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PERISA Case Study 2 Infrastructure

Financing of Infrastructure

By Lesley Wentworth

In response to the global financial crisis of 2008–09, banks radically cut back on lending, especially for long-term projects. Governments worldwide, gambling on a big positive multiplier effect on aggregate demand, increased fiscal spending through focused stimulus packages on infrastructure development, and actively encouraged private participation in infrastructure (PPI).[1]

The injection of private capital is no outright solution to the problems that beleaguer major infrastructure projects. Such problems include ineffective investments, inefficient service provision, and weak governance structures in big-ticket infrastructure assets. Nonetheless, through private-sector involvement, much of the upfront financial risk is substantially shifted away from the public sector, since private players typically contract competent advisors for independent forecasts, due diligence, and risk assessments.[2]

1 Beck T *et al*. 'Finance in Africa: Achievements and Challenges' Policy Research Working paper 5020, August 2009, http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2009/08/18/000158349_20090818083808/Rendered/PDF/WPS5020.pdf2009.

2 Bent F, 2009.

In Africa, though, between 1990 and 2011 only 10% of global private investment flowed to infrastructure, against 40% to Latin America.[3] International development experts cite the shallowness of national utility markets in Africa, including Southern Africa – highlighting the strategic importance of marketing higher-value regional (multicountry) infrastructure projects to the private sector. This requires continued co-ordination and harmonisation of regulatory and institutional reforms aimed at promoting investment in cross-border infrastructure.

GLOBAL CONTEXT

The combination effects of the global financial crisis, the Eurozone sovereign debt crisis and associated austerity measures have put official development assistance (ODA) flows worldwide under pressure. Recent concern was expressed by the UN Secretary General over the 4% drop in ODA last year, following a 2% decrease in 2011.[4] This has also caused unease on the part of governments in developing countries and emerging markets, given that aid has historically been used as a fillip for infrastructure budgets. In addition, the socio-economic development and resultant stability that ODA has sought to foster has the important effect of enhancing the investment attractiveness of developing and emerging countries.

Commercial banks have been both financiers and major syndicators of loans. The impact of the Basel Regulations' increased capital costs means long-term lending has become prohibitively expensive for many commercial banks. Hedge funds, assets managers and unregulated institutions backed by high-net-worth individuals (HNWIs) are now seen to be making investment and lending decisions.[5]

The technical, financial and legal project preparation capacities required for complex infrastructure projects are not easily found within the public sector. It is estimated by the Organisation of Economic Cooperation and Development (OECD) that project preparation costs in Africa already average between 5% and 10% of total project costs and that planning has not been sufficient, especially for the bigger more difficult construction projects.[6] Project sponsors, multilateral development banks (MDBs) and international co-operating partners agree that more emphasis should be given to proper project planning and preparation, as well as proper financial costing throughout the project lifecycle.

The undeniable need for infrastructure maintenance and development, and the difficult conditions for governments to procure affordable services or contractors to raise finance through traditional methods, make for compelling reasons to consider alternative funding modalities.

PUBLIC–PRIVATE PARTNERSHIPS

Public–private partnerships (PPPs) have the potential to improve the provision of goods and services originally regarded to be in the public delivery domain. Through 'bundling' individual services, or phases within a contract (for example, building, financing and operating contracts), private consortiums of specialist firms bid in a combined long-term contract, exploiting synergies and realising economies of scale.[7] By allocating risks to the appropriate parties, PPPs can make use of the private sector's shorter, more cost-efficient delivery times, and access to innovative technology and entrepreneurial expertise. To warrant PPP selection, the project's public-interest purpose must be confirmed, and rigorous assessments must be applied to determine whether traditional public procurement methods may not be better value for money (VfM). The public-sector comparator model is a realistic assessment of all costs based on a net present value calculation comparing the public-sector cost against the price of PPP. The VfM assessment estimates the difference between traditional procurement and the anticipated cost of the PPP model.[8]

Project finance is a financial technique based on lending against the cash flow of a project that is legally and economically self-contained. Project finance is

3 OECD, 2013.

4 Tran M, 'Ban Ki-moon: Development aid decline a cause for concern', The Guardian, 16 August 2013, http://www.theguardian.com/global-development/2013/aug/16/ban-ki-moon-development-aid-decline.

5 Rose DG, 2013.

6 OECD, 2012, p. 17.

7 Iossa E & D Martimort, 2009.

8 Murphy T, 2008.

Figure 1: The cost difference between Model 1 and Model 2 is the estimated VfM

Model 1 Traditional project delivery (public sector comparator)	Model 2 Alternative financing and procurement
Total project costs that would have been incurred by the public sector to deliver an infrastructre project under traditional procurement processes.	Total project costs incurred by the public sector to deliver the same infrastructre project with identical specifications using the AFP approach.

Source: Infrastructure Ontario, *Value for Money Assessment*, 2012, http://www.infrastructureontario.ca/WorkArea/DownloadAsset.aspx?id=2147490079.

often used for infrastructure projects, where a special purpose vehicle (SPV) is created and financed through a non-recourse loan (using project assets as collateral). The SPV is ring-fenced and all project activities are off-balance sheet of the sponsor organisations. The lender is limited to cash flow, assets and financial performance generated by the project's performance. In this way, the project sponsor can reduce its equity investment and exposure to risk.[9]

Infrastructure bonds are project loan instruments issued directly by an SPV, whose obligations are repaid directly from the cash flows of the project, once operational. Since the infrastructure bond is not affected by the balance sheet of the sponsors, it does not rely directly on the credit quality of the sponsors.

Infrastructure projects have traditionally relied on heavy debt-to-equity ratios. Especially since the financial crisis, commercial banks have been reluctant to provide loans without the additional security of a guarantee. In most developing economies, direct government loans may not be feasible. However, full or partial credit guarantee (PCG) funds,[10] often backed by development banks, have been set up in various national infrastructure sectors. Partial risk guarantees[11] are political risk mitigation tools that provide investors with a degree of comfort when contracting long term with the government. Guarantees are advantageous in obtaining domestic and international financing.

Private-sector risks are reduced significantly when private financing is combined with public-sector or donor funding. This blending combines concessionary loans with debt financing from international financial institutions, allowing for 'grant loan' elements to keep the service tariff affordable. This is also used for interest rate subsidies, investment grants, technical assistance, loan guarantees, or insurance premiums. Blending is used by a number of development finance institutions (DFIs), including Proparco (France); Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden (Netherlands); the African Development Bank (AfDB), and the EU's Africa Infrastructure Trust Fund (ITF) and the Neighbourhood Investment Facility.[12]

Pension fund investment managers typically opt for low-risk, long-term assets in order to ensure satisfactory returns for their clients upon retirement. Government bonds are largely risk free for a specific market. Other fixed-income assets by corporate or other non-government issuers would be considered for the portfolio along with some assets of varying liquidity. It is argued that pension funds are a natural constituency for investors in infrastructure, given their long-term nature and backing by some of the largest institutional investors in private-equity funds in advanced markets. In the UK, large pension funds are collaborating to start a specialist infrastructure fund manager projected to be worth $5.8 billion in 2013.

Infrastructure companies are able to leverage equity raised by state-owned sovereign wealth funds (SWFs).

9 Allen & Overy, 2010.

10 PCG funds lower the risk to the lender by substituting part of the risk to the issuer of the PCG, which guarantees repayment of part of the loan upon default. A PCG fund can help to diversify risk by guaranteeing loans across different sectors or geographic areas.

11 Partial risk guarantees cover private lenders against the risk of government non-performance of obligations in a PPP. The guarantee gives some certainty that the government will meet its obligations towards the partnership.

12 OECD, 2012.

August 2013 estimates[13] suggest that SWFs hold over $5.8 trillion in financial assets, made up of excess reserves held by central banks. Some SWFs are investing in infrastructure in developing regions, including Africa. The China–Africa Development Fund, an equity fund that invests in Chinese enterprises with operations in Africa, has reportedly invested about $540 million in 27 projects in Africa.[14] Since 2007 about 166 infrastructure funds with approximately $110 billion in commitments were raised globally. Only 15% of the funds raised were targeted towards developing countries.

Lin and Wang[15] recently proposed a Global Structural Transformation Fund with two objectives. The first aims to increase aggregate demand to create space for structural reforms in crisis-affected advanced economies. The second objective is to support green growth through investments in transformative infrastructure projects, which will release blockages in both advanced and developing countries. The economists combine infrastructure development with green urban development, eco-industrial parks and structural transformation, with a view to job creation. They further recommended that ODA be used for public goods and other official financing; while PPI be used for semi-public goods, like electricity, roads, ports and airports.

Estimates by Lin and Wang suggest that every $1 invested in developing countries will lead to an increase of capital goods imports (into developing countries) by $0.50. With 70% of capital goods used in developing countries being sourced from advanced economies, they expect that $1 of additional investment in developing countries may result in a $0.35 increase in exports from high-income countries.[16]

SOUTHERN AFRICAN ANALYSIS

The capital requirement for the Southern African Development Community (SADC) Regional Infrastructure Development Master Plan (RIDMP) – adopted by the SADC heads of state and government in August 2012 – is estimated at $500 billion. An estimated $100 billion will have to come from private-sector sources if the RIDMP is to be rolled out successfully over 2014–27 as envisioned; not including infrastructure maintenance required domestically in SADC member states.

The RIDMP aims at the development of an efficient, seamless and cost-effective transboundary infrastructure network, made up of 418 projects in the energy, transport, tourism, information and communication technologies (ICT), meteorology and water sectors. Many of these projects are multicountry (involving at least two member states); and are expected to begin development in three five-year plans, with the short-term action plan kicking off in 2013.

Besides institutional infrastructure, the study identified 89 energy projects; 222 transport projects (including harmonisation studies and institutional initiatives); 55 tourism projects; nine ICT projects; nine meteorological projects; and 34 water projects.

- The energy projects require an investment of $173 billion.
- The key transport projects for roads, railways, inland waterways, land borders, air and seaports have an anticipated cost of $100 billion over 15 years.
- The total estimated cost of providing the ICT infrastructure and implementation of the identified projects is $21.4 billion.
- The 34 water infrastructure projects that are ready for immediate implementation between 2013 and 2021 have an estimated cost of $16 billion.

High tariff challenges for sub-Saharan African utilities persist. Compared with other developing countries, World Bank estimates put power tariffs in sub-Saharan Africa up to 460% more expensive in terms of $/kW hour; road freight tariffs are 350% higher in sub-Saharan Africa with respect to tonnes/km; and water tariffs are

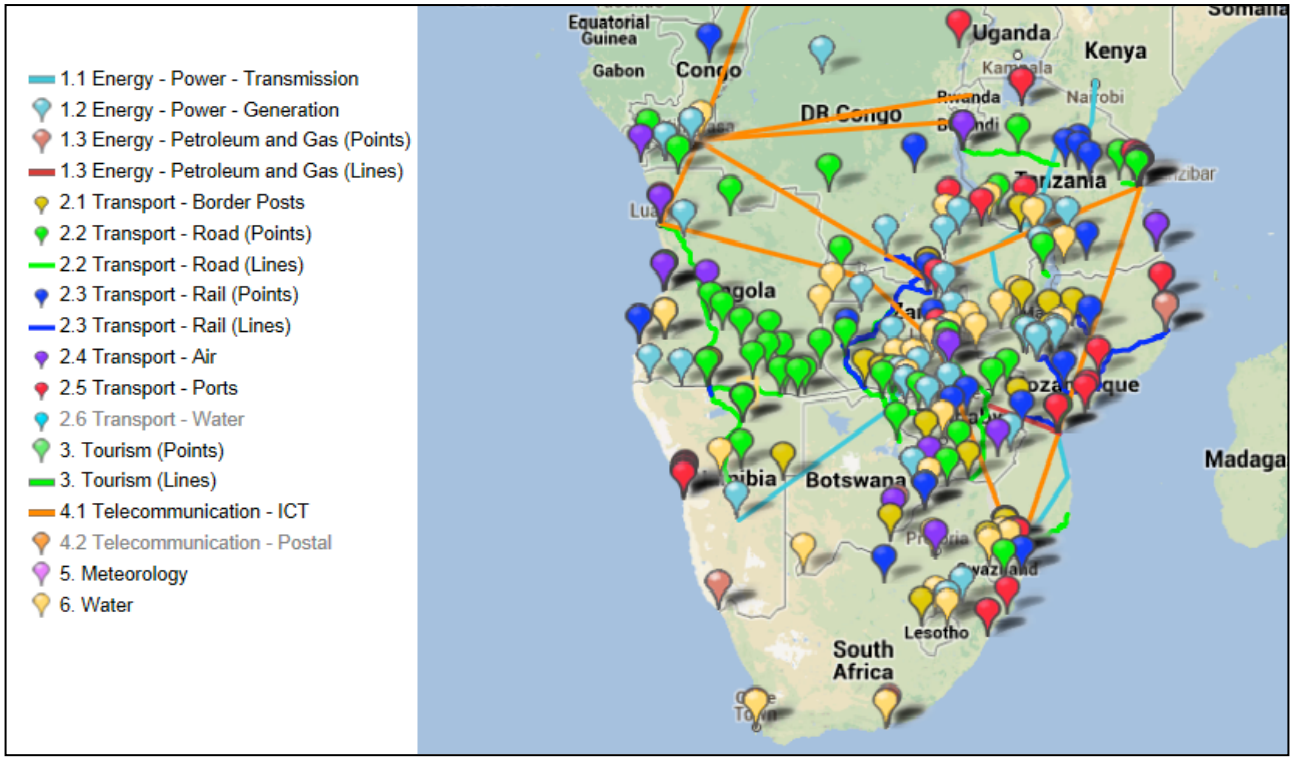
13 SWI, 'Sovereign Wealth Fund Ranking, updated August 2013, http://www.swfinstitute.org/fund-rankings.

14 OECD, 2012.

15 Lin JY & Y Wang, *Beyond the Marshall Plan: A Global Structural Transformation Fund*, 2013, http://www.post2015hlp.org/wp-content/uploads/2013/05/Lin-Wang_Beyond-the-Marshall-Plan-A-Global-Structural-Transformation-Fund.pdf.

16 *Ibid.*

Figure 2: SADC RIDMP geographic information system



Source: SADC RIDMP, 'Infrastructure Projects', http://www.ridmp-gis.org.

up to 1 093% higher in comparative terms in $/m3.[17]

Energy subsidies have crowded out alternative spending on much-needed social and infrastructure projects. The International Monetary Fund (IMF)[18] estimates that direct energy subsidies for sub-Saharan Africa are about 0.4%, arrears by state-owned power utilities about 0.6%, and debt accumulation is 1.5% of total sub-Saharan Africa gross domestic product (GDP).[19] These subsidies are often poorly targeted, benefiting more affluent consumers and big businesses.

17 Deloitte (citing World Bank Doing Business), *Challenges and Bottlenecks in Implementing Successful Infrastructure Projects*, 2010, http://www.ebandla.co.za/uploads/AfricanR2012/Andre_Pottas_Challenge_Bottleneck_Infrastructure.pdf.

18 IMF, *Energy Subsidy Reform in Sub-Saharan Africa: Experiences and Lessons*, 2013, http://www.imf.org/external/pubs/ft/dp/2013/afr1302.pdf.

19 World Bank, 'Data: Sub-Saharan Africa (developing only)', 2012, http://data.worldbank.org/region/SSA; Sub-Saharan African GDP = $1.288 trillion.

Lack of depth in financial markets

Local and regional financial capital markets in Southern Africa remain underdeveloped; and with the exception of South Africa institutional and regulatory frameworks are weak, and institutional investors are largely absent. In this sense, there is no significant local trend towards medium- to long-term financing of infrastructure projects.

A perpetual weakness in SADC is the short-term nature of lending. Apart from South Africa, Angola has accounted for most of the medium- to long-term bank lending to SADC countries until 2005. More recently information from the World Bank suggests a growth in bank lending, but confined to resource-rich countries, like Angola and Zambia. In addition, the overwhelming dearth of comprehensive and comparative financial data across individual countries and across regional economic communities (RECs) makes systematic analysis problematic. South Africa's dominance within the SADC region tends to skew data. Paradoxically,

omitting South African figures provides an incomplete picture.

African DFIs are introducing innovations in financial and risk management product offerings. In SADC it certainly seems that the correct signals are being sent. A regional infrastructure investment conference was hosted by the SADC REC in Maputo on 27 June 2013, under the theme 'Accelerating investment in SADC infrastructure through sustainable and innovative financing'. SADC heads of state, ministers and senior officials from continental, regional and international organisations exchanged information on project opportunities, and committed to pursue resource mobilisation towards implementation of regional projects.

Similarly, the SADC Development Finance Resource Centre has supported the PPP Capacity Development Strategy and the establishment of the SADC PPP Network in order to strengthen capacity building, business development, information and awareness, policy harmonisation and institutional development of PPPs in SADC.

New moves from key actors

The Development Bank of Southern Africa (DBSA) signed a memorandum of understanding with the US Trade and Development Agency in June 2013 to promote sustainable development and broad-based economic growth in sub-Saharan Africa, particularly in clean energy, transportation, water, the environment and telecommunications. The DBSA is expected to expand its funding pipeline through the funding of feasibility studies, investment analysis, technical assistance tools and related innovations in project development solutions.

The Africa50 Fund initiative, launched at the AfDB Annual Meeting in 2013, is a vehicle to facilitate large-scale mobilisation of resources. The fund, which could grow to $50 billion, aims to unlock international private finance and leverage infrastructure financing resources from African central bank reserves, African pension funds, African SWFs, the African diaspora, and HNWIs on the continent.

Two SADC countries, the Democratic Republic of Congo and Tanzania, will likely benefit from the World Bank's $1 billion International Development Association (IDA) zero interest financing aimed at contributing to lasting peace in the Great Lakes region. The IDA pledge is intended to increase power generation and interconnectivity, and to leverage low-cost renewable energy sources like hydropower and geothermal.

The EU–Africa ITF was launched in 2007 to promote the financing of infrastructure programmes facilitating interconnectivity and regional integration across Africa. It aims to support synergies between European development agencies to benefit African countries, and leverage additional funds by blending grants from the European Commission and EU member states with long-term loan finance from EU financial institutions, as well as the AfDB.

China has engaged in sub-Saharan African countries offering low interest, concessional loans subsidised by its Ministry of Commerce. Large oil-for-infrastructure loans, channelled through China Export–Import Bank and China Development Bank, have funded infrastructure, with quick disbursements and none of the conditionality required by Western banks and MDBs. Governments in oil-producing economies, like Angola and the Democratic Republic of Congo, are in turn required to procure goods and services from China in the implementation of the infrastructure project.[20]

China's central bank's failure to inject liquidity into the country's slowing economy is viewed by experts as a signal that President Xi Jinping and Premier Li Keqiang are preparing for a structural reform of the economy. Slower, market-related growth fuelled by the private sector and more moderate consumption trends are expected from China, both domestically as well as through its engagement in sub-Saharan Africa.

In June 2013 the Japan Bank for International Cooperation (JBIC) launched the Facility for African Investment and Trade Enhancement (FAITH). This initiative draws from the original (2009) Facility for African Investment, but has extended the range of financial instruments for Japanese private firms engaging in infrastructure in Africa. Under FAITH, the JBIC will work with other DFIs, like the AfDB, to extend loans, equity participation and guarantees.

The UK's Department for International Investment has invested GBP 5 million in the Infrastructure Project Preparation Facility for early stage preparation of regional projects. The Department for International

20 Alves A, 2013.

Development has also provided GBP 20 million to the EU–Africa ITF; GBP 2 million to the ICA; and will provide GBP 2 million to fund staff working on regional infrastructure in the AfDB, World Bank and other international financial institutions.

On the ground in SADC

Bond issuance

Historically bond issuance has been limited to South Africa, with other SADC countries receiving small amounts of bond financing from international markets. In 2011 Namibia issued a 10-year sovereign debt Eurobond (valued at $ 500 million); and in 2013 the country issued bonds of ZAR 850, the South African rand being the currency of the Common Monetary Area of which Namibia is a part. Zambia issued a $750 million Eurobond in 2012, which is currently oversubscribed.

Regional infrastructure bonds

The RIDMP has been undertaken in alignment with the Common Market for Eastern and Southern Africa–East Africa Community–Southern African Development Community (COMESA–EAC–SADC) Tripartite Inter-Regional Infrastructure Master Plan and the African Union's Programme for Infrastructure Development in Africa initiative. In this regard, the three RECs are discussing the possibility of regional infrastructure bonds. COMESA is reportedly the furthest along in conceptualising this initiative.

Diaspora bonds

Diaspora bonds are debt instruments issued by a government, a sub-sovereign entity, or a private corporation aimed at raising finance from its overseas diaspora. These bonds are often marketed at times of crisis in a country, and appeal to the diaspora's patriotic feelings. Since there are usually strong ties, including family and property ties to the country of origin, the currency inconvertibility risk, usually a high cost, is perceived as lower for diaspora clients in Southern Africa, where great potential is envisioned for this instrument.

Personal remittance inflows

In sub-Saharan Africa the diaspora is estimated at 16 million, with 5 million in high-income countries. Personal remittance inflows to the subcontinent have increased from $3.2 billion in 1995 to $10.3 billion in 2006. Approximately $8.5 billion (of the $10.3 billion in 2006) was sent to low-income sub-Saharan African countries. In Lesotho, Mauritius, Swaziland and Togo, remittances were greater than foreign direct investment. Estimates suggest that sub-Saharan African countries could raise up to $3 billion by reducing the cost of international migrant remittances, $5–10 billion by issuing diaspora bonds, and $17 billion by securitising future remittances and receivables.[21]

Pension funds

First South Africa, then Namibia and Botswana have employed pension funds in buying infrastructure bonds. The Botswana Public Officers Pension Fund is in the process of diversifying 14% of its portfolio to alternative assets in property, private equity, hedge funds and infrastructure. Namibian pension funds have bought Zambian infrastructure project bonds. South Africa's Government Employees Pension Fund bought $595 million in the Industrial Development Corporation's 'green bond' issue, aimed at funding renewable energy. Other pension funds held by South Africa's Old Mutual and Sanlam have invested in toll roads and energy projects.

Sovereign wealth funds (SWFs)

In 2009 the SWF, Qatar Investment Authority (QIA), invested $400 million in the PME Infrastructure Management Limited Fund. PME invests in infrastructure in Africa in the areas of transportation, communication and energy. South Africa is reportedly the biggest beneficiary of this fund – the first investment by the QIA in South Africa. [22]

Fundo Soberano de Angola is a home-grown SADC SWF that was established in Angola in October 2012. Angola has allocated a substantial portion of money and future oil revenue towards the fund, with an asset allocation mix aimed at preservation of capital, long-term return maximisation and infrastructure

21 Ratha D *et al.*, 2008.

22 South Africa, Department of International Relations and Cooperation, 'South Africa and Qatar to Hold Bilateral Consultations, 04 February 2009', http://www.dfa.gov.za/docs/2009/qata0203.html.

development. The $5 billion fund has faced questions of credibility, given that the son of President Eduardo dos Santos has been appointed as chairman. In addition, the fund's investment strategy, expected to be released in the first quarter of 2013, has not been unveiled at time of writing this paper.

CONCLUSION

Financing is a core requirement in the infrastructure development of the regional economy. As the preconditions for advancing economic growth, improvements and innovation in financing models and techniques must be underscored. Synchronisation and harmonisation of financial, technical and regulatory structures are vital in multicountry projects, where there is an appetite for PPI.

SADC member states have noted the requirement for innovation in financing to ensure the capital required for new assets and the sustainable maintenance and upgrade of existing assets. A concerted effort from all stakeholders is needed to ensure that the seamless and cost-effective regional infrastructure network envisioned in the RIDMP is realised.

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