EXPERT ROUNDTABLE

INVESTMENT IN TRANSPORT INFRASTRUCTURE

NEPAD-OECD AFRICA INVESTMENT INITIATIVE

Engaging the Private Sector in African Infrastructure

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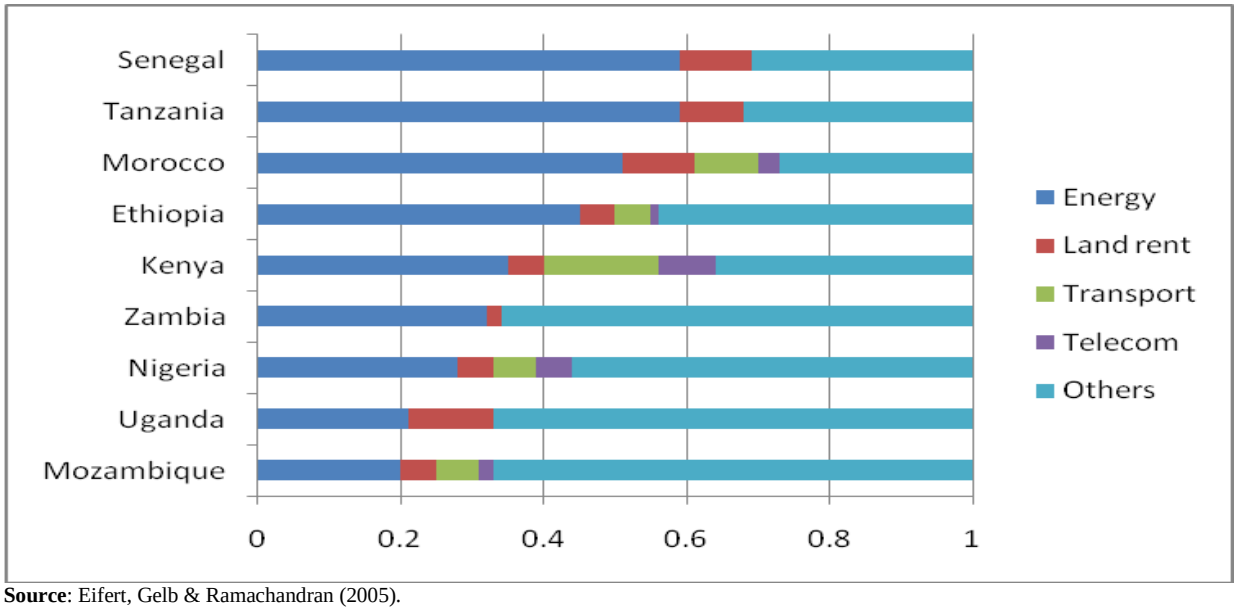
The weakness of African infrastructure has important direct and indirect human consequences and contributes to hampering business development. Although not explicitly included in the MDGs (with the important exception of water and sanitation), infrastructure development is unquestionably instrumental to achieving all of them. In addition to the human cost of infrastructure under-development, the cost of doing business in Africa is 30% higher than in any other region, with indirect expenses accounting for 20-30% of this cost[1]. Although several components contribute to these costs, such as a cumbersome economic legislation and weak legal systems, inadequate infrastructure also features high on the list, with energy estimated to account for a third of indirect costs.

Fig.1 - Composition of indirect costs in selected African countries



Source: Eifert, Gelb & Ramachandran (2005).

The weakness of today's Africa transport infrastructure is striking.

- Transport costs are particularly high throughout Africa, averaging 14% of the value of exports compared to 8.6% for all developing countries, and hovering around 50% for Africa's 15 landlocked countries.

- Only 27.6% of Africa's 2 million kilometres of roads are paved, falling down to 19% for sub-Saharan Africa, compared to 27% in Latin America and 43% in South Asia.

- Only a few airports have attained FAA Category I status (complying with the International Civil Aviation Organisation Standards) required for international flights (in Egypt, Cape Verde, Ethiopia, Morocco, Ghana and South Africa).

- Only one African seaport is owned by one of the five largest global port operators known worldwide for their efficiency and most container terminals are reaching or have reached capacity limits, and are under-equipped.

[1] Eifert, Gelb & Ramachandran (2005). Business Environment and Comparative Advantage in. Africa: Evidence from the Investment Climate Data: www.cgdev.org/files/2732_file_WP56_1_revis.pdf

- Sub-Saharan Africa accounts for 3% of the rail transport of the developing world (for 17% of its population and 7% of its GDP).

- When available, the quality of transport infrastructure leaves much to desire, with dramatic consequences on safety. In 1999, 10% of global road deaths occurred in sub-Saharan Africa with only some 4% of the world's registered vehicles. In 2004, Africa's share of airplane accidents reached 25% for only 4.5% of global air traffic.

Inadequate access to water and sanitation remains problematic for human and economic development.

- Less than 4% of potentially irrigable lands in Sub-Saharan Africa as a whole have been developed.

- Sub-Saharan Africa has the lowest drinking water and sanitation coverage in the world: 322 and 463 million people lack access to drinking water and sanitation facilities, respectively. Globally, diarrhoea – usually caused by poor sanitary conditions - is the second cause of child mortality, with 5000 children under 5 dying every day.

- The dynamics is unfavorable: over 1990-2004, the absolute number of unserved people has increased by about 60 million, just for water. Consequently, Sub-Saharan Africa is unlikely to reach the drinking water and sanitation MDGs by 2015.

- Even if Sub-Saharan Africa were to reach the water and sanitation related MDGs by 2015, some 234 million people would still lack access to safe drinking water and 317 million to improved sanitation.

- Conditions are considerably better in Northern Africa: access to drinking water is the highest in the developing world with Latin America (91% of population) and sanitation coverage has increased by 12 percentage points between 1990 and 2004 to be broadly on track to meet the MDG target by 2015.

Energy sources are numerous, but the potential remains largely untapped and sometimes wasted.

- Only 7% of hydraulic capacity and less than 1% of geothermal capacity are exploited. Photovoltaic development remains embryonic.

- Fossil energy is exploited more intensively (Africa accounts for 12.7% of world crude oil production for 9.5% of proven reserves) but refinery capacity remains extremely limited (3.7% of world refinery capacities). More than 40% of natural gas is lost through flaring.

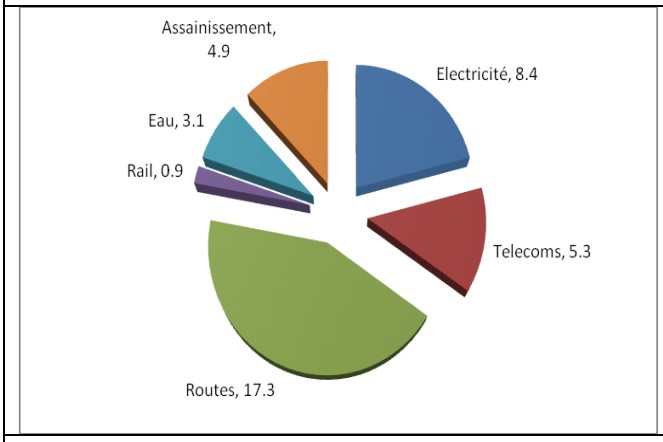
- Africa has the lowest level of electrification in the developing world, with 35.5% of population in 2002, to be compared to 42.8% in Asia, 89.2% in Latin America, 88.1% in East Asia and 91.8% in the Middle East.

- 11.3% of electricity generated in Africa is wasted in the course of production and transportation, compared with 9.2% in the world as a whole. This wastage exceeds 20% in Senegal, Kenya and Tanzania and 40% in Nigeria and Congo.

Financing needs

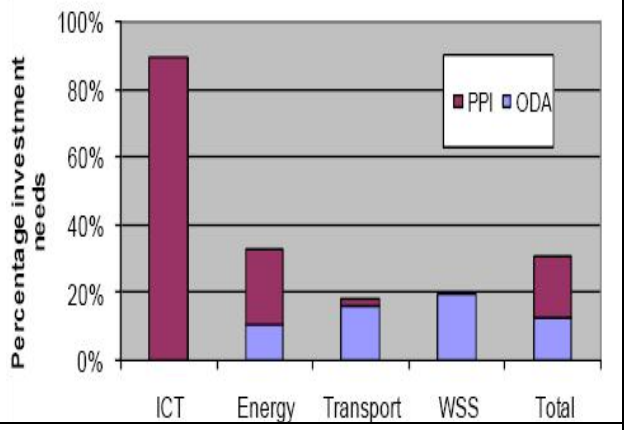
Developing and modernizing infrastructure in Africa to reach the MDGs by 2015 would require substantial investments, estimated by the World Bank at some 40 billion USD per year over 2005/2015 (or 9% of GDP), including USD 22-24 billion for new investments and USD 17 billion for maintenance.[2]

Fig. 2 - Annual expenditure to meet the MDGs (billion USD



Source: Antonio Estache, World Bank (2006)

Fig. 3 - Infrastructure financing gaps



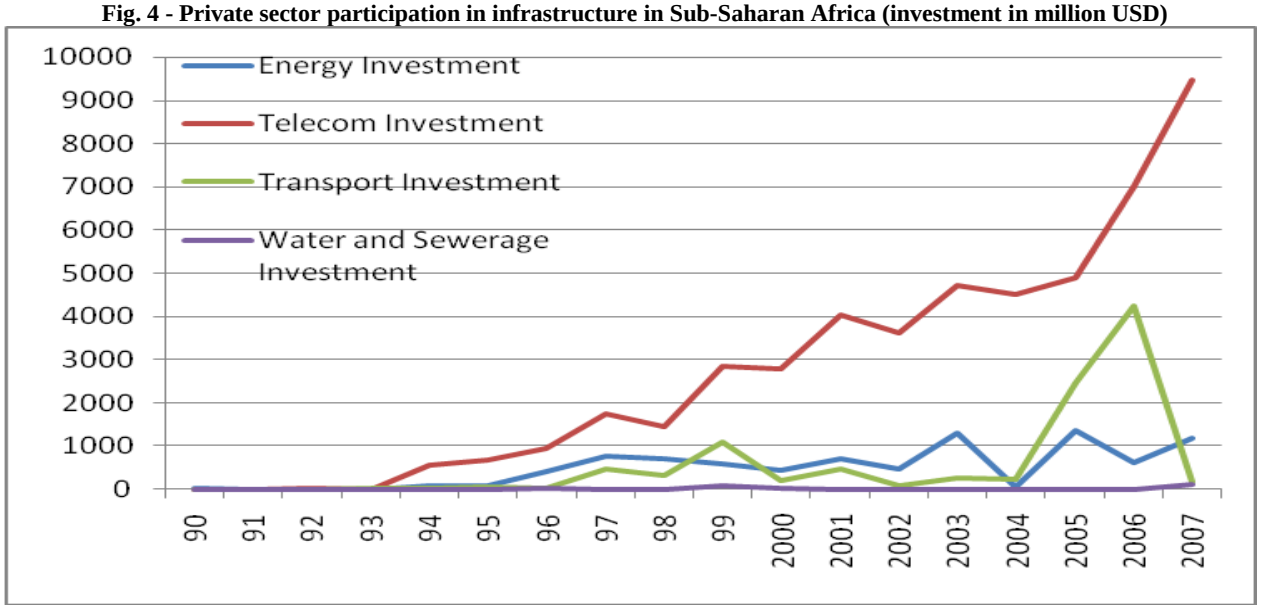
Source: OECD-DAC and World Bank PPI Database 2006

The enormous gap between available infrastructure and the needs of the African population cannot be bridged by public resources alone. As an illustration, it is estimated that, on average, using their budgetary resources, African countries would be able to adequately maintain only half of their national road networks.[3] Recognising this, many African countries have sought to engage the private sector in the development and management of their infrastructure.

2 Estache (2006). These figures ignore the needs in the port and airport sector, leave out irrigation and may also ignore some important large regional projects.

3 Infrastructure Consortium for Africa Annual Report (2006).

Fig. 4 - Private sector participation in infrastructure in Sub-Saharan Africa (investment in million USD)



Source: World Bank PPI Database, 2008

However the expected amounts of private flows have not fully materialised and private sector participation has remained limited to some 10 to 15% of infrastructure financing, with telecoms attracting the bulk of investments. In 2007, while investment grew in all developing regions, it declined in Sub-Saharan Africa by 10% and was again mainly driven by transactions in the telecom sector. Of all infrastructure sectors, water has long attracted the least private investment. In addition, infrastructure cases represent 40% of overall investor-state dispute settlements cases arising under investment treaties.

Bottlenecks: risk-allocation and framework conditions

The causes behind limited investment flows and past disputes have often been of poor understanding of the risks involved by private sector participation in complex sectors and of inadequate institutional framework conditions. Although a potentially interesting class of assets for investors[4] because of their characteristics of slow technological change, long-life span and stable revenue stream, infrastructure sectors (especially water, energy and transport) share several features that may act as deterrents to commercial financing:

- Infrastructure projects are usually capital intensive. They involve high initial investment, long payback periods and disparate commercial rates of return across sectors (estimated by the African Development Bank at between 5 and 10% in the water sector, compared to 17-25% in the power sector and 25-30% in telecoms). The resulting infrastructure is specific and cannot be used for other purposes or removed from the country. This profile generates high contractual and regulatory risks in a context of political volatility and important external shocks. It may also expose the public sector to risk, especially of capture by the private partner.
- The revenues come mainly from user fees or government subsidies in local currency, exposing investors and lenders to foreign exchange risk if funding is in foreign currency, a true constraint for international investors, but also for national operators in a context of poorly developed local financial markets. The foreign exchange risk may be compounded, as in the case of water, by the political difficulty of implementing tariff increases.

4 OECD/IOPS Global Forum on Private Pensions.

- Management and supervision of contractual arrangements may be carried out by local entities, exposing the investors to the weak management and financial capacities of sub-sovereign entities.
- Infrastructure services have important social and political repercussions. On the one hand, this justifies public involvement in the form of regulation aimed at protecting users from possible abuse of a monopolistic position on the part of service providers. On the other, such public involvement has often taken the form of political interference.

Private finance will not materialise unless the balance between risks and returns is deemed appropriate by lenders and investors. It involves an increased focus on the part of governments and their partners on aspects that go "beyond money", such as the institutional and regulatory framework conditions. Recognising this, the OECD Council approved in March 2007 the OECD *Principles for Private Sector Participation in Infrastructure*[5], which offers a coherent catalogue of policy directions and practices to help governments properly assess and manage the implications of involving private actors in infrastructure development and harness more effectively the capacities of all stakeholders. The *Principles* and their subsequent application to the water sector highlight four main considerations for governments.[6]

OECD Principles-based considerations for African governments and their partners

1- Deciding on the nature and modalities of private sector participation.

- There is a need, prior to the actual development of projects, to clarify the ultimate objectives for infrastructure development, to **ensure coherence with national development strategies** through multi-year investment planning **and** to **identify the contributions that the private sector can make** using costs/benefits analysis.

> *ICA Guide on attracting investors to African PPP: www.icafrica.org/en/publications*
> *Sector-wide approach to planning in Ugandan water sector (www.oecd.org/dataoecd/27/0/38563109.pdf).*
> *The Cairo Transport Master Plan.*

- **Appropriate risk allocation** across partners **is a key element of success**. It involves an assessment of the party best able to manage the risk (the party best able to influence the probability of occurrence or of dealing with its consequences), so as to ensure value for money and sustainability of partnerships. Responding to the diversity of risks, a wide range of risk sharing arrangements is available to policy makers and forms a quasi continuum from the public sector assuming most of the risk to full risk transfer to the private sector.

5 www.oecd.org/daf/investment/ppp.

6 Following the publication of the OECD *Principles*, a specific application to the water sector was launched as part of a broader OECD programme on water policies for affordable services and sustainable resource management. Material and forthcoming publication available at: www.oecd.org/daf/investment/water.

Table. 1 - Typology of contractual arrangements between government (G) and the private sector (P)

	Service contract	**Management contract**	**Affermage / Lease**	**Concession**	**Built Operate Transfer**	**Joint venture**	**Divestiture**
Asset ownership	G	G	G	G	P/G	G/P	P
Capital investment	G	G	G	P	P	G/P	P
Commercial risk	G	G	Shared	P	P	G/P	P
Operations / Maintenance	G/P	P	P	P	P	G/P	P
Contract duration	1-2 yrs	3-5 yrs	8-15 yrs	25-30 yrs	20-30 yrs	Infinite	Infinite
Retribution of operator	Municipality	Municipality: fee is fixed or based on performance	Operator collects user fees. *Lease*: fee paid by municipality *Affermage*: revenue shared	Users	Municipality	Users	Users

Appropriate risk allocation: the Senegal water lease (www.oecd.org/dataoecd/17/8/39679099.pdf) and the South Africa-Mozambique toll road (www.oecd.org/dataoecd/33/58/36741703.pdf).

- **Financial sustainability** of partnerships **should be ensured, through appropriate tariff schemes and/or funding mechanisms that allow for proper operation and maintenance of infrastructure and account for the different levels of affordability**. Public subsidies may remain necessary, notably to improve access for the poorest. However, these subsidies must be well targeted, clearly defined in the budget and sustainable for public finance.

Development of second generation road funds dedicated to maintenance (www.worldbank.org/afr/ssatp). OBA scheme for the water sector in Kenya that clarifies subsidies: www.gpoba.org

2 - Enhancing the enabling environment, based on high quality regulation, political commitment (including to fight corruption) and adequate allocation of roles and responsibilities

- Private participation in infrastructure does not exclude **a role for government**. Such a role **is essential to establish adequate policy and regulatory frameworks and contractual arrangements**, and for the ultimate responsibility to meet population's basic needs. It involves establishing the appropriate institutions, including the relevant regulatory bodies.

Political commitment and development of a conducive economic legislation: the 2004 Lagos Roads Law, the development of water regulatory agencies in various countries (www.oecd.org/dataoecd/17/8/39679099.pdf). Regional initiatives to help capacity building and harmonisation through development of guidelines and sharing of good practices: African Forum for Utility Regulators (www.afurnet.org).

- Strong political commitment remains essential, notably in the fight against corruption. While **African governments must comply with** regulations and initiatives such as **the AU Convention on preventing and combating corruption and EITI**, their **OECD partners need to strengthen and enforce** multilateral instruments like **the OECD Anti-Bribery Convention and the Stolen Assets Recovery** (**STAR**) **Initiative**. **Emerging economies should** also consider **adhering** to these instruments.

OECD Anti-Bribery Convention: www.oecd.org/daf/nocorruption/convention
United Nations Convention against Corruption: www.unodc.org/unodc/en/corruption/index.html
AU Convention on preventing and combating corruption: www.africa-union.org/root/AU/Documents/Treaties/treaties.htm
STAR: http://siteresources.worldbank.org/NEWS/Resources/Star-rep-full.pdf
Extractive Industry Transparency initiative (EITI): http://eitransparency.org/

- Infrastructure sectors, most notably water and transport, are fragmented, with oversight responsibilities often split between different local, national and regional authorities. This raises important capacity challenges and issues of consistency across government levels. **Careful allocation of roles and responsibilities is needed taking into account existing capacity gaps, and based on resources allocated in line with duties and distributed in a predictable way**. Preserving **consistency** across government policies also **requires effort at strengthening co-ordination** mechanisms, **vertically across government levels and horizontally across jurisdictions**.

Training support structure: South Africa PPP Unit (www.ppp.gov.za), UK PPP Programme of Local Government Association (www.4ps.gov.uk), Partnerships Victoria (Australia): www.partnerships.vic.gov.au
Mechanisms for cross-jurisdictional co-operation: to manage water resources (Nile Basin Initiative: www.nilebasin.org), to integrate regional transport systems and facilitate transit for landlocked countries (Almaty Programme of Action: www.un.org/special-rep/ohrlls/lldc/Almaty_PoA.pdf), to interconnect electricity grids (Southern African Power Pool: www.sapp.co.zw).

3 – Making the cooperation work in the public interest through strong accountability mechanisms, clear and consistent contractual arrangements and relations based on information sharing and consultation with stakeholders

- Contractual arrangements with the private sector in infrastructure sectors are typically long-term and as such not likely to cover all aspects of the complex relationship between the private sector and the public sector. **Mechanisms** exist **that may help reduce the uncertainty that comes with long-term** incomplete **contracts** or deal with its consequences. They **include**: **strengthening competitive pressure and promoting information sharing**; **adopting performance-based** contractual **arrangements**; **providing for** clauses and mechanisms to frame the discussions on future issues as well as **formal dispute resolution mechanisms**.

Performance-based contracts granted by the Federal Roads development in Nigeria and the National Roads agency in South Africa.

- In any case, commitment, good faith and willingness of the parties to co-operate and find solutions in the public interest will remain crucial. In that context, **starting the discussion early when challenges arise and before conflicts escalate can help diffuse the tensions**. Engaging the private actors to formulate their requirements and constraints can promote mutual understanding and better appropriateness of contracts.

Dispute resolution mechanisms embedded in the contract for the Senegal water lease (www.afd.fr).

- **Informed involvement** in the process of other actors**,** such as **local communities** and regional partners, can be **essential** to identify priorities, facilitate maintenance and the monitoring of performance. However, consultation should be developed according to the principles of clear focus, representation and transparency and organised strategically at important stages of policy making.

The Consumer Watch Group launched by the Energy Regulation Board (ERB), the Communications Authority (CAZ) and the National Water Supply and Sanitation Council (NWASCO) of Zambia to involve consumers in regulatory processes: www.erb.org.zm/viewpage.php?page=ndtls&nid=18

4 - Roles and responsibilities of the private sector in ensuring the sustainability of partnerships and beyond, that their contribution can make a difference in improving the lives of millions of people.

- **Infrastructure services** - water, energy and transport – are vital goods involving important economic, social, environmental and political repercussions. They **require strong commitment on the part of the private partners to responsible business conduct**, good faith and integrity.

OECD Guidelines for Multinational enterprises (www.oecd.org/daf/investment/guidelines) and Risk Awareness Tool for Multinational Enterprises in Weak Governance Zones (www.oecd.org/daf/investment/wgz). Coalitions to fight corruption: CIPE (www.cipe.org/programs/corruption).

- **Companies have an important role to play in evaluating the social and environmental impacts of their activities**, mitigating the potential negative impacts and contributing to the country development goals. They can notably contribute to assess the consequences for the poor of the technology choices, tariff setting policy, investment planning. They can also evaluate the impacts of activities on environment and continuously seek to improve environmental performance.

Global Reporting Initiative: www.globalreporting.org

- Finally, **being responsive to users' claims** and providing transparent and effective procedures to address complaints **can contribute to** building mutual understanding and **improving service provision**.

Focus on improvement of service delivery, and establishment of a hot line for consumers: Compagnie Ivoirienne d'Electricité (www.groupecie.net/).

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OECD/IOPS Global Forum on Private Pensions: www.oecd.org/daf/fin

OECD Principles for Private Sector Participation in Infrastructure: www.oecd.org/daf/investment/ppp

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