

A decorative graphic consisting of a grid of dots in various shades of gray and red, arranged in a pattern that suggests a world map or data visualization.

Infrastructure Investments:

A Broad-based Policy Tool for Equitable and Sustainable Growth

SANJAY PETERS AND PATRICK PINTUS

January 2018

- Recent research has shown that rising and persistent inequality (both urban/rural inequality and urban income gaps) can lead to social and political instability and act as an impediment to long-term sustainable growth.
- Leading scholars and practitioners now recommend increased spending on infrastructure to stimulate balanced growth and reduce income gaps, especially between the top and bottom deciles; this should occur not only during downturns but also when economies are growing.
- A lack of transparency, coordination, and information about global investment opportunities in infrastructure, as well as other legal, governance, and monitoring challenges, discourage adequate investment in infrastructure.
- A nonpartisan, transparent, and independent global infrastructure investment platform, intended to promote development by bringing together all the relevant parties, could offer a way forward to increase stability, which would be attractive to long-term investors and promote equitable and sustainable growth.



Contents

1. Infrastructure and the fight against rising inequality	2
2. Changing theories and recent evidence	2
3. Economic vs. social infrastructure	3
4. A global infrastructure investment platform	4
5. Addressing inequalities	5
6. Conclusion	6

1. Infrastructure and the fight against rising inequality

Can sustainable investments in infrastructure serve as effective policy instruments to reduce inequality, facilitate growth, and promote development? The nature of infrastructure demands and policy hurdles in mature markets differs considerably from that in industrially less advanced economies. However, similar challenges are faced by all economies at various stages of development. Common challenges include: the selection of infrastructure projects to achieve more equitable growth; the procurement of financing and the allocation of funding; the institution of transparent and accountable governance; effective monitoring; and accurate measurement of social and environmental impacts.

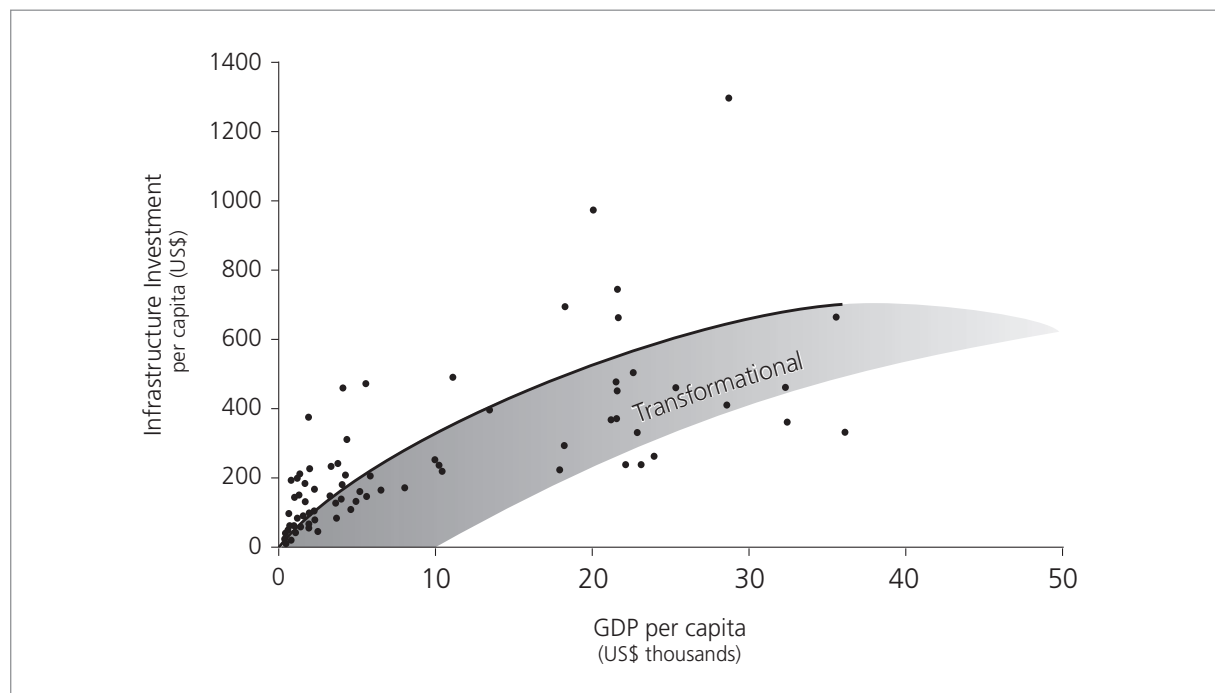
One of the ways for low-income developing economies to break away from the current, ineffective path of infrastructure investments—which have traditionally been carried out by the public sector, but are increasingly being undertaken by governments in partnership with private investors—is to take advantage of the role that regional development banks can play in identifying infrastructure projects that are in urgent need of financing, so that

they can assist with project preparation and strengthen the accountability of blended finance and public private partnerships (PPPs) by providing collateral for investments. This approach stresses the utility of bringing all the relevant actors, including host nations, institutional investors, ratings agencies, environmental specialists, trade unions, sovereign wealth funds, insurance companies, and pension funds, together into one platform. The creation of an independent global infrastructure investment platform (GIIP) to improve governance and transparency at all levels of project planning, execution and maintenance is the logical next step.

2. Changing theories and recent evidence

Recent research has shown that rising and persistent inequality (both urban/rural inequality and urban income gaps) can lead to social and political instability and act as an impediment to long-term sustainable growth (Berg, Loungani, and Ostry 2017; Milanovic 2016). This position debunks prior theories of inequality and growth that view inequality at earlier stages of economic development as a normal and necessary condition for growth (Kuznets

Figure 1. Economic transformation through infrastructure investment



Source: World Bank 2015, p. 6

1955; Kaldor 1960). Especially considering the current global context, leading scholars and practitioners now recommend increasing public spending on infrastructure to stimulate balanced growth and reduce income gaps, especially between the top and bottom deciles (Kanbur and Stiglitz 2015).

The World Bank's Infrastructure Strategy Update for 2012-15 (World Bank 2015) argues that "a ten percent increase in infrastructure development contributes to one percent growth in the long-term" (Figure 1). Evidence from this study singles out infrastructure investments as a main driver behind the notable increase (approximately 50 per cent) in economic growth in Sub-Saharan Africa over the past decade. It also attributes an almost six per cent rise in real income growth in China in 2007 to infrastructure spending amounting to 600 billion US dollars between 1990 and 2005 to upgrade roads and build expressway networks linking China's largest cities. Other recent evidence, looking decade by decade from 1950 to 2010 in the United States, shows that growth in spending on highways and higher education in any given decade translated into lower Gini coefficients by the end of the decade (Hooper, Peters, Pintus 2017a, b).

However, it is not a given that increasing infrastructure investment will automatically reduce income inequality. For example, the Golden Quadrilateral Network, India's largest infrastructure project, which was constructed to connect the four regions of the country with a modern highway system, has had little or no impact on reducing inequality because the main beneficiaries of this transportation network are large firms using it to address supply chain and logistical challenges. The other beneficiaries of this project have been private individuals at the top decile of per capita income. The bottom decile—largely in rural India, where the majority live and work in the agricultural sector—has not benefited from this investment.

A counterexample, provided by Peru's experience, shows that infrastructure investment prompted by the federal government's decentralization program was the main cause for a notable rise in income growth in rural areas in the 1990s (Webb 2013). This policy reform enabled local governments to approve the construction of rudimentary roads from the federally allocated budget, which in turn facilitated poor farmers' efforts to get goods to market more efficiently. The main lesson to be learned from Peru's experience is that public spending

reforms earmarked for infrastructure investment should be prioritized as a policy tool for narrowing income gaps. This is so because reducing inequality increases the human capital stock, and a more highly skilled labor pool increases productivity growth and facilitates long-term sustainable growth.

3. Economic vs. social infrastructure

The distinction between economic infrastructure, the capital inputs that enable an economy to operate more efficiently (e.g., roads, railways, ports, water, power, telecommunications), and social infrastructure, the capital allocated to cover social services (e.g., schools, universities, hospitals, etc.) is not always obvious, as there are economic and social components present in both spheres (Inderst and Stewart 2014). However, the major difference from a policy-making perspective is that social infrastructure expenditures often take much longer to produce returns on investment (approximately 24 years) than outcomes from public spending on economic infrastructure (on average, 15 years).

Social infrastructure investments in developing countries tend to be debt-financed because of the longer time horizon, thus placing a debt burden on the state. Recent infrastructure projects financed by the Asian Infrastructure Investment Bank (AIIB), the BRICS New Development Bank, and the China Development Bank are becoming more prominent, but while many developing countries are eager to be part of such promising economic growth initiatives, concerns remain about debt sustainability. Such concerns will continue to arise with the adoption of more debt-funded infrastructure projects led by China and other countries with large sovereign wealth funds (SWFs), particularly those in low- and middle-income economies.

Social infrastructure projects, apart from generating more debt-based financing, also result in a larger share of current expenditures, as well as higher maintenance and operational costs, than economic infrastructure investments. Therefore, it is not surprising that conflicts of interest emerge between the short-term interests of politicians eager to be re-elected by focusing on economic infrastructure, and the interests of the general population, who may value social infrastructure invest-

ments (mainly education and health) over five-lane toll roads or new airports (Aidt and Dutta 2007; Bonfiglioli and Gancia 2013). The areas of infrastructure investment most pertinent to developing countries are transportation networks, energy, and education: these are where the inequality gaps are most pronounced and are in most acute need of funding. Apart from PPPs and public spending (which in advanced economies is usually derived largely from taxpayers), other options are also needed for developing countries to finance infrastructure expenditures.

4. A global infrastructure investment platform

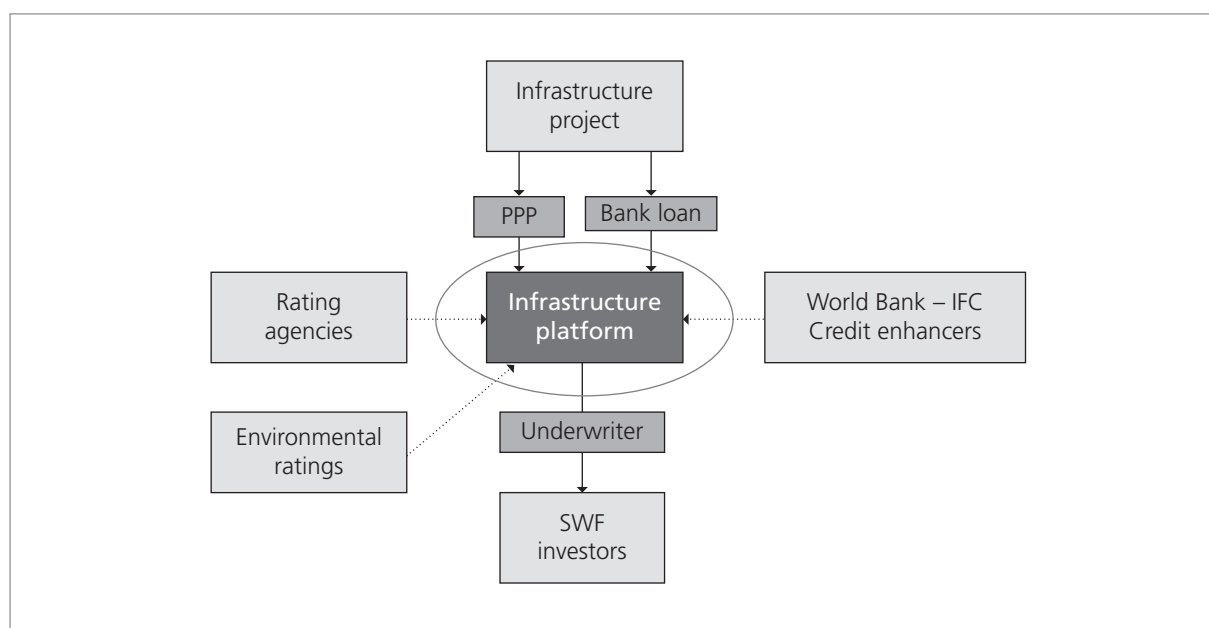
One key factor holding back investors is the perception of high risk associated with investing in infrastructure in the least-developed countries, where demand is formidable but where political risks and the instability of financial and legal institutions are greater than in middle-income and industrially advanced economies. There is a notable lack of transparency, coordination, and information about global investment opportunities in infrastructure, as well as legal, governance, and monitoring challenges. These obstacles are a main reason why private investors are often disinclined to undertake such investments. All

investors—sovereign wealth funds as well as pension funds, insurance companies, and development banks—face major challenges in assessing and mitigating risks associated with long-term investments in infrastructure. A global infrastructure investment platform (GIIP) could offer new ways of addressing these various challenges through a more open and independent investment process (Figure 2).

Unlike existing infrastructure platforms that are spearheaded by one country (such as China with the AIIB), or by regional and multilateral development banks in Europe and the US (EIB, EBRD, and WB) respectively, a GIIP would function as a nonpartisan, independent, special-purpose entity intended to promote development by bringing together all of the relevant parties involved in long-term infrastructure investments in a transparent manner.

Those parties include sovereigns, ratings agencies, environmental agencies, legal firms, sovereign wealth funds, pension funds, insurance companies, international financial institutions, and regional development banks. Safeguards could be enforced through a governing board composed of experts or qualified professionals in different domains, such as in assessing the environment and

Figure 2. Schematic of global infrastructure investment platform



IFC, International Finance Corporation; PPP, Public-Private Partnerships; SWF, Sovereign Wealth Fund
Source: Authors

social impacts of infrastructure projects. However, none would have the power, as with the Global Infrastructure Facility of the World Bank, to individually determine the operation and governance of the platform. A GIIP would identify all of the agencies involved in a given infrastructure project and follow the development of the project at each stage of the concession period (normally anywhere from ten to 30 years). The most important function of the GIIP would therefore be to mitigate investment risks and to perform the necessary tasks required to convert a potential project into an investable asset.

The envisioned GIIP would be a source for the origination of projects (i.e., identifying good projects designed by outside entities, in addition to host country governments). Its role would be to bring projects and host countries together with long-term investors to design a framework for risk allocation that lowers the overall cost of finance so that it is consistent with the risks a host country is willing to bear. Financial and reputational risks could be managed by arranging operational oversight by the GIIP, even if it did not operate the project directly. The process would go as follows:

- Sovereign wealth funds and pension funds would bring together a pool of savings.
- Governments would propose projects to match these savings, based on their investment plans and development strategies.
- Risk mitigation and allocation would be done not just in the usual ways, through structured finance and securitization, but through the use of guarantee funds (like MIGA) and additional guarantees from multilateral development banks and private foundations.

The creation of an independent infrastructure platform would allow developing countries in particular to attract global investors to large projects for tender, to measure risk, to strengthen governance of PPPs, to monitor projects, and to allow the evaluation of infrastructure projects by ratings agencies, environmental specialists, and institutional investors/sovereign wealth funds at every phase of a project (design, construction, and operation). The platform could also be integrated into an Internet- and intranet-based management system to facilitate greater transparency and to improve coordina-

tion and information transmission between federal and sub-national governments.

Finally, an independent and transparent governance structure would increase stability, which would be attractive to long-term investors, as it would provide them with a heightened sense of legal security when undertaking investments with payback periods between ten and 30 years. The board of such a platform should consist of senior members from the central governments of host countries, from the investment community (SWFs and pension funds), and from the World Bank and other official multilateral institutions. Clear guidelines governing conflicts of interest and environmental, social, and labor safeguards would be formulated so that they are consistent with World Bank standards.

5. Addressing inequalities

The form in which inequality manifests itself is vastly different across the spectrum from high-income, advanced economies to low-income, developing economies. The rural/urban income gap, for example, is more pronounced in less developed countries because agriculture is more labor-intensive than urban industries, and a large segment of lower-income populations (e.g., 60 per cent in India) still earn their livelihoods in agriculture. In developed countries, the large size of farms enables them to be mechanized, and the sector itself is heavily subsidized precisely to ensure that the rural-income gap is kept to a minimum (e.g., the Common Agricultural Policy of the EU).

Another important distinction between more and less developed countries is that for those with mature markets the largest costs are associated with maintenance and modernization of existing infrastructure (brownfield investments), whereas for less developed countries the lion's share of infrastructure investments is needed for initiating new projects (greenfield investments). This distinction is exemplified in Africa, where only 20 per cent of the continent has electrification. The privileged upper decile of the population in African countries may have many of the amenities of their counterparts in advanced economies, but the vast majority of the population has been left out of the development that has accrued from the notable rise in economic growth in the region over the past decade.

6. Conclusion

This short policy-oriented paper has drawn attention to recent research showing that rising and persistent inequality (both urban/rural inequality and urban income gaps) can lead to social and political instability and act as an impediment to long-term sustainable growth. It has underscored that increased spending on infrastructure can stimulate balanced growth and reduce income gaps, not only during downturns but also when economies are growing. The paper has underscored the distinction between economic and social infrastructure, particularly with regard to the debt-based financing, larger share of current expenditures, and higher maintenance and operational costs associated with social infrastructure investments, which have to be taken into account. Finally, it has proposed to improve governance of infrastructure investments through the creation of a nonpartisan, transparent, and independent global infrastructure investment platform, which could promote development by bringing together all the relevant parties, and thereby promote more equitable and sustainable growth. Financing and managing the social and environmental impacts and the mechanisms to reduce inequality and to foment long-term stable growth through infrastructure development should now be the biggest priority for both developed and developing economies.



References

- Aidt T., and J. Dutta** (2007): Political Myopia and Economic Growth, in *European Journal of Political Economy* 23: 734–753.
- Berg, A., P. Loungani, and J. Ostry** (2017): *Inequality: Causes, Consequences, and Cures*. New York: Columbia University Press, forthcoming.
- Bonfiglioli A., and G. Gancia** (2013): Uncertainty, Electoral Incentives and Political Myopia, in *Economic Journal* 123: 373–400.
- Hooper, E., S. Peters, and P. Pintus** (2017a): *To What Extent Can Long-Term Investments in Infrastructure Reduce Inequality?* Banque de France Working Paper 624.
- Hooper, E., S. Peters, and P. Pintus** (2017b): *The Causal Effect of Infrastructure Investments on Income Inequality: evidence from US states*. Working Paper, forthcoming.
- Inderst, G., and F. Stewart** (2014): *Institutional Investment in Infrastructure in Emerging Markets and Developing Economies*. PPIAF Working paper, March 2014. Washington, D.C.: World Bank Group.
- Kaldor, N.** (1960): *Essays on Value and Distribution*. Glencoe: Free Press.
- Kanbur, R. and J. Stiglitz** (2015): *Wealth and Income Distribution: New Theories Needed for a New Era*. VOX, CEPR's Policy Portal, 18 August.
- Krugman, P.** (2017): Why Can't We Get Cities Right? Opinion Column, in *New York Times* (9.4.2017).
- Kuznets, S.** (1955): Economic Growth and Income Inequality, in *American Economic Review*, 45: 1–28.
- Milanovic, B.** (2016): *Global Inequality, A New Approach for the Age of Globalization*. Harvard University Press.
- Webb, R.** (2013): *Conexión y Despegue Rural*. Instituto del Perú.
- World Bank** (2015): *Transformation Through Infrastructure, Infrastructure Strategy Update. FY 2012-2015*. Washington, D.C.: World Bank Group.



About the Authors:

Sanjay Peters is Adjunct Associate Professor of International and Public Affairs, School of International and Public Affairs, Columbia University.

Patrick Pintus is Senior Research Economist at Banque de France.

Imprint

Friedrich-Ebert-Stiftung | Global Policy and Development
Hiroshimastr. 28 | 10785 Berlin | Germany

Friedrich-Ebert-Stiftung | New York Office
747 Third Avenue, 22B | New York, NY 10017 | USA

Responsible:
Bettina Luise Rürup, Executive Director, FES New York

Phone +1-212-687-0208 | fax +1-212-687-0261
www.fes-globalization.org/new_york/index.htm

To order publications:
linklaar@fesny.org

Commercial use of all media published by the Friedrich-Ebert-Stiftung (FES) is not permitted without the written consent of the FES.

The Friedrich-Ebert-Stiftung office in New York serves as a liaison between the United Nations, FES field offices and partners in developing countries to strengthen the voice of the Global South. It contributes to UN debates on economic and social development, and on peace and security issues. Towards this end, FES New York annually organizes some 30 seminars, conferences and roundtables and regularly publishes briefing papers and fact sheets. In addition, it contributes to a dialogue on the work of the World Bank and the International Monetary Fund in Washington, DC.

The New York office is located in close proximity to the United Nations headquarters. The office has four permanent staff members and provides internships for students specializing in international affairs, development and economic policy.

The views expressed in this publication are not necessarily those of the Friedrich-Ebert-Stiftung.

This publication is printed on paper from sustainable forestry.

