

Changes in Development Finance in Asia: Trends, Challenges, and Policy Implications

Toshiro NISHIZAWA†

Japan Bank for International Cooperation

There have been shifts in the composition and nature of development finance in Asia, such as the mainstreaming of private sources of finance and the emergence of domestic resources potentially available for development purposes. In parallel, new trends and challenges are identified in such areas as the transformation of development aid, public–private partnerships, and green finance. A common challenge is how to strengthen financial intermediaries for longer term sustainable financing from domestic and external sources for investment serving development purposes. To address this, policymakers should bear in mind policy coherence and consistency from macro, sector, and micro perspectives. For various financial resources to bring about tangible benefits, policymakers should take account of complementarities and synergies among the full range of available financial resources. The effective utilization of private sources of finance depends on commercial viability. The key to success is incentive design and risk mitigation measures.

Key words: aid, Asia, CDM, development finance, infrastructure, public–private partnership

JEL codes: F23, F35, O16, O19, O53

1. Introduction

In this paper, the scope of “development finance” is defined as financing from domestic and external sources, both public and private, for investment serving development purposes in developing countries.

A typical example of investment for development purposes is investment in hard infrastructure with various risks that are difficult for the private sector to bear alone. Another example is investment in soft infrastructure, such as technology transfer and institutional capacity building, which may not be successfully brought about without public sector involvement. Investment in greening the economy, if not feasible on a purely commercial basis, can be counted as another example of investment for development purposes, equipped with a dual nature of hard and soft infrastructure. In other words, investment in developing countries with a public goods nature is defined in this paper as being investment for development purposes.

Despite this inherently broad scope, however, the focus in this paper is on financing from external sources, while the interconnections between financing from external and

The views expressed in this paper are the personal views of the author, and should not be taken as the views of the organization that the author is affiliated with.

†Correspondence: Toshiro Nishizawa, Country Credit Department, Japan Bank for International Cooperation, 4-1, Ohtemachi 1-chome, Chiyoda-ku, Tokyo 100-8144, Japan. Email: t-nishizawa@jbic.go.jp

domestic sources are also discussed. This approach is based on the presumption that as an economy moves forward in its stage of development, the domestic financial system plays the dominant role in terms of volume and coverage to meet development objectives. I share the mainstream view that the relative importance of domestic and external sources in development finance depends on a country's development stage, the availability of domestic savings, and institutional capacities, among others.

With this scope in place, the aim of this paper is threefold: to review changes in development finance in Asia¹ during the past decade, to identify the trends and challenges, and to draw some policy implications. There are three key questions that are addressed here. First, how have the sources and nature of development finance in Asia changed during the past decade and why have these changes occurred? Second, what issues are on the common agenda for development finance in Asia to move forward? Third, what are the respective roles of the public and private sectors for enhancing the effectiveness of development finance in Asia?

Even though this paper relies heavily on existing academic research, the amount of academic literature on development finance per se is quite limited. "Development finance" does not seem to be an established field of academic research. Therefore, development finance issues are very often scattered across a variety of contexts, such as "development economics" or "international economics" as in Rodrik and Rosenzweig (2010). Nevertheless, Spratt (2009) is one of the few recent publications that provides a good overview of the current issues in development finance. Kose *et al.* (2010) is also helpful in understanding issues associated with financial globalization.

Another source of input for this paper is the data sets and publications made available by international organizations due to their coverage of empirical and policy aspects. Among them is United Nations (UN) (2005), which provides a comprehensive review of the trends and challenges in financing for development and thus helps to structure this paper's coverage of these issues.

2. Changing Sources and Nature of Development Finance in Asia

From a macroeconomic perspective, we see a change in the savings–investment balance in Asia over the past few decades. Broadly speaking, the developments since the 1950s until the last decade can be divided into three phases.

In the first phase of almost two and half decades until the mid-1970s, domestic savings, or the domestic sources of development finance, were scarce in Asia as well as in other parts of the developing world (Lewis, 1954).² In the second phase from the 1970s to the pre-Asian crisis of the 1990s, the so-called newly industrialized economies (NIEs), comprising Hong Kong, South Korea, Singapore, and Taiwan, emerged as leading growth centers in Asia and were followed by some of the economies in the Association of South-east Asian Nations (ASEAN) and China. As a result of their accelerated growth, which helped them achieve higher per capita incomes, most of the Asian economies achieved higher savings and investment ratios compared with their historical levels and the average

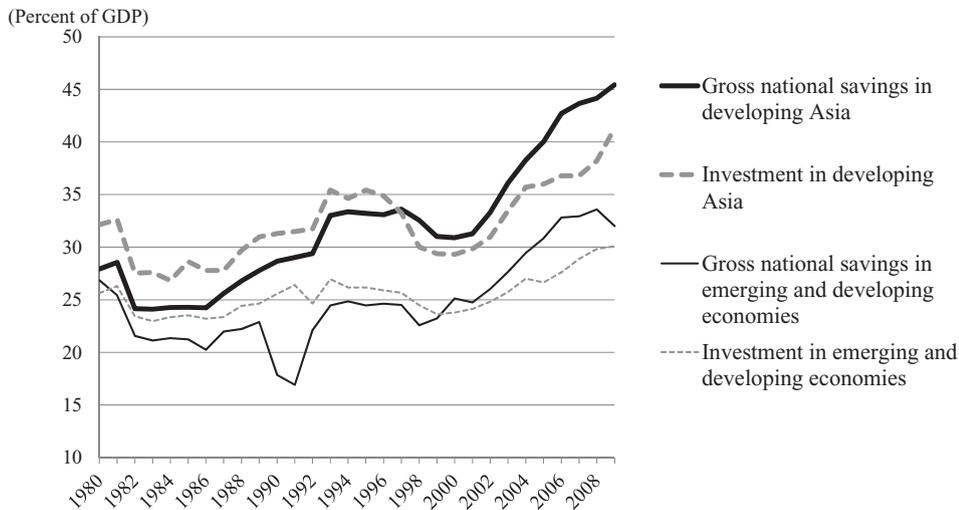


Figure 1 Gross national savings and investment in developing Asia, 1980–2009.

Source: International Monetary Fund (IMF) (April 2011), World Economic Outlook Database.

Note: As defined by IMF, “developing Asia” is composed of 27 countries in Asia and “emerging and developing economies” of 150 countries, both excluding the newly industrialized economies.

levels of their peers outside Asia. Then, toward the end of this high growth period, private capital flows surged into the region to boost investment and to sustain external current account deficits (Figure 1).

There came a third phase after the crisis in 1997–1998, in which most of the Asian economies have had an excess of savings over investment or, equivalently, external current account surpluses. Moreover, the savings/gross domestic product (GDP) and investment/GDP ratios have shown increasing trends throughout the 2000s, even with a widening positive savings–investment balance after the mid-2000s. In addition, as shown in Figure 1, among the developing countries, Asian countries have had relatively high savings and investment ratios.

The excess of savings over investment is a distinctive feature of the Asian economies during the last decade, and suggests that domestic savings have not been fully and effectively utilized as sources of development finance in Asia, or more broadly, within the boundaries of the developing world. In reality, the excess of domestic savings over investment in Asia has been channeled to the developed world by means of relatively low-yield investments (most notably, the accumulation of official foreign reserves) being only partly offset by private capital seeking higher yields, which has continued to flow into Asia. This can be described as a leakage of domestic savings toward foreign assets.

The question here is whether it is worthwhile to keep accumulating official foreign reserves either for “self-insurance” purposes against a possible future balance-of-payments crisis or to seek nominal exchange rate stability. As long as there remains a need for financing investment serving development purposes, policymakers should find ways to

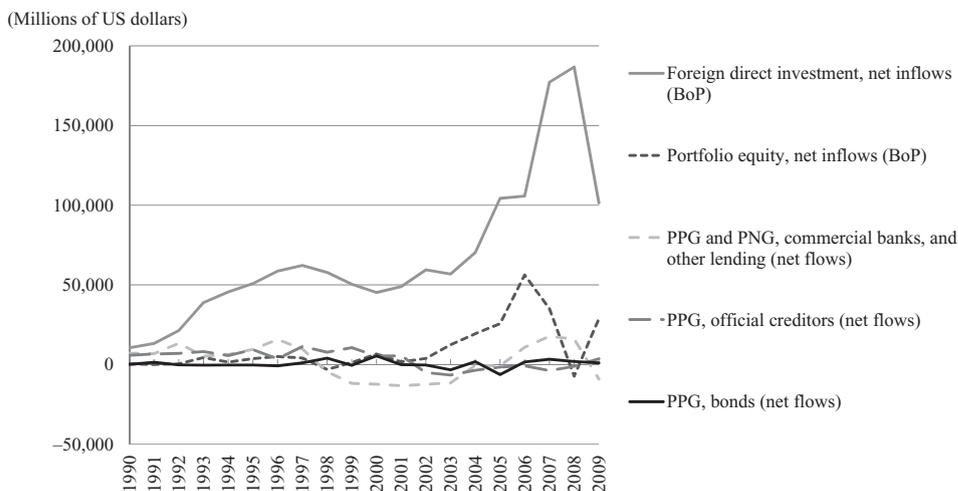


Figure 2 External capital flows to East Asia and the Pacific, 1990–2009.

Source: World Bank (2011), Global Development Finance (GDF) Database, downloaded in August 2011.

Note: “PPG” stands for “Public and Publicly Guaranteed” and “PNG” for “Publicly Non-Guaranteed.” BoP stands for balance of payments.

mobilize domestic savings for investment within their national boundaries. The current levels of official foreign reserves are too high to justify the cost of the opportunities forgone. Alternatively, as in the case of China, domestic demand needs to be rebalanced in favor of consumption to reduce excess savings.

In terms of their composition, the trend in external financial flows into Asia in the past decade as compared to the earlier decades is characterized by the continued dominance of foreign direct investment (FDI), the volatile and procyclical nature of portfolio flows and bank lending, and a relatively small share of official flows (Figures 2 and 3). The emergence of nontraditional financing from outside or within the region, including from the recipient countries of official development assistance (ODA), may be another feature below the surface.

The mainstreaming of private sources of finance from abroad, as well as a diminishing share of official financial flows, is most evident in East Asia and the Pacific (Figure 2). Another notable fact is that net ODA received in terms of the percentage of gross capital formation has been on a declining trend over the past five decades as shown in Figure 4. These changes, coupled with the emergence of domestic resources potentially available for development purposes during the past decade, are new developments. Reflecting this trend, policymakers in Asia are well aware that a shift in the focus of official development finance is required.

As a consequence, one of the policy challenges in developing Asia now is the effective use of public sources of finance, both domestic and external, as a catalyst for mobilizing private sources of finance into investment for development purposes. In this context, the

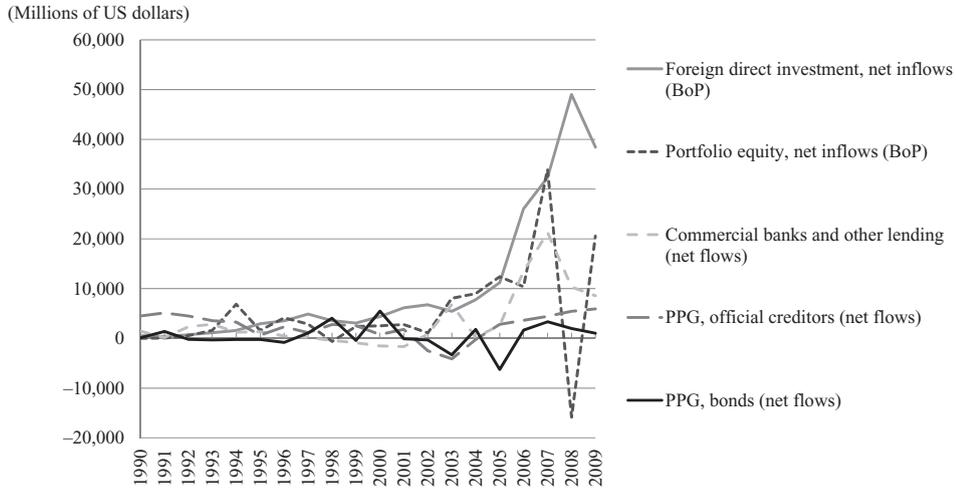


Figure 3 External capital flows to South Asia, 1990–2009.
 Source: World Bank (2011), Global Development Finance (GDF) Database, downloaded in August 2011.
 Note: “PPG” stands for “Public and Publicly Guaranteed” and “PNG” for “Publicly Non-Guaranteed.” BoP stands for balance of payments.

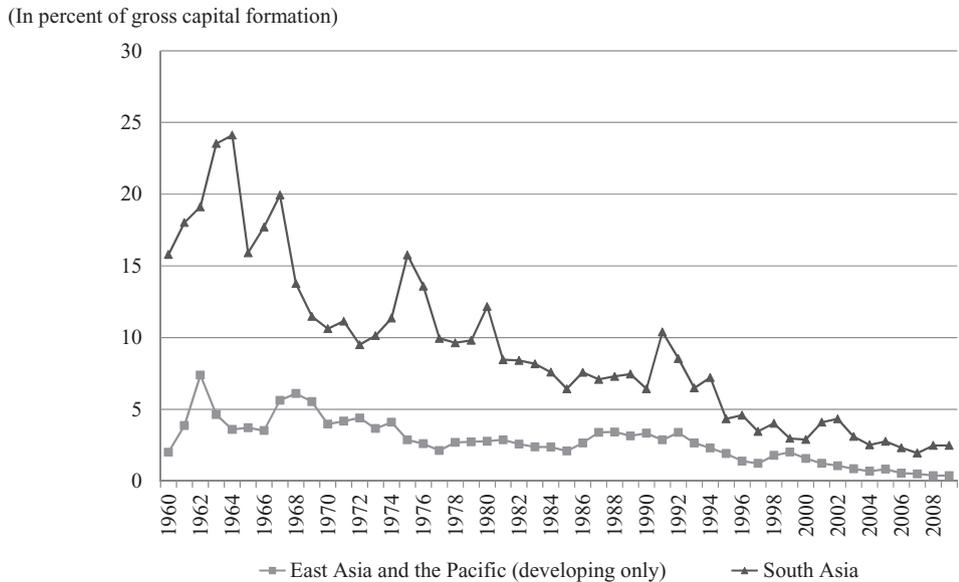


Figure 4 Net ODA received in percent of gross capital formation, 1960–2009.
 Source: World Bank (2011), World Development Indicators (WDI) Database, downloaded in August 2011.

Table 1 Taxonomy of capital flows and investment in developing countries

Capital flows to a developing country		Domestic investment	
Public		Public	
Bilateral	Official development assistance Other official flows		Government budget State-owned enterprises
Multilateral	Concessional Nonconcessional		Development banks
----- Public–Private Partnerships -----			
Private	Foreign direct investment Portfolio investment Trade credits Bank loans Remittances Grants	Private	Corporations Nongovernmental organizations Individuals Financial intermediaries

key to success for the effective mobilization of private funds is incentive design and risk mitigation measures.

For a focused discussion of the important new trends, the scope of development finance to be dealt with in the following section is limited to a subset of capital flows classified in Table 1.

3. Trends and Challenges in Development Finance in Asia

In this section, we identify the trends and challenges in development finance in Asia with a focus on several key areas.

3.1 Transformation of development aid in progress

Historical context and paradigm shift

Changes in development aid during the past decade can be traced back to a series of discussions in the 1990s that redefined thinking on aid policy.

According to the Organisation for Economic Cooperation and Development (OECD), ODA flows dropped by 16% in real terms between 1993 and 1997 due to fiscal consolidation in donor countries after the recession of the early 1990s. While there was a rise in 1998, ODA flows from Development Assistance Committee (DAC) countries as a share of their combined gross national income turned out to be 0.22% in 2001, a historical low (OECD, 2010).

Against this backdrop, frustration with an insufficient volume and the ineffectiveness of development aid was shared among policymakers, in both recipient and donor countries, and resulted in a number of international agreements that defined the future course of action. Among those are the Millennium Declaration and Development Goals, which were adopted by world leaders at the United Nations Millennium Summit in 2000.

With a deadline of 2015 set for their achievement, the Millennium Development Goals (MDGs) consist of eight targets: (i) eradicating extreme poverty and hunger; (ii) achieving universal primary education; (iii) promoting gender equality and empowering women; (iv) reducing child mortality; (v) improving maternal health; (vi) combating human immunodeficiency virus (HIV)/Aids, malaria, and other diseases; (vii) ensuring environmental sustainability; and (viii) developing a global partnership for development. These goals, supplemented by such agreements as the Paris Declaration on Aid Effectiveness in 2005 and the Accra Agenda for Action in 2008, have been and will be the guiding principles shared in the global development community.

One of the fundamental challenges that has been addressed in the past decade is how to improve aid effectiveness. Concerns over aid effectiveness arose as recipient countries were faced with the reality that increases in aid had not produced the expected impact on development, due to the increasing complexity and fragmentation of aid delivery, among other causes. Easterly (2006) is one of the well-known pieces of research to point out the ineffectiveness or even the harmfulness of development aid based on cases in Africa. In Asia, however, what we observe is a growing number of middle-income and high-income segments of the population, which seems to suggest that development aid has performed better than in Africa.

Another important milestone toward enhancing development finance beyond aid was the International Conference on Financing for Development in 2002, where the Monterrey Consensus was adopted.³ Key messages in the Monterrey Consensus (2002) endorsed as leading actions are (i) mobilizing domestic financial resources for development; (ii) mobilizing international resources for development: FDI and other private flows; (iii) promoting international trade as an engine for development; (iv) increasing international financial and technical cooperation for development; (v) ensuring sustainable external debt financing; and (vi) addressing systemic issues. These messages are quite relevant in the context of Asia, where various sources of development finance, including private financial flows, are playing greater roles in meeting development needs.

New trends

The diversity of the actors in development finance has been a notable phenomenon during the past decade. Emerging actors range from non-DAC governments, including those from developing countries, to private for-profit and nonprofit entities. They do not necessarily share all the principles that have been developed in the conventional aid paradigm and may operate under different sets of objectives and priorities. This growing diversity has provided opportunities in mobilizing resources available for development finance, but has entailed additional costs at least in the field of aid coordination and harmonization.

In this context, South–South Cooperation (SSC) has been one of the influential changes over the past decade. China and India have become the most prominent SSC providers from Asia, followed by Taiwan and Thailand (Smith *et al.*, 2010), all of which remain recipients of ODA, albeit with diminishing volumes. They tend to distinguish their approaches from those of DAC donors by emphasizing peer relationships, as against donor–recipient relationships, and mutual benefit. The dividing lines between aid and commercial activities may not be as clear as in the case with DAC donors. In the light of the increasing importance of SSC, OECD (2009, p. 24) stresses the need for the DAC “to explore these different approaches with the countries of the South.”

The idea of innovative development financing mechanisms was first discussed at the Monterrey Summit in 2002 (Sandor *et al.*, 2009). This appears to be a reflection of the growing presence of new actors that have been increasingly active in the international agenda setting process. Also, the motivation behind the emerging interest is the sense of urgency in mobilizing nonconventional resources to meet the financing requirements under the MDGs.

According to the Leading Group on Innovative Financing for Development,⁴ the notion is closely linked to global goods aimed at correcting the negative effects of globalization. Funds mobilized through the mechanisms are supposed to complement conventional ODA and are expected to be stable and predictable. The dual characteristics of stability and predictability have been stressed in the policy declarations.

Various mechanisms are used, ranging from government taxes to public–private partnerships (PPPs) with a focus on several areas such as health, the environment, and education. Mechanisms already in place include UNITAID, the International Finance Facility for Immunisation (IFFIm), and the Advance Market Commitment, all of which are health-related initiatives.⁵

For the purpose of helping to capture financing flows within the current DAC statistical system, OECD (2011; page 4) defines three basic categories of innovative financing for development, that is, new public revenue streams, debt-based instruments and front-loading, and public–private incentives, guarantees, and insurance. Among the three, the last category should play a catalytic role in mobilizing financial resources for development if designed effectively.

3.2 A renewed wave of infrastructure finance: PPPs

We have seen a renewed wave of infrastructure finance called “PPPs” during the past decade. This trend appears to be a revival of the previous wave of private infrastructure initiatives in the 1990s (World Bank, 1994). The key motivation for PPPs is to seek efficiency gains as well as to fill public sector funding gaps through private sector participation.

The fiscal conditions of most of the Asian countries have improved. However, for longer term public investments, the public sector is faced with institutional constraints, resulting in a limited share of investment spending. This is one of the reasons why governments are willing to promote PPPs in Asia.

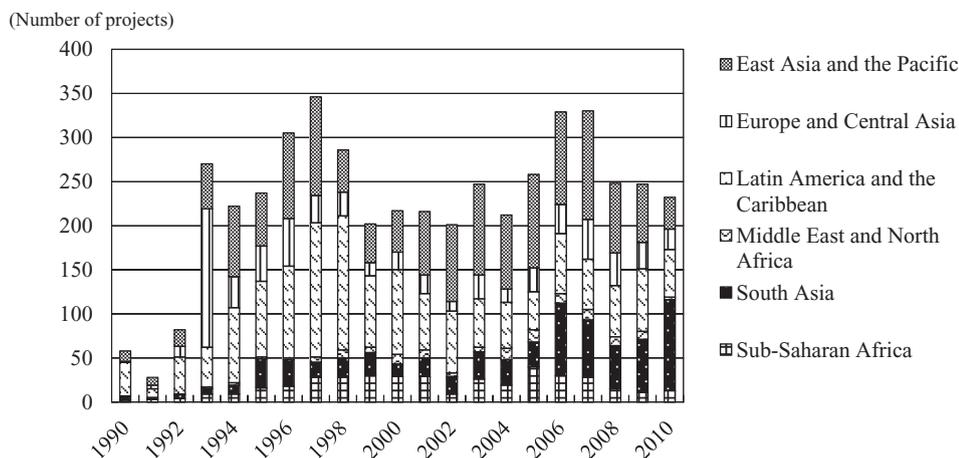


Figure 5 Number of infrastructure projects with private participation (financial closure) by region, 1990–2010.

Source: World Bank and PPIAF (2011), Private Participation in Infrastructure (PPI) Database, downloaded in August 2011.

Note: The database records contractual arrangements with and without investments in which private parties assume operating risks in low- and middle-income countries as classified by the World Bank. For the details of data, please see the database methodology described in the PPI database (http://ppi.worldbank.org/resources/ppi_methodology.aspx).

Notwithstanding the popularity of PPPs in the policy debate, however, the achievements in Asia so far have been mixed as shown in Figures 5 and 6.

In terms of the number of infrastructure projects with private participation reaching financial closure, East Asia and the Pacific attracted 112 projects in 1997, but less than 50 projects each year during the following period from 1998 to 2000. After this stagnant period, the region had more than 100 projects annually in 2003 and from 2005 to 2007. The annual average of the number of projects is 86 from 2001 to 2010. Activities were concentrated in China, Malaysia, the Philippines, and Indonesia. In South Asia, mostly in India, the number of projects has grown rapidly since the middle of the 2000s with the annual average of 25 from 1995 to 2005 rising to 72 from 2006 to 2010.

In terms of annual investment commitments, East Asia and the Pacific have never reached their highest level of \$37 billion in 1997, and have shown an annual average of merely \$16 billion since 2000. By contrast, South Asia has shown a growing level of investment since 2004, and has attracted the largest amount of \$76 billion in 2010.

Nature and potential benefits of PPPs

In this subsection, we discuss the nature of PPPs, including their benefits and pitfalls. The core task of structuring a PPP project is to reconcile the interests of the various parties from the private and public sectors. These parties include investors, lenders, and contractors on the private sector side, and the government and other related entities on the public sector side.

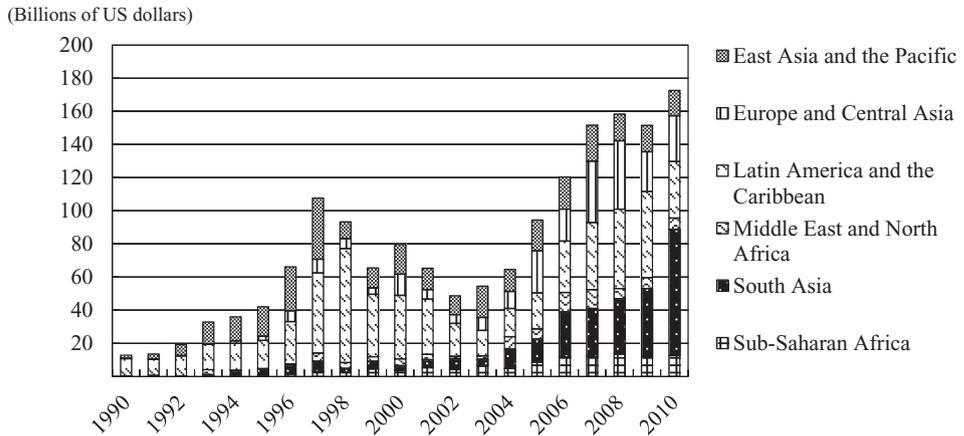


Figure 6 Investment in infrastructure projects with private participation (financial closure) by region, 1990–2010.

Source: World Bank and PPIAF (2011), Private Participation in Infrastructure (PPI) Database, downloaded in August 2011.

Note: The database records contractual arrangements with and without investments in which private parties assume operating risks in low- and middle-income countries as classified by the World Bank. With few exceptions, the investment amounts in the database represent the total investment commitments entered into by the project entity at the beginning of the project, not the planned or executed annual investments. For projects that involve investments, the database figures reflect total project investments encompassing the shares attributable to both the private and the public parties. The database does not provide data on funding flows coming as debt from private sources. For the details of data, please see the database methodology described in the PPI database (http://ppi.worldbank.org/resources/ppi_methodology.aspx).

PPPs are a long-term contractual arrangement between a public sector procurer and private parties, typically involving a separate legal entity called a “special purpose vehicle” (SPV) as the project company created by private sector equity investors called “sponsors” to undertake the activity defined in the contract. The SPV for a PPP project enters into contracts with subcontractors to build, operate, and maintain the infrastructure facility. Lenders also enter into a credit agreement to finance a PPP project. In some cases, project bonds are used to finance a PPP project although the market for such bonds remains relatively small in size.

PPPs have developed with a method of raising long-term debt financing, known as “project finance,” which is lending against project cash flows, but not against a company’s balance sheet and existing business as is the case with “corporate finance.” There are various forms of PPPs, such as build own operate, build operate transfer, design build finance operate, leasing, joint venture (JV), and operations or management contracts. Each of these arrangements is characterized by a different configuration of risk sharing among the parties involved.

In a PPP project, the public authority specifies the requirements of public services to be provided by the facility, but leaves the private sector to decide how to meet these specific

requirements. With this separation of duties between the public and private sectors, risks entailed in the design, construction, market demand, technology, operation, and maintenance are transferred to the private parties.

One of the potential benefits of PPPs is encouraging the public sector to identify project risks and to consider risk transfers in a way that differs from conventional public sector procurements. For example, the so-called “optimism bias,” which often entails substantial cost overruns, can be avoided. One reason for the optimism bias is the skewed incentives for public officials to understate cost projections to get their projects approved.

Private sector investors and lenders involved in a PPP project have capital at risk and, therefore, a greater financial incentive to ensure that the service is provided as required in the contract. Moreover, lenders may provide benefits through independent due diligence and control of the project because they want to ensure that the project is viable and that all obligations in a contract can be safely fulfilled.

Public interests versus private interests and inevitable contingencies

One of the fundamental questions relating to PPPs is whether the inherent conflict between public and private sector interests most notably in price setting could be compromised.

The government tends to prefer lower prices due to political and social pressures. On the other hand, private sector investors involved in a PPP project pursue sufficient cash flows by setting prices high enough to comfortably ensure that the project is commercially viable and to secure higher equity returns. Furthermore, when the perceived risks are large, private sector parties will ask for an additional premium for bearing such risks.

For private sector parties, it may not be clear, for example, whether the government is financially capable of and committed to ensuring the soundness of public utilities or maintaining conducive policy and regulatory environments. As such, the commercial viability of PPP projects depends, to a large extent, on government capacity, commitment, and policy.

Those aspects are typical of PPPs and may imply that the dynamic incentive mechanisms embedded in the standard theoretical model (Grimsey & Lewis, 2004)⁶ are not competent to bring about the intended outcomes of efficient service delivery or are not even able to attract private sector partners without government budgetary support or all contingencies being provided for in the contract. In theory, a risk should be borne by the party who can manage that particular risk at the minimum cost. However, some assumptions of the theoretical model are unrealistic, for example, for its negligence of the incompleteness of contracts and inevitable contingencies.

The reality we have to recognize is that a PPP contract, as a typical “incomplete contract,” cannot provide for all possible future eventualities. It is even worse because the longer the term of the contract, as is the case with PPPs in infrastructure, the more difficult it is to provide for unforeseeable circumstances.

Thus, the inherent conflict between the public and private sectors as well as the inevitable contingencies, if not properly managed, could entail risks for the government to assume an excessive fiscal burden through subsidies or in the form of contingent liabilities.

The Minimum Revenue Guarantee (MRG) scheme, originally enacted in 1998 under South Korea's Private Participation in Infrastructure (PPI) program, was an example of such subsidies, which were eventually abolished in 2009 because of an increasing fiscal burden. As such, PPPs are not immune from the "optimism bias" as is often observed with conventional public sector procurement.

Ironically though, the growing popularity of PPPs globally is due to public sector fiscal constraints.⁷ PPPs do not require public sector funding today, meaning that its capital cost is spread out over the infrastructure facility's whole life, rather than charged immediately against the public budget. As a result of this characteristic, "PPPs may be promoted for short-term political advantage" (Yescombe, 2007; p. 28).

The cost of building, operating, and maintaining infrastructure facilities eventually has to be either paid for by the users or charged to the public sector budget. On top of this, for future negative eventualities, the likely scenarios include the assumption of costs incurred by the government. The government, being responsible and accountable for infrastructure services delivery, is likely to be under pressure to incur further costs to maintain delivery, in the event a PPP project fails. The taking back of risks by the government thus negates the intended risk transfer benefit of the PPPs, and is characterized as "privatizing profits while socializing losses" (Yescombe, 2007; p. 20). On the other hand, it is also the case that the investors and lenders involved in a PPP project, having capital at risk, cannot easily leave a project.

Before the Asian financial crisis in 1997–1998, there had been a wave of independent power producer (IPP) projects in Asia. For example, in Indonesia, 27 IPP contracts had been signed between the state-owned electricity company PT Perusahaan Listrik Negara (PLN) and private investors. This boom burst after the crisis when PLN was faced with deep financial trouble due to sky-rocketing financial obligations to foreign private investors and lenders caused by the abrupt depreciation of the rupiah against the dollar.

There is another possibility that the costs borne by users become excessively high to satisfy private sector parties in view of their risk taking or other constraints. One of the well-known cases of the high cost structure in power generation is the IPP experience in the Philippines. Woodhouse (2005) describes the high cost of electricity in the Philippines, compared with other Asian countries, as the result of the basic characteristics of the electricity market, as well as of the structure and implementation of the IPP program, especially after the Asian crisis in 1997–1998.

Victor and Heller (2007) evaluate, from the political economy perspective, the experiences of five developing countries (China and India, as well as Brazil, Mexico, and South Africa) in transforming their power sectors from state-dominated systems to a "textbook market-based model" characterized by the unbundling of the sector into the separate components of generation, transmission, and distribution, leading to privatization.

Victor and Heller's (2007, p. 260) conclusion is that "Not only is it politically difficult to shift an electric system to the textbook reform, but the process of reform creates new organizations and political interests that favor an alternative equilibrium." This outcome, which is named a "dual market," consists of public and private sector elements, and tends to be a hybrid system neither purely categorized as "state oriented" nor "market oriented."

The cited examples of “dual firms” spawned in the dual market are India’s Reliance and Tata Groups, and China’s state-owned Huaneng Group. Dual firms are said to be capable of mustering “the political connections needed to get things done that are essential to their commercial viability” as well as of being “sufficiently well managed, in a manner akin to efficient private enterprise.”

At the same time, as implied by characterizing it as an alternative equilibrium, Victor and Heller view this dual market system as remarkably stable while not claiming that such an outcome is desirable in terms of economic efficiency or good governance.

Are PPPs a panacea?

For financing PPPs, it turns out that the bigger the perceived risks for the private sector, the higher are the costs imposed on the government or eventually the taxpayers. For certain types of risks, mitigation measures can help reduce the perceived risks, thereby temporarily reducing the fiscal burden. However, without removing the root causes of the risks perceived by the private sector, either the government or the users will eventually have to bear the costs that private sector parties require for their risk assumption. It also depends greatly on whether the bargaining positions are in favor of the government or private sector parties. The government is unable to gain a better bargaining position without good performance and a good track record.

Also important, from a policymaker perspective, is the management of the government’s contingent liabilities. While recognizing the potential in offering new opportunities to develop infrastructure with greater efficiency and better quality, PPPs may entail significant fiscal risks arising from bypassing spending controls and moving public investment off the budget and debt off the government balance sheet (Corbacho & Schwartz, 2008).

PPPs, while sounding promising, are in reality very complex and most likely costly. Risk allocations are challenging because of the public nature of infrastructure services provision and the inherent uncertainties over the long term. There is even such a perception as PPPs being in favor of “private profit at the public’s expense” although this view may be somewhat extreme. Difficulties also arise from the different attitudes of investors, the government and lenders, as well as the general public. PPPs are equipped with a very commercial and contractual structure and operational modalities, but at the same time are extremely political, especially in the implementation stage. PPPs are clearly not a panacea.

3.3 Green finance

UNEP (2011) defines a green economy as one that is low carbon, resource efficient, and socially inclusive. It paraphrases that in a green economy “growth in income and employment should be driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services” (UNEP, 2011; p. 16).

The concepts of a green economy and sustainable development are closely connected. The most widely accepted interpretation of the concept of sustainable development is

based on the consensus reached in 1987 by the World Commission on Environment and Development.⁸ In short, economic development today must ensure that future generations enjoy at least the same level of economic welfare as is available to current generations. The key elements of a green economy are indispensable for this purpose.

In fact, ensuring environmental sustainability is one of the eight MDGs. Thus, it is a logical consequence that development finance increasingly covers the promotion of the green economy. Here, we call this particular trend “green finance.”

International context of climate change and development

Adoption of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, complemented by the Kyoto Protocol in 1997, has paved the way for mainstreaming climate change issues in the field of development finance. In particular, the Clean Development Mechanism (CDM), one of the Protocol’s market-based mechanisms, has offered a framework for developed countries to earn emission credits, in order to meet their emission reduction commitments, by financially supporting investment projects that reduce greenhouse gas (GHG) emissions in developing countries.

A driving force behind this development has been a growing recognition, in particular, during the past decade, that climate change threatens the lives of current and future generations, unless all members of the global community make joint efforts to mitigate the adverse impact of and to adapt to the effects of climate change.⁹ In this context, more than two-thirds of the needed mitigation should take place in developing countries, so as to achieve a least-cost path for climate stabilization. In addition, without adaptation measures, the negative effects on developing countries could be disastrous because of their limited capacities to cope with such consequences.

Thus, for most developing countries, the challenge has been managing increasing climate risks with their limited institutional, technological, and financial capacities. In other words, green finance needs to be combined with institutional and technological capacity building.

Financing for developing countries to address climate change, by means of either fiscal transfers or market transactions, can be broadly categorized into three different purposes, that is, mitigation, adaptation, and diffusion of new technologies. The World Bank (2010) compiles the estimated climate funding required for mitigation and adaptation in developing countries from a number of sources and concludes that the projected average annual funding requirements are \$140–\$170 billion for mitigation throughout 2030 and \$30–\$100 billion for adaptation throughout 2050. According to the World Bank (2010), the current levels of climate finance (\$10 billion a year today) fall far short of the huge demand, while existing financing instruments have limits and inefficiencies.

Trends and challenges in Asia

GHG emissions in Asia have grown at an annual rate of two percent over the past decade (UNESCAP *et al.*, 2010; p. 16). Now that Asia has emerged as a growth engine in the global economy, there is concern over the further rapid increase of emissions, if remedial actions are not taken. Negative effects could give rise to loss of crop yields, damage to coastal

ecosystems from a rise in the sea-level, and the spread of diseases, among others. In this context, massive investment needs in developing Asia could present an opportunity to transform these economies into low-carbon ones, but without remedial measures, they could rather pose a risk of self-perpetuating inertia entailed in conventional high-carbon energy systems to discourage efforts to introduce alternative low-carbon technologies (“carbon lock-in”).

While large-scale infrastructure development led by the public sector could contribute to both economic development and low-carbon outcomes, a larger part of the investment toward creating a low-carbon economy should come from the private sector, through, for example, energy-efficiency investment.

Faced with the aforementioned risks, more and more governments in Asia are incorporating green concepts in their economic and development policies and some have launched “green” policy initiatives (e.g. see Ministry of Finance, Republic of Indonesia, 2009).

Achievements under the CDM and constraints

The CDM has been one of the market-based mechanisms for encouraging private investment in mitigation in developing countries. In order to get a CDM project approved and implemented, the applicant from a developed country that wishes to implement an emission reduction project in a developing country is required to make a case that the emission reduction would not have happened without this particular investment project on the basis of the methodologies approved by the CDM Executive Board.¹⁰ Once the project is approved, registered and implemented, carbon credits (formally, Certified Emission Reductions or CERs) are issued to the applicant based on the monitored difference between the baseline in the absence of the project and the actual emissions. Developed countries can earn such carbon credits in order to meet their emission reduction commitments under the Kyoto Protocol.

Over 4000 emission reduction projects have been put in place as of now under the CDM. These projects have generated the largest financial resources for mitigation purposes for developing countries. According to the UNEP (2008), the CDM is expected to produce the equivalent of 1.5 billion tons of carbon dioxide in emission reduction between 2001 and 2012, out of which 1.1 billion tons are in Asia. In financial terms, this could generate \$18 billion in direct carbon revenues for developing countries, where Asia accounts for \$13 billion.

On top of the carbon revenues generated, the CDM provides host countries with the potential cobenefits of the transfer and dissemination of technology as well as the benefits of employment, and environmentally sustainable development. About a third of CDM projects claim to contribute to technology transfers, while most of them are large-scale projects involving foreign sponsors (Haïtes *et al.*, 2006).

High up-front capital costs are a significant disincentive for private businesses to invest in environmentally friendly technologies. This is also the case for fiscally constrained governments in developing countries trying to deal with the climate change problem.

Existing financing tools and mechanisms have their limits and weaknesses, and have not fully met the needs of developing countries. The World Bank (2010) points out the inefficiencies and lack of effectiveness of the CDM. First, the “additionality” of individual projects is said to be difficult to prove and validate. A project is acceptable under the CDM if it is expected to bring about GHG emission reduction additional to a baseline reduction in the absence of that particular project activity. But how to define the baseline scenario is quite judgmental and involves a certain degree of arbitrariness reflecting future eventualities. Second, the transparency and predictability in CDM Executive Board decision-making have been questioned. Delays in the approval of methodologies and assessment of candidate projects often frustrate private sector players. Third, the scope is narrowly defined or does not cover important areas for emission reduction in developing countries. Examples of the former include increased energy efficiencies in the building and household sectors or transportation systems and of the latter, deforestation emission.

3.4 FDI revisited

FDI is the largest source of private capital inflow into developing countries. In Asia, in particular, FDI has been a major driving force for the development of the manufacturing sector since the mid-1980s and the services sector in the past decade.

FDI flows have shown changes in their composition. The share of manufacturing in FDI flows and stock has been dominant. Following the Asian crisis in 1997–1998, cross-border acquisitions of distressed financial and nonfinancial assets by international investors became active enough to keep net FDI inflows at levels comparable to the precrisis period.

FDI outflows from emerging and developing countries in Asia have been another notable phenomenon in the past decade. In particular, intraregional FDI has become an important ingredient for industrial development. Some of the emerging Asian countries such as China, South Korea, and Malaysia, have become active investors as shown by increasing FDI outflows in recent years. Most notably, Chinese firms have invested aggressively in the natural resources and service sectors, including in developed countries.

Are positive spillovers expected from FDI?

FDI is regarded as contributing to raising the productivity and international competitiveness of host country industries through spillovers of technology and organizational capability to host countries, and by linking local firms to international production networks or markets.

With these characteristics, certain types of FDI with technological transfer effects should be counted as part of development finance and be promoted by removing barriers and impediments to FDI inflows into developing countries.

Harrison and Rodriguez-Clare (2010; p. 4107) summarize recent research findings as showing that firms receiving FDI (JVs) or acquired by multinationals generally exhibit higher productivity levels and that positive vertical spillovers from foreign buyers to domestic suppliers and from foreign suppliers to domestic buyers are observed in terms of

technological gains. However, since horizontal productivity spillovers to firms within the same industry are generally insignificant, there is a shared view that investment incentives solely targeting multinationals seem difficult to justify due to their possible adverse impact on local competitors.

The potential negative effects pointed out in UN (2005; p. 82) include limiting competition, as well as a negative effect in the initial stage on the current account balance in the case of FDI targeting the domestic market.

4. Policy Implications

4.1 Macro, sector, and micro perspectives: policy coherence and consistency

From a macroeconomic perspective, we see a great potential for developing countries in Asia to mobilize domestic sources of development finance. This is due to the change in the savings–investment balance after the Asian crisis in 1997–1998. Notwithstanding this change, however, domestic savings have not been fully and effectively utilized for development purposes, as evidenced by the increasing net transfer of financial resources and, most notably, the accumulation of official foreign reserves.

We also see changes from sector and market perspectives. However, those changes have not helped channel financial resources, both domestic and external, to longer term investments to meet development needs.

As implied by the issues discussed in section 3, a common underlying theme is how to strengthen intermediaries for longer term sustainable financing for investment from domestic and external sources to meet development needs. To address this, policymakers should bear in mind policy coherence and consistency from macro, sector, and micro perspectives.

4.2 Full spectrum of financing for development: complementarities and synergies

Development finance should not be narrowly defined, but needs to cover the full spectrum of financial resources to meet development objectives, as recognized in the Monterrey Consensus. It is particularly relevant in the context of Asia, where various sources of development finance, including private financial flows, are playing greater roles in meeting development needs. For various financial resources to bring about tangible benefits, policymakers should take account of the complementarities and synergies among the full range of available financial resources.

4.3 Effective and sustainable use of private sources of development finance: incentive design and risk mitigation

Private sources of finance make up the largest share of financial resources available for development purposes. The effective utilization of such resources depends on commercial viability. In other words, we should avoid what is generally appealing, but not commercially viable, in an effort to attract private financing for development. The key to success is incentive design and risk mitigation measures, rather than heralding elusive benefits brought about by private sector participation. Policymakers should stay away from

protracted but unproductive debates in favor of either government intervention or market efficiency. It goes without saying that risk mitigation or any public support to correct market failure should be designed to avoid moral hazard on both the public and private sector sides.

5. Concluding Remarks

We see changes in development finance in Asia in the context of a new global landscape of the post-Asian Crisis and post-Lehman Shock periods. There have been shifts in the composition and nature of different sources of development finance. In this context, a common recurring theme is how to strengthen financial intermediaries for longer term sustainable financing for investment from domestic and external sources to meet development needs.

We will need to take into account three key notions. First, sustainability matters. The issues here are how to address global macroeconomic imbalances, global climate change, political and social imperatives, and the leading role of the private sector. Second, to achieve the goal of development, institutions matter. Third, sequencing matters. All of these notions should be interpreted by taking into account Asian contexts to come up with workable policy options. The catalytic role of external official development finance to achieve development objectives is another critical element. Finally, discussion among practitioners and academia should be further encouraged.

Notes

- 1 In this paper, Asia is broadly defined to cover the emerging markets and developing economies in East Asia, Southeast Asia, and South Asia, while the grouping and coverage may differ in specific contexts depending, for example, on data availability and source. The exclusion of Japan from Asia in this context is because of the scope of this paper, and does not imply that Japan is not part of Asia.
- 2 For example, Lewis (1954, p. 139) describes the key issue as “. . . the central problem in the theory of economic development is to understand the process by which a community which was previously saving and investing four or five percent of its national income or less, converts itself into an economy where voluntary saving is running at about 12–15% of national income or more.”
- 3 The International Conference on Financing for Development was held in March 2002 to address the challenges of development financing and poverty alleviation. The Conference brought together 51 presidents and prime ministers, numerous finance and foreign ministers, leaders of international organizations and financial institutions, as well as business and civil society leaders.
- 4 The Leading Group, created in 2009, consists of 63 member countries (including Japan), international organizations, foundations, NGOs, and representatives from civil society. Its permanent secretariat is based at the French Ministry of Foreign and European Affairs.
- 5 See UNITAID (<http://www.unitaid.eu>), the IFFIm (<http://www.iff-immunisation.org>), and the Advance Market Commitment (<http://www.gavialliance.org>).

- 6 For example, Grimsey and Lewis (2004, p. 6) state that “. . . the PPP is a strongly incentive-compatible contracting arrangement. . . . All of this is a consequence of the incentives built into the services payment mechanism and the risk transfer in the PPP model.”
- 7 For example, the Jakarta Declaration adopted in April 2010 by the Ministerial Conference on Public–Private Partnerships for Infrastructure Development in Asia and the Pacific states that “Realizing that, typically, infrastructure requirements are significantly larger than budget provisions and that innovative solutions are needed in order to raise financing for the development of infrastructure, improve the efficiency of infrastructure operations, . . .”
- 8 The Commission, known as the Brundtland Commission by the name of its chair, was convened by the United Nations in 1983 to address growing concern “about the accelerating deterioration of the human environment and natural resources and the consequences of that deterioration for economic and social development.”
- 9 The Intergovernmental Panel on Climate Change defines mitigation as “implementing policies to reduce greenhouse gas emissions and enhance sinks” and adaptation as “initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects.”
- 10 The CDM Executive Board supervises the CDM under the authority and guidance of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol.

References

- Corbacho A. & Schwartz G. (2008). PPPs and fiscal risks: Should governments worry? Schwartz G., Corbacho A. & Funke K. (eds), *Public Investment and Public-Private Partnerships: Addressing Infrastructure Challenges and Managing Fiscal Risks*. Basingstoke: Palgrave Macmillan, 85–104.
- Easterly W. (2006). *The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good*. Oxford: Oxford University Press.
- Grimsey D. & Lewis M.K. (2004). *Public Private Partnerships: The Worldwide Revolution in Infrastructure Provision and Project Finance*. Cheltenham: Edward Elgar.
- Haites E., Maosheng D. & Seres S. (2006). Technology transfer by CDM projects. *Climate Change Policy*, 6 (3), 327–344.
- Harrison A. & Rodriguez-Clare A. (2010). Trade, foreign investment, and industrial policy for developing countries. In: Rodrik D. & Rosenzweig M.R. (eds), *Handbook of Development Economics*, Vol. 5. Amsterdam: Elsevier Science, 4039–4214.
- International Monetary Fund (IMF) (2011). World Economic Outlook (WEO) database.
- Kose M.A., Prasad E., Rogoff K. & Wei S.J. (2010). Financial globalization and economic policies. In: Rodrik D. & Rosenzweig M.R. (eds), *Handbook of Development Economics*, Vol. 5. Amsterdam: Elsevier Science, 4283–4362.
- Lewis W.A. (1954). Economic development with unlimited supplies of labor. *The Manchester School*, 22 (2), 139–191.
- Ministry of Finance, Republic of Indonesia (2009). Ministry of finance green paper: Economic and fiscal policy strategies for climate change mitigation in Indonesia.
- Monterrey Consensus (2002). Monterrey Consensus of the International Conference on Financing for Development.
- Organisation for Economic Co-operation and Development (OECD) (2009). *Development Co-operation Report 2009*. Paris: OECD.
- Organisation for Economic Co-operation and Development (OECD) (2010). *The DAC: 50 Years, 50 Highlights*. Paris: OECD.

- Organisation for Economic Co-operation and Development (OECD) (2011). *Mapping of Some Important Innovative Finance for Development Mechanisms*. Paris: OECD.
- Rodrik D. & Rosenzweig M.R. (eds) (2010). *Handbook of Development Economics*, Vol. 5. Amsterdam: North-Holland.
- Sandor E., Scott S. & Benn J. (2009). Innovative financing to fund development: Progress and prospects. DCD Issues Brief, November 2009. OECD.
- Smith K., Yamashiro Fordelone T. & Zimmermann F. (2010). Beyond the DAC: The welcome role of other providers of development co-operation. OECD Development Co-operation Directorate.
- Spratt S. (2009). *Development Finance: Debates, Dogmas and New Directions*. New York: Routledge.
- United Nations (UN) (2005). World economic and social survey 2005: Financing for development.
- United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), Asian Development Bank (ADB), and United Nations Environment Programme (UNEP) (2010). Preview – Green growth, resources and resilience: Environmental sustainability in Asia and the Pacific, 2010.
- United Nations Environment Programme (UNEP) (2008). UNEP Risoe CDM/JI pipeline analysis and database.
- United Nations Environment Programme (UNEP) (2011). Towards a green economy: Pathways to sustainable development and poverty eradication – A synthesis for policy makers.
- Victor D. & Heller T.C. (eds) (2007). *The Political Economy of Power Sector Reform: The Experiences of Five Major Developing Countries*. Cambridge: Cambridge University Press.
- Woodhouse E.J. (2005). The IPP experience in the Philippines. Working Paper no. 37. Program on Energy and Sustainable Development, Stanford University.
- World Bank (2011). Global Development Finance (GDF) database.
- World Bank (2011). World Development Indicators (WDI) database.
- World Bank (1994). World Development Report 1994: Infrastructure for development.
- World Bank (2010). World Development Report 2010: Development and climate change.
- World Bank and PPIAF (2011). PPI Database.
- Yescombe E.R. (2007). *Public-Private Partnerships: Principles of Policy and Finance*. Oxford: Elsevier.