Should Countries Invest Resource Revenues Abroad When Demands for Public Infrastructure Are Pressing at Home? The Dilemma of Sovereign Wealth Funds in Sub-Saharan Africa

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Abstract

Setting aside some resource revenues for future generations is not controversial. So is the need to set aside some of the revenues as fiscal buffers against the risk of uncertain revenue flows. There is merit in both on equity and efficiency grounds. For capital-constrained resource-rich economies, the conundrum is whether to invest the savings in external financial assets, or to invest them in whole or in part in domestic infrastructure development. Conventional advice is for the former. There is growing voice, however, that there is room for both. An emerging strategy is to establish ‘umbrella’ sovereign wealth funds (SWFs) with three components each with a clear savings objective: for future generations, for budget smoothening buffers, and for public infrastructure investment. In sub-Saharan Africa Angola, Ghana and Nigeria are most recent examples. But will this innovation become a source of patronage or will it improve the efficiency of domestic infrastructure investment? What guidelines should countries follow to stay true to the objectives of SWF and at the same time meeting their development objectives?

Key words: sub-Saharan Africa, natural resources, sovereign wealth funds, infrastructure investment

JEL classification: E60, F34, F43, O13, Q32

1. Introduction

(I)t is not fair to watch the continent’s wealth and resources fly away, while most of its nations remain stagnant in terms of development. Something needs to be done to that end. José Filomeno de Sousa dos Santos, Chatham House, February 2014.1

1 José Filomeno de Sousa dos Santos, Chairman of the Board of Directors, FSDEA, keynote address, Africa’s Sovereign Wealth Funds: Demand, Development and Delivery, Chatham House, February 2014.
The need to set aside in savings some of the resource revenues from an exhaustible common wealth for the benefit of future generations is not controversial. And so is the need to set aside some of the revenues as fiscal buffers during bad years. On equity and efficiency grounds, there is merit in meeting both needs. The importance of these savings for intergenerational equity and as potent stabilisation instrument for budget implementation cannot be overemphasised. But for capital-constrained resource-rich economies, the real challenge has been whether to invest the savings in external financial assets or to use the savings to invest in the development of domestic public infrastructure essential for economic development (UNCTAD, 2006).

Promoted by the boom in mineral and oil commodity prices in the mid-2000s, it has generally been considered prudent that countries establish savings funds or sovereign wealth funds (SWFs) from their resource revenues (Davis et al., 2001; Barnett and Ossowski, 2003). What was once choice savings of few countries will increasingly become the standard advice for emerging resource economies, especially those in sub-Saharan Africa (SSA). From Angola to Chad, Equatorial Guinea, Ghana, Nigeria, South Sudan and Tanzania, governments have been encouraged to establish SWFs and the locus of traditional policy advice is to restrict the savings to overseas instruments in order ‘to serve the purposes of stabilisation, investment and intergenerational equity’. Elsewhere, and before the recent dip in oil prices, new funds were being considered at the national level in Afghanistan, Kenya, Liberia, Mozambique, Myanmar, Niger, Peru, Uganda and South Sudan. With promising oil and gas discoveries in Kenya, Madagascar, Sierra Leone, Uganda, Mozambique and Tanzania, whether to use the resource savings to finance domestic investment projects, and if so how, is likely to stimulate debate, especially when physical and social infrastructure stocks in SSA are noted to be among the lowest in the world (Dabla-Norris et al., 2012).

Conventional advice to restrict the savings to external financial instruments is being called into question. The lament of Sousa dos Santos of Angola reflects a growing public sentiment about the use of resource savings. In 2006, UNCTAD Secretariat suggested that there should be an alternative because ‘Africa has considerable investment needs that can be met by the surplus revenue.’ Collier et al. (2010) and van den Ploeg (2011a) addressed the issue of the efficient management of resource rents in capital-constrained economies. Both studies proposed that these economies prioritise domestic investment, and counselled that countries structure the investment process to be able to cope with potential variations in resource revenue streams. Reflecting on past approaches and advice, the International Monetary Fund (2010) and subsequently the World Bank (2014) have leaned towards the emerging paradigm, remarking that poor capital-constrained countries that invest more of their resources at home in infrastructure could boost non-resource growth and ‘create a virtuous cycle of increased fiscal space’ (World Bank 2014, p. 7). Already governments in Angola and Nigeria have given their SWFs’ portfolio domestic investment mandates. Bauer

2 See the collection of papers in Escaping the Resource Curse, Humphreys et al. (2007a,b).
3 Public infrastructure is the network of physical assets, including both economic infrastructure (roads, airports, roads, railways, water and sewer systems, energy, pipelines and telecommunications) and social infrastructure (schools, hospitals, prisons) that are created by public investment (IMF, 2015).
4 African Development Bank, Oil and Gas in Africa, 2011 (p. 194).
(2015) echoed the rationale behind the conventional advice and provided somewhat a push back to the idea to use the SWF to support investment at home.

This paper surveys the literature on SWFs and more specifically examines the debate about the dilemma of SWFs in capital-constrained or developing economies, a debate still relevant despite the recent drop in oil price, and made all the more relevant at a time when the compass of mobilising resources for development and financing the Sustainable Development Goals points increasingly to Africa relying on itself (UN, 2015).5 We look at the case for and against the placement of SWF abroad as well as the drive to direct the savings in whole or in part to finance domestic infrastructure development.6 If investment opportunities in Africa are reported to offer some of the highest rate of return on investment, then is there something arguably anomalous about the placement of savings in low yielding overseas assets? But will the innovation to create separate SWFs to spur infrastructural development necessarily ensure the optimal use of natural resource savings, or will the innovation simply exacerbate the risks of fragmentation of public investment projects? What should countries do to ensure the optimal use of their SWFs and at the same time meeting their development objectives? The study is not empirical about country experiences, but rather a survey of the literature, with a view to highlighting some of the factors that should inform policy choices and the safeguards to minimise the inefficiencies in public investment process.

The stylised facts about SWF in general and in SSA in particular follow next in Section 2, followed by a review of the case for and against SWF investment abroad versus the growing sentiment for domestic investment in Section 3. The analytical framework to guide policy makers in their decision-making of SWF placement in the domestic economy follows in Section 4. Next we turn to the specific case of Ghana, with comparisons to Nigeria, about the steps being taken to direct some resource revenues into infrastructure funds for domestic investment, and highlight potential challenges and the lessons.

2. Major SWFs in SSA

Created by governments, SWFs in SSA are funded mostly by the proceeds from extractive resource rents.7 SWFs typically hold, manage or administer assets principally to achieve intergenerational resource revenue sharing and macroeconomic sterilisation objectives, and employ a set of investment strategies to that end (World Bank, 2014). Commonly, SWFs are in the form of Stabilisation fund, Heritage or Intergenerational fund, Development fund and Pension Reserve fund. Stabilisation fund aims to insulate the budget and economy from commodity price volatility and external shocks. The investment horizon and liquidity objectives often resemble central banks reserve management. By its various names Heritage

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6 Coincidentally, the World Bank Report Sovereign Wealth Funds and Long-Term Development Finance: Risks and Opportunities published in 2014 but disseminated in 2015 at the time when this study had already begun has a similar focus.

7 The terms SWF and Natural Resource Funds (NRF) may be used interchangeably in this paper, since most SWF in SSA are funded from non-renewable resource revenues. Globally, SWF may also be funded by non-extractive resource. Senegal’s non-commodity SWF is an example.
or Intergenerational fund provides savings for use by future generations when resources are depleted. With long investment horizon, the investment mandate emphasises high risk-return profile. Development fund is established to allocate resources to priority socio-economic projects, usually infrastructure and focuses on meeting identified outflows in the future with respect to pension-related contingent-type liabilities on the government’s balance sheet (IMF, 2012).

The guidelines for Norway’s Government Pension Fund are simple and compelling: be guided by the permanent income approach, save in international assets and spend the long-term average rate of return on the accumulated resource funds (Davis et al., 2001; van der Ploeg and Venables, 2011b). Norway’s history of SWF management has taught much: sound long-term management of the fund serves a multipurpose role, contributes to intergenerational equity, by allowing both current and future generations to benefit from the petroleum revenues (Ovesen, 2014). It is as much a Development fund, and, by drawing a steady stream of income in support of annual budget, it also safeguards the budget against the cyclicality of oil prices. The Norwegian Pension Fund has become the pearl of best practice, even if the assumptions, the institutional capacity, the underlying social consensus and the political incentives facing policy makers that make the model work, as it has so far, are often taken for granted. The application of the underlying permanent income approach to emerging oil-producing countries in Africa has been questioned and varied. Collier and Venables (2008) for example have argued that the model is optimal only under special circumstances that do not apply to most developing countries, especially the assumption that countries are free to borrow and lend at the world rate of interest. The asymmetric access to capital markets and the potentially high rates of return on domestic investment undermine the traditional advice.

For countries faced with the practical policy challenge in financing public infrastructure, the concern is not about the wisdom of having SWFs, it is about the trade-offs between investment abroad in financial instruments and the savings to support public investment at home (Berg et al., 2012). The question being asked, and stated differently by different researchers is whether it is appropriate, perhaps even ethical, to invest SWFs in low-interest earning financial instruments abroad when the demands for providing social and physical infrastructure at home are so pressing? Or should SWF be used to develop critical infrastructure that would attract investments, increase the absorptive capacity and diversify the economy (UNCTAD, 2006)? The new thinking leans more towards pragmatism and sound political economy approach than towards best practise yardstick. Collier and Venables (2008) and van der Ploeg and Venables (2010), among others, have argued that not all countries will find it optimal to build up a SWF that invests abroad especially if the risk-adjusted rate of return in domestic investment is higher in the long run than on foreign assets. Table 1 summarises the essential features of the SSA SWFs for which data are readily available.

2.1 Botswana: The Pula Fund
Established in 1994, the Pula Fund of Botswana is a long-term fund with the aim of ensuring intergenerational equity by preserving part of the income from diamond exports for
<table>
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<th>Country</th>
<th>Name of fund when est assets ($billion)</th>
<th>History</th>
<th>Objective(s) and stated rule</th>
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<td>Botswana</td>
<td>Pula Fund 1994 $5.5 billion</td>
<td>The Pula Fund, which holds a long-term investment portfolio, established under the Bank of Botswana Act in 1994 and it is part of the foreign exchange reserves. Its goal of preserving a portion of the income from diamond exports for future generations.</td>
<td>Future Generation Foreign exchange reserves that are in excess of what is expected to be needed in the medium term are transferred to the Pula Fund and invested according to these investment guidelines.</td>
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<td>Angola</td>
<td>Fundo Soberano de Angola 2012 $5Bn</td>
<td>Established on October 17 2012, with an initial allocation of US$ 5 billion, the FSDEA. The FSDEA was established according to international governance benchmarks, and gradually diversify its investment portfolio across a number of industries and asset classes in accordance with its investment policy and guidelines.</td>
<td>Stabilisation and Future Generation The NSIA receives monthly funding of a significant portion of oil and gas revenue above the budgeted revenue and approved by parliament. The NSIA will manage these three funds: (i) Future Generations Fund, (ii) Nigerian Infrastructure Fund, (iii) Stabilisation Fund.</td>
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<td>Nigeria</td>
<td>Nigerian Sovereign Investment Authority 2012 $1.4 billion</td>
<td>ECA created in 2004 to help stabilise the budget. The ECA replaced with three SWFs. The ECA intended as a stabilisation fund, closing budget deficits that are a product of oil price volatility. The NSIA created in 2012 manages excess profits from the country’s sale of crude oil.</td>
<td>Stabilisation and Future Generation The NSIA receives monthly funding of a significant portion of oil and gas revenue above the budgeted revenue and approved by parliament. The NSIA will manage these three funds: (i) Future Generations Fund, (ii) Nigerian Infrastructure Fund, (iii) Stabilisation Fund.</td>
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<td>Ghana</td>
<td>Ghana Petroleum Funds 2011 $0.43 billion</td>
<td>The Ghana Petroleum Funds were created by the Petroleum Revenue Management Act of 2010. The funds will be funded by the Petroleum Account. In 2014, the Government of Ghana passed legislation, Ghana Infrastructure Investment Fund Act, 2014, to create the GIIF.</td>
<td>Stabilisation and Future Generation The NSIA receives monthly funding of a significant portion of oil and gas revenue above the budgeted revenue and approved by parliament. The NSIA will manage these three funds: (i) Future Generations Fund, (ii) Nigerian Infrastructure Fund, (iii) Stabilisation Fund.</td>
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According to the Natural Resource Governance Institute and Columbia Law Centre 2013 study, all these funds are managed with varying degrees of transparency and accountability. Little is known about Equatorial Guinea’s Fund for future generations and Gabon’s savings fund with assets under management of $0.08 billion and $0.4 billion, respectively. Senegal’s FONSIS non-commodity SWF stood at $1 billion. Source: Sefinstitute.org/statistics.research, accessed May 2015.
future generations. While there are no explicit deposit rules, the Fund receives foreign exchange reserves in excess of the projected amount each year for investment. The government owns two-thirds of the Pula Fund, while the remainder is owned by the Bank of Botswana, which manages the Fund. As of May 2015, the Fund had a balance of US$5.7 billion to its credit and has investment range covering public equity and fixed income instruments in industrialised economies. The Fund is part of the foreign exchange reserves of the central bank and is exclusively invested in foreign currency denominated assets.

2.2 Angola: Fundo Soberano de Angola
Established in 2012 with an initial endowment of US$5 billion from its petroleum proceeds, the Angolan Fundo Soberano de Angola (FSDEA) has as its objective ‘to promote growth, prosperity and social and economic development across Angola’. The FSDEA was established in accordance with international governance standards and best practices, as stated in the Santiago Principles, and seeks to have its own ratings, exclusive from the sovereign ratings of Angola. An ‘umbrella fund’ with multiple goals, its broad objective is to pursue investments that generate long-term and sustainable financial returns to promote Angola’s social and economic development through the generation of wealth for the people of Angola. According to the Government of Angola, the FSDEA intends to allocate approximately one-third of its initial endowment to interest bearing financial assets, the other-third to various investment vehicles and sectors mainly in emerging and frontier markets, and the others in investing in Angola and across other African markets in sectors such as agriculture, mining, infrastructure and real estate. The Fund is also focused on investing in the sub-Saharan hospitality sector, through the establishment of a dedicated Hotel Fund.

2.3 Nigeria: Nigeria Sovereign Investment Authority
Unlike Angola, the Nigeria Sovereign Investment Authority (NSIA) is set up by legislation. The Nigeria Sovereign Investment Authority Act enacted in May 2011 is also an ‘umbrella fund’ with the objective of managing Nigeria’s oil revenue savings. This is a departure from the previous practice when excess oil reserves were allocated to the Excess Crude Account (ECA), which was set up in 2004 as a stabilisation fund to meet the country’s yearly budget deficits and to contribute to the development of local infrastructure.

Similar to the Angolan FSDEA and with US$1 billion in seed capital, the NSIA has three dedicated funds (Future Generations Fund, Nigeria Infrastructure Fund and Stabilisation Fund) through which various investments would be made but all of which will be managed under the single institution of NSIA. The innovation here is the explicit establishment of the separate Infrastructure Fund. According to the NSIA Act, a minimum of 20% of the initial funding shall be allocated to each of the three components. The initial $1 billion is expected to increase to $5–6 billion possibly with an annual increment of $1 billion. The objective of the Infrastructure Fund is to invest in domestic infrastructure projects either directly or as a leverage to attract private capital in a public–private sector partnership in order to stimulate economic diversification, job creation and ultimately growth. The focus sectors

9 Like the Government of Abu Dhabi, Botswana has not imposed deposit rules on its SWF build-up (Natural Resource Fund Governance: The Essentials, Policy Overview, August, 2014).
11 See Ezeani (2012) and Agbaeze and Onwuka (2014).
for infrastructure development are agriculture, healthcare, real estate, motorways and power generation, distribution and transmission, water and sewage treatment and delivery.\(^{12}\) Section 41(2) of the Act also makes provisions for the placement of funds in financial assets pending investment in infrastructure.

### 2.4 Ghana’s SWFs

Ghana’s Petroleum Revenue Management Act, 2011 (Act 815), (or PRMA), provides for three alternative allocations of petroleum revenues: public consumption, public investment and saving (abroad). The Act sets out with some flexibility on how the oil revenues shall be split among the three alternatives. The starting point for each annual allocation is to estimate a benchmark revenue (BR). The Act allows for no more than 70% of the calculated BR to be allocated to current spending through the budget, and therefore at least 30% in savings, ex ante.

The domestic spending component is then split between consumption and development projects, with a prescribed floor of at least 70% of the spending allocated to the latter in priority areas. Of the 30% earmarked for savings, the Act prescribes that the Ghana Heritage Fund (GHF) shall receive at least 30% and 70% to the Ghana Stabilisation Fund (GSF).\(^{13}\) The savings in both funds are ring-fenced and are not meant to be used to provide credit to any entity or collateral for debts, guarantees or commitments and that the resources be invested in international qualifying instruments.\(^{14}\)

### 3. SWFs placement

#### 3.1 The case for SWFs placement abroad

There are several reasons to support the conventional advice to restrict SWF investments to overseas assets. Namely, investing globally diversifies income, maximises financial returns, lowers the volatility of government revenue, helps to avoid the Dutch Disease, and

\(^{12}\) Nigeria Sovereign Investment Authority, Act 2011, section 41(1).

\(^{13}\) The law defines clear withdrawal rules to meet shortfalls in petroleum revenue in order to smoothen budget implementation and further makes provisions of setting a cap on the Fund and the transfer of any excess amount over the cap for contingency and/or debt repayment. Unlike the GSF, transfers from the GHF can only be done after 15-year intervals under authorisation from Parliament. The transfer can only be on a portion of the accrued interest on the GSF into any other fund established by or under the PRMA. When petroleum resources have been depleted, the GSF and the GHF are consolidated into the Ghana Petroleum Wealth Fund and the withdrawal rules mimic the Norwegian Pension Fund approach. The Norwegian model withdraws no more than the real return on the Pension Fund annually for budget support.

\(^{14}\) From 2011 to end-2014, a total of US$832.61 million was deposited into the GPFs, of which Stabilisation Fund (GSF) received US$589.19 million and the GHF also received US$243.42 million. By the end of 2014, the total amount standing to the credit both funds was US$535.56 million, out of which the GSF had US$286.64 million, while the GHF received US$248.92 million. The first time a cap was set on the GSF was in 2014 at US$250 million with the excess amounts over the Fund being transferred into the Contingency Fund and for debt repayment, in line with the PRMA. Overall, a total of US$305.68 million was determined as the excess over the cap of US$250 million, with US$17.43 million directed into the Contingency Fund and US$179.81 million was used to retire some domestic marketable instruments, leaving a balance of US$108.44 million. The amounts cited here do not include the returns on investment, which stood at US$8.70 million by end-2014.
minimises the absorption capacity problems and the potential adverse macroeconomic consequences. Conventional advice has also used the political economy governance behaviour as reason enough to place SWF abroad. What are the arguments?

First, the ‘Dutch Disease’ occurs when large inflows of foreign exchange earnings relative to the size of the economy result in increased real exchange rate and as a result damages the non-oil sector of the economy (Humphreys et al. 2007a, b; Berg et al. 2012). The revenues from the natural resource sector have the tendency of increasing the country’s net international reserves, leading, according to conventional exchange rate arguments, to the strengthening of the domestic currency against the major trading currencies. The investment of excess revenue offshore helps to obviate this artificial strengthening of the domestic currency, thus preserving the competitiveness of the traditional sectors of the economy.

Second, SWFs also indirectly address the issue of absorptive capacity, which basically means how much new cash injection the economy can cope with without triggering adverse macroeconomic effects. Boosting domestic spending (consumption and investment) rapidly may run into supply bottlenecks that could push up prices of non-traded goods (IMF, 2012). Gelb et al. (2014) observe that the ability of the economy to absorb spending delimits the size and efficiency of domestic investment by the government. ‘Haste makes waste’ the old adage goes. To avoid waste and overheating of the economy, a large amount of this revenue should be invested externally through the vehicle of SWFs.

Third, there are political economy considerations that funds saved abroad divest excess revenue during booms away from the ‘misbehaviour’ of politicians, who if funds were saved at home would be tempted to withdraw with the slightest of budgetary challenges. In jurisdictions where the governance structures and withdrawal rules from SWFs are not water-tight, SWFs could easily be turned into virtual slush funds from which governments fund wasteful public expenditure, under the guise of domestic infrastructure development.

Nigeria and Venezuela provide examples of the fiscal exuberance and ‘misbehaviour’ of politicians. Nigeria’s disappointing development record with its oil revenues provides an iconic example of how massive domestic spending on social and physical infrastructure can be caused by both political economy difficulties and poor budget process (Okonjo-Iweala, 2012) to turn billions of resource revenues into waste. It is on record that huge sums of money spent in haste in Nigeria resulted in poorly planned projects of low quality, and no usable value. The classic case is the Ajaokuta Steel Mill. According to Okonjo-Iweala, the mill consumed US$5 billion and produced virtually no usable steel. The failure to invest oil revenues to create conditions for sustainable development has been described by Collier (2008) as a case of catastrophic failure of public policy. The Venezuela Investment Fund (VIF), established as the repository of its oil windfall, is another of public policy failures.
According to Davis et al. (2001), the resources were diverted toward acquiring stakes in public enterprises, many of which turned out to make losses. The resources were used to provide electricity subsidies and for other off-budget expenditure. Weak governance and corruption underlie much of the waste and reckless domestic investment in Nigeria and Venezuela.

Bauer (2015) argues that a single fund with multiple objectives can lead to ‘inconsistent and confused decision-making’. Concerns about having a single fund with multiple objectives can in principle be resolved by the innovation of creating separate funds. A single fund as in Norway has the advantage that it helps to minimise administrative costs and the rigidities associated with managing transfers to and from multiple funds. The standard two-fund model for many countries (World Bank, 2014) does increase flexibility to cope with multiple objectives of stabilisation and savings for the future. But if the resource reserve horizon is long enough to justify the administrative and operational costs, a three-fund model does provide for better ring-fencing, greater flexibility in matching instruments to objectives as well as transparency and accountability, especially in environments where budgetary processes in planning, allocation and implementation are generally weak. Nigeria’s NSIA manages an ‘umbrella portfolio’ of three funds by a single institution. By contrast, Ghana’s Infrastructure Investment Fund (GIIF) (as we explain later) requires a separate institution for management, distinct from the management of its stabilisation and heritage funds by the central bank.18

3.2 The case for SWFs supporting domestic investment

Limited access to international capital markets, scarcity of domestic capital, pressing economic development needs and the constraints on growth caused by widening infrastructure gap are the main arguments in support of using SWF to finance domestic investment projects (UNCTAD Secretariat, 2006; Collier and Venables, 2008; van der Ploeg and Venables, 2010). The arguments for a reconsideration of the policy advice in managing resource revenues can be framed in two ways.

First, capital-scarce developing countries need domestic investment. However financing remains a binding constraint for both public and private investment, with the limited financing that is available to the private sector being typically of short-term nature. Natural resource financial capital should help to relax the capital constraints and therefore provide an opportunity to speed up economic development. Berg et al. (2012) developed a computable general equilibrium model to study the trade-offs between saving resource rents abroad in a SWF and investing them at home, and concluded cautiously that but for the risk of Dutch disease growth sustainability and the risk to macroeconomic stability, public investment spending at home may be highly desirable. A closely related argument is whether policy advisors often overstate the absorptive capacity problem and exaggerate the fear of the Dutch Disease (Sachs, 2007). In his view the risk may be overblown if the resource revenues are being properly invested as in Botswana as part of a national development strategy, in which case the real exchange rate may or may not appreciate relative to some initial equilibrium. Real exchange rate depreciation is also quite possible, Sachs argues, if the domestic public investment raises productivity of the non-traded sector of the economy. But even in

18 Act 877, Section (8).
the case of Botswana, the Pula Fund does invest offshore as part of the national foreign exchange reserves managed by the central bank.

Not so apparent, however, is whether a country’s absorptive capacity constraint ought to be treated as exogenous, not influenced by considerations of domestic investments. Or whether there is an endogeneity consideration made possible by the prospects that judicious public investment itself can be a catalyst to expanding a country’s supply and management capacity. If that is the case, then the concern ought to be one of the pace and management of domestic investment spending, not over the prohibition of it. The solution: countries should scale up funding domestic investment gradually while still maintaining investments in income-yielding financial instruments abroad as stated explicitly in the Nigerian Sovereign Investment Authority Act. Moreover, the danger of public investment running into capacity constraints and its untoward consequences can be managed through long-term comprehensive planning as in Botswana19 and through proper sequencing of domestic investment projects that are themselves growth-enhancing and potentially transformative.

A second argument against SWFs placement abroad has also been built on the pragmatic grounds that most SSA countries are at a stage of development where they need massive investments in public infrastructure. Figure 1 shows the estimated annual funding gap that needs to be met for selected countries over the next 10 years (beginning 2011) to improve basic infrastructure to the level of a middle-income country such as Mauritius. Estimated annual infrastructure funding gap for Nigeria is $3,368 million, Ghana’s gap is $357 million, Senegal is $576 million, while soon to be oil producers Kenya and Cote d’Ivoire have gaps of US$2,094 million and $1,048 million, respectively.

While the lion’s share of infrastructure financing in SSA according to the IMF (2014) has come from domestic resources and to a lesser extent budget support from development partners, the scope to scale up infrastructure investment through tax revenue and

19 With its strong belief in technocrats, intellectuals and consultants and noted for its consistency in planning, Botswana’s National Development Plans (NDP) typically run for 6 years. Its 10th NDP runs from 2009 to 2016.
borrowing is limited. Global financing may be plentiful, but they may not be cheap and not easy to access. Indeed, the UN High Level Panel of Eminent Persons on the Post-2015 Development identified SWF as one of the most important sources of development finance. It is against this background that we are witnessing a growing public sentiment that governments consider using SWF resources, as opposed to borrowed funds, for infrastructure development, recognising at the same time that the annual investments required for each country grossly exceed their available SWF portfolio, certainly for Ghana and Nigeria. Total SSA SWF of nearly $13 billion (December 2015) is indeed a small fraction of Africa’s vast infrastructure gap estimated at nearly $12 billion annually between 2011 and 2040.

4. SWF and domestic investment: The analytical framework

Increasingly, there are countries whose SWF are mandated to finance domestic investments. The list includes Angola, Kazakhstan, Malaysia, Nigeria, Bahrain, South Africa and United Arab Emirates (World Bank, 2014). While such funds can help focus attention on domestic investment projects, the challenging question is what should countries do in order to ensure the optimum benefits from the SWF (ensuring equitable intergenerational income benefits from resource revenues) and at the same time advance their infrastructure development objectives? While there is as yet no plausible behavioural model, which comprehensively prescribes the optimal allocation of every dollar of public sector investment, Figure 2 is adapted from Gelb et al. (2014) to illustrate the universe of public sector investments that should qualify for the use of savings from SWFs.

The model assumes that (a) domestic investment planning and project design are in place, that investment projects are well coordinated across sectors, with clear and realistic priorities, costs and sectoral objectives and (b) domestic investments can be evaluated on a continuum based on their financial and broad social and economic returns. On the horizontal axis is the range of increasing financial returns with the market threshold of ‘R’, which may be tied to some long-term benchmark rate. On the vertical axis is the rate of social-economic returns with a threshold ‘E’ (analogous to what the Nigerian Sovereign Authority Act describes as ‘non-financial social welfare enhancing attributes’). The four segments in Figure 2 represent a stylised combination of ‘low/low’ (A), ‘low/high’ (B), ‘high/low’ (C) and ‘high/high’ (D) projects ranked on the scale of social-economic (E) and financial (R) returns, respectively. The following classifications may be made.

(a) SWF should not invest in projects in segments A and B first because they fall below the socio-economic welfare enhancing threshold, ‘E’, and second investment in segment B projects potentially displaces private investment opportunities.

21 Foster and Smits (2008) provided a model that attempts to quantify the level and composition of public spending on infrastructure so as to match fiscal allocations to the particular characteristics of individual subsectors, how to evaluate public budgetary spending for infrastructure against macroeconomic conditions, and the ways to make public spending for infrastructure more efficient, so as to better use existing resources.
22 Thanks to an anonymous referee for highlighting these essential steps.
23 NSIA Act, 2011 Section 41(7b).
(b) Two types of projects fall in segment C.

- Projects of medium to high socio-economic returns but have low financial returns with short lead times should be financed exclusively through the normal budget process even if they require multi-year financing such as the construction of clinics, rural roads, sanitation improvements and maintenance of social infrastructure. With adequate planning, these typically can be financed over two or three budget cycles under the medium-term expenditure framework. Most social infrastructure projects especially in deprived regions of most economies will fall in this category. But a case can be made as a one-time exceptional development projects supported by a percent ceiling of the SWF portfolio of domestic investment subject to the broad public consensus.

- Projects that fall in the eastern and north-eastern corner of segment C typically may require high initial capital investments, are long-term and require multi-year commitments to ensure efficient project implementation. At relatively lower financial return but high socio-economic return, public–private partnership may be ideal.\(^2\) SWFs investment may be used to leverage private sector participation.

(c) Infrastructure projects in segment D are ideal candidates for co-financing with international investment institutions, regional development banks. These typically will require high capital requirements with long-term investment horizons such as major (toll) highways, energy generation, ports and harbour development, dams, airport facilities, urban water and sewage projects as recognised explicitly in Nigeria’s NSIA Act, 2011 (Section 41(1)).

The simple guideline here is that while there could be cases of exceptional social infrastructure projects, as recognised in the NSIA Act, with low ‘immediate economic returns’

\(^2\) NSIA Act, 2011 Section 41(5) is more explicit on this possibility because it allows for ‘social infrastructure projects which promote economic development in underserved sectors or regions in Nigeria that may present less favourable economic return potential.’
but high non-financial social welfare enhancing attributes, SWFs should focus on co-financing with international financial institutions to bring in additional expertise in project selection and screening, design, implementation and monitoring, and to increase credibility of the investment decisions and reduce risk (Gelb et al., 2014). These are areas in which countries typically encounter most difficulties and where improvements in public investment management could significantly enhance efficiency and productivity of public investment. The Nigeria Infrastructure Fund’s approach to partner with General Electric and Power China in the area of energy, and with Africa Finance Corporation and International Finance Corporation are examples of such approach. Second, SWFs that invest part of its portfolio at home should not duplicate the opportunities of investments of other financial institutions or crowd out opportunities of the private sector (as in projects in segment B).

While the above scheme outlines possibilities, a pragmatic approach is to balance the socio-economic returns and the financial returns in order to ensure lasting development impact. But a lot rides on the political and economic governance institutions and processes for each country. Ultimately, countries’ planning framework, budgeting process, overall public financial management, and the demand for accountability and transparency hold the keys to effectively using fiscal resources to support public infrastructure projects with or without SWF.

5. Ghana infrastructure investment fund

Ghana’s pre-oil growth rates of about 5% and the halving of poverty in the early 2000s earned it star status in the eyes of many. Oil discovery was seen to present two major development opportunities: to accelerate poverty reduction and the pursuit of the Millennium Development Goals, and to overcome the infrastructural weakness and bottlenecks to private sector development. But, despite the 70% allocation of the oil revenue into public spending and the requirement that at least 70% of this budget allocation be directed to finance domestic investment expenditures, politicians, urged on by social activists, grapple with how the savings are to be invested. A number of factors have combined to stoke the debate.

First, although 70% of the spending allocation through the budget was earmarked for priority areas in domestic investment projects, there was never enough for any single project for a simple reason. The absence of a comprehensive national development plan meant that there was no strategic guidance and consensus on prioritisation of the projects to be financed either on the basis of their socio-economic returns (E) or on financial returns (R). For example, the government in its 2012 and 2013 budgetary allocations spread the funds too thinly over too many projects with no explicit project ranking criteria. But this is more a budgetary discipline problem than of any fundamental controversy of whether the savings should be placed at home to support domestic investment or be placed abroad in financial instruments. Second, Ghana’s elevated reliance on sovereign bonds to finance its fiscal and current account deficits heightened debate about the wisdom of SWF savings in external assets. The cost of Ghana’s 2014 sovereign bond of 8% was nearly five full percentage

26 See Aryeetey and Kanbur (2008).
27 See Breisinger et al. (2009), IFFPRI and World Bank (2009).
points higher than the yield on its SWF portfolio. Political and public sentiment, however short-sighted, was that there is something anomalous about this. For many proponents, it did not matter that Ghana’s borrowing of $1 billion exceeded its accumulated $832.6 million in its savings abroad. And it also did not matter that substituting the savings for the portfolio inflow would amount to directing the savings to finance fiscal imbalances and current account deficits, which averaged 8% and 10.6% of GDP annually, respectively, between 2010 and 2013. Third, having emerged as a lower middle-income country, Ghana’s ability to move into middle income is increasingly constrained by infrastructure gaps in transportation and energy in particular. Following the example of Nigeria, Ghana enacted legislation to create a stand-alone Ghana Infrastructure Investment Fund (GIIF), 2014 (Act 877), another public investment management institution.

The Fund, among other things, is to undertake investments for the development of infrastructure within the country to promote economic growth and attract investments. Its single objective ‘is to mobilise, manage, coordinate and provide financial resources for investment in a diversified portfolio of infrastructure projects in Ghana for national development.’ The Fund is also meant to facilitate the removal of self-financing projects from Government’s debt stock and managed separately as commercial projects, thereby freeing up arithmetically debt capacity (Government of Ghana, 2014). The Fund’s major source of funding is the 25% of the oil revenue intended for current budget allocation, which amounts to 17.5% of total estimated annual oil and gas revenues, leaving intact its stabilisation and heritage fund.

6. Is Ghana getting it right?

The creation of the GIIF does provide a legal and institutional framework for the use of part of the oil revenue to support infrastructure development. It recognises that financing infrastructure projects can be challenging because of the large size of investments, the long-term nature and even the complexity of projects. While the legislation, like Nigeria, may provide a solution to the effective use of oil revenue (17.5% of it towards infrastructure), it is also a tacit acknowledgement of a weak development planning culture, of a broken budget system and of the reality that most funds that pass through line ministries and departments go toward current spending. It is also an admission of the lack of coherence in the country’s infrastructural development and their financing. But as legislated, the GIIF is yet another public investment management institution no less vulnerable perhaps to the problems of how to close the efficiency gaps between inputs and quality of infrastructural investment output. Recent estimates across twenty-five countries, according to the IMF (2015), reveal average inefficiencies (measured by the value of investments and infrastructure coverage and quality) of around 30%, adding to the argument against exclusive domestic investment of SWFs. The GIIF is an extra-budgetary fund, intended to operate

28 Much of the elevated fiscal deficit between 2010 and 2013 resulted primarily from a rise in the public sector wage bill (favouring largely current spending) and higher capital spending (IMF Regional Economic Outlook, April 2014).
29 Act 877, Section 2(1).
30 Other major source of funding are a 2.5% out of the 17.5% of the value added rate, excess funds from escrowed and on-lent funds from prior investments.
outside the annual government budget process, provides a wide berth of investment ‘discretion’ to the Board and that alone leaves much to be desired.

The legislation (Act 877) does not explicitly tie the infrastructural spending of the fund to the budget process or to the plans developed by line ministries and agencies. The NSIA Act\(^\text{31}\) on the other hand seeks explicitly to integrate infrastructure policy with national priorities and the activities of line ministries. The expectation is that GIIF domestic investment decisions will be guided by country’s development planning framework. Failing strong coordination between the annual budget processes and the infrastructural investment spending, there is no guarantee that the investment decision-making will not be subject to some form of ‘political capture’ and eventually generate the same undesirable economic and social outcomes that do not promote domestic economic development.

Looking ahead there are several key areas of concern. These include (a) the fund’s engagement in activities to ensure ‘the development of skills in infrastructure development’ (Section 2(d)), (b) the power of the fund to ‘create sub-funds, affiliates…in any jurisdictions in furtherance of the object of the fund’ (Section 3(a)), (c) the power of the fund to ‘invest in … investments of any kind’ (Section 3(b)) and (d) the power to locate the head office of the management of the fund in Ghana and ‘may, where it considers necessary for the performance of its functions, open branches within or outside the country’ (Section 7). Moreover, a powerful Board of the separate GIIF may take on fragmented responsibility for a wide range of politically motivated development projects, whether or not the investment and disbursement decisions pass the socio-economic or financial-optimal returns test. Finally, while the corporate governance of the GIIF as stated in Act 877 may be strong and perhaps independent, there is little comfort in the accountability and transparency provisions of the legislation.\(^\text{32}\)

Yet to be implemented at the time of writing, the design and governance of Ghana’s infrastructure fund echoes and exemplifies some of the challenges as countries begin to give their SWFs domestic investment mandate. The risk is high that GIIF will operate outside the annual government budget process, and the absence of a long-term development plan in Ghana can only exacerbate this risk. The risk of multiple mandates of development spending either through the normal budget process or through the investments of the GIIF is high. Especially so if by the legislation the latter can ‘invest in investments of any kind’ (section 3(b)) within and outside ‘the confines of national policy guidelines on infrastructure investment’ (section 21). And so is the risk that the investment choices may not follow the schematic framework outlined in Figure 2.

7. Conclusions

For resource-rich, yet capital-constrained economies that are facing difficulties in financing public investment in infrastructure and also facing pressing social needs, the concern is no longer about the wisdom of setting aside some revenue in savings. It is rather about the

\(^{31}\) NSIA Act, 2011 Section 41(1).

\(^{32}\) For example, whereas the GIIF submits an annual report only to the Minister of Finance for onward submission to Parliament, the NSIA in line with its Federal character submits its annual report simultaneously to the President, the Minister, the Central Bank, the National Economic Council as well as the National and State Assemblies (GIIF Act, 2014 Section 29, NSIA Act, 2011 Section 37).
choice of investing in whole and in part in domestic infrastructure development. The emerging view, even if driven by the spending temper of politicians, is to consider investing the saving at home. This orientation, however, plays down perilously the risks of Dutch Disease, of absorption capacity challenges, of the potential adverse macroeconomic consequences, and may ignore the need to maintain the income generating capacity of the savings, which can only be guaranteed through savings in foreign financial instruments.

Is the use of the saving to finance domestic infrastructural projects the panacea for the effective use of resource revenue? Is there a greater risk of exacerbating the fragmentation of public investment projects? Considering the size of SWF for most SSA with their pressing social and physical infrastructure needs, the use of SWFs is unlikely to provide a step change for their infrastructure financing. But the debate is unlikely to diminish sooner at a time when the compass of development financing is pointing increasingly at Africa relying on itself. Yet to be implemented at the time of writing, Ghana’s legislative approach hints that unless there are explicit guidelines rooted to a well-defined national policy on infrastructure development and unless there are complementary safeguards that prevent ‘political capture’, waste and corruption, separate infrastructure funds surely will not be the answer, or for that matter, a substitute for sound planning, project selection, design, implementation and strong budgetary process. A lot surely rides on the political and economic governance institutions and processes for each country.

Reform to strengthen public investment management, from project screening and design through cost-benefit analysis and strengthened budget process, are all critical elements for the success of the use of infrastructure funds as an innovative development strategy. To the extent that it may take time to strengthen these elements of public investment management, it may still be prudent for the infrastructure fund to make financial investments abroad but, as its ultimate objective, then increase the proportion invested in domestic investment projects. The Nigerian Sovereign Investment Authority Act explicitly makes provision for this.

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References


Ovesen V. (2014) ‘Political Accountability of SWFs,’ Presentation at the Africa’s Sovereign Wealth Funds: Demand, Development and Delivery, Chatham House, September.


