

Report no. 75145

Republic of Djibouti

Transport and logistics in Djibouti: contribution to job creation and economic diversification

Policy note

Final report
February 2013

Middle East & North Africa region
Transport unit



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Acronyms

ASYCUDA	Automated Systems for Customs Data (Customs information system developed by UNCTAD)
BMOD	<i>Bureau de la Main d'Oeuvre des Dockers</i> (Dockers Labor Bureau)
COMESA	Common Market for Eastern and Southern Africa
DCT	Doraleh Container Terminal
DPW	Dubai Port World
FER	<i>Fonds d'Entretien Routier</i> (Road Maintenance Fund)
IGAD	Intergovernmental Authority on Development
IT	Information Technology
LPI	Logistics Performance Index
MET	<i>Ministère de l'Équipement et des Transports</i> (Ministry of Infrastructure and Transport)
NFTLP	National Freight Transport & Logistics Program [of Ethiopia]
PAID	<i>Port Autonome International de Djibouti</i>
PFZA	Ports and Free Zones Authority
SDTV	<i>Société Djiboutienne de Gestion du Terminal Vraquier</i> (Djibouti Bulk Terminal Management Company)
SGS	<i>Société Générale de Surveillance</i> (international trade inspection and certification company headquartered in Switzerland)
TEU	Twenty-foot Equivalent Unit (container)
UNCTAD	United Nations Conference on Trade & Development
WFP	World Food Program

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Foreword

This note has been written during the first semester of 2012 by Vincent Vesin (transport specialist, task team leader) and Graham Smith (transport economist, consultant), who visited Djibouti in January 2012 as part of a larger World Bank team preparing a broader study entitled “Djibouti new growth model” at the request of the Government. They are thankful to many colleagues in the Bank as well as the International Finance Corporation for comments.

Introduction

Despite growth acceleration over the last decade, Djibouti suffers from one of the highest unemployment rates in the world: more than half of the population overall, and even higher for young people. Deprived of jobs, the vast majority of Djiboutians continue to live in dire conditions. Medium and long-term perspectives for employment are worrisome. Indeed, demographic pressure is likely to increase in the coming years due to the young and more and more educated workforce entering the labor market. Social stability is therefore at stake, as demonstrated by the Arab Spring. In early 2011 riots broke out in the streets of Djibouti, akin to those of Tahrir Square in Cairo.

Djibouti therefore needs a new economic growth model, more sustainable and more inclusive. Well aware of the urgency of the situation, the Government of Djibouti has requested the World Bank's assistance to revise the country's growth model and shape a new vision for the future. The Bank has thus launched a broad study, entitled "Djibouti new growth model", in particular to examine the development potential of a few economic sectors, for which Djibouti has a comparative advantage. Among these sectors are transport and logistics, the current backbone of the economy. Other sectors explored by this study include tourism, fishing, and telecommunications.

The present policy note deals with transport and logistics and provides key input to the broader "Djibouti new growth model" study. The note relies on the findings of a World Bank mission that visited Djibouti in January 2012 to collect data and interview various representatives of the public and private sectors, as well as on a literature review.

The main objectives of the note at concept stage were to: (i) assess the current situation of the transport and logistics sector in Djibouti, in particular regarding employment; (ii) examine the potential of the sector for creating jobs and generating new activities; and (iii) analyze the constraints and make recommendations to alleviate them. During the fact-finding mission in January 2012, the team found that the statistical basis for carrying out a detailed analysis of employment did not exist, and that strategic questions regarding economic development and job growth in the transport and logistics sector were not addressed by the authorities and other stakeholders. The team therefore shifted to a somewhat different emphasis and focused its attention to a wider strategic and systemic analysis. It particularly concentrated on the priority policy measures which are a prerequisite for unlocking further growth in transport and logistics.

The note concludes that transport and logistics probably have a relatively limited potential for reducing unemployment since port activities are capital-intensive, the trucking industry serving the corridor to Ethiopia is totally dominated by Ethiopians, and the ongoing improvement of the supply chain's efficiency tends to cut jobs for a given volume of trade. Djibouti's economic future in the sector lies in serving very efficiently trade corridors to the Horn of Africa and remaining the prime gateway for Ethiopia. This will require: (i) a coherent strategy based on investment rationalization and feasibility studies, (ii) an attitudinal shift in favor of more open governance, (iii) the creation of institutional mechanisms to bring together public and private stakeholders from both Djibouti and the landlocked neighbors, (iv) a further facilitation of transit and trade procedures, and (v) the development of training in specialized skills.

After an executive summary, the note is divided into three chapters: a diagnosis of transport and logistics in Djibouti, opportunities and strategic priorities for the future, and a suggested action plan. At the end of the note, after the annexes, are two maps: one of Djibouti (the country) and the other of the hinterland of Djibouti port, mainly Ethiopia and to a lesser

degree South Sudan. The second map also shows ports with which it competes in Sudan, Eritrea, Somalia, and Kenya.

Executive Summary

1. Current situation of the sector

Djibouti port is a world class, deep-water port on the world's busiest shipping lane. In 2011 nearly 17,800 ships passed through the Suez Canal (50 ships per day on average), carrying almost 700 million tons of cargo. Of these ships, about 1,500-2,000 stopped in Djibouti port. Djibouti's other main economic advantage is that it is well positioned and well equipped to serve as the main seaport for the nearly 90 million inhabitants of Ethiopia, an economy that is currently growing at about 10% per year and is expected to sustain that rate over at least the next five years. The old port of Djibouti PAID (*Port Autonome International de Djibouti*) has had a well-equipped container terminal since 1985 and a dozen berths for bulks and general cargo. The decade from 2000 to 2010 saw considerable investment in the port and substantial improvement of its facilities. At Doraleh, just outside Djibouti city, a new oil terminal with deepwater access started operating in 2006, and an entirely new container terminal DCT (Doraleh Container Terminal) started operating in 2009 (\$397 million investment). In parallel, a free zone adjoining the old port was launched in 2004, intended to simplify foreign investment, including in the port itself. During this period the highway crossing Djibouti to the Ethiopian border was upgraded so that, for the first time, the entire length was asphalted and designed to modern standards.

The Emirate of Dubai played a major role in financing the port's development and helping to introduce international best practice in its management. The public-private partnership with Dubai Port World (DPW), one of the world's leading port operating companies, was central to the development of the Doraleh oil and container terminals, which are state-of-the art as to design and operating efficiency. The special relationship with Dubai that Djibouti has enjoyed since 2000 may have cooled somewhat since July 2011, when the Djibouti government terminated 20-year management contracts with DPW for the old port and the airport after only a decade. Nevertheless, DPW remains present in Djibouti, in particular at the DCT: this container terminal has been built and is now operated by a joint-venture controlled by the PAID (67%) and DPW (33%) through a 30-year concession contract signed in 2006.

Djibouti is currently the main seaport for landlocked Ethiopia. Since the war between Ethiopia and Eritrea in 1997-2000, Ethiopia has not used any of the Eritrean ports, even though Assab is located slightly closer to Addis than Djibouti. Ethiopia relies heavily on Djibouti, which today handles about 93% of Ethiopia's imports and exports, while Berbera (in northwest Somalia) handles 3% and Port Sudan (in Sudan) 2%. Likewise, Djibouti relies heavily on Ethiopia: 85% of Djibouti's port traffic is in transit to or from Ethiopia. Ethiopia's imports include much of its supply of gasoline, diesel oil and aviation fuel. It also includes large quantities of bulk wheat (0.4-0.8 million tons per year) and other foods delivered to Ethiopia by the World Food Program.

The recent improvement of the port and the highway has made the Djibouti corridor the most attractive to Ethiopia's traders, compared with those serving Berbera and Port Sudan. In 2011 typical daily truck traffic from Djibouti port to Ethiopia was about 1,200 loaded trucks. Of these, about 200 carried oil, another 20%-30% carried containers and cars, while the remainder carried goods imported in bulk (such as coal) or freight stripped from containers in a holding area outside Djibouti port (known as PK12). Modernization of customs procedures in both countries, together with raised fees for storage in or near the port, is causing ever more Ethiopian importers to transport containers all the way to Addis or to a dry port at Mojo, 60 km short of Addis, where imports go through customs clearance. Ethiopian trucking firms totally dominate the trucking market for transport of goods on the

Djibouti-Addis corridor. They charge tariffs of about 3 cents per ton-km, which is exceptionally low by international standards, despite the fact that almost all trucks have to return empty because of the severe imbalance between imports and exports (imports have therefore to bear the full cost of the round trip). These low tariffs, combined with several other factors presented in annex 1, exclude the Djiboutian firms from the trucking market on the corridor.

In 2010 the Djibouti-Ethiopia railway, running since 1917 and for many decades the main link between them, finally stopped both freight and passenger operations. In recent decades it had suffered severely from underfunding of maintenance and renewal, as road transport gradually became cheaper and faster, demand for rail plummeted, and the railway's financial deficits piled up. An attempt was made between 2005 and 2009 to concession it to foreign private operators, but it fell through. A project of rehabilitation of the railway, financed by the European Union, was launched with mixed results.

Transshipment of containers at DCT added to revenue in early days but has waned. The terminal also takes advantage of its locational advantage to provide transshipment services for the world's major container shipping lines, adding to port revenue. However, as local and transit traffics have grown, taking up ever more of the container storage area, transshipment has waned, and in the last three years was less than 10% of the traffic handled.

Djibouti port contributes substantially to the national economy. Direct revenues generated by the port are estimated from \$65 million to \$90 million per year, representing between 20% and 25% of government revenues. Today there are about 6,500 direct jobs in transport and logistics in Djibouti (see table 4 in main text for details). This is 20%-25% of total formal employment in the private sector of about 30,000 jobs. Applying multiplier factors estimated in some other major ports, it is reasonable to expect that goods and services purchased by the port sustain further jobs by a multiple of 50%-80%, and expenditures by transport employees themselves support jobs of another 70%-100%, for a total impact of 2.5-3 times the direct employment. Thus, transport and logistics generate about 15,000 direct and indirect jobs, which represent 10% of total formal and informal employment in Djibouti.

2. Constraints faced by the sector

The foreign trade community expresses discontent with Djibouti's management of trade. Despite the above initiatives to improve the business environment and modernize transport infrastructure in the Djibouti-Addis corridor, the international trading community has rated Djibouti poorly on both the World Bank's Logistics Performance Index (LPI) and the International Financial Corporation's Doing Business. The 2010 LPI ranked Djibouti 126th out of 155 countries, while the Doing Business of 2013 ranked it 171st out of 185 countries. Within its overall indicator, the LPI ranked Djibouti's infrastructure and customs appreciably better than the overall rating (91st and 100th respectively). Logistics competence (133rd) and timeliness (143th) were ranked worse. International shipments were in between (116th), as were tracking and tracing (123rd). Doing Business similarly ranked Djibouti far higher on trading across borders (41st). These survey results (while at risk that the sample size was small) serve to emphasize how important it is for the government, as regulator of services and provider of infrastructure, to consult with and listen to the opinions of the business community. At present—except for trading across borders—there is a large credibility gap between them.

Djibouti government lacks a coherent strategy to develop transport and logistics services. The Ministry of Infrastructure and Transport issued a transport strategy report in 2008, but the Bank mission of January 2012 found little awareness of this report in the

ministry and none outside it.¹ The Bank team was unable to access any feasibility studies for the major transport infrastructure projects now under development, namely reconstruction of the Djibouti-Addis railway, construction of a new railway to export Ethiopian potash via a new port to be built at Tadjoura, and the Tadjoura port itself. Mention was also made of plans to expand the Djibouti airport or replace it with a new airport, but again, no feasibility study was made available to the Bank team. It seems that the authorities lack capacity to prepare or oversee such studies, nor even to collect and publish basic transport statistics on the present system. It also seems that the disclosure of existing studies is very limited.

The Djiboutian workforce lacks technical skills and does not speak English well. The government offers only limited programs to provide training in core technical skill areas for transport and logistics, whether it is management and operation of services in each transport mode (road, rail, sea and port, and air), or analysis and planning of new infrastructure. According to the private sector, Djibouti suffers from a lack of specialized technicians (e.g. mechanics and logisticians), who could fill the large gap existing today between unskilled workers and university graduates. Also, modern logistics beyond Djibouti's borders requires competence in English—the working language for international maritime and air transport, and particularly for Ethiopian traders and state bodies involved in international trade—but few Djiboutians speak it fluently, if at all.

The transport and logistics sector does not offer the potential for expanding employment on any great scale, certainly not as much as other sectors. Transport and logistics are inherently capital-intensive and efficient service generally means minimal reliance on low-skilled labor.

The capital intensity of the sector, relatively to other sectors of the economy, was for example illustrated in two recent Bank studies. A study on infrastructure and employment in the Middle East and North Africa region estimated that creating a direct job in transport and communication in Djibouti costs about \$17,000 in investment, against between one tenth and one half of that for a direct job in construction (depending on what is being built: buildings, roads, bridges, water and sewage systems, etc.), and against \$12,000 for a direct job in electricity.² Another study on Namibia's trade corridors with landlocked neighbors found that creating a job in transport and logistics in Namibia costs around \$31,000, against one third of that in tourism and construction.³

In Djibouti itself, DCT is perhaps an extreme example, but it also illustrates the principle. The container terminal cost almost \$400 million, equivalent to a third of one year's GDP for Djibouti. Even though DCT's construction created numerous jobs, at its inauguration in January 2009 traffic was transferred from the old container terminal in PAID, creating only a hundred net new (skilled) jobs, according to port officials.

As regards traffic in transit, the governments of Ethiopia and Djibouti have started to implement their agreed plan to rely far more than hitherto on multimodal through bills of lading (*connaissance direct*). This will substantially cut back demand for stripping containers after they are unloaded at Djibouti port, thereby reducing demand for unskilled workers in the sector in Djibouti.

In addition, the free zone, which is a central embodiment of the business-friendly policy, has disappointed as regards job creation. The zone has indeed been facing three major cross-cutting issues that also hamper the rest of the economy: high labor cost, expensive and

¹ Ministère de l'Équipement et des Transports, *La Chaîne de transport dans l'économie nationale*, 2008.

² Elena Ianchovichina et al, *Infrastructure and employment creation in MENA*, World Bank, 2012.

³ Gael Raballand et al, *Policy note on trade logistics in Namibia*, World Bank, c. 2011.

unreliable electricity supply, and high cost and low quality telecoms services. So far almost all occupants use it only for open storage and warehousing (including cold storage); only one occupant packages foodstuffs, and no labor-intensive light manufacturing firms are present.

Finally, as already mentioned, Ethiopian trucking companies dominate the Djibouti-Addis corridor traffic. Their share is said to be as much as 97% of the total: Ethiopia has between 6,000 and 8,000 trucks fit for international trade; Djibouti has only between 200 and 250. Many reasons are given in annex 1. Most significantly, the Ethiopian government appears to be subsidizing its state-owned truck fleets, by requiring no recovery of depreciation and financing cost in the calculation of freight rates, which cover only fuel, labor, and maintenance. So nearly all truck driving and mechanic jobs go to Ethiopians.

Other ports in the region offer some competition, or may do so in the near future if they and the roads connecting them to Ethiopia's heartland are upgraded. For example, in 2011 the Ethiopian Petroleum Enterprise was looking to import large quantities of coal from South Africa as fuel for its 12 cement factories, and sought bids from Djibouti port and Berbera, both about the same distance from Addis. Djibouti was able to win the bid because it could handle larger ships, and as part of the resulting purchase, \$4.8 million will be invested in improving coal handling facilities in Djibouti port.

Parts of the highway from Djibouti to the Ethiopian border urgently need maintenance to maintain the quality of service on the Djiboutian part of the corridor. The authorities have recently financed, with support from the European Union, the rehabilitation of 40 km of the corridor highway to the Ethiopian border at Galafi; 10 additional km are expected to be rehabilitated in 2013. However, portions of the corridor have not been resurfaced for nearly a decade and are beginning to deteriorate as a result of the heavy traffic. Timely routine and periodic maintenance requires a national road budget of at least \$8 million per year, whereas recent budgets have not exceeded \$5 million. (Discussions between Djibouti and Ethiopia are ongoing through the *Commission Mixte* to increase the road fee imposed on trucks using the corridor). There is a serious risk of accelerating deterioration in the future, as the pavement begins to crack up. It is well established that rehabilitation after the asphalt pavement has failed can cost at least three to five times more than timely application of overlays. This problem needs urgent attention. In addition to having a high economic benefit, it is roughly estimated that road maintenance, especially routine, could generate jobs for several hundred low-skilled workers (see annex 2), which is significant given the small size of the labor market in Djibouti.

3. Opportunities and recommended principles for long-term development

Djibouti's hinterland shows promise of sustained economic growth. At the regional level, the Common Market for Eastern and Southern Africa (COMESA) was established in 1993 to promote trade and transport among participating countries through a customs union, simplification and harmonization of procedures and documentation, and a motor vehicle insurance scheme. COMESA has policy making and cooperative bodies at several levels, including a consultative committee of the business community. All this is helping Ethiopia and other regional neighbors to gradually achieve greater integration with one another. In addition, Ethiopia's economic boom looks set to continue. Its government plans to expand core industries many-fold over the next five to ten years. Furthermore, the independence of South Sudan introduces a new player in the Horn of Africa region. It may well look to Djibouti and Ethiopia (via Addis) as a major trade corridor, including possibly a crude oil pipeline for export. Nonetheless, Ethiopia will surely remain Djibouti's main partner, by virtue of its location and the size of its economy.

Djibouti is ‘on the map’ as a regional multimodal transport hub. Djibouti is likely to retain its special role as a multi-modal transport focal point for the Horn of Africa, given its favorable location and its stable and open economy, provided that this is validated by good governance and a better dialogue with the private sector. Whether this will be a full or only partial success depends on various factors, some within the government’s control. Since its inception, the government has hoped that the free zone would complete the wished-for virtuous circle of a regional multi-modal hub, comparable to Dubai’s Jebel Ali Free Zone—on which it was modeled—or Morocco’s Tanger Med. This seems unlikely, unless and until the Djibouti free zone succeeds in attracting light manufacturing and assembly operations, such as textiles or electronics. However, this can only be achieved if significant progress is made in three critical areas: wage levels more in line with other countries at a similar stage of development, moderately priced electrical energy, and open, responsive telecoms services. (Please refer to the broader study “Djibouti new growth model” for recommendations on how to tackle these crosscutting issues.)

Even though transport and logistics cannot create the large number of jobs that Djibouti needs, there is still an opportunity for substantial growth thanks to the rapid increase in Ethiopian transit traffic and the potential to capture South Sudan’s transit. In order for Djibouti to seize these opportunities of further traffic expansion, it must maintain and even strengthen the competitiveness of its supply chain. Djibouti must anchor its position as the prime and preferred port for Ethiopia.

The vision that this policy note proposes to the government is therefore not a break with the past. Rather, Djibouti should aim to do better what it already does relatively well. The vision’s overarching precept is to use transport and logistics as a source of fiscal revenues for the state, bearing in mind that the potential for job creation is limited relative to what the country needs. These revenues would in turn be spent to reduce constraints on job creation elsewhere in the economy, for instance in tourism, as it is probably the most promising sector for employment (see the “Djibouti new growth model” study for a full assessment of tourism).

In that perspective, Djibouti should rely on the following strategic principles to make the most out of its assets in transport and logistics:

- **Given the very limited resources of Djibouti, strengthen the planning capacity** of the Ministry of Infrastructure and Transport, and have it plan carefully, conducting surveys of market demand and feasibility studies, as well as environmental impact assessments, before deciding on major investments in transport infrastructure.
- **Take trust-building measures with the Ethiopian government** to cement a friendly, win-win relationship (including through the existing *Commission Mixte* and *Comité de Suivi*).
- **Using transparent mechanisms, formalize partnership relationships between the state and the private sector as regards oversight of trade and transit reforms.**
- **Train Djibouti youth** in mechanics (automotive and heavy equipment) and transport-related technical skills, as well as in English. Train more Djiboutian freight forwarders, shipping agents, and customs brokers to handle the fast-growing Ethiopian transit traffic.
- **Further facilitate trade and transit procedures, especially regarding reform and streamlining of customs procedures** (in consultation with Ethiopian counterparts), so that stripping of containers in Djibouti city is no longer the preferred option – which should shorten delivery times by weeks and cut transit costs.

4. Action plan

Short-term actions

Action 1: Evaluate carefully the financial risks associated with reconstructing the Djibouti-Ethiopia railway.

Why? The risk is high that not enough traffic can shift from road to rail and therefore the investment would have low economic and financial returns for Djibouti. Ethiopia should bear most of this risk, since almost all the foreseeable traffic will be in transit to Ethiopia.

Action 2: Solicit advice from an independent third party when contemplating large and complex contracts.

Why? Past experience shows that Djibouti might have benefited from such advice. And Djibouti is about to embark in major infrastructure projects, which are highly risky and complex (e.g. reconstruction of Djibouti-Ethiopia railway, new port of Tadjoura, and new railway to north-east of Ethiopia)

Action 3: Establish a training center to train trainers and develop detailed training options. In the meantime, reinforce South-South cooperation to train Djiboutians outside of Djibouti.

Why? Lack of specialized skills in Djibouti is an impediment to the development of modern transport and logistics (e.g. mechanics, logisticians). Vocational training centers are urgently needed.

Action 4: Set up a standing committee that includes the private sector to manage the Djibouti-Addis corridor.

Why? The Djibouti-Addis Corridor would benefit from more effective yet transparent interactions between the public authorities and the private operators and customers.

Action 5: Support Djibouti Customs' transition to ASYCUDA World and consider establishing a green channel regime for authorized transport operators.

Why? Djibouti should maintain and reinforce the competitiveness of its supply chain to anchor its position as Ethiopia's preferred port.

Medium-term actions

Action 6: Develop a strategy for the transport sector and master plans for each sub-sector (road, rail, port, airport).

Why? Several large and costly infrastructure proposals are being pursued in the absence of a strategy, leaving the government at risk of opportunistic and opaque decision-making. There is a wide spectrum of possible projects with economic rates of return probably very different: a strategy is therefore needed to maximize benefits and make the most of Djibouti's scarce resources.

Action 7: Mobilize fiscal revenue for the Road Maintenance Fund and support firms created by former agents of the Road Maintenance Fund, so that they can compete to execute maintenance contracts.

Why? The good condition of the road corridor must be maintained if it is to compete successfully with other potential corridors (e.g. Berbera-Addis).

TRANSPORT AND LOGISTICS IN DJIBOUTI: CONTRIBUTION TO JOB CREATION AND ECONOMIC DIVERSIFICATION

Chapter I - Diagnosis

Thanks to its geographic advantage, Djibouti port is the backbone of the transport and logistics sector.

1. **Djibouti port is a world class, deep-water port on the world's busiest shipping lane.** In 2011 nearly 17,800 ships passed through the Suez Canal (50 ships per day), carrying almost 700 million tons of cargo. Of these ships, about 1,500-2,000 stopped in Djibouti port. Djibouti's other main economic advantage is that it is well positioned and well equipped to serve as the main seaport for the nearly 90 million inhabitants of Ethiopia, an economy that is currently growing at about 10% per year and is expected to sustain that rate over at least the next five years.

2. The old port of Djibouti PAID (*Port Autonome International de Djibouti*) has had a well-equipped container terminal since 1985 and a dozen berths for bulks and general cargo. The decade from 2000 to 2010 saw considerable investment in the port and substantial improvement of its facilities. At Doraleh, just outside Djibouti city, a new oil terminal with deepwater access started operating in 2006, and an entirely new container terminal DCT (Doraleh Container Terminal) started operating in 2009 (\$397 million investment). In parallel a free zone adjoining the port was launched in 2004, intended to simplify foreign investment, including in the port itself. During this period the highway crossing Djibouti to the Ethiopian border was upgraded so that, for the first time, the entire length was asphalted and designed to modern standards (see annex 2).

3. **The Emirate of Dubai played a major role in financing the port's development and helping to introduce international best practice in its management.** The public-private partnership with Dubai Port World (DPW), one of the world's leading port operating companies, was central to the development of the Doraleh oil and container terminals, which are state-of-the-art as to design and operating efficiency. The special relationship with Dubai that Djibouti has enjoyed since 2000 may have cooled somewhat since July 2011, when the Djibouti government terminated 20-year management contracts with DPW for the old port and the airport after only a decade. Nevertheless, DPW remains present in Djibouti, in particular at the DCT: this container terminal has been built and is now operated by a joint-venture controlled by the PAID (67%) and DPW (33%) in the context of a 30-year concession contract signed in 2006.

4. **Djibouti is the main seaport for the nearly 90 million inhabitants of landlocked Ethiopia.** Since the war between Ethiopia and Eritrea in 1997-2000, Ethiopia has not used any of the Eritrean ports, even though Assab is slightly closer to Addis than Djibouti. Ethiopia relies heavily on Djibouti, which today handles about 93% of Ethiopia's imports and exports, while Berbera (northwest Somalia) handles 3% and Port Sudan (Sudan) 2%.⁴ Likewise Djibouti relies heavily on Ethiopia: 85% of Djibouti's port traffic is in transit to or from Ethiopia (see table 1). Ethiopia's imports include much of its supply of gasoline, diesel oil and aviation fuel. It also includes large quantities of bulk wheat (0.4-0.8 million tons per year)

⁴ Ethiopian Railways Corporation, *Draft final report of railway planning and forecasting*, September 2010.

and other foods delivered to Ethiopia by the World Food Program (see table 2).

Table 1: Djibouti port traffic, 2002-2010, by destination and volume

Million tons per year	2002	2008	2009	2010	2010 share
Ethiopian imports	2.72	6.20	8.32	4.89	81.5%
Ethiopian exports	0.38	0.61	0.51	0.21	3.5%
Djibouti imports	0.52	1.48	1.52	0.84	14%
Djibouti exports	0	0.22	0.47	0.06	1%
Total (excl. transshipment)	3.62	8.54	10.83	6.00	100%
Transshipment	0.79	0.79	0.68	0.05	1%

Source: Djibouti Ministry of Finance, *bulletin d'information économique*.

Table 2: Djibouti port traffic, 2009-2010, by freight categories

Freight categories (% of total tons)	2009	2010	growth rate 2001- 2010 (%/yr)
Containerized	45	44	13%
Liquid bulks (oil)	20	25	5%
Dry bulks: grain, fertilizer	17	19	9%
Break bulk & other dry bulks (inc. clinker, cement & coal)	19	13	5%
Total	100	100	9%

Source: *Study on regulation of private port operators in Djibouti port*, World Bank, February 2012.

Note: grain & fertilizer are handled together at a specialized terminal (SDTV).

5. **The recent improvement of the port and the highway has made the Djibouti corridor the most attractive to Ethiopia's traders, compared with those serving Berbera and Port Sudan.** In 2011 typical daily truck traffic from Djibouti port to Ethiopia was about 1,200 loaded trucks. Of these, about 200 carried oil, another 20%-30% carried containers and cars, while the remainder carried goods imported in bulk (such as coal) or freight stripped from containers in a holding area outside Djibouti port (known as PK12). Modernization of customs procedures in both countries, together with raised fees for storage in or near the port, is causing ever more Ethiopian importers to transport containers all the way to Addis or to a dry port at Mojo, 60 km short of Addis, where imports go through customs clearance. Tariffs charged by Ethiopian state-owned truck fleets are now between \$48 and \$55 per ton for imports.⁵ Because of the severe imbalance between imports and exports, almost all trucks have to return empty; imports have to bear the full cost of the round trip. This puts the truck tariff for imports at 3 cents per ton-km, exceptionally low by international standards. The fleet is relatively young and in good condition; for example the Ethiopian government recently bought 3,000 semi-trailer trucks from Sinotruk of China.

6. **In 2010 the Djibouti-Ethiopia railway, running since 1917 and for many decades the main link between them, finally stopped both freight and passenger operations.** The last trains ran in 2010, and only as far as Dire Dawa, the line from there to Addis Ababa having been closed since 2008. In recent decades the railway had suffered severely from underfunding of maintenance and renewal, as road transport gradually became cheaper and faster, demand for rail plummeted, and the railway's financial deficits piled up. An attempt was made between 2005 and 2009 to concession it to foreign private operators, but it fell through. A project of rehabilitation of the railway, financed by the European Union, was launched with mixed results.

⁵ International and Djiboutian freight forwarders interviewed by Bank team in January 2012.

7. **Ethiopia’s economy has been growing rapidly and steadily, in both imports and exports.** Traffic passing through Djibouti port has grown rapidly in recent years, although transshipment traffic of containers has oscillated widely. Import, export, and transit traffic (i.e. leaving out the transshipment traffic) has grown steadily at rates between 5% and 10% per year until 2010. This has also been reflected in the equally rapid growth of road traffic in the highway corridor to the Ethiopian border at Galafi. In 2010 traffic slipped back, reflecting the global economic slow-down (see table 1). Almost all Ethiopian exports—notably coffee, pulses, hides and skins, and sesame seeds—move in containers. But exports account for only about 5% of the total trade volume.

8. From the 1970s until the late 1990s Ethiopia relied mainly on the port of Assab. Assab had become part of Ethiopia until Eritrea gained its independence in 1993, and Ethiopia continued to use it until the border conflict between Ethiopia and Eritrea in 1997-2000. Since then relations between the two countries have remained strained and Ethiopia has made no further use of Assab. The road linking it to the Ethiopian network has fallen into disrepair. Ethiopian government planning documents expect to continue using Djibouti for the lion’s share of its trade, though a smaller share than today, with only small shares going through Berbera and Port Sudan (see table 3).

Table 3: distribution of Ethiopian imports and exports by sea port

Sources	Year	Djibouti	Berbera (Somalia)	Port Sudan (Sudan)
Ethiopian Railways Corp	2010 (actual)	93%	5%	2%
Ethiopian Railways Corp	2015 (forecast)	75%	15%	10%
Ethiopian Min of Finance	2015 (forecast)	60%	30%	10%

Sources: (a) Ethiopian Railways Corporation, *Draft final report of railway planning and forecasting*, September 2010; (b) Ethiopia’s Min Finance & Econ Devt, *Growth and transformation plan 2011-2015*.

Transport and logistics contribute substantially to the national economy but are not labor-intensive.

9. **The transport and logistics sector employs nearly the equivalent of a quarter of the formal work force in the private sector.** Today there are about 6,500 direct jobs (public and private) in transport and logistics in Djibouti (see table 4). This is between 20% and 25% of total formal employment in the private sector of about 30,000 jobs. Applying multiplier factors estimated in some other major ports, it is reasonable to expect that goods and services purchased by the port sustain further jobs by a multiple of 50%-80%, and expenditures by transport employees themselves support jobs of another 70%-100%, for a total impact of 2.5-3 times the direct employment. Accordingly, transport and logistics generate about 15,000 jobs, which represent 10% of total formal and informal employment in Djibouti.

Table 4: direct employment in transport and logistics (formal sector)

Entity	Jobs	Comments
Doraleh Container Terminal (DCT)	750	- 600 full-time staff (including 6-7 expatriates) - 300 part-time employees working 60%-70% of the time
Port International de Djibouti (PAID)	800	In 2007, PAID had 1,300 full-time employees, including 300 handling containers which were transferred to DCT in 2009
Freight forwarders	1,500	About 25 well-structured companies, each with 50-100 people
Shipping agents	400-500	
Dockers	1,000	3,800 day-hire dockers registered with BMOD (<i>bureau de la main d'oeuvre des dockers</i> – Dockers Labor Bureau), which corresponds to about 1,000 full-time
Djibouti International Airport	370	
Djibouti-Ethiopia Railway	260	Employees not paid for ten months (to January 2012), since operations ceased
Directorate of Public Works and Transportation	300	Including about 60 staff of the Road Maintenance Fund
Ports and Free Zones Authority	1,200	Jobs in companies registered under the free zone regime are located as follows: - 327 in Djibouti Free Zone: trading and logistics companies such as BMMI, Seven Seas, etc. - 134 at Doraleh: HDTL oil terminal and customs verification firm SGS (<i>Société Générale de Surveillance</i>) - 15 at the fishing port - 700 at PAID: port security guards, SDTV (bulk terminal operator), and DCS (cleaning containers) - 10 at the airport: Djibouti Free Shop and Djibouti Catering
Total	~ 6,500	

Source: authors' estimate (assembled from various reports)

Note: the total of 6,500 jobs is supported by data available from the National Social Security Fund, which cited just under 7,000 people working in transportation, communications, and tourism.

10. **Direct revenues generated by the port represent between 20% and 25% of government revenues.** The government owns 100% of PAID, 67% of DCT, and 10% of the Doraleh oil terminal. PAID publishes its financial results and planned budget. The Doraleh oil terminal and container terminal, in contrast, are owned by public-private investment partnerships who do not make public any financial information other than investment costs. The Djiboutian partner is the Djibouti Ports and Free Zones Authority, which is wholly owned by the state. The income information publicly available therefore applies only to part of Djibouti port (in the broader definition).

11. Furthermore, information in the public domain varies widely from source to source. A planning document issued by the Ministry of Infrastructure and Transport puts the port's gross income in 2007 at \$113 million, having more than doubled over the preceding five years. A COMESA press briefing for a conference of infrastructure ministers (October 2009) put the gross income in 2008 at \$142 million. (In 2007 and 2008 the Doraleh oil terminal was already in operation, but not the Doraleh container terminal.) In contrast, PAID's budget for 2012 reports that gross income in 2010 was only \$54 million—presumably so much less because all container operations had by then been transferred to Doraleh—and after-tax net income was \$7 million. It projects gross income for 2012 of only \$64 million and after-tax profit of about \$10 million.

12. Considering the investment made in the Doraleh container and oil terminals, said to total about \$530 million (\$397 million for the container terminal, \$30 million for the oil berths, and \$99 million for the oil storage tanks), it is reasonable to expect a return on assets of at least 10%-15%, which would put net income from the two new terminals in the range \$55-\$80 million per year.⁶ Adding the net income of PAID brings this to \$65-\$90 million, that is about 5%-7% of Djibouti's GDP (2011) of \$1.25 billion and about 20%-25% of government revenues.

13. This would put the old port and the two new terminals at Doraleh (taken together) on a par with the lump sum payments of about \$80 million per year from France, the USA, and Japan for allowing their military presence (from France €30 million a year equivalent to \$39 million, from the USA \$31 million per year, and from Japan about \$10 million).

14. **However, the transport and logistics sector does not offer the potential for expanding employment on any great scale, certainly not as much as other sectors, such as tourism.** Transport and logistics are inherently capital-intensive and efficient service generally means minimal reliance on low-skilled labor.

15. The capital intensity of the sector, relative to other sectors of the economy, was for example illustrated in two recent Bank studies. A study on infrastructure and employment in the Middle East and North Africa region estimated that creating a direct job in transport and communications in Djibouti costs about \$17,000 in investment, against between one tenth and one half of that for a direct job in construction (depending on what is being built: buildings, roads, bridges, water and sewage systems, etc.), and against \$12,000 for a direct job in electricity.⁷ Another study on Namibia's trade corridors with landlocked neighbors found that creating a job in transport and logistics in Namibia costs around \$31,000, against one third of that in tourism and construction.⁸

16. In Djibouti itself, DCT is perhaps an extreme example, but it also illustrates the principle. The container terminal cost almost \$400 million, equivalent to a third of one year's GDP for Djibouti. Even though DCT's construction created numerous jobs, at its inauguration in January 2009 traffic was transferred from the old container terminal in PAID, creating only a hundred net new (skilled) jobs, according to port officials.

17. Companies based in the free zone and providing for most logistics and trading employ only 350 people in 2012. The break-bulk facilities in the old port continue to use large teams of manual labor, but they are the exception, and the traffic they handle is less than one-fifth of all port traffic. Freight forwarders and shipping agents are two other work categories exceeding a thousand jobs. But both break-bulk traffic and demand for freight forwarders can be expected to shrink in the next few years, as the governments of Ethiopia and Djibouti implement their agreed plan to modernize and computerize their customs procedures and information exchange, and rely far more than hitherto on multimodal through bills of lading (*connaissance direct*) and electronic transmission of trade documents. All of this will substantially cut back demand for stripping containers after they are unloaded at Djibouti port. Instead, many more unopened containers will be transferred with little delay to trucks taking them directly to dry ports in Ethiopia.

⁶ Gross receipts may have been two to three times greater, in the range \$160-\$200 million, which would be a reasonable extrapolation of the gross income recorded by PAID before containers were transferred to DCT.

⁷ Elena Ianchovichina et al, *Infrastructure and employment creation in MENA*, World Bank, 2012.

⁸ Gael Raballand et al, *Policy note on trade logistics in Namibia*, World Bank, c. 2011.

Transshipment of containers varies greatly from year to year.

18. In some recent years but not others, Djibouti has handled large volumes of containers off-loaded from one ship engaged in long-distance trans-continental movement, to another. An example would be containers coming from China on a ship bound for Rotterdam transferred to a ship from India going to New York, or to a feeder service that visits regional ports which are too small for the mega-carriers. Such transshipment movements are decided largely by the shipping lines, to optimize use of carrying capacity on the various ships in their fleets. The choice of port is secondary, provided that it is not far from the main shipping lanes, it can be relied upon to unload and load quickly, and its fees are reasonable. In consequence such traffic is notoriously fickle (see table 5). The dip in transshipment traffic at Djibouti in 2010 was due in part to one of the major international shipping lines transferring its business to other ports in the Arabian Peninsula.

Table 5: transshipment of containers through Djibouti port

	1997	2005	2008*	2009	2010	2011
000 TEU per year	108	1	60	176	70	398

* Last year for the 'old' terminal (PAID), before inauguration of DCT

19. From the port's perspective, such traffic normally has the advantage of a shorter dwell time than containers being imported, and can bring in extra income when local traffic leaves available handling capacity unused. Increments of traffic that cover variable cost and make a contribution to fixed costs are better than none, provided that they do not crowd out local traffic that bears a higher tariff. Profit margins may be low, as several other international ports along the same sea routes compete for the same transshipment traffic: Salalah (Oman), Aden (Yemen), Jeddah (Saudi Arabia), and Sokhna and Port Said (Egypt). Box 1 below gives a wider picture of transshipment in the Middle East and North Africa region. Transshipment fees charged by Djibouti's container terminal in the old port (PAID) are somewhat lower than fees charged to containers in transit to Ethiopia (see table 6).⁹

Table 6: transshipment Fees at Djibouti Port (2011)

Container type	<6,000 TEU/yr	6,000-80,000 TEU/yr	>80,000-200,000 TEU/yr
20ft full	\$141	NA	\$83
40ft full	\$201	NA	\$116
20ft empty	\$112	NA	\$67
40ft empty	\$137	NA	\$80

Source: *Study on regulation of private port operators in Djibouti port*, World Bank, February 2012.

NA = not available

⁹ Comparable data on DCT are not made public.

Box 1 - The economics of the transshipment market for containers in MENA

Many of the world's busiest shipping lanes pass through the heart of the MENA region, so connectivity is rarely an issue. Scheduled sailings of ships carrying containers are frequent, from the Indian Ocean to the Red Sea and the Suez Canal, and thence westward through the Straits of Gibraltar.¹⁰ Frequency of services –such as a sailing at least once a week towards the desired destination-- is one key parameter for connectivity. The other is the port-to-port transport cost, the key determinant of which is the ship size, which in turn is constrained by the available water depth at the berth (up to 17m) and ship length (up to about 220m).

Opportunities exist to take advantage of lower transport tariffs on ships returning partly empty in the direction opposite to the main flow, and likewise empty containers. The fully loaded direction for liner ships plying the Southeast Asia-MENA corridor is westbound (i.e. coming from China and other countries of the Far East); so in principle substantial discounts should be available on eastbound traffic. In the USA and Europe corridors the partly empty direction is westbound. In other words, exports from the MENA Region generally stand to benefit from backhaul discounts.

Combining these parameters --service frequency, cost due to ship and port economies of scales, and discounts in the backhaul direction-- should allow stakeholders to determine if there will be enough traffic to justify direct services from origin to destination without transshipment on the way, which adds to costs and lengthens trip times.

From the ports' perspective the size of the market for transshipment in the Red Sea is about 6 million TEU per year. But transshipment creates few jobs.

The foreign trade community expresses discontent with Djibouti's management of trade.

20. Despite the above initiatives to improve the business environment and modernize transport infrastructure in the Djibouti-Addis corridor, the international trading community has rated Djibouti poorly on both the World Bank's Logistics Performance Index (LPI) and the IFC's Doing Business. The 2010 LPI ranked Djibouti 126th out of 155 countries, while the Doing Business of 2013 ranked it 171st out of 185 countries. Within its overall indicator, the LPI ranked Djibouti's infrastructure and customs appreciably better than the overall rating (91st and 100th respectively). Logistics competence (133rd) and timeliness (143th) were ranked worse. International shipments were in between (116th), as were tracking and tracing (123rd). Doing Business similarly ranked Djibouti far higher on trading across borders (41st). These survey results (while at risk that the sample size was small) serve to emphasize how important it is for the government, as regulator of services and provider of infrastructure, to consult with and listen to the opinions of the business community. At present, except for trading across borders, there is a large credibility gap between them.

21. The international trading community rated Ethiopia similarly low in the 2010 LPI (123rd) and in the 2013 Doing Business (127th). The LPI's rating of specific services differed, however. They ranked tracking and tracing as relatively good (67th out of the 155 countries), and international shipments about average (89th), whereas both infrastructure (145th) and timeliness (144th) were rated as poor.

Djibouti is highly dependent on Ethiopia, and is expected to remain so.

22. Ethiopia dominates transit traffic through Djibouti. As already noted, a high share (85%) of Djibouti's port traffic is in transit to and from Ethiopia. Trade with Somaliland and Eritrea, other neighbors, is very limited. Ethiopia's GDP in 2010 was \$24.9 billion, that is, 20 times greater than Djibouti's (in other words, Djibouti's GDP is only 5% of Ethiopia's). In population Ethiopia is the second-largest country in Africa; Nigeria is the largest. Ethiopia's population is larger than that of Germany, the largest country in Europe. In contrast Djibouti, with fewer than a million inhabitants, is one of the smallest countries in Africa, comparable in

¹⁰ More than 70% of the world's dry cargo maritime trade is now carried in boxes.

population to some small islands (Mauritius and Cape Verde). As to GDP, among African states only the Gambia and Guinea-Bissau are smaller (see table 7).

Table 7: population and GDP of Djibouti, Ethiopia, and hinterland neighbors

Country	Population (million, 2009)	GDP (\$ billion, 2010)	GDP per head (\$PPP 2009)
Ethiopia	82.8	29.7	930
Congo – Kinshasa	66.0	10.6*	320
Kenya	39.8	31.4	1,570
Uganda	32.7	17.0	1,220
Yemen	23.6	26.4*	2,470
South Sudan	8.3	13.2	1,550
Somalia	9.1	2.0*	210
Eritrea	5.1	1.9*	580
Djibouti	0.9	1.25	2,320

Source: *Economist Pocket World in Figures*, World Bank, 2012

* value for 2009

Djiboutian truckers only have a small share of the Ethiopian corridor market

23. In Djibouti's case, by far the largest freight haulage market is the transit traffic from Djibouti port to Ethiopia. However, Djiboutian truck owners and drivers have only a very small share (less than 10%) of this market. 200 to 250 Djibouti trucks barely manage to compete with 6,000 to 8,000 Ethiopian trucks. Many reasons account for this; they are summarized below and explained more fully in annex 1. There is no easy solution, but at least some of the impediments may be amenable to negotiation with the Ethiopian government.

- (1) Djiboutian drivers earn wages in the domestic market that are about double those of Ethiopian drivers in the corridor.
- (2) Ethiopian drivers and repair mechanics are more skilled.
- (3) The Ethiopian currency (birr) is non-convertible, so that Djiboutian trucking firms have difficulty transferring payments home.
- (4) Frequent devaluations of the birr further deter Djiboutian transporters.
- (5) Djibouti truckers cannot find return freight from Ethiopia.
- (6) A Djiboutian trucking firm cannot submit a written invoice to an end customer in Ethiopia, because it needs but lacks a tax identification number.
- (7) Diesel fuel has until recently been far cheaper in Ethiopia than in Djibouti.
- (8) Djiboutians buy their trucks in US dollars with no government assistance. In contrast the Ethiopian government supports its trucking firms, and is said to require domestic banks to lend at preferential interest rates for purchase of large truck fleets.
- (9) Ethiopian trucking tariffs appear to be subsidized, at least for state-owned fleets, in that the government does not require recovery, through the tariffs, of its investment in the vehicles.

24. To ensure a larger share of the market for Djiboutian carriers, representatives of the Djibouti government have proposed trip quotas for cross-border trips. Indeed, the last meeting of the *Comité de Suivi* agreed that the option of a quota system would be considered. Nevertheless, in the Bank's view, it is unlikely to solve the problem of the Djiboutian truckers. International experience suggests that it is not advisable for several reasons. Such quotas have been abolished within the European Union since 1993, but they are still used in agreements governing trips between European states and countries to the East, notably Russia. This approach is suboptimal from the viewpoint of the importer or exporter, since towards the end of the year, if the quota for the lower-cost trucks is exhausted, shippers are

forced to use carriers whose rates are higher than those charged by firms that they know and trust, contrary to a normal healthy commercial relationship. From the administrative viewpoint, it requires a mechanism to negotiate and issue the quotas, to keep track of their use throughout the year, and to take enforcement actions if the quotas are violated: altogether, a sizeable administrative burden that interferes with the working of the market. And lastly, transparent enforcement can be an issue leading to corruption and time delays.

Other ports in the region offer some competition.

25. Competition for Ethiopian imports is essentially limited to Berbera and Port Sudan; Ethiopia does not use Assab at all for political reasons. A recent planning document prepared by the Ethiopian Ministry of Finance (“Growth and transformation plan, 2010/11-2014/5”) aims for a 60%-30%-10% split among Djibouti, Berbera and Port Sudan respectively. However, today Djibouti’s share is more than 90% (see table 3) and likely to benefit in the near future from the more efficient process for customs processing discussed below. Berbera is known for the export of livestock but little else; a precondition for greater use will be major rehabilitation works on the road from the port to the Ethiopian border, i.e. within Somalia—which is unlikely so long as Somalia’s political situation remains unstable. Port Sudan has a substantial disadvantage because of its long overland distance (1,900 km from Addis), unless the origin or destination of the goods traded is in northern Ethiopia. With regard to South Sudan, this country is currently served mainly by Mombasa (Kenya) and a transit corridor via Uganda. The distance from Mombasa to Juba is 2,600 km, whereas the distance from Djibouti is 1,900 km. Mombasa port is often congested and costly, but Kenya is developing a new port at Lamu to relieve it. Ethnic and linguistic ties with South Sudan give Uganda an advantage, including the fact that English is the language of commerce in all three countries (Kenya, Uganda, and South Sudan). The trans-Uganda transit corridor is said to operate satisfactorily without undue impediments, whereas the corridor from Djibouti via Addis to Juba is said by an international freight forwarder operating in Djibouti to be “full of obstacles.”

Parts of the highway from Djibouti to the Ethiopian border urgently need maintenance to maintain the quality of service on the Djiboutian part of the corridor.

26. The authorities have recently financed, with the support of the European Union, the rehabilitation of 40 km of the corridor highway to the Ethiopian border at Galafi; 10 additional km are expected to be rehabilitated in 2013. However, portions of the corridor have not been resurfaced for nearly a decade, and are beginning to deteriorate as a result of the heavy traffic. Timely routine and periodic maintenance requires a national road budget of at least \$8 million per year, whereas recent budgets have not exceeded \$5 million. (Discussions between Djibouti and Ethiopia are ongoing through the *Commission Mixte* to increase the road fee imposed on trucks using the corridor). There is a serious risk of accelerating deterioration in the future, as the pavement begins to crack up. It is well established that rehabilitation after the asphalt pavement has failed can cost at least three to five times more than timely application of overlays. This problem needs urgent attention. In addition to having a high economic benefit, it is roughly estimated that road maintenance, especially routine, could generate jobs for several hundred low-skilled workers (see annex 2), which is significant given the small size of the labor market in Djibouti.

27. The next chapter examines the opportunities and strategic priorities recommended for a long-term development of the transport and logistics sector.

Chapter II - Opportunities and strategic priorities for the future

COMESA promotes economic integration in the Horn of Africa region.

28. The region is dynamic, undergoing change and a process of international integration (thanks to the Common Market for Eastern and Southern Africa - COMESA), in which Djibouti can play a major role as gateway and pole of stability. The member countries of COMESA are lowering and harmonizing their import tariffs, making intra-regional trade more attractive. Exporters from Egypt, also a member of the common market, have shown interest in taking advantage of the opening up of these economies, and Djibouti may be a convenient access route, especially if air freight services between Djibouti and the landlocked member countries can be shown to be viable.

Ethiopia promises rapid and sustainable growth.

29. The government of Ethiopia has high expectations regarding continued rapid growth of its economy, averaging more than 10% per year over at least the next few years. It expects exports of coffee and meat to grow especially rapidly, as well as textiles and garments. It also plans to increase production of sugar and cement several-fold; part of this production will go for export (see table 8). Ethiopia's cement industry also counts on importing coal as its main fuel, which will add to Djibouti port's in-bound traffic. To attract investment capital, the Ethiopian government is offering to sell arable land to Arab countries and major developing countries (India, China) where land is scarce.

Table 8: Ethiopian forecasts of growing exports by 2014

Export Products	Units	Baseline 2009/10	Forecast 2014/5	Increase
Coffee exports	000 tons	320	601	88%
Meat exports	000 tons	10	111	x11
Sugar production	000 tons	17,712	42,516	140%
Cement production	000 tons	2,700	27,000	x10
Textiles & garments exports	\$ mn	1.7	4.5	x2.7

Source: Ethiopian Ministry of Finance & Development, *Growth and transformation plan, 2010-2014 (draft)*

Creation of South Sudan has given rise to great expectations.

30. The independence of South Sudan introduces a new player in the Horn of Africa region, which may well look to Djibouti and Ethiopia (via Addis) as a major trade corridor. South Sudan is attracting much interest, mainly because of its large oil reserve. Indeed, there is talk of a pipeline to export crude oil from the South Sudan oil fields to Djibouti, which could be operating within three years. The burgeoning oil industry might justify a 'sea-air' air lift from Djibouti to Juba, though for now the volume of demand can only be guessed at. Apart from oil, South Sudan's trade volume is likely to be small relative to Ethiopia's. Ethiopia's GDP is \$30 billion, whereas South Sudan's is estimated at \$13 billion (see table 7), of which oil accounts for 71%. That is, South Sudan's non-oil economy is only about \$4 billion, one eighth of Ethiopia's.

31. A long-term vision for the development of the transport and logistics sector should rely on the following strategic priorities.

SP1 - There is a need for a coherent strategy (planning, prioritization, feasibility studies, consultation, capacity for implementation and monitoring).

32. Officials of the Djibouti government mentioned many projects to the Bank team, but no long-term vision emerged that was realistic and consistent. No priorities were set. This is a core problem. Although, the Ministry of Infrastructure and Transport issued a transport strategy report in 2008, the Bank mission of January 2012 found little awareness of this report in the Ministry and none outside it.¹¹ The Bank team was unable to find any feasibility studies for the major transport infrastructure projects now under development, namely the reconstruction of the Djibouti-Addis railway, the construction of a new railway to export Ethiopian potash via a new port to be built at Tadjoura, nor of the Tadjoura port itself. Mention was also made of plans to expand the Djibouti airport or replace it with a new airport, but again, no feasibility study was made available to the Bank team (see annex 3 for a list of major projects being financed by donors).

33. The state needs to explore options and adhere to objective assessment of market interest in new services, before reaching investment decisions that will be transparent, aired publically and open to public debate as to their advantages and drawbacks. Today's management culture appears to be the opposite. The Ethiopian government seems better focused in this regard, and it is conducting feasibility studies appropriately for major transport investments like the two railway projects now at the planning and financing stage. Those projects which cross the border into Djibouti, notably the railway projects but also possible upgrading of the southern highway corridor, will of course impose their discipline on Djibouti's planners.

SP2 - Djibouti should manage its relationship with Ethiopia as a mutually advantageous partnership (win-win), anchoring Djibouti's position as the primary and preferred port for Ethiopia.

34. The greatest challenge for the Djibouti government is to manage its relationship with Ethiopia as a mutually advantageous partnership (win-win), despite the large disparities between both countries in terms of population as much as of GDP. Ethiopia needs a well-functioning, quick, reliable, and not-too-costly corridor for its imports, which cover oil products, industrial inputs, a wide gamut of manufactured goods, and foodstuffs that it cannot grow at home. It has a burgeoning agricultural output, part of which (notably coffee) needs a well functioning export corridor. If the whole corridor from Djibouti port to Addis fell within a single country, the government could readily make rational investment decisions ranked by economic benefit-cost estimates. It would trade off the large up-front capital expenditure in infrastructure, borne largely by the state, for the benefit of both public and private sectors in keeping the prices of imported goods down, opening up new markets for exports, and in the process creating well-paying jobs for those engaged in transport and logistics in the corridor. The state could expect to recoup its investment in operating companies, notably the railway, directly through corporate profits; and in roads through taxes on fuels and vehicles, as well as tolls where applicable.

35. Where an essential part of the corridor is in a second country, how is Djibouti to get around the complication that it cannot easily recoup its investment in road improvement through indirect taxes on Ethiopian vehicles and fuels or direct taxes on the trucking firms? (Ethiopian trucks account for more than 95% of the total fleet involved). The only viable source of revenues from foreign users is road tolls. If the principle of the state recovering

¹¹ Ministère de l'Équipement et des Transports, *La Chaîne de transport dans l'économie nationale*, 2008.

infrastructure investments is accepted by both sides, Ethiopia either has to accept higher tolls than today, or has to bear part of the investment cost otherwise falling on Djibouti. If the proposed two new railway lines are built, in principle the two governments should contribute a share of the capital cost that matches their expected share of future profits.

36. The Ethiopian-Djibouti relationship is complicated not only by the great difference in size, but also the equally great difference in economic development philosophy and politics. Ethiopia is pursuing an interventionist policy of state ownership of all major assets and state control of most economic activity. Djibouti in contrast pursues a radical laissez-faire/market approach: the state limits itself to provision of essential social services including infrastructure, and leaves almost all other economic activity to the private sector. Ethiopia plans its development through centralized reasoning and administrative mandate, apparently with limited regard to prices and other market signals; Djibouti expects market signals to provide the key incentives for investment and job-creation, and its government has very limited capacity for visionary long-term, or even medium-term, planning.

37. Thus it cannot be taken for granted that the Ethiopian government wants to recover its investments in national assets. On the contrary, the exceptionally low tariffs charged by Ethiopian trucking fleets, most of them state-owned, suggest that the government does not even expect to recover its investment in new truck fleets, let alone infrastructure—effectively providing a large subsidy to all road transport transactions.

38. The Djibouti government's primary concern should be to satisfy its Ethiopian customers, as its monopoly position is not assured forever. Today the competing ports are hampered by limited cargo handling capacity as well as low-quality access roads and political complications. But over time these may change, depending heavily on their relations with Ethiopia. Now is the time for Djibouti to anticipate and position itself to take full advantage of the changing structure of Ethiopian imports and exports. As table 7 showed, the exports are diversifying from mostly agricultural crops and products to industrial raw and semi-processed materials, as well as manufactured goods derived from the above.

39. The Ethiopian 'Growth and transformation plan' gives information on the competing corridors, though it remains to be evaluated whether future changes in the corridors—such as a possible, but by no means assured, big shift of traffic from road to the new Addis-Djibouti rail corridor—may alter the balance significantly. In principle the new rail service should cement Djibouti's advantage over Berbera and Port Sudan. Port Sudan seems unlikely to attract Ethiopian trade other than for the northern cities, as it is 1,900 km from Addis, 1,000 km more than Djibouti. Berbera is about the same distance from Addis as Djibouti (937 km versus 910 km), but its port facilities are far inferior to Djibouti's (water depth, handling equipment) and the road from the port to the Ethiopian border is unpaved and in poor condition. Assab is slightly closer to Addis (882 km), but the road between the port and the Djibouti-Galafi-Addis road is unpaved or severely deteriorated. Over all, political relations give Djibouti a clear advantage over its competitors, at least in the near future—long enough for Djibouti to cement the present relationship through measures discussed below.

40. Djibouti port's competitiveness can be measured not only in terms of cost and time but also reliability and other attributes. It offers much of what international supply chains seek, as set out in annex 4. Handling charges for containers may be on the high side, but ocean cargo rates are probably appreciably lower than those to competing ports by virtue of Djibouti's location right on the world's main east-west maritime corridor, and quick unloading and turnaround of container ships. Areas that particularly need strengthening are the skills of service providers (freight forwarders and shipping agents) to operate in the English language, and in mechanical and engineering functions.

SP3 - Build a win-win strategy between the public and private sector.

41. So far, the institutional framework for the Djibouti-Addis corridor is limited to the public sector, in the form of the *Commission Mixte* that meets twice yearly, most recently at the end of January 2012, and its dependence, the *Comité de Suivi*. (Transport topics addressed by the November 2011 meeting of the *Comité de Suivi* are summarized in annex 5.) It is regrettable that the Djibouti Chamber of Commerce and their Ethiopian counterparts are excluded from this consultation mechanism, since they have an important role to play in optimizing the services they offer (price and service quality), in adapting to the transformation of customs procedures and documentation for transit traffic described elsewhere in this note, and in seeking other solutions that would facilitate trade and in lobbying for the removal of impediments.

42. Trade corridors linking population centers in landlocked countries to the seaports that serve them have been examined in a recent World Bank study.¹² It observed that most successful cases were substantially aided by the existence of an institutional framework that brings together the four main interested parties: the governments of the landlocked country and of the transit country, but also the private sector of each country, representing the interests of both traders and the providers of transport and logistics services. Formal bi-national institutions (committees, commissions, coordinating bodies) oversee the development of these trade corridors, resolving conflicts regarding not only the infrastructure but also customs procedures, immigration constraints, police controls, and other soft services. The private sector plays a key role in these corridor committees, since it is most sensitive to the user's complaints, and it needs to be able to pay adequate salaries so that the head of the committee and one or two others are professionally competent and motivated. Such mechanisms help to disseminate information and build trust among the stakeholders, creating a favorable environment for reaching win-win solutions, avoiding the zero-sum game mentality that tends to perpetuate inefficiencies and corrupt practices.

43. Good examples are the Maputo Corridor Logistics Initiative between the Republic of South Africa and Mozambique, the Northern Corridor linking the Kenyan port of Mombasa with the countries of the Great Lakes Region, and the Walvis Bay Corridor Group in Namibia. The Maputo Corridor and the Walvis Bay Corridor are public-private partnerships. Their mission statement typically addresses the desire to promote trade between the two countries to their mutual benefit, to keep users (actual and potential) advised of the services offered and operating conditions in the corridor, and to be an effective problem-solving body.

44. In addition to the creation of a public-private corridor committee, two major opportunities are at hand to enhance the supply chain's performance markedly, and for the long term: (a) reform and restructuring of the transit regime under which Ethiopian imports pass through Djiboutian territory, and (b) the construction of one or two railway lines serving the transit corridor. Each of these is discussed below.

SP4 - Major shift towards more efficient processing of imports in transit to Ethiopia.¹³

45. The customs administrations of Ethiopia and Djibouti have recently agreed to modernize and reform the processing of Ethiopia's imports, switching from the current very cumbersome and sui generis Ethiopian system to one relying on a transit guarantee regime aligned with international best practice. To function fully, it also requires Djibouti customs to

¹² Arvis, Carruthers, Smith, and Willoughby, *Connecting landlocked developing countries to markets*, World Bank, 2011.

¹³ Michel Zarnowiecki, customs expert and consultant to the World Bank, report of mission to Djibouti and Ethiopia, September 2011.

replace their Mirsal software (imported from Dubai) by a system compatible with the UNCTAD-designed ASYCUDA World system, which is now widely used throughout the developing world, including Ethiopia (ASYCUDA ++ version). The third leg of the stool is to adopt multimodal through bills of lading, implying that the party issuing the bill of lading remains responsible for the shipment until it reaches its inland destination—likely in most cases to be Mojo dry port near Addis, or other dry ports being developed elsewhere in Ethiopia.

46. The original agreement in principle was reached in 2006, under the aegis of COMESA. It took two years, until 2008, to develop and agree on the *connaissance direct* (“through bill of lading”) approach. And the switchover from Mirsal software to ASYCUDA has begun with a test phase, financed by the government. UNCTAD has been assisting in piloting the new software at two pilot sites, and in training freight forwarders and shipping agents.

47. This bilateral reform will substantially reduce freight handling and delay in Djibouti, as the customs procedures to be performed in Djibouti will be much simplified and trade data will be passed on to Ethiopian customs electronically instead of by paper. Dwell time in Djibouti port or at PK12, the staging and storage point at the edge of the city, is expected to shrink from an average today of about 23 days to about 8 days. (DCT was designed assuming an average dwell time of 7 days, but until recently goods in transit to Ethiopia have been granted 30 days of free storage, of which many importers have taken full advantage. The free period was recently cut to eight days.) The introduction of transit guarantees and electronic transfer of data eliminate the justification for the several customs checkpoints within Ethiopia between Galafi and Addis Ababa, trimming another half day from the transit time.

48. The companies that own containers, mostly shipping lines, charge penalties when containers carrying imports inland take more than 25-30 days to be returned to the port. Once the dwell time in Djibouti and delays in transit are cut back, the frequency of such penalties will drop. There will no longer be much economic argument for stripping containers in Djibouti. The savings to Ethiopia will be large. Freight forwarders today handling between 3 and 4 million tons of imports per year will save about \$150 per TEU (20 tons content) by no longer stripping the containers and reloading their contents onto trucks, and about \$100 per TEU for storage while awaiting customs processing, which in future will all shift to the Ethiopian dry ports: in total about \$250 per TEU.¹⁴ Some of the storage costs may instead be incurred at the Ethiopian dry port or destination, but the net savings will still be considerable.

49. As the other side of the same coin, the revenue loss to freight handlers in Djibouti could amount to \$35-\$40 million per year, about 3% of Djibouti’s current GDP. Adoption of the reforms may take time, but the economic rationale for Ethiopia to pursue them is strong, and the Djiboutian government has agreed to take the main actions required of it: the switch of customs software and the transition from paper to electronic exchange of data.

50. The Ethiopian government aims to apply the new trading approach as soon as possible, programming that by 2014-2015 80% of import cargo will use the multi-modal (*connaissance direct*) system and the dry ports (including fewer internal checkpoints). Ninety percent of exports will also use the newly improved system. Transit times for imports will shorten from 30 days average in 2009-2010 to 10 days in 2014-2015, that is, a saving of 20 days. This is a reasonable expectation. It will allow the truck fleet to average four round trips per month, against today’s three trips, bringing down the cost of road transport thanks to the more efficient use of the vehicles and drivers.

¹⁴ These data come from the Ethiopian NFTLP study.

SP5 - Construction of two new bi-national rail lines offers to cement the transit relationship between Djibouti and Ethiopia.

51. The Bank team's visit to Djibouti coincided with the visit of a Chinese delegation to negotiate a financing and construction agreement for reconstruction of the railway line serving the southern corridor between Djibouti and Addis Ababa. The line is to adhere to the route of the old meter-gauge line via Dewele (the Djibouti-Ethiopia border crossing) and Dire-Dawa, Ethiopia's second largest city. The total length will be similar to the old line, that is, about 780 km—about 130 km shorter than the road corridor via Galafi. The new line will be standard gauge, enabling it to carry substantially more traffic and achieve lower operating costs than the original line. The total construction cost would be large: of the order of \$2.6 billion.¹⁵ The Ethiopian portion (about 680 km) would be the equivalent of about 6% of its GDP, while the 100 km in Djibouti would cost the equivalent of about 15% of Djibouti's GDP. Phasing construction over time would reduce this burden, as the host countries' economies grow; but most of the expected traffic is from end to end: Djibouti port to Addis. The Chinese Exim Bank is to provide financing to the Ethiopian government for the Dewele-Mieso portion, the first part to be built. And a Chinese construction firm has signed an agreement with Ethiopia to begin the reconstruction works. The Djiboutian government is likewise negotiating financing for its portion of the line.¹⁶

52. At the same time, negotiations were said to be under way between an Indian importer of fertilizers and a Canadian mining firm which is preparing to open a large potash mine at Danakil, near Mekele in northern Ethiopia. The potash would be transported by a new rail line to a new special-purpose port at Tadjoura in Djibouti, for export. This is a distance of 600-700 km, of which about 110 km would be in Djibouti. A spur would be built to connect to Djibouti City and the Doraleh terminals. Within Ethiopia the government will very likely take responsibility for building the railway, as it has ambitious plans to develop an entirely new national rail network of about 2,400 km. It also intends to build sugar and cement factories in and around Mekele, for which coal will need to be brought in from Djibouti port. Within Djibouti it is less clear, but there too the government is likely to take responsibility (rather than a private firm). The Saudi Fund and the Arab Fund for Economic and Social Development are lending \$60 million towards construction of the Tadjoura port. The Port and Free Zones Authority's five-year plan says the first phase of Tadjoura port plus 110 km of road from the Ethiopian border near Balho to Tadjoura will cost \$132 million, to handle 4 million tons per year. The prequalification for contractors has already been launched. A second phase would cost a further \$20 million and would double the handling capacity to 8 million tons. The potassium is to be exported in containers. This large a volume alone would very likely justify the railway option.

53. These two lines are intended to serve different products and different geographical areas. The Mekele-Tadjoura line would be an industrial line serving a large corporate exporter—though the option of also carrying other bulk freight is being considered, that would tend to balance paying traffic in both directions. In contrast, the southern corridor railway would compete in the market for transit traffic of all types, heavily biased toward imports. As with most freight railways, the market would push it toward a focus on bulk commodities, notably oil and dry bulks such as coal and clinker, but also containerized traffic that could be hauled in block trains, mostly from a single origin (Djibouti port) to a single destination (the Mojo dry port near Addis).

¹⁵ The press release says the section between Mieso and Dewele will cost an average of \$3.5 million per km, a reasonable estimate for Chinese construction of an essentially new single-track line in hilly terrain. The Djibouti portion, in mostly flat terrain and likely to re-use the old trackbed extensively, will probably cost less.

¹⁶ Djibouti's trade with China reached \$445 million in 2010, 51% higher than in 2009.

54. The main commercial uncertainty regarding the Djibouti-Addis line is likely to be the market share that it could wrest from today's trucking operations—that can be expected to fight back vigorously. In many countries a trip distance of some 800 km is well beyond the breakeven distance above which railway operating costs are lower than road transport costs, though the calculus also depends heavily on the annual volume of traffic, its stability (i.e. if spread evenly throughout the year), and its predictability (is the traffic amenable to long-term contracts?). International experience suggests that a minimum volume might be 5 million tons per year.

55. However, very few railways in Africa have succeeded in competing with road transport in parallel corridors, given the administrative rigidities and lack of commercial management incentives normally plaguing the rail option, while the road option is a free market, open to small and large firms alike, who all have strong incentives to be profitable or else withdraw. As we have already noted, the Ethiopian trucking industry is large, well organized, apparently heavily subsidized by the government, and aggressive in expanding. It is therefore far from clear that the southern corridor railway would succeed commercially.

SP6 - Training of the local workforce needs to be improved (in technical skills and proficiency in foreign languages)

56. The private sector sees a shortage of technical specialists in the trades at the heart of transport and logistics, notably among mechanics, welders, electricians, and stock managers. Furthermore, knowledge of English is essential for almost all international trade, especially for Djiboutians, as it is the working language with Ethiopia. Some service providers working in Djibouti port lack such skills.

57. The following section draws on the above strategic priorities to recommend to the government of Djibouti an action plan for the short and medium terms.

Chapter III - Action plan

Short-term actions

Action 1: Evaluate carefully the financial risks associated with reconstructing the Djibouti-Ethiopia railway.

58. An immediately pressing question is the appropriate sharing between Ethiopia and Djibouti of the capital cost of rebuilding the Djibouti-Addis railway, taking into account that Ethiopia will be the main user and beneficiary. Since almost all the foreseeable traffic will be in transit to Ethiopia, almost the only significant benefit for Djibouti would be its share of operating profits. The highly developed Ethiopian trucking industry can be expected to compete vigorously to protect its market share, preventing the railway from attracting enough traffic to cover its large fixed costs. The break-even traffic volume has been estimated at about 5 million tons per year, whereas total freight in the corridor is about 9 million tons per year. For the railway to attract even a quarter of the freight market would be exceptional by the standards of other African trade corridors. Accordingly, we advise the Djiboutian government to minimize its investment in the line. Since it is almost entirely for the advantage of Ethiopia, Ethiopia should bear the financial risk accordingly.

Action 2: Solicit advice from an independent third party when contemplating large and complex contracts.

59. Djibouti should carefully plan and implement large infrastructure projects if it is to attract funding from international donors and private investors, and if it is to foster competition among private contractors and operators. In particular, technical, economic, financial, and legal aspects should be examined in depth. It is recommended that Djibouti solicits advice from independent specialists to ensure a transparent and robust examination of these aspects. Further details are provided under action 6 with regard to the development of a strategy and master plans for the transport sector.

60. Actions should also be taken to enhance the transparency of transactions between the state and private interests. In particular, transparency should be sought in the award process, both at the bidding stage and in the contract with the winner. In a small country like Djibouti, the formation of monopolies is inevitable in some cases. Nevertheless, the contracting and regulatory frameworks need to be conceived so that the investors do not abuse their monopoly position; that is, the benefits of the investment and the monopoly position are shared between the investors and the public at large. The use of independent advice is recommended in the design of these frameworks. International donors could play this role of “honest brokers” through technical assistance.

Action 3: Establish a training center to train trainers and develop detailed training options. In the meantime, reinforce South-South cooperation to train Djiboutians outside of Djibouti.

61. This requires identifying: (i) skills in demand but in short supply, (ii) target population, (iii) sources of training expertise (training of trainers), (iv) funding, and (v) implementing agencies.

62. Would-be international investors are put off by the shortage of technical and

mechanical skills in the Djibouti labor market. But given the high unemployment at home, the government is unlikely to allow importation of such labor from other countries as the Dubai free zone did. Instead, the only politically viable solution seems to be to launch a large training program, including a training center to train trainers, and to attract sponsors (donors or international firms who need the skills) willing to fund it.

63. Djibouti should create training programs for technicians for careers in transport and logistics to fill the gap between University graduates and the numerous unskilled workers. Djibouti University has seen the number of its students double over the decade since 2000, in equal numbers of males and females. But these students seek academic and administrative qualifications, especially in the social sciences, rather than technical and mechanical skills. The latter are covered by the *Lycée Industriel et Commercial*. However, it is inadequately funded and inadequately staffed to take on this training at the scale needed. The World Bank, in collaboration with the *Agence Française de Développement* and the Islamic Development Bank, is considering support to vocational training facilities in the public sector.

64. What additional actions could be taken to strengthen the competitiveness of Djibouti truckers vis-à-vis their Ethiopian competitors? The impediments set out in annex 1 amount to a formidable set of non-tariff barriers to competition. However, one solution that will benefit Djiboutian truckers wherever they operate, in the domestic market or the international corridor, is the provision of training for auto mechanics. Efforts could be made for example to attract manufacturers of heavy trucks to support the training in automotive mechanics and other skills required in operating fleets of large vehicles.

65. For Djibouti to play its part in planning and managing the proposed railway lines, managers and technical staff will need to be trained from scratch. A substantial training program would have to be conducted before operations could begin. Indian Railways and its former consulting arm RITES have already been involved with the *Chemin de Fer Djibouto-Ethiopien*, the now-defunct railway company. Similar programs could be launched.

66. Port technical workers have received training from the international port operating company P&O, before it was absorbed into DP World in 2006. More recently the Ministry of Employment sent some 40 trainees to India for management training in ports and shipping (*métier maritime*). Four or five employees of PAID have attended courses at the Arab Academy for Science, Technology and Maritime Transport in Alexandria, Egypt. Others have attended UNCTAD's port management courses. Djibouti is encouraged to reinforce South-South cooperation in the short-term to train its workforce outside of Djibouti before local training becomes operational.

67. The Djibouti government is also encouraged to approach international donors, wherever ties to particular technical and mechanical skills are identified. Donors are generally pleased to channel their funding into training and technical assistance, as long as a valid beneficiary organization (*interlocuteur valable*) has been identified.

Action 4: Set up a standing committee that includes the private sector to manage the Djibouti-Addis corridor.

68. Where the economy of one of the two countries is far smaller than that of the other, as is the case for Djibouti vis-à-vis Ethiopia, the smaller country may prefer the less formal options, as they hold less risk of losing sovereignty. Even in this case, participation by private-sector representatives can be beneficial, in so far as they are more aware of the time and cost penalties incurred by vehicles kept waiting at border crossings as well as at informal road checks within each country. They can therefore be vigorous lobbyists for more efficient border procedures and better governance regarding the informal checks and 'fees', resulting

in a win-win outcome for shippers and operators on each side. The private stakeholders that should be involved in the proposed committee to shape a vision and a strategy for the future include, among others, the chamber of commerce, the port operators, the shipping lines, the current major shippers, and the freight forwarders. Djibouti could look for assistance from international donors to set up this institution.

69. If its relations with Ethiopia make a bi-national entity infeasible, Djibouti could set up such a public-private committee unilaterally to monitor performance indicators and truck traffic counts, giving a more reliable basis for negotiations with Ethiopia.

70. An example of a successful public-private institution is the Maputo corridor, which is described in box 2 below.

Box 2 - Case study: the Maputo corridor, a highly successful tri-national and public-private corridor institution

A best-practice example of a tri-national (and bilingual) institution promoting the improvement of a trade corridor between a seaport and its international hinterland is the Maputo Corridor Logistics Initiative (MCLI) in southern Africa. It addresses the needs of the road and rail corridor from the port of Maputo in Mozambique to Pretoria, capital of the Republic of South Africa, and its surrounding region including Swaziland (landlocked). South Africa is not landlocked, but Maputo is the nearest deepwater port for this major industrial region.

MCLI is a not-for-profit institution legally based in South Africa but with members also from Mozambique and Swaziland, from both the public and private sectors. Its objective is to (i) promote continuous improvement of border procedures, (ii) enhance the scope and competitiveness of transport services in the corridor at more competitive tariffs, (iii) provide information services to users of the corridor, and (iv) promote investment in designated zones, including the port. It was launched in 1994-6 and from 2004 to 2009 saw transit traffic grow at 22% per year, more than doubling over the period, while border delays were radically reduced. It has attracted \$5 billion of investment in improved road, rail, border post and port infrastructure and services.

Source: MCLI website - www.mcli.co.za

Action 5: Support Djibouti customs' transition to ASYCUDA World and consider establishing a green channel regime for authorized transport operators.

71. This transition is already under way in two pilots (financed by the government) but likely to need continued financial and technical support. Full conversion from the previous software will allow both Djiboutian and Ethiopian customs to use compatible softwares, greatly simplifying electronic exchange of documents, and supporting Ethiopian customs' initiatives to reform their import clearance procedures radically (see details in the previous chapter).

72. With Djibouti customs about to launch a major redesign of its procedures and software, it is important that customs communicate effectively with international firms doing business in Djibouti on the implications—broadly positive, but they need to be transparent. Traders need to feel confident that customs are honest, and will treat them in predictable ways in the future. A one-stop-shop website/information service is part of this scenario.

73. There is merit in the concept of approved or authorized carriers, who meet standards of service quality and financial standing, and thereby qualify for accelerated processing by customs at border crossings, through a green channel, to be used also by empty trucks. (Vehicles warranting only documentary checks would qualify for the yellow channel, while vehicles that customs have reason to inspect physically qualify for the red channel.) Such a system creates positive incentives to improve performance and trustworthiness, rewarded by more efficient traffic flow at borders. The European Union has such a system, using the term “authorized transport operators”, broadened to include any company engaged in trade that is

able to meet and guarantee professional standards of conduct and reliability defined in the regulations.

74. This concept could be implemented through a bilateral agreement defining criteria and the process for screening of firms wishing to enter the international trucking market, to meet quality standards as to (a) company robustness (assets and insurance), (b) vehicle fitness (Is the box secure? Does it comply with weight and size limits, as well as physical performance standards?), and (c) drivers' competence (accident record).

Medium-term actions

Action 6: Develop a strategy for the transport sector and master plans for each sub-sector (road, rail, port, airport).

75. Djibouti needs a clear vision and strategy for the development of its transport sector, which should lead to the elaboration of, in sequence, master plan studies, programs, and projects. In particular, it is recommended to:

- Define and carry out needed master plan studies for ports and shipping, roads, rail and air transport, and specific topics for analysis, especially of market demand for new infrastructure. This will require close consultation and cooperation with private stakeholders who are best informed as to the demands of the market and who are willing to invest in the development of new services.
- Evaluate prospects for road/rail competition in the next decade
- Evaluate prospects for sea/air services to South Sudan and the Great Lakes area (Uganda, Rwanda, Burundi, Congo DR). See annex 6 for a brief discussion on this topic.

76. Master plan studies should look ahead 20-25 years and identify potential for development of the national economy and for closer economic integration with neighboring countries. On the basis of forecasts of population, income per head and major economic activities, the likely quantity and geographical distribution of personal travel and the transport of goods should be predicted. It will be useful to differentiate transport needs in accordance with specific scenarios of development, identifying causal links between particular developments in other parts of the economy and the transport and logistics infrastructure and services they will need—often a chicken-and-egg problem that flags the need for inter-industry coordination.

77. Programs for the next five to ten years should then be developed that are consistent with the long-term forecasts, identifying the aggregate level of state spending that will be required (in relation to GDP and the government's likely capital budget). Within these estimates major infrastructure projects expected to transform the economy should be singled out, and estimates made of their likely cost, as well as the traffic volumes and (in the case of railway, ports and airports) revenue and profitability. This process should aim to identify threshold levels of traffic that would make each major project economically viable.

78. As building blocks for the above, the Ministry of Infrastructure and Transport intends to undertake the following priority actions:

- 1) preparation of a multi-modal master plan
- 2) technical assistance to develop a long-term vision of regional partnerships, such as COMESA and the Intergovernmental Authority on Development (IGAD)
- 3) a study of demand and traffic forecasts for the transport sector
- 4) a study on Djibouti trucking to develop this activity in the corridor through support

mechanisms

5) formal training of mechanics

6) a study to recommend on delegating road maintenance to the private sector: one option is to support businesses created by agents of the FER board, so that they can run their own small firms.

79. The Bank mission of January 2012 found interest in all these topics among one or more government agencies. However, a consistent and structured approach was not apparent. Below we focus on where the government of Djibouti could start its strategic reflection.

80. Ethiopia's *Growth and transformation plan for 2010/11-2014/15*, commissioned by the Ministry of Finance and Economic Development, sets out a strategic agenda, which Djibouti would do well to study, as it stands to benefit from the growing breadth and depth of the Ethiopian economy. The related report on "National freight transport and logistics program" of May 2010 (draft) contains detailed information on the transport operations in the Djibouti-Addis corridor, as seen from the Ethiopian perspective. These documents may be helpful, though far from definitive, in identifying future demand for transport and logistics services. Ultimately, any large proposed investment in transport infrastructure needs to be evaluated against rigorous assessments of market demand and realistic prices.

81. Djibouti wants to become a regional hub for transport and logistics: that is the current vision. However, the government has not defined a strategy to get there. Its model is mainly Dubai. It may be warranted to learn more about Dubai's success story, which is characterized by proximity to consumption markets with far higher income levels, competitive telecoms and dense air transport connectivity on the main flight paths between the Mediterranean and the Indian subcontinent, abundant energy at low cost, and an equally abundant supply of moderately skilled migrant labor from other countries in the region, from Palestine to Pakistan and India, and even from the Philippines. Djibouti, in contrast, enjoys few such advantages.

82. Undoubtedly there is good potential for developing tourism in Djibouti, as identified by the broader Bank study "Djibouti new growth model" undertaken in parallel to this policy note. The implications for transport infrastructure and services to play a role in realizing this potential are briefly addressed in annex 7.

83. With regard to the reconstruction of the Djibouti-Addis railway, in addition to evaluating the financial risks carefully as recommended above, Djibouti should identify strategic design choices, such as the warranted carrying capacity of the reconstructed line, taking account of the likely competitive response of the Ethiopian trucking industry; and the possibility that a future oil pipeline might take away substantial traffic from today's road transport and from tomorrow's railway.

84. Transport infrastructure designed to carry large volumes of bulk commodities should be reconciled with the investment plans of the public or private companies planning to exploit mineral deposits and quarries or to build large factories; and to the extent possible, those companies should be required to contribute wholly or in part to the cost of the transport infrastructure on which they will rely. The planned railway line to carry potash from northern Ethiopia to a new port to be constructed at Tadjoura is a case in point.

Specific recommendations regarding the free zone

85. The Djibouti government has harbored high expectations of its free zone to attract foreign investors, in which it has had only limited success, and to create jobs, which it has not done. Foreign firms that might establish light manufacturing operations in the free zone have

made it clear that they are unwilling to do so as long as the wage levels are two to three times higher than in competing countries and energy remains costly and unreliable. Solving this problem will not be easy, but we recommend some interim measures that the government may wish to take to gain momentum in the right direction.

86. The Djibouti government should carry out a cost-benefit analysis of the free zone, and compare its findings with the expectations they had when launching it, with a view to modifying the regulatory framework.

87. In terms of benefits, Djibouti is now “on the map” among international traders and globalized firms, mainly by its association with Dubai and the success record that the Dubai free zone has enjoyed. Many international traders and a few global-operating manufacturers have come prospecting to Djibouti, and the publicity given to its cutting-edge container operations is positive for its image. Dubai investors may perceive a “special relationship” and still be willing to finance further developments—though the termination in July 2011 of the DPW management contract for PAID and the airport may have dulled their enthusiasm.

88. In terms of costs, Djibouti has foregone customs duty revenues on incoming goods, notably on goods declared as in transit to Ethiopia but actually leaked to the local economy. And the Ministry of Finance has foregone income tax revenue on firms doing business in the free zone that might otherwise have been subject to conventional tax rules.

89. As a lesser point, the legal issue of who owns buildings erected in the zone needs to be clarified. This would contribute to the perception by prospective investors of the government's predictability.

Action 7: Mobilize fiscal revenue for the Road Maintenance Fund and support firms created by former agents of the Road Maintenance Fund, so that they can compete to execute maintenance contracts.

90. Road maintenance should be funded at a level that sustains the quality of the road network and especially the international corridor to Ethiopia. The best option is probably to negotiate with Ethiopia higher road fees. The Djiboutian authorities have carried out studies and have started discussing with the Ethiopian authorities, through the *Commission Mixte*, to increase the road fee and to tax truck overloading.

91. The Road Maintenance Fund (FER) is responsible for raising revenue through a fee imposed on road users, in accordance with the “users pay” principle. It is using this revenue to maintain the national network, of about 1,200 km of highway. Launched in 1999, the fee has so far been charged solely on traffic using the international corridor between Djibouti and the border crossing with Ethiopia at Galafi. Between 2000 and 2005 it was \$11 per loaded trip. Since 2005 the standard charge for most trucks using this highway has been \$20, collected at PK20 outside Djibouti city. The fee rate complies with a provision of the COMESA founding agreement, which specifies that road use fees may be charged, on the basis of \$10 per truck with more than three axles, plus \$5 for each 100 km driven. Since the distance from Djibouti city to Galafi is just over 200 km, this translates into a user fee of \$20 per truck. Fees are also collected from large trucks engaged in domestic movements, but not on buses, nor on trucks with a total weight of less than 12 tons.

92. The income generated has fallen far short of maintenance needs. The annual budget has been 800-850 million Djiboutian francs (\$4.5-5 million). Needs have been estimated at

\$6-8 million per year.¹⁷ Raising the fee to \$28 is being negotiated, but it is foreseen that the fee may need to go to \$40. Part of the problem is that 10%-15% of FER's budget goes to pay its own staff (65 persons) and another 25%-30% pay for other staff of the Ministry of Public Works (215 persons). Only 60% of its budget is spent on actual maintenance works, awarded by contract.

93. FER is experimenting with performance-based maintenance contracts for routine maintenance, having awarded such a contract to the large French firm Colas in October 2010, for a three-year period, covering the Djibouti-Galafi highway. The annual budget is about \$2 million, equivalent to about \$10,000 per km. Particular care is needed for the drainage structures, which see no rain for most of the year but are subject to downpours two or three times a year, that can do substantial damage.

94. A related policy option is to delegate road maintenance to the private sector, through a new autonomous road agency. International experience suggests that performance-based funding of road maintenance by private firms can be highly cost-effective, as it aligns incentives while keeping the buyer of maintenance services at arm's length from the deliverer of such services. A decree reforming the Ministry of Infrastructure and Transport, approved in 2010, created (among other things) a Djiboutian roads agency to manage the road network, but as a purely state-owned part of the government. Annex 8 repeats the institutional recommendations from the Bank's 2005 transport sector review, on how best to manage the maintenance of the corridor, through a roads agency that is semi-independent from the government.

¹⁷ Jean-Charles Crochet et al, *Republic of Djibouti: transport sector review*, World Bank, 2005—adjusted for inflation of 4%-5% per year from 2005 to 2012.

Annex 1 - Factors favoring Ethiopian trucking firms in Djibouti-Addis the corridor market

1. *Wages of Djibouti drivers are about double those of Ethiopian drivers.*

It is debatable which is constrained: the Djiboutian wage levels (60,000-100,000 Djiboutian francs or \$300-500 per month) are artificially high or the Ethiopian wage rates are artificially low. Since Djiboutian trucking is an open market and jobs are scarce, there seems no reason for Djiboutian drivers to over-price themselves. However, other parts of the Djibouti labor market likewise show a high reservation wage: a preference to remain dependent on an extended family that includes some who are employed by the government. In contrast most Ethiopian drivers are working for large state-owned fleets, which have the power to set wages low, provided that they likewise control wages in labor markets to which drivers might migrate in search of better pay.

2. *Ethiopian drivers and repair mechanics are more skilled.*

This seems to be the consensus, even among Djiboutians.

3. *The Ethiopian currency (birr) is non-convertible, so that Djiboutian trucking firms have difficulty transferring payments home.*

The Ethiopian government has given no evidence to suggest a future change in policy.

4. *Frequent devaluations of the birr make Djiboutian transport more expensive overnight.*

The International Monetary Fund is encouraging Ethiopia to devalue, to promote exports. The government of Djibouti, in contrast, has pegged the Djiboutian franc to the US dollar for the past decade, as an incentive to prospective foreign investors.

5. *Djibouti truckers cannot find return freight from Ethiopia.*

There is no official ban but Djiboutian forwarders claim that cargo is never available. Ethiopian exports are de facto reserved for Ethiopian truckers. Ethiopian traders' choice may result from national loyalty, or quality of service, or price. All three may count, but especially price (see below).

6. *A Djiboutian trucking firm cannot submit a written invoice to an end customer in Ethiopia, because it needs, but lacks, a tax identification number.*

It is therefore obliged, in practice, to go through an Ethiopian agent, which has many drawbacks: the additional transaction costs money, lacks transparency, and complicates and deters scaling up. It is legitimate for the Ethiopian government to enforce payment of taxes by domestic firms. But it may be questioned whether it is warranted to require this of foreign carriers, whose tax obligations are to their own government, not Ethiopia's. We advocate a process of quality encouragement/enforcement among trucks serving international trade. Once in place, this certification of authorized transport operators would obviate the need for measures to control for tax compliance on each trip.

7. *Diesel fuel has until recently been far cheaper in Ethiopia than in Djibouti.*

In January 2012 diesel fuel in Ethiopia cost \$1.00 per liter, in Djibouti \$1.13. In late 2008 the

price in Ethiopia had been 89 cents per liter.¹⁸ Prior to 2008 the price had been below the US benchmark, implying some degree of subsidy by the state. It was raised above that benchmark for the first time in 2008. Djibouti's current price corresponds roughly to the US benchmark, implying no subsidy and perhaps a small tax component.

8. *Djiboutians buy their trucks in US\$, with no government assistance. In contrast the Ethiopian government is said to support its trucking firms, forcing domestic banks to lend at preferential interest rates for purchase of large truck fleets.*

It is plausible that the Ethiopian government is subsidizing trucking to reduce the overt cost of imports and exports as a key to national development. The recent purchase arranged by the Ethiopian government of 3,000 tractor-trailers from the Chinese manufacturer Sinotruk was probably inexpensive (by hearsay at a price of \$60,000-65,000), very low compared to western manufacturers or even those of middle-income countries (Brazil, Turkey) that have western partners, more likely to be priced in the range \$130,000-150,000. In principle, a Djiboutian firm could do the same, but would not command quantity discounts, and would not be offered soft financing (or even effectively, grant funding) by its government.

9. *Ethiopian trucking tariffs appear to be subsidized in the state sector.*

Under current market conditions, the cost of road transport in the corridor is 80-85 birr per 100 kg for hauling imports from Djibouti to Addis. That is, \$48-\$50 per ton for about 920 km, or 5.3 cents per ton-km for a round trip. Since exports from Ethiopia are few (only 5% of its trade volume), nearly all trucks return empty, making the real trucking price in the corridor about 3 cents per ton-km averaged over the round trip.¹⁹ This is one of the lowest rates in the world for road transport; otherwise the lowest cost per ton-km known to the team is about 5 cents, observed in China and Brazil.

From the limited information available, Ethiopian truck fleets in the state sector seem to have no obligation to cover vehicle purchase price and financing cost from income. A report issued in Ethiopia in 2010 (known as the NFTLP report²⁰) broke out truck operating cost elements, itemizing driver's wage, fuel and oil, tires, and others, which presumably covered maintenance and/or insurance; but it omitted any explicit depreciation of the truck purchase price, let alone interest. It refers to a typical truck purchase price of 2 million birrs (then about \$155,000). Straight-line depreciation and interest over a working life of one million km would give 1-2 cents per ton-km of cargo hauled (assuming a typical full load of 35-38 tons in the import direction, mostly empty in the other). Added to the current Ethiopian average tariff of about 3 cents, this would bring it closer to 5 cents, the asymptote of international best practice, even though the Ethiopian average annual distance driven (about 65,000 km) is below international best practice (closer to 100,000 km).²¹

It is noteworthy that the World Food Program, in contrast, calls for bids and typically pays 7-10 cents per ton-km in Ethiopia, and as much as 30 cents in Djibouti.

¹⁸ Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), a development agency of the German government and an authoritative source.

¹⁹ PAID uses 4 cents per ton-km in a small analysis to justify minor investment in improving road access to DCT. Source: PFZA, *Plan quinquennal 2011-2016 de développement portuaire et de zone franche*, September 2011.

²⁰ Afro Consult & Trading Plc, *Ethiopia's national freight transport and logistics program*, draft report, May 2010.

²¹ Overloading is not seen as a problem here. Almost all Ethiopia's full-size tractor-trailers have 6 axles, and the Ethiopian legal limit is 10 tons per axle, whereas in Djibouti it is 13 tons (as in France). A new weigh station has been installed just outside Djibouti city, at PK20, and was to be in use by February 2012.

All this puts Djiboutian truckers in a vicious cycle: as they work less and less in the international corridor, they find themselves relegated more and more to the local market, which in turn drives down prices and margins in Djibouti, putting the industry in trouble. So long as most of the nine impediments listed above persist, it is unlikely that Djiboutian truckers can gain a significant share of the traffic in transit to Ethiopia.

Annex 2 - Djibouti-Galafi highway/international corridor

The corridors connecting the port to Ethiopia are central to the role Djibouti plays in the region (see maps at the end of this note). The lowlands separating Djibouti city from the Ethiopian border are largely arid desert. The inland population in this southern half of Djibouti is minimal. The older corridor to Addis Ababa passes through Ali Sabieh and thence south into Ethiopia at Dewele. This is the route taken by the railway built at the start of the 20th century and now derelict. A national highway parallels the railway, but is used only lightly, because some 200 km immediately south of the border with Ethiopia are unpaved.

The main highway to Addis branches off near Ali Sabieh and thence runs west-northwest to the Galafi border crossing, 217 km from Djibouti city. From there the highway in Ethiopian territory soon joins the north-south highway that connects the Eritrean port of Assab with Addis. Since around 2000 the whole highway from Djibouti city to Galafi—flat much of the way—has been paved with asphalt, which explains why it is now the corridor used by the vast majority of Ethiopian traffic, even though the road distance is about 65 km longer than the southern corridor paralleling the railway south from Ali Sabieh: 910 km via Galafi versus 844 km via Dewele.

The present condition of the highway within Djibouti varies markedly (see table below). Thanks to financing from the European Union, the most recently rebuilt section, from PK20 to the Grand Bara, is in good condition, except that the shoulders are inadequate, considering the very heavy truck traffic using it. Continued strong traffic growth will accelerate the deterioration of the road. A useful rule of thumb is that each \$1 in maintenance avoids \$3-4 in later rehabilitation. At the other extreme, the 70-odd km between Dikhil and Galafi are already sorely in need of strengthening. Raising the FER tariff would help Djibouti to muster the necessary financing, but understandably is resisted by Ethiopian interests.

In terms of employment creation, it is roughly estimated that road maintenance, especially routine, could generate jobs for several hundred low-skilled workers, with the following assumptions. The wage of a low-skilled worker in Djibouti is about 50,000 Djiboutian francs per month (about \$250), that is \$12.50 per day. With 20 days worked per month, this wage is \$3,000 per year. For each \$1 million spent on routine maintenance, 35% will be the labor cost, i.e. \$350,000. It will buy about 120 person-years of labor. Each \$1 million spent on periodic maintenance (labor is only 10% of total cost) will buy 33 person-years. If the mix of maintenance is about one-third routine, two-thirds periodic, each \$1 million will buy about 60 person-years. If the annual roads budget for Djibouti is \$8 million (needed but not yet realized), and the mix of operations is similar, it represents a work force of about 500 people. Including the indirect effects, it might create 1,000 jobs. The present budget for road maintenance is a little more than half of what is needed (\$4.5+ million per year), so the increment will be just under 500 jobs. By the scale of the Djiboutian economy, 500 low-skilled workers is not insignificant: about a tenth of the 6,500 total that have been compiled elsewhere in this note for direct employment in transport and logistics.

As regards construction and present condition, the corridor can be divided into 6 sections:

PK	Start and end	Pavement condition	Date	Financed by
1-12	Djibouti city and suburbs, storage areas at PK12	Fair: 7m asphalt, wide shoulders, level	?	Djibouti city
12-33	Toll collection & weigh station at PK20, to Arta turn-off	Good: 7m asphalt, drop off to gravel shoulders	? Weigh station 2011	
33-	Arta-Grand Bara	Good: 7m asphalt + paved	2006-11	EU, €36 mn

73		shoulders 1.5m,		
73-83	Grand Bara-Triangle de Ali Sabieh	Will be same Now v. poor, severely deteriorated AC	Sept 2012- mid 2013	EU, €6-7 mn
83-119	Triangle de Ali Sabieh-Dikhil	Poor: 7m asphalt, deteriorated, frayed edges to 1.5m gravel shoulders	1986-90	
119-216	Dikhil-Galafi border	Fair: 7+m asphalt, 2m gravel shoulder, fords vulnerable to floods	2000-04	IDA

Source: Site visit by Bank team on January 19, 2012

An important question is whether Ethiopia is interested in paving the southern corridor highway between Dewele and Dire Dawa, presently just an earth road of 198 km crossing a desert area. For Djibouti-Addis traffic the southern corridor is shorter than the Galafi route by about 65 km. At the same time, the Ethiopian government already seems committed to construction of the new railway line in this corridor, and therefore may have little or no incentive to upgrade the parallel highway at the same time.

Annex 3 - Donors' financing of transport infrastructure

Donor	Project	Donor financing	Total project cost	Implementing agency
		(\$ million)		
Within Djibouti				
African Development Bank	Cereals & fertilizers terminal at PAID	\$10	\$30	SDTV
Arab Fund for Economic & Social Development	Tadjoura port (for export of potash from Ethiopia)	\$36	\$200	MET
Saudi Fund	(ditto)	\$24	"	MET
Kuwait Fund	Upgrading of Tadjoura-Balho highway (120 km)		\$64	MET
European Union	PK20 au Triangle d'Ali Sabieh	€10		MET
Ethiopian part of bilateral project				
China Exim Bank	Djibouti-Addis Abeba railway reconstruction	NA	\$2,500	
Govt of India	Potash railway from Tigray province (Ethiopia) to Tadjoura port	\$300		
Joint Djibouti & Ethiopia				
COMESA	International corridor to serve South Sudan			

Source: Bank team based on findings of January 2012 mission

Annex 4 - Qualities that traders and shipping lines look for in a port

Port attribute	Djibouti	Favorable
1. Port terminal operational efficiency (e.g. ship turnaround time)	Doraleh terminals high, PAID moderate	YY
2. Port cargo handling charges	PAID: c\$16/ton, \$180 per TEU Above regional average (?)	N
3. Reliability (incl. no labor disputes)	Good	Y
4. Port's receptivity to preferences of carriers and shippers (incl. use of English language)	Questionable	?
5. Depth of navigation channel (economies of scale in ship size)	12m most berths, access up to 18m - Very favorable	YY
6. Adaptability to changing market environment	Good (?) – Competition for containers between DCT and PAID	Y
7. Landside accessibility	Excellent for Doraleh, which is outside city; good for PAID	YY
8. Service differentiation	Good (?)	Y

Source for attributes: J. Tongzon, *Determinants of competitiveness in logistics: implications for the [Southeast Asia] region*, Singapore, 2004

Source for rating of Djibouti port: Bank staff

Annex 5 - Djibouti-Ethiopia *Comité de Suivi* of November 2011: main points of its aide-memoire

1. Agreed to exchange proposals for road use fee to be paid by all trucks on the Djibouti-Ethiopia Corridor, within two months. Established a joint technical committee to assess the issues in detail and make proposals. (participants for Djibouti: MET, TT, FER)
2. Multi-modal transport system (i.e. transit guarantee regime): Ethiopia to consider the option of a quota system, to give Djiboutian carriers some share of the market.
3. COMESA vehicle insurance ('yellow card'): discussion on how to deal with environmental pollution caused by truck accidents.
4. Setting up a special court to handle maritime disputes.
5. Cross-border bus service: Ethiopia will draft an agreement for consideration by Djibouti.
6. Ethiopia is including the Dire-Dawa – Dewele road in its five-year plan, with upgrading after 5 years. Since a new rail line will now be built between Mieso and Dire-Dawa, there will be no need to fix up the parallel road on that section.
7. Pollution of Djibouti port.
8. Dedicated berth for Ethiopian Shipping Line in Djibouti's old port (PAID)

Annex 6 - The doubtful potential for sea-air transport services

A potentially important niche market may develop for sea-air services for South Sudan and other landlocked countries of East-Central Africa. This has been identified by the Djibouti government as a possible rationale for substantial investment in improving the Djibouti airport, or even replacing it by a new one at Chabelley, 5 km inland. The reality is that a sea-air corridor is likely to serve a very narrow market, if at all. The economic geography and logistics must be analyzed with care. The goods to be carried must have a high value-to-weight ratio, i.e. an average value of over \$2,000-3,000 per ton, and yet be able to tolerate the longer trip time implied by the sea portion of the journey. If the value is too high or time constraints are tight (such as cut flowers), their buyers will prefer air freight for the full distance from origin to destination. Ethiopian Airlines already has a dense array of flights to Gulf and European destinations, and even direct flights in high-capacity aircraft to the US east coast, India and China. The purchasing power of the destination market has to be taken into account, and potential competition from other sources.

The sea-air concept was essentially invented in Dubai, which had close working relations with Djibouti port and airport. The lessons of Dubai's experience should be analyzed. But also account should be taken of the big differences between the markets it serves in the Arabian Peninsula and those of the landlocked countries of East-Central Africa.

Annex 7 - Support to tourism by transport infrastructure and services

Note: please refer to the broader study “Djibouti new growth model” for a full assessment of the potential of the tourism sector

1. Djibouti has the potential to expand its tourism by a considerable degree, to the point where it might compete with, or at least emulate, Sharm-El-Sheikh (Egypt) and attract the Red Sea cruise market.
2. A high priority is to expand the airport terminal and take measures to speed up processing, notably the issuance of visas upon arrival. Development of Chabelley as a new airport has been suggested. However, it is unlikely that this would be economically viable, as the capital cost of building an entire new airport would be prohibitive (\$200-400 million), out of all proportion with the volume of traffic likely to materialize in the foreseeable future. We recommend that the government focuses instead on developing new terminal buildings adjoining the existing runway. Consideration should be given to converting the VIP terminal, a luxury that Djibouti can ill afford. Soviet airports used to have special buildings for foreign visitors and VIPs, most of which after 1992 were converted into terminals for business and first class passengers, to good (commercial) effect.
3. The Tadjoura region is famous for its pristine white sand beaches and pure coastal waters. This may be in jeopardy, now that bids are being called for construction of a major potash loading port near Tadjoura. The Plage des Sables Blancs is several km to the east of Tadjoura town, whereas the port site is to be 1 km to the west of the town. But what is the pattern of sea currents and winds: from east to west or west to east? The beaches had better be upwind. For the future of tourism in the Tadjoura region it is important that the port's sponsors conduct a rigorous environmental impact assessment to meet the high standards warranted in this case.
4. It remains to be determined what demands the development of tourism may put on the transport infrastructure. To drive from Djibouti city to Tadjoura is a long and winding road of about 170 km to loop around the Goubeh Gulf, which takes at least half a day, especially if there is much truck traffic. The road is asphalted all the way, but it may prove costly to maintain and especially vulnerable wherever it has to cross the many dry river beds, where occasional rains can do much damage. Travel time might be halved if a bridge were built across the Goubeh Gulf's narrow opening to the sea, but the cost would be large relative to the light traffic. It may suffice to have a high-speed water taxi service to link the two towns in less than an hour—as already exists, but capacity and frequency may need to be raised. Construction or upgrading of local airports may be warranted on the north shore (such as Obock) to access the remote, self-contained beach resorts. Arta beach warrants construction of a paved access road that (on Djibouti's small scale) is not trivial as to cost, maybe \$5 million.
5. The exotic and remote sites, such as Lake Assal and Abourma (site of ancient hieroglyphics in the northwest), share some attributes with the safari market of southern and eastern Africa: adventure vacations that attract upmarket clients willing to pay several hundred dollars a night, even for relatively basic accommodation, and also willing to pay for access by small plane.
6. As for divers, by analogy with Belize, for example, for the early years the most practical solution as regards accommodation is a self-contained dive boat that is also a mini cruise ship. That avoids the need for shore-based accommodation in remote sites, but the boats will require a suitable berth and support facilities in Djibouti port to pick up and drop

off clients and to re-supply and dispose of waste in an environmentally sound way.

Source: Bank study team

Annex 8 - Role, responsibilities, and set-up of an autonomous road agency

Force account operations undertaken through the Régie have been counterproductive in the past, as very limited resources were spent on works. This should be stopped. Termination of the Régie should however be accompanied by a redundancy program to support in-house workers in setting up their own business.

Removing production activities from the MET's duties would allow the government to focus more on policy-making and regulation in the road sector, and move towards a more commercial approach for roads management. Considering the limited size of the country's road network and the experience of the past ten years in reforming the road sector in many African countries, the creation of a National Road Agency (NRA) is recommended. Such agency would be autonomous, and supervised by a board including members from the road users and the business communities. Adequate safeguards regarding the composition of the board should be implemented to ensure that it is not ultimately taken over by one single partner, whether public or private.

The NRA would prepare multi-year and annual expenditure programs, and execute the programs after approval by its board. An annual performance contract would be signed between the NRA and the MET to ensure the NRA's accountability. This contract would define the government's goals for the agency, strategies for meeting them, and procedures for operations, monitoring, and control. Within the NRA, a transparent approach would be established for planning and programming road works, based both on the strategic objectives set by the MET for the road sector and on socio-economic criteria and available funds.

All construction or maintenance works undertaken by the agency on the road network would be contracted out to private companies without exception. All Régie's current equipment should be auctioned off. Keeping such equipment under NRA's responsibility would prove counter-productive, as it would entail preserving a technical department within the agency to ensure efficient maintenance of the equipment over time. Independent auditing of the NRA would be done annually.

Source: *Republic of Djibouti: transport sector review*, World Bank, 2005

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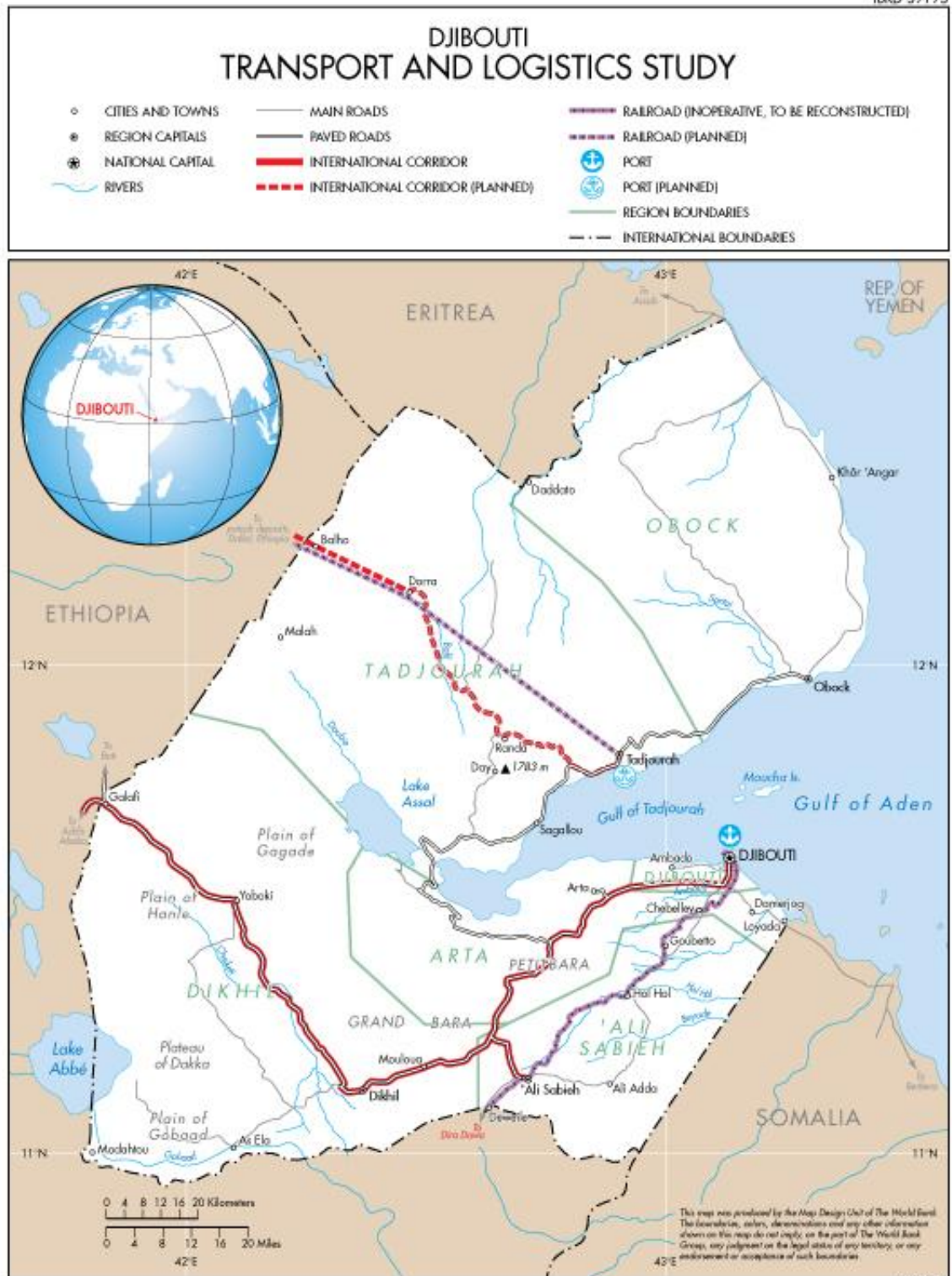
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Maps: Djibouti and Djibouti port's hinterland

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EAST AFRICA TRANSPORT AND LOGISTICS STUDY

- ◻ CITIES AND TOWNS
- ⊕ NATIONAL CAPITALS
- RIVERS
- PAVED ROADS
- INTERNATIONAL CORRIDOR
- INTERNATIONAL CORRIDOR (PLANNED)
- RAILROAD (INOPERATIVE, TO BE RECONSTRUCTED)
- RAILROAD (PLANNED)
- ⊕ PORT
- ⊕ PORT (PLANNED)
- INTERNATIONAL BOUNDARIES

