5</sup> International Trade Centre and Uganda Export Promotion Board, ‘Uganda Services Sector Export Strategy’, June 2005, 26.

<sup>6</sup> DNA Economics, ‘Developing a Services Strategy for Zambia’, 2009

<sup>7</sup> Government of Rwanda, ‘National Export Strategy’, March 2011, 35.

<sup>8</sup> Manpower Global, **2012 Talent Shortage Survey**.

<sup>9</sup> Malawi Export Promotion Council and MALSWITCH, ‘Country Paper: Malawi’, Presentation to Regional Capacity Building Workshop to Enhance Services Exports (Africa), White Sands Hotel, Mombasa, Kenya, June 7 – 9, 2011. Available online from <http://www.thecommonwealth.org/files/239829/FileName/CountryPaper-Malawi.pdf>.

communicable diseases by packaging and exporting specialised health services<sup>10</sup> to the region and beyond. In Zambia, the Government is expanding the specialist Cancer Disease Hospital to take 2000 patients a year, with hostels to be built to cater for distant (including foreign) patients. According to the Government, the CDH is currently the only cancer facility in SADC, outside of South Africa<sup>11</sup>.

## 4.4 Business Services

### 4.4.1 Professional Services

There appears to be considerable interest in exporting professional services from throughout Africa. Malawi for example has identified accountancy and professional consultancy services as potential source of exports; and it is reported that Uganda 'exports' semi-skilled workers to Japan and the Middle East and professional and high-skilled workers to America, Canada, and Europe.<sup>12</sup>

For skilled workers, immigration controls are often less burdensome than the professional accreditation process. In South Africa, for example, where international engineering qualifications are generally recognised, qualified engineers from elsewhere in Africa must undergo a personal interview with the Engineering Council of South Africa to establish what additional training is required, if any, in order to qualify as an engineer. Similarly, no recognition is given to qualifications of lawyers from most African countries, though candidates from certain designated countries (Zimbabwe, Namibia, Nigeria and Lesotho) do receive explicit preferences<sup>13</sup>.

### 4.4.2 Services incidental to mining and agriculture

Mining companies make use of a range of support services including engineering; leasing services for equipment; testing facilities to undertake mineral analysis and certification; expert evaluation services to gain validation of resource statements and many others. Rwanda and Zambia have targeted this sector for export to the rest of the region.<sup>14</sup> Similarly, Zambia has identified the potential to export its land surveying; soil testing; fumigation, and seed research services to the rest of SADC. It is already providing training and testing work in pest management in South Africa, and individuals from the region come to Zambia for training in horticulture<sup>15</sup>.

### 4.4.3 Business Processing Outsourcing (computer and related services, finance, administration, human resources and marketing services, etc.)

Although many countries (including Uganda, Rwanda and Malawi) have identified BPO as a potential export industry, it is not clear whether they have had any success in exporting these services as yet.

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<sup>10</sup> International Trade Centre and Uganda Export Promotion Board, 'Uganda Services Sector Export Strategy', June 2005, 35.

<sup>11</sup> DNA Economics, 'Developing a Services Strategy for Zambia', 2009

<sup>12</sup> International Trade Centre and Uganda Export Promotion Board, 'Uganda Services Sector Export Strategy', June 2005, 28.

<sup>13</sup> DNA Economics, 'Professional services in South Africa Accounting, engineering and law', 2009.

<sup>14</sup> Government of Rwanda, 'National Export Strategy', March 2011, 35; and Ministry of Natural Resources 'Revised Mining Policy: Transforming Rwanda's Mining Industry', October 2009, 37.

<sup>15</sup> DNA Economics, 'Developing a Services Strategy for Zambia', 2009

Telecommunication costs and bandwidth limitations might make this difficult, though indications are that both of these have improved markedly in recent years. Sharing a time zone and language with Europe would provide some inherent advantage to some countries in chasing international business in this sub-sector.

#### 4.4.4 Other Services

A recent study by the South Centre highlighted a wide range of semi-skilled and low skilled professions in which LDCs have a strong supply capacity and may be able to export through mode 4<sup>16</sup>. The major groups identified were service workers and shop and market sales workers; craft and related trades workers; and elementary occupations. The full list is included in Annex 1.

## 5 WHAT CAN WE TELL FROM THE SERVICES REQUESTS MADE BY LDCS IN OTHER NEGOTIATING FORA?

A final potential source of information could be found in the requests made by African LDCs to other countries during WTO or regional negotiations.

In the WTO negotiations on services, Uganda had made a request to Japan to provide access to allow Ugandans to work in Japan as garbage collectors and street sweepers.<sup>17</sup> Uganda's leading source of foreign exchange has for several years now been remittances from Ugandan's working abroad, including the semi-skilled and the unskilled.

More broadly, LDC countries have indicated that Mode 4 (supply of services through the temporary movement of natural persons) represents the most viable means of supplying services internationally.<sup>18</sup> They have therefore requested other WTO Members, to the extent possible and consistent with Article XIX of the GATS, to consider undertaking commitments in Mode 4, taking into account all of the categories of natural persons identified by LDCs in two group requests.

Finally, African LDCs are involved in negotiations on trade in services at the regional level in a number of different configurations. At this stage, the priority sectors selected for negotiation are largely infrastructural services (in SADC, negotiations are limited to telecommunications, financial services, energy services, transport services, construction, and tourism). Requests were recently circulated in the SADC negotiations, but are not publicly available. In COMESA, more than ten member states have exchanged offers and requests in seven priority sectors: financial, communication, business, transport, tourism, energy and construction and related engineering services. These requests should provide some indication of the offensive interests of these countries, though there might not be much overlap between these regional interests and the interests of African countries in more developed markets.

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<sup>16</sup> Daniel Crosby, *Advancing Services Export Interests of Least-Developed Countries: Toward GATS Commitments on the Temporary Movement of Natural Persons For the Supply of Low-Skilled and Semi-Skilled Services*, International Centre for Trade and Sustainable Development: Geneva, 2009.

<sup>17</sup> Seatini, 'The ESA-EU EPA Negotiations: Technical Issues in the 6 Negotiating Clusters', 46.

<sup>18</sup> UNCTAD, 'Lesotho: Services Policy Review,' United Nations: Geneva and New York, 2013, 28.

## 6 EMERGING OPPORTUNITIES

From the above quick and brief review, it is difficult to identify the specific interests of African LDCs in a potential waiver at the WTO. There are no areas in which African service providers have a clear comparative advantage, globally, which is constrained by known barriers in any one foreign country. And there is no ex ante reason to expect African service providers to pursue global investment opportunities, when they are generally constrained by skills and capital at home. Rather, it would seem that there are two broad means by which African countries could seek to raise services exports, and these would involve:

- **Encouraging foreign companies to outsource work to businesses and individuals in Africa.** This is not limited to call centre services, but could extend across a wide range of service sub-sectors, such as legal and engineering drafting, basic accounting, the processing of insurance claims, and many other back-office and administrative support functions. Most of this could be done electronically (i.e. mode 1).
- **Enabling semi-skilled workers from Africa access to developed markets.** African LDCs have already expressed an interest in making it easier for individuals, across a very wide range of services, to work in more developed markets. These interests are likely to differ significantly by country, making it difficult to derive a definitive list of sub-sectors or skills, and the more open this is left the better. Here mode 4 access is critical.

In both cases, market access is important but may not be sufficient, and serious attention would also need to be given to the recognition of African qualifications by the authorities and professional associations in potential export markets and sub-sectors.

## 7 WHAT NEEDS TO BE DONE TO TAKE ADVANTAGE OF THESE OPPORTUNITIES?

Most of the constraints to service industry growth and competitiveness are domestic. To attract foreign investment in this sector, either directly or through outsourcing, will require significant improvements to the business environment and substantially lower transaction costs (most notably in telecommunications) in most African LDCs. These challenges are well documented in the available literature and not easily overcome.

How then might a WTO services waiver assist African countries in taking advantage of the opportunities identified above? Again, it is difficult to derive specific requests from this preliminary review. However, it is possible to describe some of the general pre-conditions that would need to be met for this waiver to have a meaningful effect:

- It will need to be sufficiently broad to include a wide range of country interests, many of which are unknown.
- It will need to extend beyond the benefits that are already derived from existing mobility agreements.

- It should be structured in such a way that it does not contribute to a brain drain of needed or high-skilled professions and is supported by mechanisms which encourage brain circulation.
- It will need to include an improved mechanism to enable the mutual recognition of African qualifications and professions.

Much further work is clearly required to assess how this could be done in a way that is beneficial to actual service providers across all African LDCs.

## **ANNEX 1: CATEGORIES OF LOW- AND SEMI-SKILLED SERVICES**

### **MAJOR GROUP 5 - SERVICE WORKERS AND SHOP AND MARKET SALES WORKERS**

#### 51 PERSONAL AND PROTECTIVE SERVICES WORKERS

##### 511 TRAVEL ATTENDANTS AND RELATED WORKERS

5111 Travel attendants and travel stewards

5112 Transport conductors

5113 Travel guides

##### 512 HOUSEKEEPING AND RESTAURANT SERVICES WORKERS

5121 Housekeepers and related workers

5122 Cooks

5123 Waiters, waitresses and bartenders

##### 513 PERSONAL CARE AND RELATED WORKERS

5131 Child-care workers

5132 Institution-based personal care workers

5133 Home-based personal care workers

5139 Personal care and related workers not elsewhere classified

##### 514 OTHER PERSONAL SERVICES WORKERS

5141 Hairdressers, barbers, beauticians and related workers

5142 Companions and valets

5143 Undertakers and embalmers

5149 Other personal services workers not elsewhere classified

##### 515 ASTROLOGERS, FORTUNE-TELLERS AND RELATED WORKERS

5151 Astrologers and related workers

5152 Fortune-tellers, palmists and related workers

##### 516 PROTECTIVE SERVICES WORKERS

5161 Fire-fighters

5162 Police officers

5163 Prison guards

5169 Protective services workers not elsewhere classified

##### 52 MODELS, SALESPERSONS AND DEMONSTRATORS

##### 521 FASHION AND OTHER MODELS

5210 Fashion and other models

**522 SHOP SALESPERSONS AND DEMONSTRATORS**

5220 Shop salespersons and demonstrators

**523 STALL AND MARKET SALESPERSONS**

5230 Stall and market salespersons

**MAJOR GROUP 7 - CRAFT AND RELATED TRADES WORKERS****71 EXTRACTION AND BUILDING TRADES WORKERS****711 MINERS, SHOTFIRERS, STONE CUTTERS AND CARVERS**

7111 Miners and quarry workers

7112 Shotfirers and blasters

7113 Stone splitters, cutters and carvers

**712 BUILDING FRAME AND RELATED TRADES WORKERS**

7121 Builders, traditional materials

7122 Bricklayers and stonemasons

7123 Concrete placers, concrete finishers and related workers

7124 Carpenters and joiners

7129 Building frame and related trades workers not elsewhere classified

**713 BUILDING FINISHERS AND RELATED TRADES WORKERS**

7131 Roofers

7132 Floor layers and tile setters

7133 Plasterers

7134 Insulation workers

7135 Glaziers

7136 Plumbers and pipe fitters

7137 Building and related electricians

**714 PAINTERS, BUILDING STRUCTURE CLEANERS AND RELATED TRADES WORKERS**

7141 Painters and related workers

7142 Varnishers and related painters

7143 Building structure cleaners

**72 METAL, MACHINERY AND RELATED TRADES WORKERS****721 METAL MOULDERS, WELDERS, SHEET-METAL WORKERS, STRUCTURAL METAL PREPARERS, AND RELATED TRADES WORKERS**

7211 Metal moulders and core-makers

7212 Welders and flame-cutters

7213 Sheet metal workers

7214 Structural-metal preparers and erectors  
 7215 Riggers and cable splicers  
 7216 Underwater workers  
 722 BLACKSMITHS, TOOL-MAKERS AND RELATED TRADES WORKERS  
 7221 Blacksmiths, hammer-smiths and forging press workers  
 7222 Tool-makers and related workers  
 7223 Machine-tool setters and setter-operators  
 7224 Metal wheel-grinders, polishers and tool sharpeners  
 723 MACHINERY MECHANICS AND FITTERS  
 7231 Motor vehicle mechanics and fitters  
 7232 Aircraft engine mechanics and fitters  
 7233 Agricultural- or industrial-machinery mechanics and fitters  
 724 ELECTRICAL AND ELECTRONIC EQUIPMENT MECHANICS AND FITTERS  
 7241 Electrical mechanics and fitters  
 7242 Electronics fitters  
 7243 Electronics mechanics and servicers  
 7244 Telegraph and telephone installers and servicers  
 7245 Electrical line installers, repairers and cable jointers  
 73 PRECISION, HANDICRAFT, PRINTING AND RELATED TRADES WORKERS  
 731 PRECISION WORKERS IN METAL AND RELATED MATERIALS  
 7311 Precision-instrument makers and repairers  
 7312 Musical instrument makers and tuners  
 7313 Jewellery and precious-metal workers  
 732 POTTERS, GLASS-MAKERS AND RELATED TRADES WORKERS  
 7321 Abrasive wheel formers, potters and related workers  
 7322 Glass makers, cutters, grinders and finishers  
 7323 Glass engravers and etchers  
 7324 Glass, ceramics and related decorative painters  
 733 HANDICRAFT WORKERS IN WOOD, TEXTILE, LEATHER AND RELATED MATERIALS  
 7331 Handicraft workers in wood and related materials  
 7332 Handicraft workers in textile, leather and related materials  
 734 PRINTING AND RELATED TRADES WORKERS  
 7341 Compositors, typesetters and related workers  
 7342 Stereotypers and electrotypers  
 7343 Printing engravers and etchers



7344 Photographic and related workers

7345 Bookbinders and related workers

7346 Silk-screen, block and textile printers

74 OTHER CRAFT AND RELATED TRADES WORKERS

741 FOOD PROCESSING AND RELATED TRADES WORKERS

7411 Butchers, fishmongers and related food preparers

7412 Bakers, pastry-cooks and confectionery makers

7413 Dairy-products makers

7414 Fruit, vegetable and related preservers

7415 Food and beverage tasters and graders

7416 Tobacco preparers and tobacco products makers

742 WOOD TREATERS, CABINET-MAKERS AND RELATED TRADES WORKERS

7421 Wood treaters

7422 Cabinet makers and related workers

7423 Woodworking machine setters and setter operators

7424 Basketry weavers, brush makers and related workers

743 TEXTILE, GARMENT AND RELATED TRADES WORKERS

7431 Fibre preparers

7432 Weavers, knitters and related workers

7433 Tailors, dressmakers and hatters

7434 Furriers and related workers

7435 Textile, leather and related patternmakers and cutters

7436 Sewers, embroiderers and related workers

7437 Upholsterers and related workers

744 PELT, LEATHER AND SHOEMAKING TRADES WORKERS

7441 Pelt dressers, tanners and fellmongers

7442 Shoe-makers and related workers

#### **MAJOR GROUP 9 - ELEMENTARY OCCUPATIONS**

91 SALES AND SERVICES ELEMENTARY OCCUPATIONS

911 STREET VENDORS AND RELATED WORKERS

9111 Street food vendors

9112 Street vendors, non-food products

9113 Door-to-door and telephone salespersons

912 SHOE CLEANING AND OTHER STREET SERVICES ELEMENTARY OCCUPATIONS

9120 Shoe cleaning and other street services elementary occupations

913 DOMESTIC AND RELATED HELPERS, CLEANERS AND LAUNDERERS

9131 Domestic helpers and cleaners

9132 Helpers and cleaners in offices, hotels and other establishments

9133 Hand-laundrers and pressers

914 BUILDING CARETAKERS, WINDOW AND RELATED CLEANERS

9141 Building caretakers

9142 Vehicle, window and related cleaners

915 MESSENGERS, PORTERS, DOORKEEPERS AND RELATED WORKERS

9151 Messengers, package and luggage porters and deliverers

9152 Doorkeepers, watchpersons and related workers

9153 Vending-machine money collectors, meter readers and related workers

916 GARBAGE COLLECTORS AND RELATED LABOURERS

9161 Garbage collectors

9162 Sweepers and related labourers

92 AGRICULTURAL, FISHERY AND RELATED LABOURERS

921 AGRICULTURAL, FISHERY AND RELATED LABOURERS

9211 Farm-hands and labourers

9212 Forestry labourers

9213 Fishery, hunting and trapping labourers

93 LABOURERS IN MINING, CONSTRUCTION, MANUFACTURING AND TRANSPORT

931 MINING AND CONSTRUCTION LABOURERS

9311 Mining and quarrying labourers

9312 Construction and maintenance labourers: roads, dams and similar constructions

9313 Building construction labourers

932 MANUFACTURING LABOURERS

9321 Assembling labourers

9322 Hand packers and other manufacturing labourers

933 TRANSPORT LABOURERS AND FREIGHT HANDLERS

9331 Hand or pedal vehicle drivers

9332 Drivers of animal-drawn vehicles and machinery

9333 Freight handlers;



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