European programmes and Chinese projects: a modality clash on sustainable infrastructure development in Africa.

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Introduction

Since the neoliberal orthodoxies of the 1980s came to define development thinking, Africa's economic infrastructure sector has been seen as the domain of private investment, not as a key donor responsibility. The donors' role in Africa's development had to focus on creating the enabling conditions in which a private sector could flourish: first these were economic liberalization and privatization, later they became the development of good (democratic) institutions and regulations, pro-poor growth, capacity building and social service provision.

But about 5 years ago, a series of changes in geopolitics and development discourse led to the reestablishment of economic infrastructure as a fundamental development objective. By that time, infrastructure stocks in many Sub-Saharan countries had reached abysmal levels as the gap between African infrastructure and that of other Low Income Countries widened year by year. The momentum for increases in infrastructure investments grew from two sides. On the one hand, Western donors started to acknowledge, in publications such as the Commission of Africa Report, that policy mistakes on their part have significantly contributed to Africa's current infrastructure malaise. As a result, the amount of ODA and non-ODA finances that are channeled into these sectors is rising year by year. On the other hand, a group of emerging economies, with China taking the lead, started investing heavily in Africa's infrastructure sector, often as a collateral for the resource acquisitions they needed to fuel their breakneck economic growth.

But recognizing Africa's infrastructure deficit is only step one. Just as important is finding the most adequate modalities to achieve the goal of infrastructure reconstruction most effectively. History is already littered with cases where development modalities have become development obstacles. This paper deals with this dilemma. Even though there is a growing consensus on the fact that infrastructure development is desperately needed, there is a growing divergence between East and West about the aid modalities that should be employed. While the Chinese prefer a 'non-interference' project by project approach, taking much of the implementation process in their own hands yet often delivering quick and very visible results, the European donors recycled their Budget Support modalities that called for financing through the governments budgets to strengthen local institutional capacity. How do both approaches perform in the highly specialized field of large scale infrastructure development? This paper argues that due to the special nature of this sector, both approaches have their inherent weaknesses, which could undermine African infrastructure reconstruction. But they also have their inherent strengths. As the infrastructure programs of both China and the EU expand, their common interests will likely increase too. Better cooperation through a division of labour, with each side focusing on its areas of comparative advantage, would allow these strengths to prevail, while the weaknesses could be overcome.

1 A crumbling infrastructure sector

For much of the twentieth century, states have been the providers of infrastructure[1] services, often through state-owned utilities. In the 1980s however, a profound reassessment of the role that the state had to play in service delivery dramatically changed this relationship. The shift occurred as a result of inefficient management and poor results on the part of these state-owned enterprises and the increased focus on the importance of infrastructure performance due to globalization. (Jerome, 2008) Under the influence of neoliberal policies, the private sector was seen as much more capable in dealing with the challenges of infrastructure development in a quickly changing world.

With inefficiency problems that often far exceeded most other regions and the burden of the debt crisis on their hands, African countries stood at the center of this reform process. The ideas quickly moved from theory into practice as Structural Adjustment Programmes broke many of Africa's state monopolies and opened its markets. Donors also reassessed their aid flows. ODA financing for infrastructure drastically decreased in the following years. World Bank lending for infrastructure for example fell from around 50% in 1987 to 30% in 2003 and OECD-DAC figures show how aid to infrastructure development continually declined from 1995 onwards, from 55% of the total ODA package to Sub Saharan Africa, to only 30% in 2005. (Nissanke & Jerve, 2008) In reality, the shift was even bigger if one separates economic infrastructure from social infrastructure. The OECD-CRS data shows how social infrastructure has consistently grown at the expense of economic infrastructure during the 1995-2005 period.

Africa's economic infrastructure became the domain of private investment and no longer a key donor responsibility. From now on, donors had to shift their attention towards creating the enabling conditions in which this private sector could flourish. During the 1980s, this was very much focused on economic liberalization and privatization, but by the middle of the 90s, this had expanded to the development of good and preferably democratic institutions, rule of law, pro-poor capacity building and social service provision.

This believe in the private sector was however too optimistic. In reality, the performance has been dismal. Between 1990 and 2007, Sub Saharan Africa only attracted around 69 billion US dollars, which accounts for only 5,5% of the cumulative investment in developing countries. And even then was most of this money concentrated in South Africa (36%) and Nigeria (25%) (WB PPI database, 2011). The combination of this struggling private sector, a sharp decline in public funding, drastic cuts in ODA for financing economic infrastructure and continued difficulties in improving the institutional quality caused the stagnation of Africa's economic infrastructure for almost a quarter of a century. Research from Banerjee et al (2008) into the changes in Urban and Rural Service coverage showed that sanitation, electricity and landline access were pretty much stagnant during this 25 year period. The access to clean drinking water even fell from 80% to 60% for Africa's urban population. The work that has been done remained also too fragmented, resulting in very low intraregional connectivity in the transport sector, power and ICT. (Foster, 2008)

[1] Infrastructure, as defined in this paper, refers (unless otherwise mentioned) to economic infrastructure such as power, roads, irrigation, ports, energy, telecom and railways. Health and education infrastructure are specifically referred to as 'social infrastructure and not included under the 'infrastructure' banner.

This lacking performance became even more visible because it coincided with Asia's major infrastructure expansion. By the middle of the nineties, Asian countries started registering significant upward trends in their infrastructure stocks. As a result they distanced themselves ever further from their Sub Saharan developing peers. During the sixties, the distribution of roads was very similar in Africa and South and East Asia. The same was true with telecommunication in the seventies and electricity in the eighties. But by 2005, Sub Saharan Africa had been left far behind in terms of infrastructure stocks. Although in the seventies, Africa had three times the electricity generating capacity per million people as South Asia, it now only has about half of South Asia's capacity (World Bank, 2009). African LICs lag far behind the world's other Low Income Countries in the density of paved roads, the electricity network and electricity generation, internet and landline access,… Only mobile phone density was performing relatively well. (Yepes, Pierce and Foster, 2003) The IMF determined that the lack of appropriate infrastructure has been the key reason why natural resources in Africa remained relatively untouched by traditional investors and Africa failed to attract a larger share of the world's FDI flows. (IMF, 2011) The Commission for Africa Report (2005) shared similar concerns. Donors urgently needed to orient their investments towards improvements in the investment climate, the support of economic integration of different African regions, the ability of African nations to tap into world markets and the provisions of pro-poor benefits. As a result, the main investment sectors should become power, roads, irrigation, ports, energy and telecom.

In hindsight, the donors' almost unanimous decision to pull out of Africa's infrastructure sector looks more surprising when one examines the theoretical debate on the relationship between infrastructure and development. The correlation between infrastructure and development is scientifically endorsed and it remains uncontested. Easterly and Levine (1997) for example clearly showed that infrastructure is strongly and significantly correlated with growth. Many others have done the same. Calderon (Calderón, 2009) calculated that Africa's growth per capita would have been 2,3 points higher if it would have had the infrastructure level of Mauritius. Panel data studies such as Ayogu (1999) and Kamara (2008) all find strong associations between infrastructure and economic output of a country. Reinikka and Svensson (1999) make clear that unreliable power acts as a significant deterrent for private investment. Ndulu (2006) concluded that Africa's competitive disadvantages, such as low population density and limited coastlines can only be overcome through concerted efforts in infrastructure building, in order to be able to participate in global production networks. (Limao and Venables, 1999) Yet, although the correlation between infrastructure and economic development might seem rather straightforward, even without econometric evidence, the direction of this relationship is far less obvious. It probably runs in both directions, with infrastructure supporting economic development and economic development supporting growth. (World Bank, 2009) Yet a number of studies show that the improvement of infrastructure will have a direct effect on the economic development. Willoughby (2004) stated that infrastructure would make valuable contributions to all the MDGs, something the United Nations Millennium Project (2005) reaffirmed a year later. In their study on Tanzania; Lanjouw, Quizon and Sparrow (2001) showed how the presence of electricity increased the income from nonfarm business in a village by 61%. Another study showed how a road rehabilitation project in Ghana reduced the cost of transportation of goods by a third. (World Bank 2000) Ethiopian farmers were 20% more likely to use fertilizers if they had access to an all-weather road. (Croppenstedt and Demeke, 1996) Between one third and half of Tanzanian villagers reported improvements in their access to health care if they had a road connection. (Davis, Lucas and Rikard, 1996)

2. Rediscovering the infrastructure sector

Around 2005, the first estimates of Africa's infrastructure deficit started to emerge. In order to bridge the infrastructure gap that was hindering African growth, very large increases in infrastructure financing would be necessary. The Commission for Africa Report (2005) estimated that an initial 10 billion dollars per year was required during the 2005-2010 period, which had to be expanded to 20 billion dollar during the 2010-2015 period in order to make a meaningful contribution to the realization of the Millennium Development Goals. A recent study by the World Bank (2009) refined these numbers and estimates now that the gap is at least twice as large, with African infrastructure needs requiring an annual investment of 93 billion dollar. Most of that money (45 billion USD) is already carried by the local population. Another 17 billion USD could be gained through increases in efficiency. In the end, a funding gap of 31 billion dollar remains. The World Bank identified three types of actors that could close this gap: private sector investors, ODA through Western donors and non-OECD finance.

Although the disappointing private sector performance was previously labeled as one of the causes of Africa's current infrastructure deficit, private flows will remain absolutely crucial in solving African infrastructure needs in the future. It is important however to understand why the neoliberal theory failed to turn its ideas into practice. Investments in African countries were most of the time considered too risky. With Africa's lacking infrastructure, unstable political situations and limited institutional capacity, only very few international investors were willing to take the big plunge into the unknown. Both governance and infrastructure first has to improve before more private companies will be willing to take such risks. To some extent, this has already happened. The PPI database, which tracks private investments, shows how the invested value in Sub Saharan Africa increased from 8,7 billion USD in 2005 to 13,5 billion USD in 2008, although many of these investments went again to less riskier markets such as South Africa.

So, at least at the initial stage, financing from foreign state actors will be crucial to kick start the process of economic development. The World Bank report identified that aid and investments from both old as new world powers will be necessary to bridge Africa's infrastructure gap. ODA and investments from Western countries have to become more oriented towards this infrastructure sector. At the same time, non-OECD financiers can use infrastructure development as a collateral for resource acquisitions. In recent years, both of these actors have seriously committed themselves to African infrastructure development. They do however employ two very different development modalities to realize these objectives. In the next section, these two approaches to infrastructure development will be discussed in more detail, focusing mainly on the rhetoric that drives them, while the follow-up section will give critically analysis of the strengths and weaknesses of both approaches.

a) Western donor shift

The Commission for Africa Report, which was drafted by a group of world leaders and development experts in 2005, under the ambitious direction of the British Prime Minister Tony Blair, was one of the first signs of change in the Western development rhetoric. The goal of the report was to provide 'fresh' inspirations for the promotion of African development. By combining econometric evidence and case study research, the extensive report entitled "Our Common Interest" came to the conclusion that the massive underinvestment in African infrastructure was one of Africa's biggest hurdles in their search for prosperity. They argued that the donors' drive for infrastructure privatization, which had become a dogma during the eighties and nineties, was a clear ‘policy mistake’ and left African infrastructure paralyzed for almost two decades.

> *“Despite its clear benefits, African governments and development partners sharply reduced, over the 1990s, the share of resources allocated to infrastructure… In retrospect, this was a policy mistake, founded in a new dogma of the 1980s and 1990s asserting that infrastructure would now be financed by the private sector.” (Commission for Africa, 2005)*

In order to overcome this ‘policy mistake’ and restart African growth, a ‘massive’ investment in infrastructure would be required to break down the internal barriers that hold Africa back. The report called upon donors to shift their development priorities and double their spending on infrastructure. These investments in the infrastructure sector should be broad and all-inclusive. They would range from rural roads and small-scale irrigation to national highways, railways, large power projects and ICT. They should target both rural and urban environments through a pro-poor lens, with a special attention for women and young people, while safeguarding the environment and mitigate the risks of climate change. In order for Africa to break out of its vicious circle, a “big-push” in the infrastructure sector would be necessary. (Commission for Africa, 2005)

The recommendations of the Commission had considerable influence. At the G8 summit that year in Gleneagles, the Report served as a blueprint for the final resolution. Just as the report had asked, the G8 committed themselves to a doubling of aid and a significant extension on multilateral debt relief, partly in a way to ease the pressure on their agricultural export subsidies. In the infrastructure sector, the summit contributed to the creation of a number of international forums: the Investment Climate Facility for Africa, the Infrastructure Consortium for Africa (ICA) and Business Action for Africa. The NEPAD Infrastructure Project Preparation Facility (NEPAD-IPPF) was another African initiative that showed the refocus towards the infrastructure sector. Lastly, with the African Infrastructure Country Diagnostic, the World Bank launched an unprecedented attempt to collect detailed data on Africa’s infrastructure sectors and has provided analysis of the challenges that Africa faces in its substantial research volume: ‘*Africa’s Infrastructure: A time for transformation*.’ (World Bank, 2009)

But the call to increase donor financing for infrastructure development was more than just a change in rhetoric. Donor funding to infrastructure indeed enjoyed an important renaissance, especially since 2005. The World Bark suggests that this surge in investments has been central to Africa’s improved levels of growth during the last couple of years. (World Bank, 2009) The Infrastructure Consortium for Africa (ICA), which was established to promote increased investments in infrastructure projects (transport, power, ICT) in Africa, concluded that the donor commitment to double aid for infrastructure has certainly been more than achieved, and this has been done a year early. ODA from ICA members[2] to Africa for the infrastructure sector stood at 5 billion USD in 2005, but already reached 10 billion USD in 2009. Only during the financial crisis, there was a dip in funding, but this was short-lived. But it were the non-ODA commitments that have seen the biggest increase since 2005 (2 billion USD at the time) since they grew to more than 9,4 billion USD in 2009. The ICA

[2] ICA members are : African Development Bank, World Bank, G8 countries (Canada, France, Germany, Italy, Japan, Russia, UK, USA), European Commission, European Investment Bank, Development Bank of Southern Africa.

members mainly directed their funding towards the transportation sector, which received 35% of the funding. Water received around 12%, the same amount as the 'multi-sector commitments'. ICT on the other hand received very little finance with only 4% of the funding package. (ICA, 2011)

The EC from its part was initially slow to respond, since for many years it has been one of the most committed donors supporting a social, pro-poor approach to development. But its 2010 Green Paper on the EUs development policy, clearly shows how the EU now too is changing course. Although the Green Paper still included sections on MDGs, social inclusiveness and governance, its core was found in two sections: a first one which deals with growth and a second one which deals with energy and development. In these sections attention goes to catalytic impact, risk-sharing with the private sector, infrastructure development and investment promotion. Commissioner Andris Piebalgs phrased it like this:

> *"In a nutshell, the more I think about it, the more I meet people, I visit countries, […] I'm convinced that our development policy and aid should be directed towards economic growth and job creation, while keeping good governance as a strong priority. […] We will be supporting them in this endeavor, to set up sound health, tax, legal and social systems; to fund infrastructures and develop industrial markets; to establish good governance and build sustainable economy." (Letter to development ministers, 2010)*

Since the EU has only recently started to shift its approaches, it is too early to tell whether or not this will lead to a substantial increase in funding for infrastructure. The EC did however already double its current contribution to the EU-African Infrastructure Trust Fund to 200 million euro for the 2009-2010 period and called upon other members to join, so 500 million dollar could be raised. The EC also promised to leverage 2,5 billion euro in soft loans to support infrastructure projects. (PPIAF, 2008).

But recognizing Africa's enormous bag log in the infrastructure sector is only step one. Just as important is finding the most adequate development modalities to achieve the goal of infrastructure reconstruction most effectively. Although the Commission for Africa Report argued for a major shift in the content of the funding, it did not argue for a shift in aid modalities. Its recommendations were very much in line with the emerging donor discourse on aid effectiveness, which was bundled in 2005's other major development publication: the Paris Declaration. It argued that support to African governments should be given through the general budgets of these countries and not in the form of stand-alone projects. By providing the national budget with the extra liquidity, a country is able to make its own choices. This way, recipient countries could become skilled at managing their finances and learn to be accountable for their own development results. The Paris Declaration argued for a similar approach when it called for effective aid delivery, with a focus on partner country ownership, donor recipient alignment, harmonization among the donors, mutual accountability and resultorientedness. Aid has to be predictable and suspensions should only happen when there is a clear divergence from previously agreed eligibility conditions. But General Budget Support can only be used when governments already have a clear development strategy in place and have an open and transparent budget system. If this is not the case, donors will have no choice but to employ a sector-wide approach or even a project by project approach, although this was clearly seen as a far less preferable option. But half measures do not work, according to ODI's analysis on the progress of the Budget Support Modality. Delivering aid through other modalities alongside GBS will weaken its ability to contribute to an institutional transformation of recipient countries. (ODI, 2008)

The EC champions this approach and clearly defines Budget Support as its preferred aid modality, which will amount to 50% of the disbursements for the 2008-2013 period. Traditional project aid on the other hand is however discouraged. (EC, 2011) The role of Budget Support was further defined in its recent Green Paper on Budget Support (2010) where it stated that *"through budget support, donors would need to help partner governments finance key government functions, such as schools and hospitals, teachers and health care staff, the construction of infrastructure, improve security and rule of law and implement the complex reform processes."* It also stated that *"since both partner country development strategies and EU attention are increasingly focused on the importance of sustainable economic growth, […] it is necessary to ensure that development aid in general, and budget support in particular, gives more attention to the identification of steps needed to remove binding constraints on sustained growth, such as inadequate economic infrastructure, red tape or limited human capital."*

We can conclude that the EU is gradually adapting itself to a discourse that has been emerging among Western donors since 2005. This discourse puts much more importance on infrastructure development, economic growth and industrialization of African countries. It is also much more output oriented than the original 'aid effectiveness' discourse, which focused on the (institutional) management of aid. But although there are calls for a shift in the content of the aid flows, there are far less calls to shift the modality through which this aid would be delivered. The EU has reaffirmed its commitments to Budget Support as its preferred aid modality, even for infrastructure development.

b) Attention from the East

At the same time that Western donors started to place more emphasis on the role of infrastructure development in Africa, their dominant influence began to erode as a group of emerging economies quickly expanded their trade, FDI and aid relations with the continent. These countries have been able to capture the spotlights of international media in their hunt for resources, but their African construction frenzy has been just as remarkable. The IMF (2011) concluded that BRIC financing will play a key role in alleviating infrastructure bottlenecks in Low Income Countries and should help raise productivity. Their recent investments have already contributed to a 35% improvement African electricity supply, 10% increase in rail capacity and lower prices for telecommunication. (Foster et al, 2009; Sebastian 2008; Onjala 2008) The World Bank (2009) recognized too that the non-OECD actors will play a crucial role in bridging Africa's annual funding gap of 31 billion dollar. No other emerging economy has a more impressive track record in Africa than China.

Without going in detail into China's historical relations with Africa (See for example Brautigam, 2009 or Taylor, 2010), it is important to stress that its former flagship projects such as the Tanzania-Zambia

Railway (TAZARA) and the continued diplomatic engagement throughout the eighties and nineties, were the foundations on which the current expansion could be build. But even the Chinese government admitted recently in their White Paper on Foreign Aid (2011) that 2005 marked a new chapter in their relations with Africa. Before 2005, at least in the eyes of most Western donors, China's presence in Africa almost went unnoticed. The Commission for Africa Report in 2005 hardly mentioned the potential role that China could play. The follow up report however, which was printed just five years later, makes clear how much has changed since now it had earned a prominent place in the discussion.

In just five years, China has redefined power relations in Africa through a massive increase in trade, FDI and aid spending. And it has done so at a breakneck speed. Before 2005, China's financing investments in Africa accounted for less than one billion US dollar. In 2006, they already accounted for roughly 7 billion. (World Bank, 2010) Chinese foreign aid has risen substantially; on average with about 30% per year in the 2004-2009 period. (PRC White Paper, 2011) It's trade relations with Africa increased tenfold between 2002 and 2009 and large amounts of FDI were channeled through Chinese state owned enterprises and private investors. China's Export and Import Bank (EXIM) was expected to lend US$20 billion to African countries in the 2007-2010 period at attractive rates. Most of that money was targeted for the infrastructure sector, with investments through Chinese companies. (Brautigam, 2010) The financial crisis even intensified this focus on developing countries as China wanted to diversify its exports since the West looked increasingly unstable as its 'buyer of last resort'. (FT, 2011) The stability and expansion of China's Africa connection consequently is becoming increasingly important for its own internal stability and development as more and more Chinese companies fiercely compete for the available government finance. (Corkin, Burke & Davis, 2008)

One major appeal of China's development discourse has been the fact that it placed the full onus back in the hands of the state when making public investments decisions in infrastructure and agriculture. (Mohan & Power, 2009a) At the same time, the Chinese aid doctrine firmly goes against any form of political conditionality and proclaims mutual benefit, equality and common development. These principles have an impact on the development modalities that the Chinese government uses in its relations with Africa. China finds many Western development principles ineffective or even detrimental to the development of a country. The donor interference through (whether or not mutually agreed) conditionality will not allow countries to develop a sustainable endogenous system of state governance. The growing Western trend for 'cash' aid through General Budget Support is not supported. China gives almost all its aid in 'kind' and tied to Chinese companies, which provides direct results and allows for a tight chain of accountability. A mutually beneficial approach, such as infrastructure development, offers according to China a much greater potential for success because it strengthens the recipients capacity for economic growth, while allowing China to secure resources and strengthen its SOEs and other private companies. China uses a whole range of development modalities, such as technical and cultural cooperation or debt relief (China canceled a total of 2,8 billion dollar by 2010), but it has been most active in the infrastructure sector through individual projects, concessional loans and 'Angola model' resource-backed loans.

These infrastructure projects are very much oriented towards industry, economic development and transportation. Many have already pointed out that there exists a certain gray area between where their aid ends and pure private investment begins. With major investments through state owned enterprises this is not really surprising. But China is not unique in this respect. Many Western deals have suffered from this blurred distinction. A 2011 OECD analysis on the progress on untying aid, concluded that while there might seem acceptance about untying aid in donor theory, in practice most contracts still go to donor countries' own firms. (OECD-DAC, 2011)

The first major instrument that the Chinese government uses for infrastructure development are concessional loans, which allows developing countries to undertake projects that would generate economic and benefits. It is the Chinese EXIM bank that issues the loans and the People's bank of China covers the difference between the concessional rate and the real market rate. These loans have repayment periods of 15 to 20 years (with 5 years grace) and interest rates of around 1.5-2%. The Chinese government White Paper on foreign aid claimed that with these concessional loans China has been supporting 325 projects in 76 countries since the start of its development aid with Africa. Of those 325, only 142 have been completed, which would either point to a low success rate or a very recent investment. Since concessional loans focus on the profitability of projects, they are mainly used for economic infrastructure projects (61%). Industry comes as a distant second with 16,1% and to some extend surprisingly due to proclaimed 'resource grab', only 8,9% goes to energy and resource development. (PRC White Paper, 2011)

Secondly, China also finances complete projects in recipient countries through the grants or interest-free loans. In these cases; the Chinese contractors take the lead in the project, from planning, through construction until the actual handover to the recipient country. At present, 40% of Chinese foreign aid is delivered through this modality. By the end of 2010, China has completed 2025 overseas projects since the beginning of its aid relations with Africa. The biggest chunk (33%) of these projects goes to public facilities, where the focus lies on constructing infrastructure for science education and healthcare, civil, cultural infrastructure and water supply. The industrial sector is second (31%) with most projects investing in light industry. Contrary to what would have been expected, the oil industry and the mineral exploitation industry only received a small amount of projects, financed through this mechanism. In the economic sector, which accounted for 20% of all the projects, more than half went to transportation infrastructure, a third to power supply. So just as with the concessional loans, Chinese projects are oriented towards economic and industrial development, where they try to lay a solid foundation for the economic development by improving industrial and agricultural productivity.

But overall, even though it has been rising significantly since 2004, the Chinese real aid package remains rather small. With a total funding of just 38 billion dollar <u>in total</u>, the package bleaks out against traditional donors such as the UK, which has distributed 13 billion dollar in ODA in 2010 alone. (DFID, 2011) China's true influence does not come from ODA, but from large non-concessional flows. A first type, the export sellers credits, are preferential loans issued to Chinese companies abroad. In 2009 alone, the EXIM bank issued a total of 26 billion USD to strengthen companies in their 'going out' policy.

The most obscure, but also most significant 'package' of them all are the resource-backed infrastructure loans. These deals have received the most criticism, with China being blamed for a mercantilist attitude. Through this model, recipient countries can use their exports of natural resources to repay their loans to China (as is the case with Angola) or part of the infrastructure financing will be used to develop natural resource extraction to provide the collateral. (as is the case in the DRC) (Corkin, 2011) By paying contracted construction companies directly, the Chinese EXIM bank remains fully in control of the project disbursements. This mitigates the risks of the loan entering the African government's financial system and disappear. The huge lack of transparency and the lack of international tenders however makes it difficult for outsiders to assess the fairness of many of these deals.

Finally, China has been engaged in the creation of a number of export processing zones. Five of these zones have been approved so far for Sub Saharan Africa: two in Nigeria and one in Ethiopia, Mauritius and Zambia. The Chinese government provides generous packages of financial and nonfinancial support to these zones and MOFCOM is issuing grants and loans for a total of 294 million dollar to the companies that were selected to invest in these zones. China's own development history explains why China is propagating this model for development. Chinese used the SEZ model to slowly integrate itself with the world economy and spread development throughout its provinces. In China at least, these zones were essential in allowing local manufacturing to move up the value chain. (Brautigam, Farole & Tang, 2010)

In general, China has rapidly expanded its contributions to African infrastructure development, providing African countries with 'quick' and 'easy' solutions in meeting their development needs. The special focus of their assistance is the economic and industrial sector. But in this process, China almost exclusively relies on projects approaches, which often try minimize the risks of African ineffective government by setting up parralel systems and employing mostly Chinese contracters.

3. Two models, each with its share of weaknesses and potentials

Since 2005, when infrastructure reappeared on the radar and donor countries redirected their finances to this sector, two very different development approaches have been created by two very different kind of donors. A western approach that has tried to improve infrastructure through the principles of the Paris Declaration by using modalities such as General Budget Support or (as a second best) a range of Sector based approaches in order to shape the enabling conditions under which infrastructure can flourish. On the other hand there has been China's rising influence, whose own development experience made it convinced of the overarching importance of infrastructure development for economic growth and strongly disagrees with the Western interference policy in the internal institutional affairs of recipient countries. It also convinced that its projects can be much more effective in kick starting Africa's development than the Western conditional Budget Support. By looking at the lessons that history can offer us, these two approaches will be evaluated on their strengths and weaknesses.

The Chinese project based approach: doomed to fail?

In the eyes of many Western development agencies, the Chinese project based approach that bypasses the recipient state level by directing the money immediately to the Chinese executing company does not stand a chance, at least not in the long run. A historical analysis of the Western development experiences quickly shows why Western development discourse is so apprehensive of a project based approach and explains why even after reestablishing the importance of infrastructure, donors remained loyal to aid modalities of the Paris Declaration.

When the concept of "development co-operation" was first used in the sixties, in the wake of independence of former colonies, capital shortage was diagnosed as the major hurdle for development. (Thorbecke, 2006; Wood, 1986) A lack of monetary, physical and human capital prevented the continent from breaking out of a cycle of poverty. On all three levels, a 'big push' would be necessary to kick start the engine of development (Rosenheim-Rodan, 1943). The newly established national and international donor agencies started working on a wide variety of infrastructure projects. By the end of the 1970s project aid was established across all sectors in the portfolios of most of the donors. (Lancaster, 1999) The World Bank rapidly expanded its lending for infrastructure in the 1960s and 1970s towards developing countries, with a specific focus on the road sector. (World Bank, 1994, p. 24) During the early days, it were mainly governments and state owned companies that invested, with ODA being a major source of finance. (Nissanke & Jerve, 2008a) Project aid was highly visible and technologically straightforward. (Mosley & Eeckhout, 2000) It was also easy to monitor since spending did not have to pass through the 'messy' government budget. In many ways, this approach is very similar to the discourse that China currently preaches in Africa. China again advocates a push for economic growth through industrialization and the construction of infrastructure. The infrastructure approach of the 1960s was also largely unconditional, at least in the present meaning of the word. Chambers (2005) argues that current practices such as the funding of government expenditures or even worse, calling the policy shots, would have been vilified as gross neo-colonialism in the sixties. Mold (2009) agrees that during its early initiatives, undertaken during the McNamera years, the Worldbank hardly ever demanded political or governance related conditions. The excess petrodollar liquidity that became available from the 1970s onwards was funneled towards large scale loans, much in the same way that China now has huge stocks of foreign reserves that it uses in funding its African projects. The spirit of the early Lomé agreements was also one of partnership in economic growth and self-development through the improvement of the infrastructure sector. (Ling, 2009) The Lomé agreements provided the framework for European investments in Third World ventures and it reinforced European access to natural resources and markets. (Whelan, 1981)

But the outbreak of the oil crisis, the worldwide economic recession and the austerity measures that came in its wake, caused resource prices to plummet and the loans issued to developing countries became unsustainable. By the 1980s, average growth rates were negative, moreover persistent conflicts and poor governance had a horrible impact on the economic and social conditions on the continent. These conditions, combined with the relative improvement of (average) living standards in Asia and Latin America, made donors realize that Africa's problems were far greater than just the limited availability of infrastructure. (McCormick, 2008) Implementation problems and lack of impact fueled frustrations that led to the bust of one diagnosis and the boom of another. Projects were criticized for their lack of ownership by recipient governments, their fragmentation and their inability to develop beyond the local level and solve problems at the sector level. High administrative burdens, inefficient spending that was dictated by donor priorities, unpredictability of the funding and undermining of the state's systems and accountability all were confounding factors to a lack of sustainability. (Lawson et al, 2002)

This realization sparked a new era in development cooperation. A new development diagnosis emerged that placed first <u>policy failures</u> and later <u>institutional failures</u> at the center of the problem. The Eighties became marked by the creation of policy-based aid that tried to bring economic and fiscal change to African developing countries through series of structural adjustment lending with conditionality becoming the distinguishing feature of post-cold war development policy. (Wissenbach, 2008) The Neoliberal doctrines that were popular at the time, also urged for a shift towards the private sector, which, they argued, was much better equipped to deal with these 'brick and mortar' problems than any inefficient state actor. As a result, the perceived role that donors had to play changed drastically. Donors only needed to make sure that an enabling environment would be created in which private actors could flourish. The stringent ex-ante conditions attached to the loans required African nations to open their markets, deregulate and privatize the state's public utilities to generate competition.

The previous parts it was already explained that this policy is now labeled a 'policy mistake' since it had a devastating effect on the overall African infrastructure stock. But whether or not the programme based approaches were successful, the sustainability issues of Western projects were clear and should provide reasons for caution. By using a non interventionist policy, the Chinese have no way to counteract the inherent problem of African state capacity. Africa's infrastructure gap is just as much an institutional gap as it is a physical gap. Aiding infrastructure means much more than creating 'bricks and mortar'. Just as important is the transfer of intangible assets: technology, management and knowledge should be used to enhance the sustainability of these projects. In order not to fall back into the project trap of the 1970s, the issue of institutional sustainability of infrastructure projects is crucial. Successful infrastructure assistance should be able to tick both boxes. On the one hand it should fill the financing gap, but on the other it should promote particular sector based or national policy that enhances sustainability through transfer of knowledge and management.

This does not mean that the Chinese development actors, such as the EXIM bank are not paying attention to the problem of project sustainability. Quite the contrary. In order to qualify for funding, a project's ability to generate profit and long term sustainability is analyzed by a stringent review process, even at preferential rates, in order to "nip risks in the bud." This process emphasizes on project compliancy and orientation of industrial adjustment. Other important assessment criteria are overcapacity, environment, energy and emissions. Exim Bank's lending policy is to structure a loan so that there is a revenue stream that will be able to support the debt repayment. The Bank also performs correlation risk analysis of entire industries and companies to discover the overall risks.

Furthermore it has strengthened its post-lending management and risk inspection. (EXIM, 2009) Although Davis (2008) argued that the state led nature of the bank would make it less bound to short-term profit making in than its Western counterparts, Corkin (2011) notices that the bank is getting increasingly cautions about its high risk projects in Angola. Brautigam (2011) also argues that the Chinese have a long-term sense of responsibility for the projects they have financed under their aid programme, due to the diplomatically sensitive nature. As a result, the quality of the projects that are financed under their official aid programme is very good as they seem to provide 'life-time' guarantees. This high quality standard is however less often upheld when it comes to Export Credits.

But no matter how good the projects are analyzed and supported at an individual level, the problems in the recipients state capacity remain. In her study on Angola's EXIM loans, Corkin (2011) argued that the main hurdles for Chinese projects are at the level of bureaucratic capacity of the recipient country and the poor understanding of the operating environment on the part of the Chinese companies. There are also fears that the massive government planned infrastructural spending will be misdirected if it is not balanced out by capacity-building and training programmes to improve Angola's ability to absorb investments of such magnitude. Due to the lack of local capacity and limitations of supply, construction materials and expertise have to be imported.

Conclusion: Although Chinese scrutiny over its committed projects is increasing both at the pre- and post-lending stages, the unwillingness to focus beyond the project level on the institutional capacities of the recipient state make Chinese projects highly vulnerable to the same kind of sustainability issues that Western projects have faced.

<u>The European Approach: Does Budget Support fit in the infrastructure sector?</u>

In the previous part already explained that that although Western donor documents, such as the Commission for Africa report, called for a major shift in the content of donor financing towards the infrastructure sector, they did however remain loyal to the modalities through which this intervention should happen. These were the modalities that were inspired by the Paris Declaration principles, such as General Budget Support, and when necessary, Sector Wide Approaches. Historically, these programme based approaches emerged as a reaction against the continuing failure of the Structural Adjustment Programmes to attract the expected private enterprises. The lacking quality of African institutions and governance became the new focal point as <u>institutional failures</u> became the development diagnosis of the nineties. (Nissanke & Jerve, 2008a) The Policy-based aid, although first in the form of Structural Adjustment programmes, gradually expanded as the limitations of ex-ante conditionality became clear. (Lancaster, 1999) The "New Aid Architecture" was developed to put more emphasis on the ownership of development policies and partnership with developing countries. These approaches should give developing countries the necessary 'policy space' to construct their own development agenda. The different modalities of the Sector Wide approaches and eventually even General Budget Support became Europe's preferential aid modalities and have remained so until the present day. This does not mean that in practice other modalities have disappeared, but that in their policy rhetoric, they have clearly favored this approach over all the other.

But the European approach of delivering infrastructure assistance trough the principles of the Paris declaration is also not entirely without problems either. The modalities of the “New Aid Approach” were first and foremost oriented towards solving the institutional deficits of a country and not its infrastructure deficit. These two are very much interrelated, but this distinction still remains valid nevertheless. The policy-based approach to development finance was never meant to be anti-infrastructure development as such. Because of the low success rate of infrastructure projects, it was indeed a logical step to try to solve the economic and institutional problems first at the level of the state, by creating sector wide approaches and good governance procedures, which on their turn could create the enabling environment for sustainable infrastructure development. The reality however has not been that positive. Few of these policy-based approaches were able to translate their theoretical reasoning into actual ‘brick and mortar’ performance on the ground, which left African infrastructure development paralyzed for almost two decades. In a large OECD study on implementation of the Paris Declaration in the infrastructure sector, several partner countries linked their weak capacities to what they saw as a general under-funding of the sector, despite the fact that it has been accorded prominent attention in second generation growth-oriented PRSPs and national strategies. (OECD, 2009)

This is because the infrastructure sector has some unique characteristics, which become even more pronounced when one has to deal with larger infrastructure projects. These characteristics makes it hard to align them with the principles of the Paris Declaration. Large scale infrastructure demands much more from a partner county’s capacity, such as procurement, public finance management, social and environmental saveguards, … than are required in other sectors. They are also highly visible and expensive. (OECD, 2009) A research done by Garnett, Nayyar-Stone and Polen (2009) analyzed to what extend the principles of the New Aid Approach were also suitable for large scale infrastructure projects. The focus of their case study was fairly limited, mainly oriented towards Bangladesh and Ghana, but their conclusions do show how difficult it is to bring these kinds of projects in line with the Paris Declaration’s recommendations.

On the issue of <u>ownership</u>, large infrastructure projects led to more active donor involvement due to their complexity and high upfront expenditures. These projects also offered fairly little opportunities for the local community to be involved in the construction and only moderate opportunities to be involved in the maintenance. Even though these projects were based upon strategies and plans that were prepared by the government, but the firm hand of donors and consultancy was never far away.

In terms of <u>alignment,</u> local procurement mechanisms were not often used, while the technical difficulty and lengthy process did lead to a closer donor supervision and a higher use of International Competitive Bidding with donor review. The high environmental costs and social risks also increased the donor review. Furthermore the demand for audit capacity and incentive systems increased. Donors still tend to use their own procurement systems, due to the limited reliability of these procurement systems in many recipient countries.

Having large scale infrastructure projects does make it easier to <u>harmonize</u> between a number of key donors, but sometimes this comes at the expense of ownership for the recipient government.

Harmonization can cause rigidity that reduces the recipient governments ability to respond to changing conditions. Yet large scale projects are very vulnerable to the donors' 'fly the flag' syndrome. Country systems are often also considered too weak to deal with large infrastructure projects and a traditional project approach tends to be preferred. Often there is a SWAP in place, but donors prefer not to pool their funding together when it comes to infrastructure.

Another crucial element of the Paris Declaration is <u>managing for results</u>. Large scale infrastructure projects have of course much longer planning periods and their high maintenance needs requires a comprehensive M&E system. Yet their complexity makes it harder for community involvement in both the management and the maintenance. Their size also offers opportunities for corruption, mainly at the top, due to the limited capacity of national audit systems. NGOs and communities also are much less able to participate in the management process.

The final pillar of the Paris Declaration is <u>mutual accountability</u>. The size and complexity of large scale projects will require greater donor-government coordination and agreement on a donor support and recipient implementation, since large scale infrastructure projects offer fewer opportunities for local communities to be involved and NGOs don't have the capacity to provide support for such projects. Furthermore, as with any project, it is difficult to collect data on the actual outcomes and impacts beyond the local level.

Although the Garnett, Nayyar-Stone and Polen (2009) case review is only limited in size, it does offer some interesting insights in the difficulty of the Paris Declaration to deal with large infrastructure projects. Due to the size and importance of such projects, donors do not wish to hand over too much ownership and due to capacity constraints, there are very few actors that can provide monitoring. These limitations are specific to large scale infrastructure however. Small scale infrastructure projects on the other hand (schools, village sanitation programmes, …) are much easier to bring in line with the Paris Declaration principles. Because these kinds of projects use much simpler technology and allow for local level monitoring, they often do tick all the boxes. But small projects alone will not be adequate for Africa to overcome this infrastructure deficit. One of the reasons why India is currently still lagging behind China when it comes to infrastructure development, is the Indian insistence on a very large number of small projects over its vast territory, while the Chinese initially chose to concentrate their infrastructure efforts on large scale, high quality investments in a small number of Special Economic Zones. While the first had no chance to become sustainable, the second were able to finance the infrastructure through the economic growth by attracting foreign capital. (Kim & Nangia, 2008)

Nisanke and Jerves agree with this analysis:

> "The renewed emphasis in infrastructure represents a move towards project aid. Whereas the provision of basic social services lend itself to broad sector programmemes supported through budget aid and donor basket funding arrangements, this is more difficult with large and expensive infrastructure projects. They will inevitably be planned and funded on a

> project by project basis. For instance, donors have their strict planning and procurement rules which they are not willing to revoke." (Nisanke & Jerves, 2008)

Interest groups such as the European Business Council for Africa and the Mediterranean (EBCAM) or European International Contractors (EIC) have recently become more outspoken in their critic of the EU's approach of channeling budget support towards the economic infrastructure sector. In their reactions against the EU's green paper on Budget Support, they called for a shift away from budget support towards more project based approaches that focus on infrastructure sector development. In their opinion, they believed that with rigorous appraisal and strict conditions, such projects have the potential to contribute more to economic development in the long run than budget support.

> "EIC takes the view that, insofar as the economic infrastructure sector is concerned, the "classic project approach" is preferable over budgetary support." (EIC, 2010).

Conclusion: When focusing on large scale infrastructure projects, the principles of the Paris Declaration become increasingly difficult to execute due to lacking local capacity and the highly specialized nature of the tasks. A project based approach seems more realistic.

4. Projects aren't bad as such… they just need the right context to function

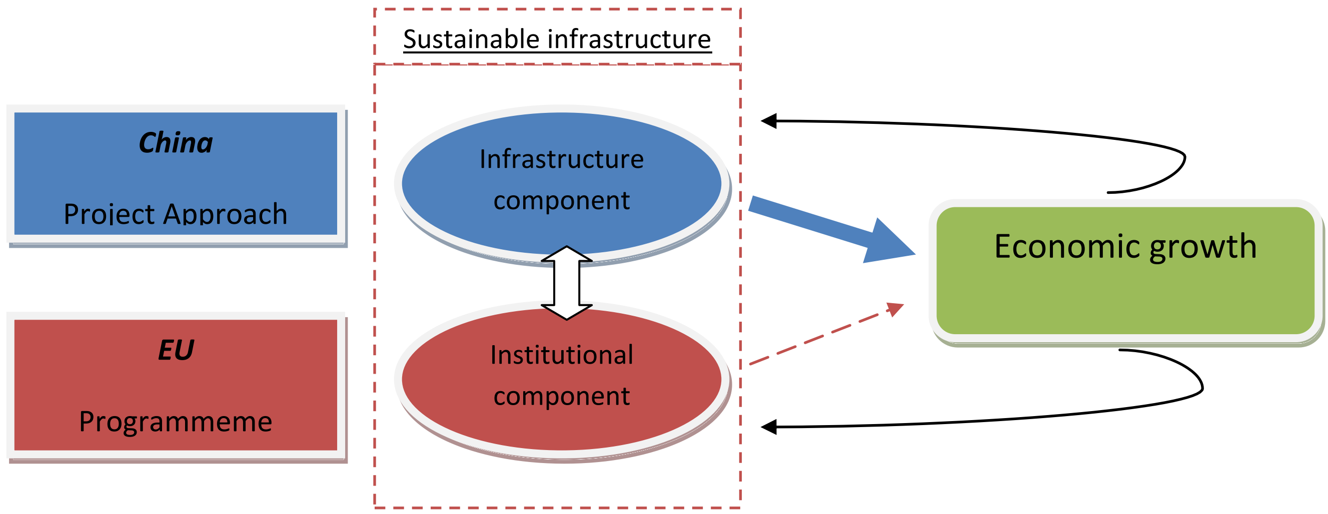
So where does that leave us? On the one hand, there are the sustainability issues of projects that led donors towards programme aid, on the other, there is the emerging realization that the implementation of large scale infrastructure needs some sort of project based approach. Are we then stuck in a catch-22 situation? Part of the answer lies in acknowledging that projects aren't bad as such, but what they need is the right context to function. It is not the modality that determines effectiveness, it's the enabling environment which pre-determines the sustainability of any intervention through whichever modality.

In order for a project to contribute to a country led development strategy, they must primarily be respectful of overall recipient government ownership and meet genuine local needs. But different levels of ownership can be distinguished, namely ownership at the project level and ownership at the sector and national level. The execution of a project by a donor organization might undermine ownership at the project level, but this does not automatically mean that ownership will also be undermined at the sector or national level. Quite the opposite could in fact be the case. When a good administrative and institutional environment is in place, these projects can be real drivers for the development processes in a country, since they offer much more stability than budget support mechanisms. Projects could offer other benefits too, such as the transfer of technologies, know-how and ideas. But just as with the projects themselves, this has to be demand and not supply driven, as was often the case in previous technological cooperation. Finally, projects can act as pilot ventures, where the risks for private investment is just too big. The well known problems of project assistance, such as fragmentation, weak impact at the sector level or donor-driven motivations are not linked to the modality of projects as such, but were the telltale signs of weak African institutional capacity. (Yamata, 2002)

Asia's project aid experience provides examples of these positive project dynamics. While donors abandoned their infrastructure development projects in Africa in the middle of the nineties, they did not do so in Asia. This is clearly visible in the distribution of infrastructure as part of the total package of ODA. While infrastructure had fallen to only 30% in Sub Saharan Africa by 2005, it remained above 60% in East Asia and the trend has been upward since the 1970s. One of the reasons for this difference is the fact that Japan has been the dominant donor in East Asia for the last two decades and that country has never relinquished its priority for infrastructure projects, even when Western donors and the World Bank had moved towards different aid paradigms. But in general, the diagnosis of project failure was much more an African diagnosis since projects in East Asia were facing much less challenges. As a result, project aid lived on just as before.

In order to develop a framework for successful infrastructure assistance, it is crucial to understand why one path was successful while the other failed. One famous and successful Asian project, which has been the subject of much research has been the Brantas River Basin Development Project in Indonesia. In his analysis on that project, Fujimoto (2008) discovered that this one project was able to develop its own chain of institutions. These institutions directly enabled the project to perform more efficiently and sustainably, but they also allowed for indirect improvements, by increasing social and economic spillovers. But more importantly, these institutions also began to integrate themselves with those of other projects until whole networks were created that were able to create changes at the sector level. African projects however failed at this crucial level. Even though they sometimes operate successfully at the project level, they are not able to create the networks with other projects that would have allowed them to promote a sector-wide change. Two factors are necessary to create such networks. Firstly, there is a need for long term commitment on the side of the donor, which is necessary because creating institutions takes time. More importantly however, is the fact that these institutions were allowed to grow, without too much interference, along endogenous development paths that made use of both formal and informal channels of power. This made sure that the institutions became embedded in the traditional socio-economic reality. (Nissanke & Jerve, 2008)

For African infrastructure projects to become sustainable, a similar situation has to emerge. The Asian examples confirm once more that sustainable infrastructure construction is just as much about the institutional component as it is about the infrastructure component. Unfortunately, there are no magical solutions to recreate these situations. The most realistic approach will be to start from what is given. Currently we have two types of donors; one that focuses on the institutional development through modalities such as budget support, another which focuses on the actual 'brick and mortar' construction through projects. Consequently we have two actors that each specialize on one aspect of this sustainable infrastructure delivery relationship. As a result, the tightening of this trilateral relationship will be crucial in providing sustainable outcomes. Both parties must acknowledge that their approaches are in fact two different sides of the same coin and not competing development discourses. To some extent, this virtuous cycle of labor division probably is already having its effects, even without proper coordination. When the Chinese engage with African governments today, these governments will be able to use their enhanced capacity and sector programmes to drive for a better bargain in the project negotiation process. What is necessary however, is a cooperative framework through which both interventions can happen in more coordinated ways. The following schematic would be a possible course of action:



In the cooperative framework as presented above, the Chinese would continue their present funding through a project based approach. This is where their comparative advantage lies and the only modality that fits within the context of their non-interference, win-win cooperation approach. Of fundamental importance however remains that these projects remain recipient driven. But as the amount of projects they are executing increases, they will be faced more often with the neo-patrimonial nature of Africa's political system so the tensions involved in project aid with Africa will become ever more apparent (Cammack, 2006). They must therefore acknowledge that the 'effective governance' capacity of African states is of fundamental importance to their project success. Therefore, strengthening cooperation with the EU and other domestic actors in the recipient country can offer clear benefits. They can do that by gradually increasing the input of different stakeholders and strengthen the 'local content' in the infrastructure construction and maintenance, by acting in a more transparent way and increasing domestic input in the planning, monitoring and evaluation processes. Training and capacity development must run parallel with the expansion of the infrastructure projects. China can also integrate itself more closely with existing planning agencies such as the NEPAD/AU, the ICA or the EU-Africa Infrastructure partnership. (Wissenbach, 2008) The size and allocation of its financing and operational modalities should also be influenced by the absorptive capacity of the recipient country. (Christensen, 2010)

The European actors on the other hand must end the sequential focus they have on infrastructure development, in which first the necessary institutions must be in place before the actual infrastructure can be delivered. The EU donors must also realize that projects are no 'evil' modalities as such, as long as other modalities are strengthening the institutional sector in a parallel fashion. Institutional development cannot happen in a bubble and needs to interact with its infrastructure component. But at the same time they must define the specific objective of their aid modality more precisely. Although infrastructure and institutions might be inseparable twins, this does not mean that your aid modality can target both equally at the same time. While improvements in the institutional component can best be achieved through budget support modalities, actual improvements in infrastructure can better be realized through project based modalities, certainly when they involve large scale infrastructure projects.

At the level of the cooperative framework, Europe should focus its efforts on its comparative advantage, which is the institutional component. Strengthening this institutional component however cannot happen by using a conditionality based approach or the treat of suspension to leverage reform, something that Budget Support is often used for. (Cepinskas, Jacobs & Molenaers, 2010) The Asian project success stories show the importance of allowing institutions to grow along endogenous development paths, that make use of both formal and informal channels of power, so institutions can become embedded in the traditional socio-economic reality. When the Paris Declaration calls for ownership of development efforts, it does not mean that donors have to build the administrative and political systems of fragile states, but monitor and (financially) assist recipients as they climb to the "next" platform of development. This is something very different as achieving international best practices. (ODI, 2008) This makes it however impossible to provide blueprints that the EU actors can use to strengthen this institutional component. Most important is probably an in depth understanding of the country's governance system. This would allow donors to stimulate and nurture the endogenous processes of development and local institutional capacity. What might seem like a dangerous corruption issue for some donors, could be what Khan (2002) described as growth-enhancing rent seeking, types of rent seeking that have the potential to strengthen pockets of growth. The better donors understand the local environment, the more able they will be to separate such growth enhancing rents from growth reducing rents themselves. For this to happen, a long-term flexible partnership will be required. Comprehensive monitoring and evaluation, both at project level and at the national level, without interventions, would give governments the information they need to improve their decision making strategies. Distilling lessons from Asia's success stories and from Africa's past and present might also help in generating political formulas for developmental state-building. There have been leadership styles and approaches that have worked better than others and this often happened not through the application of Western management principles, but by working with the grain of local societies and institutions. (ODI, 2008) Grindle's (2007) "good enough governance" approach might also provide ways forward. It remains however an extremely difficult and hybrid process. This should however not deter donors from trying because without the improvements of the institutional components, sector and national level ownership cannot be achieved and the history of project failure would repeat itself. If they succeed however, ownership at the sector and national level will make sure that infrastructure projects are guided towards national development strategies and can contribute to economic growth. Economic growth will consequently increase the institutional capacity, while private investment will increase the infrastructure stocks. This way a virtuous circle of growth could be created, which could break Africa's poverty trap.

Conclusion

Around 2005, both Western and Chinese investments in African infrastructure development increased dramatically under the influence of shifting geopolitical power relations and changing development discourses. Although both actors shared the believe that infrastructure could make fundamental contributions to Africa's lagging economic performance, they did however employ different strategies to realize these objectives. While Western donors mainly focused on the principles of the Paris Declaration for delivering their infrastructure financing, preferably through Budget Support mechanisms, the Chinese employed a project by project approach, where they used infrastructure investments as a collateral for their resource acquisitions.

This study concluded however that both approaches have their inherent weaknesses. Although the Chinese have been stepping up the scrutiny of their project commitments, both at the pre and post lending stages, their non-interference principle constrains them from focusing beyond the project level towards the ineffective state sectors. This makes their projects vulnerable to the same kind of sustainability issues that Western projects had to deal with in the past. But also the Western budget support approaches have their share of problems. Budget support was originally designed as a modality that would enhance the institutional capacity of a state, not to improve effective infrastructure delivery. When donors want to execute large scale infrastructure projects, the principles of the Paris declaration will become increasingly difficult to uphold, since lacking local capacity and the highly specialized tasks that are required for infrastructure delivery call for a project based approach.

The failure of projects is however not a problem that is inherently linked to the development modality itself. Sustainable infrastructure development has two components that have to be fulfilled at the same time. On the one hand, there is obviously the actual infrastructure component. But equally important has been the institutional component. It was this second component that was failing in African projects. Asian projects however did not encounter similar problems. In Asia, project aid preformed a crucial role in building both the institutional capacity and the infrastructure facilities that have driven Asia's growth. Projects also allowed countries to acquire more technology and they were used to enable the take-off of private investments in risky sectors. The key difference between African and Asian projects, was that the latter was able to create networks of endogenous institutions, which enhanced efficiency and sustainability of the project and created both economic and social spillovers.

This dual track approach will have to be followed to create improvements in Africa's infrastructure sector. Since the two dimensions of successful infrastructure performance overlap with the key comparative advantages of Western and Chinese assistance, a coordinated framework could to be developed, which would allow both actors to use their preferred modalities while at the same time overcoming the inherent weaknesses of both of their approaches. For the Chinese this means that they can continue their relatively easy task of completing different projects as long as these projects remain recipient driven and they gradual utilize more local inputs in the construction and maintenance processes. The EU on the other hand faces the much more difficult task of finding ways to support the process of institutional transformation. There are no blueprint solutions available for helping countries develop their institutional sector. Donors will have to refrain from using conditionality based approaches and allow for true recipient ownership of this process, while supporting successful endogenous institutional developments. Donors will require in depth understandings of the recipient country's political systems and learn from previous Asian successes and African failures. They must monitor and evaluate progress, without actual interference, so governments can make informed decisions. Clearly, institutional development is a difficult process, but the difficult nature of the approach should not deter donors from trying because without proper institutional development, most endeavors in the infrastructure sector will be doomed to fail.

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