CHAPTER V

POLICY CHALLENGES AND OPTIONS

A. A complex challenge

The significant investment needed for infrastructure development in developing countries (chapter III) necessitates greater involvement of the private sector, in many instances that of TNCs. It is therefore important for host countries and their governments to determine when it is appropriate to bring TNCs into the development and management of infrastructure projects and how to attract TNC participation that leads to the expected development outcomes. Throughout the world – in developed as well as developing countries – policymakers are faced with the challenge of developing adequate, efficient and equitable infrastructure industries and services. This involves a number of complex issues.

First, the perspectives of many different stakeholders have to be considered when deciding on whether and how to involve TNCs. At least four different stakeholders can be distinguished: the government (at different levels), the various companies and financiers involved, the users of the infrastructure services and the society at large (Scott, 2007). To avoid the risk of failure, the varying objectives of these groups need to be adequately taken into account.

Secondly, there are no one-size-fits-all solutions. Policy priorities and options differ considerably between countries at different levels of economic development and with different characteristics. For example, for landlocked countries it may be important to give special attention to cross-border infrastructure that can improve their access to global transport networks; and the infrastructure solutions for countries with small economies may differ considerably from those with large national markets. As a result, the right mix of public and private (including TNC) investment will continue to vary greatly by project, industry and country.

Thirdly, designing and implementing appropriate policies to harness the potential role of TNCs in infrastructure require adequate skills and capabilities. Many infrastructure investments are socially sensitive and technically challenging, and need to be regulated by means of long-term contracts within an appropriate legal framework. Governments have to prioritize among competing demands for different projects (keeping in mind the dual needs to maintain existing physical infrastructure and develop new projects), establish clear and realistic objectives for the projects chosen, and integrate them into broader development strategies. This means that the ministries and implementing agencies concerned have to possess the necessary institutional capacity and skills to guide, negotiate and regulate the projects. As many infrastructure projects are handled at the subnational level, development of capabilities is warranted not only at the central level, but also at provincial and municipal government levels. Thus, for leveraging TNCs for infrastructure development, adequate human and institutional resources are needed.

Added to these challenges is the rise in global demand for investment in existing

and new infrastructure. Since many developing countries are seeking foreign investment to develop their physical infrastructure, competition for such investment is becoming more intense. Moreover, growing demand in the developed world and in large emerging economies is leading potential investors to expect higher returns for a given level of risk. At the same time, failures and investment disputes associated with infrastructure projects, notably in Latin America, have contributed to a more cautious attitude among some governments as well as overseas investors. Even very large TNCs today think twice before committing managerial and financial resources to projects in developing countries that they perceive as presenting a relatively high level of risk. And with fewer potential investors, governments may face a greater risk that bidding processes for specific projects will be less competitive.

Tackling the complex and multifaceted challenges requires concerted action by all parties concerned. The ultimate responsibility for creating an environment that is conducive to long-term infrastructure investments and for prioritizing and taking the necessary decisions with regard to the potential role of the different stakeholders in different projects rests with national and subnational governments in each country. In some cases, cooperation among several countries in a region may be necessary to maximize the benefits from infrastructure investments. For many developing countries, especially LDCs, national efforts have to be complemented by active support from the international community.

This chapter reviews current developments with regard to national and international policymaking in the area of infrastructure investment, focusing, in particular, on areas of relevance to TNC participation. Thus the analysis only briefly covers issues related to sectoral reform and broader regulatory matters. The chapter is structured as follows. Section B provides an overview of recent trends in host-country policies aimed at attracting TNCs and enhancing the potential benefits from their participation. It reviews the extent to which countries allow and promote TNC participation in different infrastructure industries and analyses the various contractual arrangements and policy options that countries use in order to derive benefits from the presence of TNCs. Section C considers the role of international investment agreements (IIAs) and examines potential implications of the rising incidence of investor-State disputes related to infrastructure. Section D highlights the role of home countries and international institutions in facilitating foreign infrastructure investment in developing countries, wherever this is desirable, and section E concludes.

B. Host country policies to attract and benefit from TNC participation

A growing number of countries have opened up their infrastructure industries and are actively seeking to involve TNCs through FDI and other forms of participation. TNCs can bring benefits to a host country if the circumstances are right, but their involvement may also present risks that governments need to consider (chapter IV). This section looks at national measures to attract TNCs in infrastructure and to maximize the benefits they can bring. It begins by emphasizing the importance of a country's overall institutional and regulatory framework. It then considers the extent to which countries permit TNC activity in infrastructure and the role of investment promotion agencies (IPAs) in this context. The subsequent sections discuss the policy implications of different forms of TNC participation and various approaches to enhancing the social development gains from their involvement.

1. Building the institutional and regulatory framework

With or without TNC participation, countries need to develop strong legal and regulatory systems to ensure efficient as well as equitable pricing, investment and delivery of infrastructure. Moreover, the quality of the overall institutional environment is a major determinant of a country's ability to attract and benefit from foreign investment (chapter IV). The creation of participatory, transparent and accountable governance systems that promote and enforce the rule of law is critical in this context. Before committing funds to a project, companies consider whether laws and contracts are likely to be properly enforced, and whether their rights and responsibilities are well defined and likely to be respected (section III.D). Clear, transparent and well-enforced rules of conduct, grounded in law, are important for reducing the risk of political or popular backlashes against projects. In this context, governments also need to understand the implications and costs of compensating a company if the contract is unilaterally terminated.

If an adequate regulatory framework is not in place, there is an increased risk that countries will lose out by opening up. Moreover, once a country liberalizes, it is often hard to reverse the process. This makes the *sequencing of reform* important. A case can be made for gradual reforms that enable a country to develop the institutional capabilities first before designing and actually implementing the reforms

(see, for example, *WIR04*). Competitive restructuring, the introduction of regulations and the establishment of an independent regulatory agency should precede steps towards liberalization. Such a sequence helps clarify the rules of the game for investors, and governments become better prepared for engaging in a specific project. In reality, however, opening up to foreign investment has often preceded comprehensive sectoral reforms, with less positive results (Fay and Morrison, 2007; Wint, 2005; Wells and Ahmed, 2007; Kessides, 2005). Unless credible regulatory bodies can be established, most developing countries are likely to be better off keeping their utilities in the public domain, in particular the profitable ones (Bull, Jerve and Sigvaldsen, 2006). In fact, governments require greater skills and capabilities to privatize and to govern privately operated infrastructure than to run State-owned enterprises (SOEs) (Wells and Ahmed, 2007).[1]

The legal and regulatory framework for issuing licenses or concessions should define the rights and obligations of utilities, clarify pricing mechanisms and establish procedures for dispute resolution. It may also include conditions for ensuring that efficiency gains are shared with consumers. To the extent possible, the institutional framework should seek to minimize the possibility for conflicts of interest between participants (i.e. competing firms, remaining monopolies and consumers) in the provision of physical infrastructure and related services. Although the specific features of infrastructure industries necessitate a greater reliance on regulation of the sector (chapter III), competition policy also plays an important role. Even when the benefits outweigh the costs of unbundling (chapters III and IV), opening up needs to be complemented by competition laws and authorities sufficiently equipped to enforce these laws (Kessides, 2004: 69; Newbery, 2006). Without a competitive restructuring of infrastructure industries, privatized companies may more easily acquire a dominant position. Competition authorities should have the mandate to review regulatory decisions, assess their impact on competition and take action against firms that use the regulatory process for anticompetitive purposes.

Another important element of reform is the establishment of independent and accountable regulatory agencies to implement laws and regulation in infrastructure industries. An autonomous regulatory agency that is separate from the executive branch of the government is more likely to help maximize benefits from reforms, balancing the interests of consumers and service providers and providing foreign investors with a degree of assurance that they are protected from political intervention (Fay and Morrison, 2007; Sader, 2000).[2] A strong regulatory agency can be a useful counterweight to political opportunism as well as to opportunistic investors. Investors may try to shift risks to consumers or taxpayers by demanding renegotiation of key elements of governing contracts. They may threaten withdrawal from a project, calculating that the government, concerned with the disruption of service, will give in to their demands. The incidence of contract renegotiations has been found to be much higher in countries with weak or no regulatory agencies (Guasch, Laffont and Straub, 2003).

There are few clear yardsticks or rules of thumbs that policymakers can use when designing and implementing sectoral infrastructure reforms and opening up to TNC involvement (Estache and Fay, 2007; Woodhouse, 2006). However, some general principles have been developed that may help governments in this area, including by the Organisation for Economic Co-operation and Development (OECD) (box V.1). Other policy guidelines include those developed by the United Nations Commission on International Trade Law (UNCITRAL) (UNCITRAL, 2004); the United Nations Economic Commission for Europe (ECE, 2008) (box V.2); and the United Nations Industrial Development Organization (UNIDO, 1996).

TNC involvement represents just one of several options policymakers can consider to develop their infrastructure. Governments need to weigh the potential benefits and risks involved (chapter IV) by studying all options – from privatization to traditional government provision. If a decision is made to involve TNCs, it is important to develop an overall policy for such participation and to set clear goals, values and principles (ECE, 2008: 19). This includes making sure that the views of existing constituents are reflected in the decision-making process and in project execution.

As noted above, inviting TNCs to deliver infrastructure services tends to place more rather than less responsibility on public officials. Governments that decide to engage TNCs in infrastructure industries therefore need to develop the expertise and capabilities required for the public sector to administer often highly complex projects. This is equally important at the regional and municipal levels of government, which are responsible for a growing number of infrastructure projects but generally have limited resources and institutional capabilities.

Eventually, however, the only way to gain the necessary experience is through learning by doing (i.e. by engaging in an actual project). In this context, it may be advisable to start on a small scale rather than adopting a major programme across industries. It may also be useful initially to concentrate on less contentious segments of an industry. In the case of water, for example, network operations and billing are the most politically contentious aspects, as these activities involve direct interaction with

Box V.1. The OECD Principles for Private Sector Participation in Infrastructure

The OECD *Principles for Private Sector Participation in Infrastructure* were designed to help governments that wish to involve private investors, including foreign companies, in the development of their infrastructure industries. They were developed in consultation with a broad group of public and private sector experts as well as some from civil society. The Principles do not advocate private participation; rather, they suggest that governments should be guided by an objective assessment of what best serves the public interest – that is, supports the common well-being. In this context, a number of factors should be considered, including current conditions, what households and companies can afford, coverage, efficiency, long-term maintenance of assets as well as social and environmental sustainability. The Principles can be applied by governments in both developed and developing countries and address five main sets of challenges:

1. Deciding on the utility and nature of potential private sector involvement;
2. Providing a sound institutional and regulatory environment for infrastructure investment;
3. Ensuring public and institutional support for the project and choice of financing;
4. Making cooperation between the public and private sectors work;
5. Communicating governments' expectations about responsible business conduct to their private partners.

The Principles are intended to serve as a first step in the authorities' consideration of private sector participation. They can also be used as a template for country self-assessment at national and local government levels, aid public authorities to report on progress, provide guidance for private enterprises and serve as a tool for structuring regional and other intergovernmental cooperation and public-private sector dialogues.

As a follow-up, a specific application of the Principles was launched for the drinking water and sanitation sector. The practical guidance to optimize private sector participation in this area involves three interlinked dimensions: adapting the Principles to the sector, building an information base of country experiences, and engaging discussions at the regional level. To this end, a round table was organized jointly by the New Partnership for Africa's Development (NEPAD) and the OECD – as part of the NEPAD-OECD Africa Investment Initiative – in Lusaka in November 2007, and in March 2008 the OECD and the Asian Development Bank held a joint expert meeting.

The resulting guidelines (to be launched at the Istanbul World Water Forum in 2009) are intended to help governments and other stakeholders to properly assess the implications of involving private actors in the financing, development and management of water and sanitation infrastructure. This should enable them to better manage such involvement, including through an appropriate allocation of roles, risks and responsibilities and the establishment of the necessary framework conditions. The focus is mainly on developing and transition economies. The private sector operating in this area comprises a range of players, such as international investors, local and regional actors, small-scale water operators, construction companies, joint ventures between public and private companies as well as public companies operating abroad as private participants in competitive bidding.

Building on the application of the Principles in the water and sanitation sector, the OECD plans to develop a similar framework for energy to support the institution's efforts in addressing the impacts on climate change.

Source: UNCTAD, based on information provided by the OECD (see OECD, 2007b and www.oecd.org/daf/investment/ppp).

final consumers. In contrast, bulk water provision (including mobilization of new water resources and building reservoirs and water treatment works) does not directly involve the customers.[3]

However, if countries wish to involve TNCs in infrastructure activities that are complex to manage, as in water, it may be appropriate to start with low-level contracts. For example, technical assistance or management, operations and maintenance contracts do not attract capital inflows, but neither do they have the potential for controversy or entail the same level of costs and contractual risk. On completion of such a contract, the government can choose to revert to municipal operation, award a follow-up contract on similar terms (through an open tender or by negotiation with the original contract holder), or develop a concession contract. Another option may be to corporatize the public operators in the sector and recruit managers with private sector experience to run the operations (Estache and Fay, 2007: 27–28). Whatever the nature of TNC involvement, low-income countries are likely to benefit from partnerships with various development partners that can contribute both financial resources and expertise.

2. Openness to TNC involvement varies by industry and country

Since the Second World War, the opening up of infrastructure industries to foreign investment has been much slower than in other industries. It was only in the early 1990s that developing and transition economies began in earnest to dismantle legal barriers to private – and often foreign – investment in infrastructure. Today, many countries have some foreign involvement (chapter III). As

Box V.2. The ECE Guidebook on public-private partnerships

A common misconception about public-private partnerships (PPPs) is that they require less public sector involvement; in reality they demand more. PPPs require a strong public sector that is able to adopt a new role and perform new skills. Weak institutions can hamper the implementation of PPP programmes. Moreover, poorly constructed, non-transparent projects can lead to failure and considerable frustration. This in turn can generate a backlash and political opposition towards the whole concept of partnerships between the public and private sector in infrastructure development.

The United Nations Economic Commission for Europe (ECE) has prepared a *Guidebook on Promoting Good Governance in PPPs* (ECE, 2008). Its purpose is to assist Governments in realizing the benefits from PPPs through a strengthening of their governance frameworks. The Guidebook sets out seven principles of good governance and the ways each principle can be achieved with respect to:

- A coherent PPP policy to provide clear direction and leadership;
- Strong enabling institutions within the Government, with skills in identifying, initiating, delivering and monitoring projects;
- A legal and regulatory framework that offers clarity, simplicity and predictability in legal processes;
- Fair risk-sharing between public and private sectors;
- Transparency, openness and fairness in selecting private partners;
- Putting people first by making the projects accountable to them for performance and delivery; and
- Sustainable development, ensuring the outcomes have the maximum developmental impact and respect for the environment.

With these principles as a basis, the ECE is currently elaborating a toolkit entitled *How to do PPPs*, consisting of training the trainer modules for a PPP capacity-building programme designed to improve PPP governance.

Source: UNCTAD, based on information provided by ECE.

with private sector participation more generally, the trend towards opening up to TNC participation has been more widespread among developed countries and the relatively advanced developing and transition economies. Although the nature of liberalization has varied significantly, all groups of countries are now more open to TNC activities in infrastructure than they were two decades ago. However, national investment policies with respect to infrastructure development are generally still more restrictive than those relating to manufacturing and other service industries (UNCTAD, 2006d: 19; Golub, 2003).

There are significant differences across infrastructure industries as regards the degree of openness, for various reasons. Some factors relate to the nature of each industry, notably the scope for unbundling and competition (chapter III). Reaping benefits from TNC involvement is easier in infrastructure industries that are relatively easy to expose to competition (such as mobile telephony) than in those characterized by a natural monopoly (such as water distribution). Other factors are related to the characteristics of the host country environment, including the level of development and the quality of administrative capabilities.

There have also been exogenous factors at play. During the 1980s and 1990s, a number of developing countries opened up to TNC investment in response to structural adjustment policies of the International Monetary Fund or as part of loan conditionalities of the World Bank.[4] In the 1990s, privatization became a key element of loan conditionalities in the electricity sector, and privatization and/or cost recovery policies were recurrent conditionalities in the water sector (Bayliss, 2001; Grusky, 2001). Such conditionalities sometimes seem to have led governments to privatize in a hurry in order to be able to access aid funds. In some cases this meant shortening the privatization processes, for example by failing to establish sound regulatory bodies. Privatization and liberalization are still included as conditions in World Bank and IMF loans, but less frequently,[5] and these institutions, which still exert considerable influence, have not given much attention to alternative policy prescriptions. Moreover, there are few donors that completely disregard private involvement in the infrastructure sector (Bull, Jerve and Sigvaldsen, 2006: 26).

a. In electricity, openness is the greatest in the generation segment

A 2006 study found that 17 of 50 developing and transition economies had a total ban on foreign investment in electricity (UNCTAD, 2006d). The Asian region was generally more restrictive than Latin America and the Caribbean.[6] A large number of low-income countries were seen to have full State ownership of power utilities: 32 out of 47 countries of sub-Saharan Africa, compared to only 8 countries that had concession contracts and 7 that had management or lease contracts with private partners (Gokgur, 2004).[7] In some countries, State-owned enterprises (SOEs)

coexist with private (including foreign) operators that may be allowed to enter the market by way of greenfield projects (Wang, 2008; Nazareth, 2008). Private independent power providers (IPPs) (many of them foreign) often operate alongside SOEs (World Bank, 2004a). As expected, openness to foreign involvement is greater in electricity generation than in distribution, and very low in transmission (Estache and Goicoechea, 2005; see also section V.B.3).

b. Almost all countries allow TNCs to invest in telecommunications

The extent to which foreign companies are allowed to participate in *telecommunications* similarly differs by segment and country. More countries allow foreign investment in mobile telephony than in fixed line telephony, partly because it has been easier to introduce competition in the former (ITU, 2007b), and because technological capabilities are not sufficiently developed by domestic firms. The first privatization of an incumbent telecommunications provider took place in the United Kingdom in 1981 with the sale of Cable and Wireless.[8] Among developing countries, the Government of Chile was the first to privatize when, in 1988, it divested its shares in CTC and ENTEL. In most developing countries, incumbent telecommunications operators have rarely been fully privatized. Instead, part of the operators have been sold through private sales, public offerings or a combination of the two, with the government retaining some ownership. By the end of 2006, about half of all developing countries had sold all or part of their incumbent operators, often to TNCs. Of the 78 developing countries that partly or fully privatized their telecom operators, 82% sold significant stakes to a strategic foreign investor, while the remaining 18% divested shares through initial public offerings (Minges, 2008).

In general, there is greater openness to TNC involvement in this industry in developed countries than in developing and transition economies (OECD, 2003; UNCTAD, 2006d). The number of countries without TNC involvement is shrinking.[9] Today, it is estimated that only 10 developing countries lack any form of TNC involvement in telecommunications,[10] and only a few countries have outright prohibition of foreign investment. In Ethiopia, *Proclamation No. 281/2002* identifies government-owned Ethiopian Telecommunications Corporation as the sole telecommunications service provider.[11] In Costa Rica, telecommunications has also been regarded as a natural monopoly.[12] However, following the ratification of the Central American Free Trade Agreement in October 2007, a Government bill was adopted in May 2008 that will allow private companies to offer wireless services.[13]

In other countries, there are caps on foreign investment (table V.1). India, for example, has imposed a ceiling on the level of foreign ownership in telecommunications, which was raised from 49% to 74% in 2005 with the aim of attracting more foreign investment.[14] In Bolivia, by contrast, the country's President announced in May 2008 that the Government would take immediate control of ENTEL, in which Telecom Italia then held a 50% stake.[15]

c. Water remains highly restricted

The *water* industry remains relatively closed to foreign investment. As the costs of production are low relative to the transportation costs, unbundling is not especially attractive (chapter III). Unsurprisingly, more than 90% of all water utilities are run by public entities, either at the national or local level (World Bank, 2007c; Hall and Lobina, 2006: 3).[16] Most contracts with TNC participation are concessions or operation and management contracts (chapter III).[17] During the period 1985–2008, in developing countries, TNCs have been involved in the provision of water to at least 184 million people.[18] Apart from Chile, however, they are not known to provide any significant water services in rural areas (Hall, Lobina and de la Motte, 2004: 3; Owen, 2008). Their absence in rural areas reflects the income gap between rural and urban households and difficulties in achieving the economies of scale needed to reduce costs.

The private sector provided water to more than 30% of the population in only 6 of the 70 developing

Table V.1. Foreign ownership restrictions in telecommunications, selected developing countries, latest year

Country	Restrictions
China	49% limit, and up to 50% for value-added services.
India	74%, with the remaining 26% owned by Indian citizens or companies.
Indonesia	35%
Malaysia	30%, and permit >50%, but has to be reduced after 3 years.
Mexico	Concessions granted only to Mexican nationals. Foreign investment can be no greater than 49% except for cellular telephony services where permission is required from the Commission of Foreign Investment for a higher level of foreign participation.
Philippines	40%
Singapore	49% on facilities-based operators.
Thailand	49%

Source: UNCTAD, based on the ICT Regulation Toolkit, Table 3.6, available at: http://icttoolkit.infodev.org/en/PracticeNote.aspx?id=2551.

countries listed in table V.2; in most of the economies, the corresponding share was below 5%. At the same time, about 60% of the countries have seen some TNC involvement during the past two decades. Current trends in TNC involvement differ considerably. For example, in the Central African Republic, Chad and Guinea, TNCs are no longer present. Their exit has been due to war and political instability, the end of the contractual period, and a general wish to withdraw interests from the region (Owen, 2008). In other economies, such as Argentina, Bolivia, Brazil, Malaysia, the Philippines, Thailand and Viet Nam, the trend is towards emphasizing local private sector rather than foreign participation (table V.2). By contrast, China, India and a number of West Asian economies are increasingly interested in encouraging TNC participation in water projects (Owen, 2008).

d. Road transport the most open, rail transport the least

There is limited information on the openness to TNC involvement in *transport infrastructure*. A recent study of developing and transition economies found that the average level of restrictions on foreign investment within transportation – including infrastructure and related services – was lowest in *road transport* and the highest in *rail transport* (UNCTAD, 2006d).

e. Rising concerns related to the strategic nature of infrastructure

In recent years, policymakers in both developed and developing countries have cautioned against foreign investment in "strategic" infrastructure. While there is no common agreement as to what is to be regarded as "strategic", this tendency has been associated with national security or public interest concerns (chapter I), and seems to be particularly pronounced in the case of cross-border M&As where the acquiring company is State-owned (*WIR06*).

A recent review of the FDI policies of 11 countries found that most of them impose some sort of limitations or review requirements on foreign investment related to energy infrastructure (United States, GAO, 2008: 19; see also box I.2).[19] In the United States, the Foreign Investment and National Security Act of 2007 explicitly requires the Committee on Foreign Investment in the United States to investigate any transactions involving an acquiring company that is controlled by a foreign government or that concern critical infrastructure (Ibid.: 32–33). China includes power generation, power distribution and telecommunications among industries deemed critical to the national economy, and the Russian Federation includes natural monopolies and telecommunications in its definition of "strategic sectors".[20] Several countries, especially in Latin America and the Caribbean, have also adopted or are considering policies aimed at re-nationalizing infrastructure (box V.3).

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To conclude, many countries are today open to TNC involvement in infrastructure. However, there are significant variations by industry, and recent years have also witnessed growing concerns with respect to foreign control of certain infrastructure segments. The highest degree of openness has been observed in mobile telephony, while water services remain the least open to TNC participation. Openness is generally higher in industries that are easier to unbundle and expose to competition, and in more developed economies. Large-scale projects and those requiring

Box V.3. Recent re-nationalizations in infrastructure

The Government of *Argentina*, in 2006 rescinded its contract with Aguas Argentinas, which was responsible for providing water services to the greater Buenos Aires metropolitan area. This provoked a dispute with Suez Lyonnaise des Eaux and Veolia Environnement (both French), both of which held shares in the company. Earlier, in mid-2004, Argentina had re-nationalized the San Martin railroad, previously in the hands of Argentine company Metropolitano.[a] The *Bolivarian Republic of Venezuela* in 2007 nationalized the electricity company, Electricidad de Caracas, as well as the main telecoms company, CANTV, and its mobile unit, Movilnet. In the *Dominican Republic*, in 2003 the Government decided to re-purchase the shares of the private company Union Fenosa in the privatized electricity distribution companies EdeNorte and EdeSur (*WIR04*). In *Bolivia*, President Morales on 1 May 2008 announced that the country's largest phone company, ENTEL, would be bought from its current owner, Telecom Italia (EIU, *Business Latin America*, 12 May 2008). In the *Russian Federation*, a dispute is pending concerning the re-nationalization of Moscow's Domodedovo airport.[b] A number of re-nationalizations of infrastructure have also been announced in developed countries, including in Estonia and Slovakia (chapter II).

Source: UNCTAD.

[a] See www.thefreelibrary.com/argentina:+government+rescinds+contract+with+ aguas+argentinas,...-a0144164403.

[b] On 20 March 2008, the 10th arbitration appeals court upheld a lower court ruling in January 2008 to return a large amount of the airport's property to federal ownership, including parts of the terminal. The Government has argued that the airport was illegally privatized in 1997 (see: www.themoscowtimes.com/article/1010/42/361633.htm).

Table V.2. Private sector and TNC involvement in water projects, selected developing economies, December 2007

Economy	Private sector participation (PSP)		TNC involvement	
	PSP during past 20 years	Share of population served by PSP projects	TNC involvement during past 20 years	Comment
LDCs				
Bangladesh	No	0%	No	
Burkina Faso	Yes	5%	Yes	Limited to operation & management (O&M) projects
Cambodia	Yes	>1%	No	Small local companies gaining concessions
Central African Rep.	Yes	0%	Yes	Civil war led to the SAUR company ending its SODECA concession
Chad	Yes	0%	Yes	Renationalization (2004) as Veolia ended O&M contract
Congo, Dem. Rep. of	No	0%	No	Cascal declined to enter into a management contract in 2004
Guinea	Yes	0%	Yes	SEEG lease contract expired in 2001
Guinea-Bissau	No	0%	No	Suez has provided technical assistance since 1991
Lesotho	No	0%	No	External support for PSP may evolve into a management contract
Malawi	No	0%	No	
Mali	Yes	1%	Yes	Bouygues has a concession for the main towns
Mozambique	Yes	4%	Yes	Bouygues is involved in a management contract
Nepal	No	0%	No	
Niger	Yes	14%	Yes	Veolia has a broadly based O&M contract
Senegal	Yes	32%	Yes	10 year O&M contract was renewed for another 5 years in 2006
Sudan	Yes	0%	Yes	Status of Cascal's water PSP contract awarded in 2007 is uncertain
Tanzania, United Rep. of	Yes	0%	Yes	Cascal O&M contract revoked in 2005
Uganda	Yes	2%	No	Emphasis is on medium-sized local companies
Zambia	Yes	0%	Yes	A short-term contract completed
Other developing economies				
Algeria	Yes	29%	Yes	Desalination and water management contracts underway
Argentina	Yes	11%	Yes	Most major TNC contracts have ended
Bahrain	No	0%	No	PSP under consideration for some years
Belize	Yes	0%	Yes	Cascal has an O&M contract
Bolivia	Yes	0%	Yes	Government policy against private/TNC participation
Brazil	Yes	27%	Yes	Many TNCs have sold project stakes, strong local PSP
Cameroon	Yes	25%	Yes	ONEP won bid on privatization of SNEC in 2007
Chile	Yes	81%	Yes	TNCs have divested some of their holdings
China	Yes	10%	Yes	Market is welcoming to TNCs, albeit competitive
Côte d'Ivoire	Yes	29%	Yes	Bouygues operates a concession
Cuba	Yes	5%	Yes	Agbar is expanding its activities
Dominican Rep.	Yes	15%	Yes	One large O&M contract
Egypt	No	0%	No	PSP laws passed in 2000, no contracts signed
Ecuador	Yes	19%	Yes	Two TNC concessions
Gabon	Yes	44%	Yes	Veolia concession listed on local stock exchange
Ghana	Yes	27%	Yes	Vitens and Rand Water operate a PSP contract
India	Yes	1%	Yes	Supportive environment emerging
Indonesia	Yes	5%	Yes	Major concessions by TNCs, regional players emerging
Iran, Islamic Rep. of	No	0%	No	
Iraq	No	0%	No	
Jordan	Yes	45%	Yes	One water BOT for Amman & Northern Jordan, plans for further contracts.
Kazakhstan	Yes	2%	Yes	Some small O&M contracts
Kenya	No	0%	No	Veolia has a support contract
Korea, Rep. of	No	0%	No	Wastewater PSP with TNCs
Kuwait	No	0%	No	Wastewater PSP since 2001, no water PSP
Lebanon	No	0%	No	Beirut PSP plans postponed in 2002
Malaysia	Yes	64%	Yes	Trend towards concessions run by local companies
Morocco	Yes	22%	Yes	Veolia and Suez operate a series of concessions
Namibia	No	0%	No	Veolia has a wastewater contract, no water contracts
Nigeria	No	0%	No	Little progress on PSP
Oman	Yes	31%	Yes	One desalination and one water contract awarded to TNCs in recent years.
Pakistan	No	0%	No	
Panama	Yes	9%	Yes	One contract (Cascal)
Paraguay	No	0%	No	No formal PSP
Peru	Yes	3%	Yes	Small TNC projects
Philippines	Yes	13%	Yes	Major projects being handed over to local investors
Qatar	Yes	0%	No	Desalination by a local consortium
Saudi Arabia	Yes	15%	No	A series of management projects under development
Singapore	Yes	10%	No	Current emphasis on local players
South Africa	Yes	2%	Yes	Pressure on TNCs to provide free water in contracts
Sri Lanka	Yes	>1%	No	
Taiwan Province of China	Yes	14%	Yes	Major project developed, slow PSP progress
Thailand	Yes	3%	Yes	Shift towards local players
Trinidad & Tobago	Yes	0%	Yes	No contract has replaced Severn Trent O&M contract
Tunisia	No	0%	No	A series of formal PSP proposals are under development
Turkey	Yes	2%	Yes	Small-scale TNCs active, especially in sewerage
United Arab Emirates	No	0%	No	Water and desalination PSP projects being developed
Uruguay	Yes	11%	Yes	Agbar divested to local partners, others continue
Venezuela, Bolivarian Rep. of	Yes	0%	Yes	Low-key PSP presence
Viet Nam	Yes	1%	Yes	TNCs now discouraged
Zimbabwe	No	0%	No	PSP project awards withdrawn

Source: UNCTAD, based on Owen, 2008.

Box V.4. UNCTAD survey on openness to TNCs in infrastructure: some preliminary findings

In research for *WIR08*, UNCTAD conducted a special survey of its member States to examine their level of openness to TNC involvement in infrastructure industries. Questions were related to the extent to which the legal framework allowed private and foreign companies to participate; what forms of involvement were allowed; possible requirements on foreign companies; and possible incentives offered to attract TNCs. The survey focused on legal aspects rather than actual private or foreign involvement. The questionnaire was distributed in March 2008 and by mid-July, 26 governments had responded.[a]

In general, the survey results confirm the patterns found in other studies (box table V.4.1). The overall picture is one of relatively high levels of openness. For example, all responding countries stated that TNC involvement was allowed in electricity generation, and at least 80% of the countries allowed it in roads, seaports, airports, electricity distribution, mobile telephony, water supply and sewage infrastructure. In most industries, developed countries are more open to both private and foreign company involvement. However, in airports, seaports and mobile telephony, the share of developing and transition economies that were open was higher than that of developed countries.

In network industries, such as railways and electricity transmission, only 60–70% of the respondents stated that TNCs were allowed to participate. The water industry was more open than expected; all developed countries and almost three quarters of the other economies allowed TNC participation. Somewhat surprisingly, more countries permitted TNCs to engage in water supply than in sewage infrastructure.

Openness to foreign TNCs appears to be highly, though not entirely, correlated with openness to private companies. In telecommunications, however, while all respondents allowed private participation, only 79% and 88% of them allowed TNCs to participate in fixed and mobile services respectively.

Due to the relatively low response rate, the above analysis is a preliminary assessment. A more complete analysis of relevant issues will be prepared by UNCTAD once a sufficiently large number of responses have been obtained from member States. That analysis will include detailed information on the forms of involvement that are permitted by different countries, possible requirements imposed as well as incentives offered.

Box table V.4.1. Share of countries that legally permit private and foreign companies, respectively, to be involved in selected infrastructure industries, 2008
(Percentage share of responses)

	All countries		Developing and transition economies		Developed countries	
Industry	Private	Foreign	Private	Foreign	Private	Foreign
Transportation						
Road	87	83	88	75	86	86
Rail	75	71	71	56	86	86
Seaports	91	86	94	81	88	83
Airports	87	83	94	81	67	67
Electricity						
Generation	100	100	100	100	100	100
Transmission	64	60	56	56	71	71
Distribution	75	80	72	78	86	86
Telecom						
Fixed	100	79	100	76	100	86
Mobile	100	88	100	88	100	86
Water						
Water supply	86	86	80	80	100	100
Sewage	81	81	73	73	100	100

Source: UNCTAD Survey, conducted March–July 2008.

Source: UNCTAD.

[a] Eighteen developing and transition economies: Albania, Algeria, Bosnia and Herzegovina, Botswana, the Dominican Republic, Egypt, Gabon, Guinea, Indonesia, Mauritania, Mauritius, Mexico, Monaco, Qatar, South Africa, Sri Lanka, Trinidad and Tobago and Turkey; and eight developed countries: the Czech Republic, Estonia, Finland, Germany, Greece, Japan, Romania and Switzerland.

high levels of technological know-how similarly tend to be more open. These findings are supported by preliminary results from an UNCTAD survey of openness in selected infrastructure industries (box V.4). However, many governments are showing greater interest in restricting inward FDI in selected infrastructure industries due to strategic and national security concerns.

3. Investment promotion agencies attach growing importance to infrastructure

A growing number of countries have moved beyond the removal of barriers to TNC involvement in selected infrastructure industries to promoting it actively. This section presents the findings of a joint UNCTAD and the World Association of Investment Promotion Agencies (WAIPA) survey of the role of investment promotion agencies (IPAs) in attracting FDI in infrastructure and related services (box V.5).

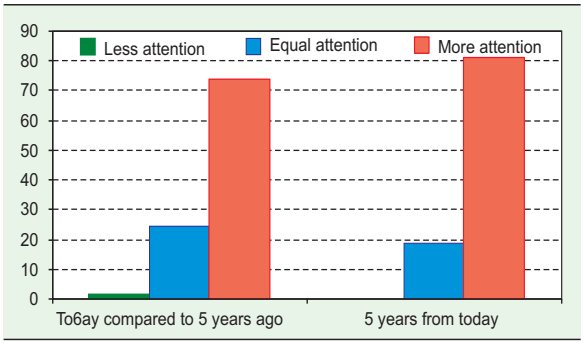
The survey found that IPAs are paying increasing attention to these industries (figure V.1): about 70% of the respondents stated that they were actively seeking FDI in these industries, while only 24% were not.[21] Almost three quarters of all respondents stated that attracting foreign investment into infrastructure industries is more important today than five years ago, and an even higher share (80%) expected infrastructure to become an increasingly important aspect of their work until 2012. Only one IPA said it pays less attention to infrastructure today

Box V.5. The UNCTAD-WAIPA survey of IPAs

In April–June 2008, UNCTAD and WAIPA conducted a joint questionnaire-based survey of all WAIPA members on the role of IPAs in attracting FDI in infrastructure and related services. A total of 70 questionnaires were completed, representing an overall response rate of 33%. A geographical breakdown of the responses shows a fairly similar distribution as that of the WAIPA membership. However, IPAs from developed countries were somewhat overrepresented and those from Africa somewhat underrepresented. The questionnaire was completed mainly by directors or deputy directors of IPAs. In general, responses were of high quality, with between 80% and 100% of questions completed by each IPA.

Source: UNCTAD.

Figure V.1. Degree of IPA attention to infrastructure industries, 2008
(Percentage of responses)



Source: UNCTAD-WAIPA Survey of IPAs, April–June, 2008.

than five years ago, and no IPA expected its interest in infrastructure investment to decline over the next five years. This increased focus seems to be justified, as UNCTAD's 2008 *World Investment Prospects Survey* identified infrastructure (and especially telecommunications) as among the most promising industries for future international expansion by large TNCs (see chapter I).

IPAs show varying degrees of interest in different infrastructure industries (table V.3). The picture largely confirms the broad patterns of openness to TNC involvement presented earlier. Almost half of the respondents said they were actively promoting foreign investment in *electricity generation.* The second most preferred infrastructure industry was *Internet services* (44%), followed by *airports* (41%). The industries that were targeted by the smallest percentage of IPAs were *electricity distribution* (17%) and *transmission* (19%). However, there is significant regional variation in terms of priorities. For example, while only one developed-country IPA actively sought to attract TNCs into road transport infrastructure, about 40% of those in developing and transition economies did so. In developed countries, Internet services were the most frequently targeted (45%); in Africa, electricity generation (79%) and Internet services (71%) topped the list; in Asia, road transport and electricity generation (46%) were the most often mentioned; in Latin America and the Caribbean the greatest interest was in seaport infrastructure and electricity generation (44%); while in South-East Europe and the CIS, airport infrastructure was the most preferred target (71%).

General promotion (e.g. providing information through brochures or special events and targeting of potential investors) was reported to be the most commonly used approach to attract TNCs in infrastructure. Other means commonly used are special privatization programmes and the use of dedicated public private partnership (PPP) programmes. Many

Table V.3. Share of IPAs that promote FDI into specific infrastructure industries, by region, 2008
(Percentage of responding IPAs)

Infrastructure industry	All countries	Developed countries	Developing countries	Africa	Asia	Latin America and the Caribbean	SEE and CIS
Transport							
Roads	31	5	42	43	46	38	48
Seaports	37	30	42	50	31	44	29
Airports	41	35	40	57	23	38	71
Railways	24	15	28	50	23	13	29
Electricity							
Generation	49	30	56	79	46	44	57
Transmission	19	0	26	36	23	19	29
Distribution	17	5	23	36	23	13	14
Telecommunications							
Fixed	29	20	30	50	23	19	43
Mobile	40	40	40	57	38	25	43
Internet services	44	45	42	71	31	25	57
Water and sanitation							
Water supply	33	26	33	43	23	31	57
Sanitation	26	15	28	29	23	31	43
Number of responses	*70*	*20*	*43*	*14*	*13*	*16*	*7*

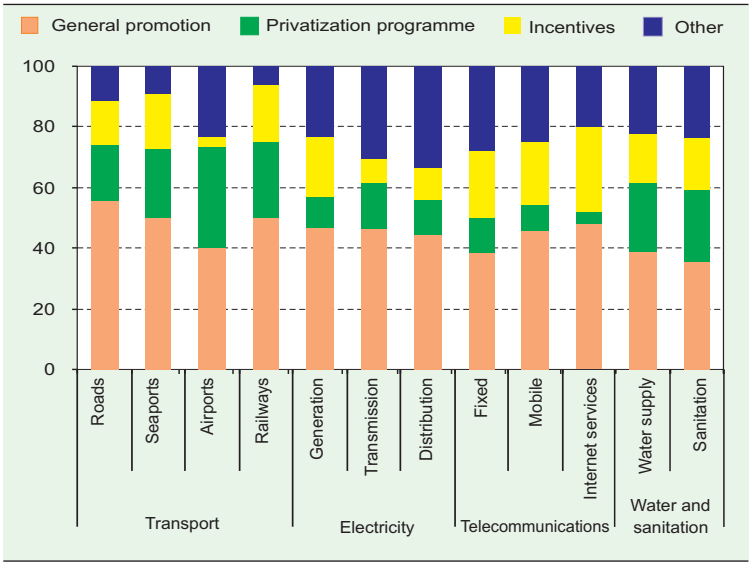
Source: UNCTAD-WAIPA Survey of IPAs, April–June, 2008.

countries also apply incentives, payment or legal guarantees. However, the tools used vary by industry (figure V.2). IPAs indicated that whereas general promotion was used in all infrastructure areas, it was used the most for road transport. Privatization (and PPP) programmes appeared to be especially common for airports, seaports, and water and sanitation. Incentives were used mainly for the various telecommunications segments.

Only a minority (30%) of the responding IPAs stated that they targeted infrastructure TNCs from specific home countries or regions. However, such targeting was somewhat more common among IPAs in the developed world (40%). The most frequently mentioned home regions were the United States and the EU (or a specific EU member State), followed by South-East Asia and the Gulf region. Specific developing home economies mentioned included Brazil, China, India, Malaysia, Mexico, Singapore, Taiwan Province of China and Turkey. Among developing economies, only one in four IPAs targeted specific home countries or regions. Their focus was on TNCs from Asia, apart from those from the United States and the EU. Two IPAs from economies in transition indicated that they targeted specific countries, notably Austria and Germany.

To conclude, the UNCTAD-WAIPA survey suggests that infrastructure investment is of growing importance to IPAs. This signals strong interest in involving TNCs in future infrastructure projects. The findings largely mirror the general patterns of openness to TNC involvement in different industries described in earlier sections of this report. Most developing-country IPAs do not target specific home countries when they promote infrastructure investment. However, judging from the information presented in chapter III (table III.10), there may be a case, especially for low-income countries, to target TNCs from other developing countries, at least in transport infrastructure.

Figure V.2. Promotion instruments, by infrastructure industry or service, 2008



Source: UNCTAD-WAIPA Survey of IPAs, April–June, 2008.

4. Managing different forms of TNC participation

Beyond the overall institutional and regulatory framework, investments in infrastructure typically require the negotiation of a contract between the host country and the foreign investor(s). Contractual arrangements aim at supplementing the applicable laws and regulations of the host country with regard to the investment at stake. The contract consists of a tailor-made agreement that responds to the particular requirements of each project and the intentions of the contracting parties.[22] This makes it important for countries to develop the knowledge and capabilities needed to determine the desirable forms of TNC involvement, to negotiate with foreign investors and to monitor project implementation.

As noted in chapter III, many different types of TNC involvement exist, ranging from full privatization to management contracts, with various kinds of PPPs in between. The choice of contract type dictates the ownership/control mix as well as allocation of risks over a project's life cycle. The picture differs considerably by industry. In water and transportation, various forms of PPP dominate. In telecommunications, most projects with TNC participation have involved privatizations or greenfield investments, while in energy, concessions dominate. Given the diversity of projects, it is difficult to generalize about the appropriateness of different types of contracts.

Infrastructure projects are far from simple to negotiate and implement. Adequate legal frameworks and institutional stability are prerequisites for successful project implementation. Contracts need to establish a set of durable relationships that take into account the tendencies of actors to behave strategically and in their self-interest over a project's life cycle. Overarching contract types formalize financial arrangements and govern shifts in ownership and control during the period of the project. This implies, inter alia, specifying in advance under what conditions services should be provided over an agreed period (say 15–30 years), allocating risks between the various parties and how prices

and guarantees should develop. Changes in policies, demographics and technology can be expected to influence the operational environment over the project's lifetime, and many contracts have been renegotiated in response to demands by either the private or the public party (chapter IV). Renegotiations are often related to the scope of work, service level of commitments and pricing.[23]

The allocation of risk is critical in this context. Two basic principles for risk allocation are that (i) the party responsible or with more control over the risk factor should be the one bearing the risk; and (ii) the party that is more able to bear the risk (i.e. that is less risk-averse) should do so (Guasch, 2004; Fay and Morrison, 2007). How they are applied in practice depends on many factors, such as the industry and country in which the project is to be undertaken, as well as the bargaining power of the negotiating parties. Indeed, TNCs may have an interest in negotiating a contractual arrangement that shifts as much of the risks as possible to the host country government. While this may enhance the chances of attracting more foreign investment, governments must be careful not to make too many commitments and offer to cover too much of the risks. Experience has shown that, as a result of past commitments, several governments today face very large contingent liabilities (chapter IV).

As parties to a contract often have diverging interests, the final contract is the product of negotiations and bargaining. Successful negotiations require adequate skills and expertise – resources that are not always available in developing countries. Asymmetries of information and experience – for example, between an experienced TNC and a municipality with little experience of TNC involvement – can constitute a significant problem. Public sector staff may find it difficult to match the resources of the private sector (e.g. Wells and Ahmed, 2007). Ex-post monitoring of contracts can also be both costly and difficult.

In the context of the bidding process, governments need to ensure that the financial sponsor(s) and the operator of the infrastructure project have adequate experience and capacity to deliver, and that the project is financially viable. Ideally, company selection should be done through transparent and competitive processes with well-defined bidding criteria. Lessons from Latin America and the Caribbean suggest that it may be advisable to fix tariff levels in advance and to establish clear rules relating to factors that might justify future tariff adjustments or renegotiations of other contractual aspects. The contract should then be awarded to the company that is prepared to pay the most for a concession, or accept the lowest subsidy when agreeing to produce an otherwise unprofitable service (Guasch, 2004; Fay and Morrison, 2007).

In practice, it is not easy to achieve the ideal agreement. There is a risk that bidders will behave opportunistically and present their offers with the intention of demanding quick renegotiations of the contract soon after it has been awarded. This may help to explain why so many infrastructure contracts have been renegotiated within the first two years of the contract period. In addition, finding a sufficient number of bidders on a contract can be a major challenge, especially for low-income countries.

With a view to reducing the risk of speculative bidding, governments might consider some form of realistic and flexible incentive-based regulation. For example, if a company outperforms its efficiency targets, benefits from its better-than-expected performance could be shared between the company and the government. Governments may also improve their bargaining power through regional collaboration. For example, a regional regulator could help pool comparative data and expertise. If enough data are assembled on project and operating cost elements in a range of circumstances and expectations, each government will have a better basis for judging whether potential bids are credible or not. A regional body could also help in reviewing bids.

Political commitment at the highest level is an essential ingredient to align and anchor related public sector accountabilities, allocate resources and address sources of institutional inertia. This is particularly important where there may be a potential conflict between public and private interests and when concerns exist about the loss of public control over the provision of public services (Scott, 2007).

An added challenge is to retain the necessary skills – legal, technical and financial – within the government sector. Even in developed countries, expertise tends to migrate to the private sector over time because of higher salaries. As a result, the capacity of governments to monitor the performance of projects can be seriously curtailed (Verkuil, 2007). These problems are often accentuated in developing countries, and they underscore the importance of proper legal and financial counsel. While major TNCs tend to make use of international law firms specializing in project finance transactions, most of which are based in the United States and the United Kingdom,[24] it is often difficult for developing countries to find the corresponding support. International institutions, including the World Bank Group, regional development banks, export credit agencies and others, offer capacity-building services in this area (section V.D), but there is a need for more assistance. This will become all the more important if

the current trend of relying on TNCs spreads further to low-income countries.

5. Factoring in social objectives

Enhancing the broader value to society requires attention to key social objectives, such as making services universally accessible and affordable to the poor (chapter IV). The social dimension of infrastructure is particularly important in the context of water, which is an essential resource and considered a basic human right (chapter III; ECOSOC, 2002; Anand, 2007), but also in other industries. A key challenge is to meet the twin targets of cost recovery (i.e. to make the investment financially sustainable) and wider access to the service (i.e. to make the investment socially sustainable). The challenge is accentuated in low-income countries, as weak purchasing power of households may make it virtually impossible to recover the costs of certain infrastructure services through user charges.

Several policy lessons can be drawn from experience with water concessions (UNDP, 2006). First, the complexity of giving increasing access to the poor should not be underestimated. The poor are not a homogeneous category. Connection costs can be a huge barrier.[25] In many low-income countries, the majority of the poor have to satisfy their water needs through an array of private "informal" providers, typically paying much higher rates than those connected to the municipality's distribution system. Social policies (such as tariff structure and increasing coverage rates) to accompany concession operations, along with regulation of informal providers and subsidies for connections may need to be considered. A second lesson is that transparency matters. There is a need to build public support through proper understanding of the processes, and to take into account the views of the poor. Without this, services cannot be tailored to users or community needs, and the capacity of communities to undertake system maintenance is often overlooked. Finally, regulation and governance of concession arrangements are essential. Increased efficiency and coverage of water systems has mainly been due to independent regulation, rather than to State ownership of utility companies (UNDP, 2006).

Three basic types of policy instruments can be identified to address the need for improved access for the poor: imposing requirements on investors to provide access (service obligations); reduced costs of connection and consumption; and an increased range of suppliers to provide more choice to consumers (Estache and Fay, 2007: 19). In some, mainly developed, countries with private sector providers of water services, social policies are incorporated into contractual obligations. However, in developing countries, private companies have often managed to negotiate exemptions from such obligations (Prasad, 2007: 13). To recover costs and achieve universal access to water in areas with weak purchasing power, experience to date suggests that tariff payments have to be subsidized in some form (WEF, 2006; chapter IV). But subsidies remain controversial. On the one hand, they can sweeten the deal for TNCs, making an otherwise unattractive investment commercially appealing. They may also help widen the consumer base to reach larger segments of society. On the other hand, they may reduce the incentives of private companies to make infrastructure projects efficient and profitable (Zhang, 2000: 735), and they may result in the company offloading the costs of a project on to the government while it realizes most of the benefits accrued.

Subsidies can be financed from different sources and take several forms. In the case of water, governments have used cross-subsidies, public subsidies, rising block tariffs and deliberately low tariffs, among others (Prasad, 2007). Rising block tariffs work on the principle of increasing tariffs per unit of water for higher levels of consumption, and low water usage per account has a low fixed cost per unit of water. This approach is based on the notion that "water for necessity" should be relatively cheap while "water for luxury" should be relatively expensive. In theory, low tariffs should benefit everybody at the lower end of consumption and should be offset by higher tariffs at the upper end. However, the actual effects may be different. First, better-off people may have private wells (Aquafed, 2007). Secondly, group purchases by less well-off people may mean that they have to buy water at a relatively high price (UNDP, 2006). Thirdly, there is a relatively weak correlation between income and water consumption (Fay and Morrison, 2007). Evidence from the water industry in Latin America suggests that subsistence blocks were often set too high, while tariffs were not sufficiently progressive, suggesting that the subsidies were not well targeted.[26] In 2001, the Government of Chile started to provide a "water stamps" scheme to allow low-income residents to recover part of their water fees (Castro, 2006).

Another example of a subsidy is "take or pay" clauses, which involves a commitment on the part of the government to ensure revenue streams for the investors by making up the difference between user demand and previously agreed company revenues. Such subsidies are generally funded through taxes. The risk is again that the subsidy could become a disincentive for companies to produce efficiently. A third form involves providing consumers with financial support for infrastructure use (World Bank, 1997: 37).

As is often the case, there is no one-size-fits-all solution: the approach has to be adapted to the specific circumstances. Regardless of the form of subsidy employed, however, governments may seek to apply certain criteria to determine the appropriateness and success of different subsidies (Irwin et al., 1997; Kerf et al., 1998; World Bank, 1997). First, the subsidy should benefit the segment of the population that is targeted. Secondly, it should ensure that the infrastructure service becomes affordable to the user. Thirdly, it should not distort the use of the service or create inefficiencies in service provision. Fourthly, it should not undermine competition. Fifthly, it should be transparently awarded and measurable in financial terms. Finally, the transaction costs of implementing the subsidy and the costs to the economy at large from funding the subsidy should be minimized.

C. International investment agreements and investment disputes

1. The role of international investment agreements

While national legislation and investment contracts between a host country and the foreign investor are the principal legal foundation for TNC participation in infrastructure investments, international investment agreements (IIAs) can add an important component to this relationship. By concluding IIAs – such as bilateral investment treaties (BITs), regional, sectoral, plurilateral or multilateral investment-related treaties, or economic cooperation agreements that include investment provisions – contracting parties may agree to refrain from taking certain measures detrimental to the investment, such as "unfair" treatment, discrimination, expropriation without compensation, or transfer restrictions. While such protection can be particularly important for infrastructure investment, it can also be sensitive from the host country point of view. This has been highlighted by the more than 90 known treaty-based investor-State disputes related to infrastructure projects (section V.C.2).

The socially sensitive nature of infrastructure, the huge costs involved, and its strategic importance for the economic development of a host country make the sector more prone to State involvement than most other economic activities. Host countries typically have to exercise their regulatory powers during the preparation, implementation and operation phase of the investment. Consequently, governments need to ensure that the IIAs they enter into leave them with sufficient autonomy to regulate infrastructure projects in the public interest. However, this objective may be at odds with the goal of foreign investors to obtain maximum protection against changes in government policies and regulations. Striking the "right" balance in IIAs between these diverging interests thus becomes a key challenge. Here, special attention is given to the role of IIAs in terms of influencing the entry and treatment of foreign investors in infrastructure.

The first area in which IIAs may limit a government's regulatory power is with regard to the *entry* of foreign investors. In general, IIAs do not reduce the sovereign right of a host country to admit or reject foreign investment in infrastructure in its territory. If a country does not wish the involvement of foreign investors in some or all of its infrastructure industries, or in a particular project, IIAs generally do not pose an obstacle. A few agreements, however, include binding obligations concerning the pre-establishment phase (box V.6). But even IIAs that grant foreign investors non-discriminatory treatment with regard to their establishment in a host country generally contain reservations relating to investment in infrastructure.[27]

A special area to consider relates to national security concerns mentioned above (section V.B). Several governments have taken action to prevent foreign takeovers of domestic infrastructure companies where such companies are considered to be of strategic importance for the country, or they have forced foreign investors to disinvest. In the latter case, government action may amount to an expropriation, in which case the host country has to pay compensation according to the expropriation provision of the relevant IIA. There is an issue as to whether a host country can be exempt from this obligation if the IIA includes a "national security exception". Such exceptions usually allow contracting parties to take any measures they consider necessary to protect their essential security interests, provided there is no arbitrary discrimination or a disguised investment restriction. A host country may argue that domestic control over a strategic infrastructure project is required for national security reasons. If such a clause is drafted in a "self-judging" manner it can give host countries considerable discretion in assessing whether a foreign investment in infrastructure poses a threat to national security.[28]

The second main area in which IIAs may limit a host country's sovereign regulatory power is in the *treatment* of established investors. Most IIAs provide protection at least against discrimination, unfair treatment, expropriation, transfer restrictions and often also against breaches of other commitments that a host country has made. Any one of these provisions is potentially important for infrastructure investments,

Box V.6. Establishment rights in IIAs

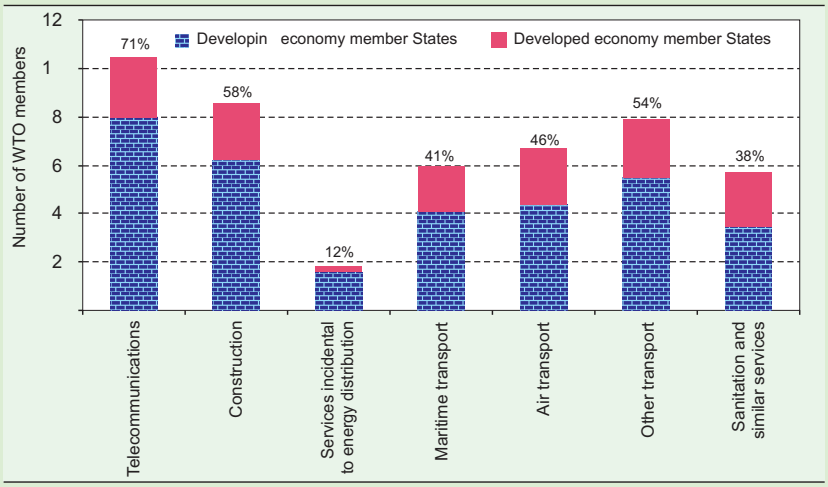
The most common approach in IIAs covering the pre-establishment phase is that foreign investors may claim non-discriminatory treatment (i.e. national treatment and most-favoured-nation treatment) concerning their establishment in a host country. However, this right may be subject to reservations concerning specific sectors, which ensure that foreign investors can make investments, including in infrastructure, only to the extent desired by the host country. Examples of IIAs that cover the pre-establishment phase include NAFTA, the Framework Agreement on the ASEAN Investment Area, the Colonia Protocol for the Promotion and Reciprocal Protection of Investments within MERCOSUR,[a] and BITs of Canada, Japan and the United States. These IIAs have adopted a "top-down" liberalization approach, identifying those industries that are not open to foreign investment.

A multilateral agreement that deals with pre-establishment rights in infrastructure services is the WTO General Agreement on Trade in Services (GATS). Its approach to scheduling commitments on national treatment and market access is based on a positive determination of sectors (and modes of supply) in which liberalization commitments are scheduled, combined with a negative list of non-conforming measures. The GATS method is "bottom-up" (i.e. limiting liberalization to those industries and activities where contracting parties have made a positive commitment). The extent to which countries have made liberalization commitments under the GATS concerning mode 3 (service supply through commercial presence in the territory of any other member) varies greatly by industry. Among the industries included in box figure V.6.1, telecommunications is the industry in which the most (71%) WTO members have scheduled commitments, while energy distribution has the lowest share (12%). In the case of water distribution, however, no country has scheduled any commitment.

A more ambitious approach has been adopted by the EU. The EU Treaty provides for an absolute right of establishment (i.e. not only non-discriminatory treatment), which may only be denied on grounds of public order. An important question in this context is whether foreign investment in infrastructure considered by the host country to be strategically important could be rejected for public security reasons. The European Court of Justice interprets this derogation narrowly and requires that there be "a genuine and sufficiently serious threat to a fundamental interest of society".[b]

Box figure V.6.1. Infrastructure-related sectoral patterns of commitments in the GATS

(Number of WTO members with at least one commitment in the relevant industry; and percentage of members with commitments in the sector)



Source: UNCTAD, based on Adlung and Roy, 2005.
Note: In this figure, developing economy member States include member States with economies in transition.

Source: UNCTAD.

[a] The Colonia Protocol for the Promotion and Reciprocal Protection of Investments within MERCOSUR has not yet entered into force.

[b] See Case C-483/99 Commission v. France [2002] ECR I-4781, para. 48; see also Case C-503/99 Commission v. Belgium [2002] ECR I-4809, para. 47; Case C-463/00 Commission v. Spain [2003] ECR I-4581, para. 72; Case C-207/07 Commission v. Spain [2008] Judgment of 17 July 2008, para. 47.

and many of them have received particular attention in recent disputes related to infrastructure investment (section V.C.2). These are reviewed below.

Many IIAs contain a provision requiring contracting parties to grant investors of the other contracting party *fair and equitable treatment*. Originally perceived as a minimum standard of treatment that protects foreign investors against "outrageous" or "bad faith" actions of the host country,[29] it has gradually evolved into a more demanding code of behaviour for States. Arbitration tribunals nowadays increasingly focus on whether the measures of the host country have violated the "legitimate expectations" of the foreign investor (section V.C.2). A host country needs to know how free it is to impose regulatory changes that are potentially inconsistent with the legitimate expectations of investors if it concludes an IIA that obliges it to grant foreign investors fair and equitable treatment.

Most IIAs include an obligation requiring contracting parties to grant established investors in

their territory *national treatment* and *most-favoured-nation treatment*. With regard to infrastructure, this provision may imply, for example, that a host country must not treat foreign investors less favourably than competing SOEs or foreign investors from other countries. Privileges reserved for SOEs, such as those related to funding, could contradict an IIA that has a national treatment provision. Also, contracting parties may have to ensure non-discriminatory treatment in relation to access to infrastructure networks.

Recent re-nationalizations (box V.3) in the area of infrastructure have brought the *expropriation* article in IIAs back into the limelight. To the extent that host countries are bound by IIAs concluded with home countries of the foreign investors concerned, they could be obliged to pay compensation in accordance with the expropriation article in the agreement if they decide to expropriate the assets of a foreign investor or nationalize an entire industry. The expropriation provisions in IIAs could also become relevant in case of nullification or substantial alteration by the host country of existing contracts with a foreign investor.

More generally, host countries are confronted with the risk that changes in their laws and regulations in respect of foreign investment in infrastructure amounts to a regulatory taking for which compensation needs to be paid.[30] Such taking would occur if, as a result of the regulatory measure, the investment is no longer economically viable, although the ownership status of the foreign investor remains formally untouched. More than in other industries, there may be instances where foreign investors in infrastructure claim that regulatory actions of a host country constitute an indirect expropriation. The problem is accentuated by the fact that many developing countries are still in the process of establishing and completing infrastructure-related laws and regulations. Other developing countries have started to re-evaluate their previous privatization policies and are considering corrective measures.

Another important provision is the "*umbrella clause*" (or "respect clause"). Numerous IIAs include a commitment of the contracting parties to respect any other obligation that they have assumed with regard to investments of investors of the other contracting party. This provision covers host country obligations deriving from investment contracts – common in infrastructure – with foreign investors.

2. Infrastructure-related investment disputes

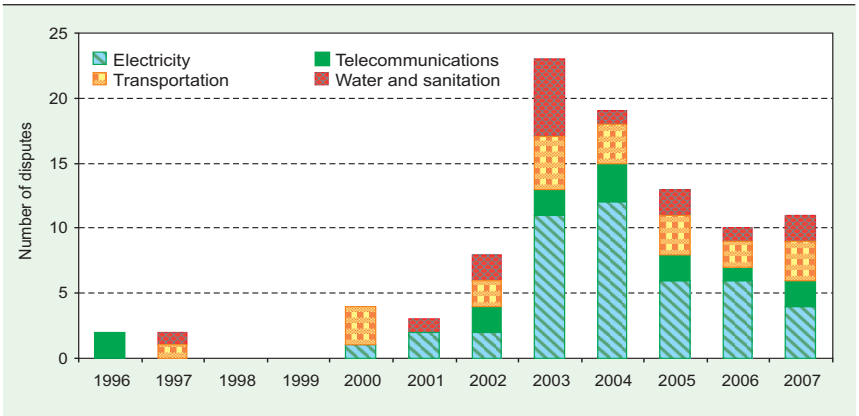
a. Many investment disputes are related to infrastructure

At the end of 2007, 95 disputes – or about one third of the cumulative number of known treaty-based disputes – were related to electricity, transportation, telecommunication, water and sanitation (figure V.3).[31] Until the end of 2002, the number of new infrastructure disputes per year had been in the single digits. In 2003, as many as 23 disputes were recorded, mainly linked to electricity and water. Since then, the annual number of new disputes has fallen, but never below 10.[32]

At least 41 governments – 25 of them in the developing world, 12 in developed countries and 4 in transition economies – have faced investment treaty arbitration in one or more of these industries. Argentina tops the list with 26 claims lodged against it. Other countries with multiple known claims include India (9), Turkey (6), Hungary (5), Ecuador (4), Poland (3) and the Czech Republic (2). In terms of industry distribution, the largest number of known disputes relates to electricity (44), followed by transportation (21), water and sanitation (16) and telecommunications (14) (figure V.3).

Circumstances and the main substantive issues of infrastructure investment disputes vary by industry. In *water and sanitation*, disputes relate to investment in water distribution and sewage services as well as to the construction of dams. Investors have brought claims alleging violations of treaty obligations based on, for example, interferences with the tariff regime of the underlying water services concession (box

Figure V.3. Number of known infrastructure-related investment disputes, 1996–2007
(Annual new cases)



Source: UNCTAD, based on information from UNCTAD's Investor-State Disputes database (www.unctad.org/iia).

V.7),[33] lack of security and termination of concession agreements.[34]

In *telecommunications*, disputes have arisen with regard to both mobile and fixed telecommunications. Investors have brought claims against States alleging violations of treaty obligations based, for example, on failure to abide by a cooperation agreement entered into with the investor aimed at securing a mobile phone licence,[35] imposing on the foreign mobile provider the subsidization of fixed-line operators (box V.8), dispossession and loss of control of the investment in the national telecommunications company,[36] termination of a contract to operate a mobile phone network,[37] and expropriation and nationalization.[38]

In *transportation*, disputes have been recorded with regard to investments in the construction of highways, roads, bridges, tunnels, airport terminals, waterways and railways, as well as in the operation of port terminals, airport terminals, toll highways and railway networks.[39] Investors have brought claims alleging violations of treaty obligations based, for example, on deception and misrepresentation in connection with the investment contract,[40] delays in handing over the land,[41] non-payment of construction bills,[42] discriminatory treatment,[43] interference in setting the toll fees to be charged on the highway,[44] termination of the investment contract,[45] annulment of the investment contract (box V.9), and expropriation.[46]

In *electricity*, disputes have arisen with regard to investment in electricity generation (including construction and operation of power plants) and distribution. Investors have brought claims alleging violations of treaty obligations based, for example, on the conduct of the host State in the following areas: unsuccessful conclusion of the investment contract,[47] failure to turn over the land,[48] discriminatory treatment,[49] interference with the tariff regime,[50] revocation of the operating permit,[51] non-payment for delivered electricity,[52] failure to enforce electricity rate and prevent electricity theft,[53] termination of the contract and expropriation.[54]

b. Recent arbitral decisions on core IIA provisions

At the end of 2007, of the 95 known treaty-based disputes in infrastructure investment, 38 had been concluded either through settlement (20) or a final decision of the arbitration tribunal (18). Thus, the majority of the known disputes remained pending (57). Whereas almost 30% of the disputes in electricity had been settled, none of the disputes in water and sanitation sectors had reached a conclusion through settlement at the time of writing this report.

Box V.7. Vivendi v. Argentina

In May 1995, Compagnie Générale des Eaux (France) (later Vivendi Universal) along with two Argentine construction companies and a Spanish firm purchased a 90% shareholding in Compañía de Aguas del Aconquija S.A. (CAA), an Argentinean company which had been awarded a 30-year concession agreement with the Argentine Province of Tucumán for the provision of water and sewage services. In accordance with the agreement, CAA had to make substantial investments to improve service quality. The contract entailed refurbishing the chlorination system, arranging the cleaning of the drinking water system, leasing buildings and purchasing supplies and new equipment.

Soon after the concession had been taken over, the newly elected Government expressed its discontent with a tariff increase. The legislature of the Province recommended that the Governor impose unilaterally a temporary tariff reduction. Furthermore, following two episodes of turbidity in the drinking water, the Provincial Government – supported by the Federal Government – and CAA commenced negotiations to reorganize both parties' obligations in the concession contract. Finally, unable to reach a positive outcome CAA gave notice of its termination of the contract in August 1997.

In the same year, the investors initiated ICSID proceedings claiming that (i) the investment had been expropriated without compensation and (ii) the action of the Province was in violation of the "fair and equitable treatment" standard under the Argentina-France BIT. About $317 million plus interest was sought in damages.

In its defence, Argentina argued that the case involved exclusively contractual matters (i.e. disputes arising under the concession agreement) over which the Tribunal had no jurisdiction. Furthermore, it argued that, faced with the claimants' material breaches of the concession agreement, the Province had the right and the responsibility to take the requisite steps to ensure the availability of safe drinking water for its population on an affordable and accessible basis.

After one of the longest running disputes at ICSID, a tribunal found Argentina to be liable for violating the Argentina-France BIT (*inter alia* by expropriating a water and sewage concession) and ordered it to pay $105 million in compensation. The decision is currently under discussion before an annulment committee.

Source: UNCTAD, based on ICSID Case No. ARB/97/3. *Compañía de Aguas del Aconquija S.A. and Vivendi Universal v. Argentine Republic,* (Argentina/France BIT), Award of 20 August 2007.

Box V.8. Telenor v. Hungary

Pannon GSM Telecommunications Rt, an affiliate of Telenor (Norway), provides mobile services in Hungary. Among various regulatory initiatives taken by Hungary between 2001 and 2003 to bring its telecommunications regime in line with EU norms, the country introduced a "universal service" programme. It stipulated that all telecommunications providers would pay a small portion of their revenue into a central fund that would be used to compensate fixed-line service providers for providing below-cost telephone access to individuals in poor or rural areas.

In 2003, Telenor initiated ICSID arbitration alleging that the programme constituted expropriation in violation of the Hungary-Norway BIT, as it required mobile operators to subsidize services provided by fixed-line operators at the State's request. Telenor also alleged that the programme violated the treaty guarantee of fair and equitable treatment. The company sought damages of up to $152 million.

In its defence, the respondent argued that it was in the nature of regulation that it involved some sort of wealth deprivation and that Telenor's contention according to which any form of interference with the investor's property or diminution of its value constitutes expropriation would be out of line with expropriation jurisprudence. Accordingly, in the respondent's view, the Tribunal lacked jurisdiction as the BIT permitted arbitration only with regard to claims of expropriation.

In September 2006, the ICSID tribunal rejected the claims, as the Hungary-Norway BIT provided for arbitration only with regard to expropriation. The measures at issue were found to fall short of a substantial economic deprivation of the investment required to constitute expropriation.

Source: UNCTAD, based on ICSID Case No. ARB/04/15 *Telenor Mobile Communications A.S. v. Republic of Hungary* (Hungary/Norway BIT), Award of 13 September 2006.

Most arbitral decisions (at least in known cases) are eventually made public, though the terms of settlement are invariably confidential.[55] With regard to their outcome, 7 arbitral decisions accepted the investor's claim, at least in part, while the remaining 11 were rejected either for lack of jurisdiction or on the merits.

Regarding the infrastructure investment disputes that have been concluded with an award of an international tribunal (either accepting or rejecting the investor's claim) and for which information is available, out of a total of $6.16 billion in claimed damages, tribunals have awarded $649.3 million. This corresponds to little more than 10% of the total damages claimed, or 25% of the amounts claimed in the nine disputes in which damages were awarded (see annex table A.V.1).[56] The large majority of arbitral decisions have addressed one or more of the following investment protection standards: fair and equitable treatment, expropriation and the umbrella clause. Some observations on recent decisions are made below.[57]

(i) Fair and equitable treatment

Several infrastructure-related investment disputes are based on alleged violation of the fair and equitable treatment (FET) standard. For host countries involved in such disputes, it is worth noting that recent arbitration practice has tended to interpret this principle in a relatively broad manner. Accordingly, the applicability of the FET standard is not limited to conduct attributable to the host State aimed at undermining the investment.[58] Rather, recent awards emphasize the importance of protecting the investor's legitimate expectations with regard to the maintenance of a stable and predictable legal and business framework.[59] In *Parkerings-Compagniet AS v. Lithuania*,[60] the tribunal specified certain criteria for determining the legitimacy of the investor's expectations in the stability of the legal system.[61] A clarification of the scope of "legitimate expectations" is crucial for preserving each State's right to exercise its regulatory power in the area of infrastructure. However, arbitral case law is still evolving and it remains unclear to what extent future arbitration awards will follow the reasoning in the *Parkerings-Compagniet* dispute. Furthermore, certain tribunals have considered the effect of the investor's conduct when determining whether the FET standard had been infringed. This has been done where investor conduct is deemed relevant in determining the nature of the respondent State's actions, or where the actual cause of the loss to the investor is an issue.[62]

(ii) Expropriation

The issue of *direct* expropriation was dealt with in, for example, *ADC v. Hungary*. In this case, the tribunal found that the Government's actions in taking over the investor's activities concerning the operation of two terminals at Budapest airport did not comply with the requirements of a lawful expropriation under the IIA.[63] A more controversial issue, particularly for infrastructure investments, is under what conditions regulatory activity of a host State amounts to an *indirect* expropriation. Investment tribunals have focused on balancing two competing interests: the degree of the regulation's interference with the right of ownership, and the power of the State to adopt

Box V.9. Fraport v. the Philippines

In 1999, Fraport AG (Frankfurt Airport Services Worldwide) initiated a series of direct and indirect investments in PIATCO, a company in the Philippines that held a concession to construct and operate an international terminal at Manila airport. Over time, the Terminal 3 concession became the subject of domestic discontent and was also at the centre of a legal controversy, as the legality of the concession and related agreements came under review for alleged fraud.

In 2002, the administration of President Macapagal-Arroyo sought unsuccessfully to renegotiate the concession, which had been agreed to by a previous administration. Subsequently, the Philippines Supreme Court declared the concession and related contracts null and void since (a) the original concessionaire had not been properly pre-qualified as financially able to undertake the contract and (b) the concession agreement was entirely different from the draft concession agreement that had been tendered, resulting in greater financial advantages to the concessionaire.

In 2003, Fraport sought ICSID arbitration against the Philippines alleging violation of the Germany-Philippines BIT and seeking $450 million in damages. The respondent argued that the tribunal lacked jurisdiction in this arbitration, as the protections afforded by the BIT (including consent to jurisdiction) did not extend to investments made in violation of Philippine law. In the respondent's view, the duty to comply with the host State's law is an ongoing one which must be respected throughout the period in which the investment is made. According to the respondent, the investor openly sought to evade the nationality requirement under Philippine law limiting foreign ownership of the capital of a public utility to 40% through the device of "indirect" ownership coupled with secret shareholder agreements. On the other hand, the investor's central position on jurisdiction was that its investment, which allegedly totalled more than $425 million, was made in accordance with Philippine law, with the result that the investment must be deemed accepted under the BIT.

The majority of the tribunal members in August 2007 held that the tribunal had no jurisdiction over the claim. It concluded that Fraport had not made an "investment" in accordance with Philippine law that was required to enjoy protection under the BIT. In January 2008, Fraport initiated an annulment proceeding with ICSID.

Source: UNCTAD, based on ICSID Case No. ARB/03/25, *Fraport AG Frankfurt Airport Services Worldwide v. Republic of the Philippines* (Germany/Philippines BIT), Award of 16 August 2007.

its policies. In evaluating the degree to which the government's actions interfere with an investment, tribunals have highlighted the importance of the economic impact of the action (i.e. whether there was an effective change of control or ownership of the investment and/or interference with the investor's reasonable expectations) and its duration.

Another issue of particular relevance for infrastructure-related investments is linked to the expropriation of contractual rights. The difficulty here lies in distinguishing between an ordinary breach of contract and the expropriation of contractual rights. For the latter, investment tribunals require that (a) the host State has acted in its sovereign capacity and (b) the breach of the contract has given rise to a substantial decrease in the value of the investment. For example, in *Vivendi v. Argentina*,[64] the tribunal concluded that the claimants' concession rights had been expropriated because the conduct of the Argentinean Province constituted "sovereign acts designed illegitimately to end the concession or to force its renegotiation" which "struck at the economic heart of, and crippled, Claimants' investment".[65]

(iii) Umbrella clause

An issue brought several times before arbitration tribunals is whether the umbrella clause protects against breach by the host State of any kind of obligation it has entered into vis-à-vis a foreign investor (e.g. a commercial contract), or whether such protection is limited to obligations entered into by the host State in its capacity as a sovereign (e.g. a concession agreement). This distinction can have huge implications for the host country. For example, under a broad interpretation of the umbrella clause, a "mere" dispute about the agreed quantity of electricity to be purchased by the host State from the investor could give rise to treaty-based arbitration. A narrow understanding would exclude arbitration in this case, unless the purchase commitment was included, for example, in a concession agreement. Arbitration tribunals have taken different stances on this issue. While the tribunal in *LESI-DIPENTA v. Algeria* opted for a broad interpretation,[66] the one in *El Paso v. Argentina* excluded ordinary commercial contracts from the scope of the umbrella clause.[67]

Another question of considerable relevance for host countries is whether the umbrella clause applies only to cases where the claimant investor and the host country itself, rather than an agency or subdivision, are parties to the contract that the umbrella clause seeks to protect. The tribunal in *Azurix v. Argentina* required the parties to the underlying contract and the parties that had agreed upon the umbrella clause to be the same.[68] By contrast, the tribunal in *El Paso v. Argentina* appears to have affirmed that the

obligations of the State on which the umbrella clause confers protection potentially include obligations entered into by State entities or subdivisions for whose conduct the State would be responsible at the international level.[69] As a result of these contradictory awards, there is still a high degree of uncertainty as to the precise scope and effect of umbrella clauses. This is only partly attributable to variations in IIAs.[70]

3. Conclusions and implications

A review of recent arbitration decisions shows that many investor-State disputes have arisen in all the main infrastructure industries, and relate to a wide range of issues. It also shows that less than half of the awards rendered have favoured the claimant, and that damages awarded have been considerably smaller than the total initial claims made by investors. The fact that more than 90 known disputes have arisen in infrastructure shows that concluding IIAs (and the coexistence of IIAs and State contracts) can have significant implications for host States. At the same time, the number of disputes should be considered in the context of the existence of several thousand IIAs and the huge number of investment projects in infrastructure. In addition, many renegotiations of investment contracts in infrastructure never reach the arbitration stage.

The disputes have provoked debate over the implications of IIAs, and especially BITs. As noted above, most known disputes related to infrastructure have relied on clauses in BITs, in particular the principle of fair and equitable treatment, the umbrella clause and the expropriation article. Governments have entered into such treaties with a view to attracting more foreign investment by way of offering better protection for the rights of foreign investors. However, there is some concern that improved protection and certainty for foreign investors has come at the price of too much of a reduction in the government's regulatory flexibility. Some experts further argue that the possibility of investor-State arbitration may discourage States from adopting public welfare regulations in the interests of their citizens (Solanes and Jouravlev, 2007: 12).

Other observers question whether IIAs have been, and ever will be, able to provide the protection they were originally intended to offer investors. TNCs that have seen their cases dismissed, or received damages far below what they had claimed, have found that the protection offered through the BITs was less comprehensive than expected, and many of them have expressed disappointment with the role played by international institutions (Ontiveros, Conthe and Nogueira, 2004).

One major issue is where to draw the line between the two international law principles of *"pacta sunt servanda"* (sanctity of treaties) and "*clausula rebus sic stantibus*" (which allows for the termination or adaptation of an investment contract in case of a fundamental change of circumstances). A common criticism is that tribunals pay too little attention to changes in the circumstances of host countries. It has been observed that "Arbitrators sitting on investor-State panels have often focused on the rights of the foreign investors" (Solanes and Jouravlev, 2007: 8), leaving countries without "guarantees that their legitimate public interest concerns, public policies, and regulations will be considered or taken into account, including issues associated to [sic] human rights" (Ibid: 72; Kriebaum, 2007). In this regard, it may be asked whether the absolute language used in many IIAs, which requires host countries – in all cases – to respect any obligation they have entered into with an investor, would need some refinement to reflect situations where host-country governments have a legitimate reason to demand an alteration of the contractual terms. To this end, IIAs might expressly recognize the right of the host country to deviate from such obligations under specific circumstances.

In case of a dispute, a tribunal would need to consider not only the behaviour of the host government, but also the conduct of the investor. Conduct to be taken into account could, for example, include situations where the investor does not carry out due diligence in assessing the feasibility of the project, or is negligent in the implementation of the investments but then blames the commercial loss on governmental action.[71] Taking the investor conduct into account could lead to a more balanced appraisal of the facts of a dispute and of whether the IIA has indeed been breached. It could also result in lower damages if the investor's conduct can be shown to have significantly contributed to the loss.

Problems of interpretation may be accentuated by the vague language that most IIAs use in connection with the key provisions of relevance to infrastructure investment discussed above. Ambiguous text and its interpretation by arbitration tribunals can result in unexpected rulings for governments and other parties involved. Host countries concerned about these developments might therefore wish to add some clarification concerning the meaning of these treaty standards in an IIA.[72] On the other hand, there is a risk of the intended elucidation becoming counterproductive by further complicating the content of the IIA. In addition, some awards from investor-State arbitrations have been inconsistent or contradictory, raising further uncertainty about the implications of entering into IIAs. While this can be

seen as a normal development until a more consistent case law develops, it remains a pertinent matter.

Another important issue is that investor-State arbitration, in general, lacks the degree of accountability and transparency mechanisms typically available in domestic courts, such as public records of proceedings, public access to the pleadings, neutral rosters of the judges and the right to appeal (Solanes and Jouravlev, 2007). While ICSID awards are usually made public, a call for more transparency in infrastructure disputes involving the public interest is justified as long as it does not affect the legitimate interests of the disputing parties to protect confidential information and does not place an excessive burden on them (UNCTAD, 2007j). Otherwise, there is a risk of disputing parties shying away from transparency-promoting forms of arbitration and seeking more discreet ways of dispute resolution.

A further key issue concerns the arbitrators. The fact that – contrary to the situation in the WTO – no appeals mechanism is currently available in international investment disputes, gives the arbitrators deciding a case a very powerful role. Choosing the "right" arbitrator therefore becomes a crucial task for the claimant and the defendant host country.

Given the problems mentioned above concerning balanced, clear and consistent treaty interpretation and procedural effectiveness, some experts have advocated that greater efforts be made to seek amicable solutions as opposed to arbitration (see e.g. Wells and Ahmed, 2007). Even if a host country is accused of having violated a clause in an IIA, it does not necessarily follow that it will be drawn before an arbitration tribunal. In light of the high sunk costs involved in most infrastructure investments and the frequent lack of adequate alternative investment locations, foreign investors might well prefer to seek an amicable solution with the host country, which allows them to continue their business under changed conditions. They could resort to alternative dispute resolution mechanisms such as mediation and conciliation (UNCTAD, forthcoming d). However, much depends on the circumstances of each case. From the host country's point of view, an important consideration is whether its authorities have sufficient regulatory discretion to negotiate an amicable settlement with the investor. The readiness of an investor to seek a mediated solution of the conflict will largely depend on the frequency and gravity of the alleged treaty violation, and whether it can afford to lose time in case that mediation fails. Neither party is likely to be keen to involve a conciliator or mediator if it is convinced that it will prevail in the dispute. Furthermore, alternative dispute resolution may not be in the interest of those who advocate more transparency in investment disputes.

The complexity of these issues, together with the dynamic evolution of IIAs and the related international case law, underline the importance of capacity-building to ensure that developing-country governments understand the implications of concluding such agreements, and are equipped to handle potential investment disputes. UNCTAD contributes to such capacity-building through policy analysis of IIA-related issues and various forms of technical assistance.

D. The role of home countries and international institutions

Given the enormous needs for more infrastructure investment, it is important to consider how home countries and the international community could facilitate more foreign investments in the developing countries that seek such inflows. This is particularly relevant from the perspective of low-income countries, which generally have failed to attract significant TNC involvement in infrastructure development (chapter III). Various home country and international measures have been developed and represent important complements to those implemented by host countries, but more efforts are required.

Four types of interventions are discussed below. The first group of measures relates to official development assistance (ODA) for infrastructure projects, notably in low-income countries. A second set of measures seeks to mitigate non-commercial risks, in particular, that are inherent to infrastructure projects, and especially in countries with weak institutional capabilities. The third type of measures is geared specifically towards strengthening the institutional capabilities of developing countries in the area of infrastructure. The final group of measures seeks to promote the development of cross-border infrastructure projects that can facilitate regional integration.

1. Making better use of official development assistance

As documented in preceding chapters, without subsidies of some form, it is very difficult to attract TNC involvement in many infrastructure projects in economies, communities and industry segments that are characterized by weak purchasing power and poor records of payment. In these cases, multilateral and bilateral development finance institutions can act as catalytic financiers. In industries such as electricity,

water and transport, in particular, there is significant potential for synergies between foreign investment and ODA (UNCTAD, 2008g). By making more funds available, development partners and the home countries of the investing firms could play a significant role in helping to "crowd in" foreign investment into infrastructure projects in developing countries. This is particularly important for addressing the needs of the LDCs and other low-income countries. Furthermore, when allocating aid resources, it is important that increases in ODA for social infrastructure are not made at the expense of ODA for investments in economic infrastructure (UNCTAD, 2008h).

The need for increased international support to infrastructure development in general has been recognized in various forums in recent years, and development partners have pledged significant increases in aid to support such projects, not least with a view to helping meet the MDGs. For example, the report of the Commission for Africa (2005) to the G-8 Gleneagles Summit in 2005 called for additional assistance of $10 billion per annum to meet Africa's infrastructure needs by 2010. More recent assessments suggest even higher levels are needed (chapter III).

Some recent trends are encouraging. Between 2002 and 2006, bilateral and multilateral donor commitments to infrastructure (communications, energy, transport and storage, and water supply and sanitation), as reported by the OECD, almost doubled: from $9 billion to $17 billion (annex table A.V.2).[73] Moreover in 2007, bilateral and multilateral agency members of the Infrastructure Consortium for Africa (ICA) committed ODA and non-concessional lending amounting to $12.4 billion (box V.10) for various infrastructure projects – a 61% increase over the $7.5 billion committed the previous year. Despite such positive trends, current levels of support have not recovered from the earlier period of decline in lending by multilateral institutions. For example, World Bank lending to energy and mining averaged more than $3 billion during the period 1990–1998, but this figure fell to just over $1 billion during 2002–2004. Although it has recovered more recently, it was still only a little over $2 billion in the period 2005–2007 (Besant Jones, 2007).

Some new development partners – particularly China – have also become active in infrastructure, notably in natural-resource-rich countries in Africa (chapter III).[74] The Government of China supports such investments by providing bilateral aid in terms of grants, and interest-free and concessional loans. China EXIM Bank, the sole provider of Chinese concessional financing, had financed over 300 projects in Africa by mid-2007, representing almost 40% of its total loans (Davies et al., 2008: 3). The Bank's lending practices of providing concessional loans mostly to infrastructure development are often linked to China's foreign aid policy. The China Development Bank provides financing on commercial terms. In May 2007, it was designated to manage a $5 billion China-Africa Development Fund (Ibid: 3). Loans by State-owned Chinese banks are linked to the contracting of Chinese SOEs. Indeed, Chinese TNCs are sometimes involved in bids that other development partners would deem to be too costly but that are strategically important for the Government of China (Corkin and Burke, 2006: 7; chapter III).

Moreover, while development partners have failed to honour their pledged commitments in recent years to scale up infrastructure investments in low-

Box V.10. The Infrastructure Consortium for Africa

The Infrastructure Consortium for Africa (ICA) was established in 2005. Its members include bilateral aid agencies from the G-8 countries, as well as the European Commission, the European Investment Bank, the World Bank Group, the African Development Bank Group and the Development Bank of Southern Africa (DBSA). It is intended to improve the effectiveness of assistance by its members in supporting infrastructure development in Africa through the sharing of information, project development and good practices. Although not a financing agency, the Consortium is intended to act as a platform to broker more donor financing of infrastructure projects and programmes, especially those related to projects with private sector participation in Africa.

ICA seeks to address both national and regional constraints on infrastructure development, with an emphasis on regional infrastructure, recognizing the particular challenges at this level. However, it also engages in efforts at the country level, since regional infrastructure projects generally also affect national budgets and raise various implementation and harmonization issues. A key role of ICA is to ensure a larger and more effective response to Africa's infrastructure needs, including greater attention to national poverty reduction and other development strategies. ICA will also seek to provide better information on who is doing what, where and with what money, so as to identify gaps. Capacity-building is also on the agenda, as rationalization and expansion of existing capacity-building efforts could help increase aid effectiveness. In addition, ICA recognizes the need for better monitoring of actions and outcomes.

Coordination with China is a growing area of activity of the Consortium. At the Annual Meeting of the African Development Bank in Mozambique in 2008, an agreement was signed with China EXIM Bank for greater information-sharing and possible joint funding of projects in the future.

Source: UNCTAD, based on information from the ICA (www.icafrica.org).

income countries, funds that are available are not being fully disbursed. One study found that the World Bank and the regional development banks at the end of 2004 had unused funds amounting to more than $200 billion (WEF, 2006: 8). Recent assessments further show that development finance institutions have very high liquidity at present (Te Velde and Warner, 2007).[75] Among possible reasons for this "infrastructure paradox" are skills shortages, lack of government capacity to prepare bankable projects, and a mismatch between the requirements of development partners and the priorities of recipient countries.

Efforts are needed to ensure that existing funds for infrastructure investment are better utilized. Risk-mitigation, capacity-building and regional cooperation are discussed in the next three sections. There is also need for greater collaboration and cooperation among the development partners. For example, the ICA was established in 2005 to accelerate progress towards meeting the urgent infrastructure needs of Africa (box V.10). While some observers have expressed concern that greater donor coordination could imply reduced policy space and weaken the bargaining power of recipient countries (Bull, Jerve and Sigvaldsen, 2006; UNCTAD, 2008i), collaboration among development partners in the preparation and delivery of projects would be beneficial.

A number of innovative initiatives have been taken in recent years in response to the need for more infrastructure investment in rural communities. Output-based aid is a strategy for using explicit performance-based subsidies to support the delivery of basic services where policy concerns would justify public funding to complement or replace user fees (box V.11). At the industry level, the Energy Poverty Action is an illustration of how joint ODA and TNC involvement can bring electricity to rural areas in LDCs, while at the same time empowering local communities (box V.12).

In order to make existing ODA funds more efficient in catalysing private (including TNC) investment, it may be necessary to give greater attention to certain risk-mitigating policy instruments (discussed in the next section; and WEF, 2006). Some experts are also suggesting that development finance institutions have to become more willing to take risks in order to make their investment and lending practices more complementary to those of commercial market players, and to enhance the share of their financing to LDCs (Te Velde and Warner, 2007; WEF, 2006: 11–12).

2. Risk-mitigating measures

Given the special nature of infrastructure projects (chapter III), various policy tools have been developed to mitigate risks associated with such investments. While host countries can reduce the level of risk by strengthening their institutions and governance frameworks, such efforts take time. Risk-mitigation measures by home countries and by international organizations can therefore be an important complementary step in the short term to mobilize private financing of infrastructure projects in developing and transition economies. They can complement private market insurers that are also important players in providing investment insurance.[76] While infrastructure investors are exposed to many types of commercial and non-commercial risks, special attention is given here to measures aimed at mitigating three broad types: political risk (including sub-sovereign and contractual and regulatory risks), credit risk and exchange-rate risk.

Box V.11. The Global Partnership on Output-Based Aid

Output-based aid (OBA) aims at increasing access to basic services, including infrastructure, for the poor in developing countries. It links the payment of aid to the delivery of specific services or "outputs", such as the connection of poor households to electricity grids or water and sanitation systems. Under an OBA scheme, service delivery is contracted out to a third party, usually a private firm, which receives a subsidy to complement or replace user fees. The subsidy should explicitly target the poor and be performance-based, meaning that most of it is paid only after the services or outputs have been delivered and verified by an independent agent.

In 2003, the Global Partnership on Output-Based Aid (GPOBA) was created. It is a partnership of donors and international organizations aimed at improving service delivery to the poor.[a] It provides three types of OBA-related support: technical assistance, dissemination of experiences and best practices, and grants for subsidy funding. The programme covers water, sanitation, electricity, telecommunications, transport, health and education. To date, more than 90 World Bank projects use an OBA approach – more than half of which involve the GPOBA – with a total funding of over $2.2 billion, predominantly in infrastructure. Since April 2007, the GPOBA has signed 19 grant agreements for OBA subsidy funding for a total of $72 million. Over 2.8 million people are expected to benefit from these schemes in both rural and urban areas in 17 countries.

Source: UNCTAD based on information from the GPOBA (www.gpoba.org).

[a] It was established in 2003 by the United Kingdom's Department for International Development (DFID) and the World Bank. Other donors include the International Finance Corporation (IFC) of the World Bank, the bilateral aid agencies of the Netherlands (DGIS), Australia (AusAID) and Sweden (Sida). As of June 2008, donor funding for GPOBA totalled $249 million (including contributions and pledges).

Box V.12. Enhancing rural electrification in Lesotho through the Energy Poverty Action

Among the greatest challenges in meeting the infrastructure gap is to improve access to affordable electricity to rural areas in LDCs. To this end, the Energy Poverty Action (EPA), a joint initiative of the World Business Council for Sustainable Development, the World Energy Council and the World Economic Forum (WEF), has introduced a novel approach. This private sector initiative seeks to use business expertise and best practices to develop innovative, scaleable and replicable energy projects. It was initiated by British Columbia Hydro and Power Authority (Canada), Eskom (South Africa) and Vattenfall (Sweden) at the Annual Meeting of the WEF in Davos in 2005. These corporate partners have signed an EPA Alliance Agreement and have committed to developing an initial project in Lesotho.

An attractive feature of the EPA initiative is its focus on local autonomy (i.e. building the necessary local capacity to empower users to manage, operate and maintain the projects in a sustainable manner). Development finance institutions are to provide funding for the up-front capital investment, but local users will then assume responsibility for all costs associated with ongoing operations and maintenance of the infrastructure thereafter. In 2007, the African Development Bank (AfDB) officially announced its intention to co-finance this project to the value of about $5.4 million. A formal decision by the AfDB Board for the funding is expected in September 2008.

The preparatory work for EPA's first project in Lesotho is well under way. A local user association, the Mphaki Electricity Distribution Association (MEDA), has been set up. MEDA's members – all connected customers – will be responsible for operation and maintenance on a commercial basis. The EPA and the Government of Lesotho have pledged in-kind contribution to the value of about $1.4 million (comprising mainly the provision of expertise) for project development and implementation. The infrastructure will be leased by MEDA from the Government of Lesotho under a long-term contract, and bulk power will be purchased by MEDA from existing suppliers. Some 1,850 customers are expected to be connected through grid extension, using either low voltage connections or solar photovoltaic installations, by December 2009.

An EPA Management Unit hosted by the Development Bank of Southern Africa was set up in September 2007 to manage and promote the initiative. Its mid-term objective is to develop the institutional capacity to act as matchmaker between leading electricity companies, governments, local entrepreneurs and communities, as well as national and international financial institutions and donors, for project financing and execution with a view to addressing the challenges of energy poverty. By seconding specialists to the management unit, the alliance partners will provide skills in support of existing projects and the replication or scaling up of new projects. Their activities will include matchmaking, development of pre-feasibility and bankable feasibility studies, project management, collation and diffusion of best practices, and development and implementation of financing mechanisms.

Source: UNCTAD, based on information from the EPAMU.

a. Coverage for political risk

Political risk insurance (PRI) is important for infrastructure projects, especially in countries with weak institutional and regulatory capabilities. Investors and governments today have a better understanding of how to mitigate political risks, and are forging partnerships that bring together the know-how and financing of the private sector with the regulatory backing of the public sector. Guarantees for investments in infrastructure can help investors obtain the necessary project financing from banks. PRI instruments typically cover war and civil disturbance, expropriation and confiscation, and currency convertibility and transferability. The main public schemes for this classical version of PRIs are operated by bilateral agencies with a mission to promote national exports and overseas investment, such as export-import banks and export credit agencies (Winpenny, 2005; Matsukawa and Habeck, 2007). The Multilateral Investment Guarantee Agency (MIGA) is the largest multilateral investment insurer (box V.13). Another international investment guarantee institution is the Inter-Arab Investment Guarantee Corporation.[77] The Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC) provides export credit and insurance to its member States and reinsurance facilities to member export credit agencies.[78]

The demand for PRI has been shifting towards coverage of risks that arise from the actions or inactions of a host government that adversely influence the operations of private companies (Matsukawa and Habeck, 2007: 5). Cover for breach of contract and for changes in law and licence requirements is more difficult to arrange than classic PRIs, since they are highly project-specific. However, most international financial institutions now offer some form of cover against these risks, with the World Bank's partial risk guarantee (PRG) extending the most comprehensive coverage. MIGA has also introduced a specific breach of contract guarantee (box V.13).

For certain infrastructure projects, countries may benefit from regional cooperation. For example, the African Trade Insurance Agency (ATI) was put in place by the Common Market for Eastern and Southern Africa (COMESA) to provide political risk coverage for trade and investment projects in its member countries.[79] It emerged from a World Bank initiative, which provided $100 million in the form of individual loans to the founding member countries to set up the agency. The ATI is based in Nairobi, Kenya,

and provides insurance cover against both political and non-political risks.[80]

For *sub-sovereign risks*, private monoline insurers can provide so-called wrap guarantees for municipal bonds of sufficiently creditworthy municipalities. Multilateral development banks have traditionally lent to sub-sovereign governments either through or with the guarantee of the relevant sovereign government. The European Bank for Reconstruction and Development (EBRD) and the IFC have created municipal finance units and provide loan and partial credit guarantee support (including local currency) to selected sub-sovereign governments and entities based on their own credit. Other institutions, including the Inter-American Development Bank and MIGA, can provide PRGs and PRI for municipal concession projects (Mistry and Olesen, 2003; Kehew, Matsukawa and Petersen, 2005).

Box V.13. Investment guarantees by the Multilateral Investment Guarantee Agency

The Multilateral Investment Guarantee Agency (MIGA) protects foreign investors against the political risks of expropriation, breach of contract, currency inconvertibility, transfer restrictions and war and civil disturbance, including terrorism. It insures new cross-border investments originating in any member country and destined for any other developing member country.[a] MIGA can provide insurance coverage for up to 15 years (and in some cases 20 years). It also supports investments at the sub-sovereign level, where partners tend to be relatively inexperienced and investments therefore riskier. Coverage for PPPs is another area where MIGA is becoming increasingly active.

MIGA's services have enabled some transactions to materialize that otherwise would not have been possible. For example, a project concerning the development, design, construction, management, operation and maintenance of a new container port terminal in the city of Doraleh, Djibouti, is being developed under a 30-year concession granted by the Government of Djibouti to the main sponsors, DP World (United Arab Emirates) and Port Autonome International (Djibouti) through a joint-venture vehicle, the Doraleh Container Terminal S.A. In 2007, MIGA was approached to provide PRI for this project that was funded through an Islamic financing structure, and issued guarantees totalling $427 million. By adapting its guarantee services to suit an Islamic financing structure, MIGA was able to issue coverage for an investment supported by such a structure for the first time.

Another recent MIGA-supported project illustrates how PRI can help get infrastructure projects off the ground. In 2006 (fiscal year), MIGA provided $108 million in coverage for the development of a toll road in the Dominican Republic. With total project costs estimated at $220 million, the investor, Autopistas del Nordeste (Cayman Islands), contributed $30 million in equity and the Government agreed to another $30 million equity stake. The investor and its financial advisers approached the capital markets for a $162 million bond issue. The credit rating agency Fitch was brought in to rate the transaction. MIGA agreed to provide a partial guarantee of 51% of the bond issue, which allowed Fitch to rate the transaction higher than the sovereign ceiling for the country, resulting in a 40% oversubscription. Thus the political risk guarantees issued by MIGA reduced the cost of capital and played a critical role in securing financing, according to Autopistas del Nordeste, which allowed the company to extend the tenure of the pay-back period.

During 2007 (fiscal year), MIGA issued $494 million in guarantees for 12 infrastructure projects, accounting for 41% of the total gross outstanding portfolio. That share has increased considerably compared with the late 1990s, when it stood at 19%. South-South investments now feature prominently in its infrastructure portfolio,[b] with special attention to infrastructure projects in Africa as well as in low-income countries. Since 1996, MIGA has issued $536 million in guarantees for 16 telecommunications projects in sub-Saharan Africa and an additional $443 million in guarantees for 11 projects involving transportation, power and sanitation. Infrastructure accounts for about 42% of all the guarantees issued for sub-Saharan Africa from 1990 to 2007. Low-income countries accounted for 21% of its gross exposure in infrastructure in 2007, a share that has been increasing steadily over the past four years.

MIGA's support for infrastructure investment draws on the agency's experience in markets considered to be higher risk, as well as its ability to offset risks encountered at the sub-sovereign level. As a multilateral agency and member of the World Bank Group, it may contribute to deterring harmful government actions and to resolving disputes to prevent claims situations from escalating, while keeping investments on track. If a dispute cannot be resolved, MIGA ensures that valid claims are paid promptly.

MIGA's new policies on social and environmental sustainability and disclosure, which took effect for all new project applications from 1 October 2007, are aimed at strengthening the standards that the agency already applies to projects it supports. These policies, which also apply to infrastructure projects, address the following: social and environmental assessment and management; labour and working conditions; pollution prevention and abatement; community, health, safety and security; land acquisition and involuntary resettlement; biodiversity conservation and sustainable natural resources management; indigenous peoples; and cultural heritage.

Source: UNCTAD, based on information provided by MIGA (www.miga.org).

[a] New investments include greenfield projects, as well as the expansion, modernization or financial restructuring of existing projects and acquisitions that involve the privatization of SOEs. Eligible forms of investment include equity, shareholder loans and shareholder loan guaranties, provided that loans have a minimum maturity of three years. Some non-equity forms of investment, such as technical assistance, management contracts, leases, franchises and licensing agreements, may also be eligible under certain conditions.

[b] In the fiscal year 2007, MIGA issued four guarantees ($244.1 million in gross exposure) specifically for South-South investments in infrastructure.

b. Coverage for credit risk

In addition to PRI and PRGs – which can protect lenders against some types of perceived risks – partial credit guarantees (PCGs) are the most common form of credit risk cover. They cover losses in the event of debt-service default, regardless of the cause of default. Thus both non-commercial and commercial risks may be covered (Matsukawa and Habeck, 2007: 2). Credit enhancement can be used to support issuance of long-term currency bonds, and may reduce the costs of debt by securing higher credit ratings. This in turn may open up more sources of capital for infrastructure projects (Fay and Morrison, 2007).

c. Coverage for currency risk

Coverage for currency risk is particularly important for TNC involvement in infrastructure. As most of the revenue is generated locally, devaluations can have a significant impact on profitability of projects that are often financed in foreign currencies. This problem arises especially in countries that lack well-established and liquid long-term debt markets and currency hedge products (Matsukawa and Habeck, 2007: 7).

Sometimes, foreign-exchange risk is contractually mitigated by allowing tariff indexation of foreign currency cost components to foreign exchange rates, thus transferring the risk to the off-taker and ultimately the consumer. However, such mechanisms are controversial. They may divert the use of scarce foreign exchange from other, higher priority uses, increase the risk of contract renegotiation and be unfair to consumers. Governments may not be able to hedge their exposure, and by offering such guarantees they may crowd out local financing in countries with nascent debt markets.[81] It is debatable whether State governments and municipalities should bear the risk of foreign-exchange movements, as they have no control over these fluctuations. Indeed, it may be argued that this risk should be treated as commercial risk and be borne by the private sector (Platz and Schröder, 2007: 26). In fact a growing number of insurers appear to be prepared to cover transactions financed in local currency.[82]

Nonetheless, the international community could help indirectly to mitigate foreign-exchange risk. For example, the Association of Southeast Asian Nations+3 (ASEAN+3) has launched the Asian Bond Market Initiative to eliminate currency mismatches and to develop local capital markets in participating countries. Also, a guarantee facility for local currency debt is currently being developed under this Initiative (Winpenny, 2005). This is an area for which further support is needed. Using local capital sources to finance investments is the best way to avoid currency risk. However, such funding is difficult to arrange in low-income countries with poorly developed local capital markets. An increase in and issuance of local currency instruments could play an important role in furthering the development of domestic credit and capital markets. A way forward may be to create mechanisms to optimize the input of local currency funding by developing high-quality structured finance bonds allied to a project or a group of projects.

The *GuarantCo* initiative was established by the Private Infrastructure Development Group to enhance local currency debt issuance by private, municipal and parastatal entities for infrastructure projects in low-income countries.[83] Its objective is to reduce or prevent the reliance of projects in poorer countries on hard currency financing by building capacity in their domestic markets to deliver viable and sustainable infrastructure financing solutions, and assist with poverty alleviation.

* * *

Despite the plethora of risk mitigation instruments available, it has been argued that current programmes are insufficiently tailored to the situation of low-income countries (Mistry and Olesen, 2003). For example, local-currency-denominated financing by development finance institutions typically requires a well-established currency swap market. However, where such markets exist, a need for interventions by the development finance institutions is less likely (Fay and Morrison, 2007). Various suggestions have been put forward to address the specific problems of LDCs. One study proposed the establishment of a small, special-purpose LDC infrastructure investment fund that would provide equity and debt financing as well as mobilize domestic currency resources for lending to infrastructure projects in LDCs (Mistry and Olesen, 2003). The Commonwealth Secretariat has made a similar suggestion, arguing for a dedicated and separate fund owned by, but legally distinct from, existing international financial institutions. Focusing specifically on LDCs and other small and vulnerable economies, this fund would offer loans in domestic currencies and quasi-equity investment capital and guarantees, while providing a specially simplified form of MIGA cover for political risk (Hughes and Brewster, 2002).

At the same time, risk-mitigation instruments are not a panacea. A key concern is that too much risk mitigation may lead to problems of moral hazard and encourage reckless risk-taking on the part of investors and lenders (WEF, 2006: 15). Moreover, while risk-mitigation tools can facilitate the mobilization of private debt and equity, they do not make poorly structured projects more viable (Matsukawa and Habeck, 2007: 6). This further underscores the importance of capacity-building efforts.

3. Capacity-building measures

A weak enabling environment in some developing countries – at national, provincial and local levels – represents a major obstacle to successfully engaging TNCs in infrastructure projects. They require support in areas such as creating better regulatory frameworks, preparing infrastructure projects for bidding and negotiation and ensuring greater transparency. As local governments are playing an increasingly influential role in ensuring the financial sustainability of utilities, capacity-building in municipalities is also needed to build expertise in areas such as finance, regulatory work and governance.

Preparing "bankable" infrastructure projects for private financing is also required to make better use of available ODA funds allocated to such investments, thus addressing the "infrastructure paradox" (discussed in subsection D.1). Multilateral and bilateral institutions are offering some assistance of this kind. For example, the Infrastructure Project Preparation Facility of the New Partnership for Africa's Development (NEPAD) – managed by the African Development Bank – has received additional funding to help in the preparation of infrastructure projects.[84] Table V.4 presents a list of capacity-building projects for infrastructure development in Africa. However, the effectiveness of these projects has not been well studied, and it is not known to what extent they have helped improve governments' capacities. Moreover, interviews conducted for this report as well as other studies (see, for example, WEF, 2006), suggest that current efforts remain insufficient and are not always effectively deployed. Anecdotal evidence indicates that available ODA funds dedicated to capacity-building are not always effectively disbursed. For example, the Southern African Development Community (SADC) has reportedly had to return to the World Bank significant funds that should have been used for capacity-building. Similarly, while a substantial portion of the resources available at the African Capacity Building Foundation has been committed to capacity-building operations, the Foundation recognizes that it needs to improve the level and rate of disbursements to grant recipients.

Another area in need of capacity-building is related to the legal implications of contracts and projects as well as their monitoring. More attention should be given to ensuring that projects are implemented in accordance with the contracts

Table V.4. Capacity-building facilities for infrastructure projects in Africa, 2006

Facility	Hosting organization	Phases in project development					
		Enabling environment	Project definition	Project feasibility	Project structuring	Transaction support	Post-implementation support
ACP-EC Energy Facility	European Commission	√	√	√	√	√	√
African Capacity Building Foundation	African Capacity Building Foundation	√	√	√			√
African Catalytic Growth Fund	World Bank	√	√	√	√	√	√
African Water Facility	AfDB	√	√	√			√
DBSA Development Fund	DBSA	√	√	√			
DEVCO	IFC and DFID		√	√	√	√	
FEMIP Support Fund	European Commission and EIB	√	√	√	√	√	√
FEMIP Trust Fund	European Commission and EIB	√	√				
Fund for African Private Sector Assistance	African Investment Bank	√	√	√	√	√	
Global Environmental Facility	UNEP	√	√	√	√		√
Global Partnership for Output Based Aid	World Bank		√	√	√	√	√
Islamic Development Bank TAF	Islamic Development Bank	√	√	√	√	√	√
IFC Advisory Services	IFC		√	√	√	√	√
IFC Municipal Fund	IFC	√	√	√	√	√	√
NEPAD IPPF	AfDB			√	√	√	
NEPAD PPFS	DBSA	√	√	√	√	√	
Nigerian Technical Cooperation Fund	AfDB	√	√	√	√	√	√
PHRD Technical Assistance Grand Programme	World Bank	√	√	√	√	√	
PIDG Technical Assistance Fund	PIDG	√	√	√	√	√	√
Public Private Infrastructure Advisory Facility	World Bank	√	√	√			
SEFI Transaction Support Facility	UNEP and Base			√	√	√	
Slum Upgrading Facility	UN Habitat		√	√	√		
Water and Sanitation Program	World Bank	√	√	√	√	√	√

Source: UNCTAD based on ICA, 2006.

Note: ACP: Africa, Caribbean and Pacific group of States signatories of the Cotonou Agreement. AfDB: African Development Bank. DBSA: Development Bank of Southern Africa. DEVCO is a multi-donor facility established by IFC and DFID to support IFC's advisory work on privatization in infrastructure. DFID is the United Kingdom's Department for International Development. EC: European Commission. EIB: European Investment Bank. FEMIP: Facility for Euro-Mediterranean Investment and Partnership. IFC: International Finance Corporation. NEPAD IPPF: New Partnership for Africa's Development Infrastructure Project Preparation Facility. NEPAD PPFS: NEPAD Preparation and Feasibility Studies Facility. PHRD: Policy and Human Resource Development. PIDG: Private Infrastructure Development Group. UNEP: United Nations Environment Programme. SEFI: UNEP Sustainable Energy Finance Initiative.

signed. In response to repeated calls from African governments, development partners and international organizations, the African Development Bank is in the process of establishing an African Legal Support Facility.[85] Another initiative in Africa is the decision by the Development Bank of Southern Africa to scale up its monitoring activities.

The international community needs to step up its capacity-building efforts as part of its assistance to low-income countries with a view to helping them develop their infrastructure and negotiate with private firms. Efforts should complement existing programmes and should include legal, financial and technical counsel that is tailored to low-income countries' requirements. For advisory services to become more effective, comparative, systematic and empirical data are needed to evaluate experience with infrastructure projects to date, especially in low-income countries. Advisory services should include not only how to encourage investment but also how infrastructure development can be made to fit into overall development plans and objectives. In this context, it may be important to develop an independent advisory service unit that is not a direct stakeholder in the actual transactions negotiated, in line with the kind of technical assistance that was once offered by the United Nations Centre on Transnational Corporations (see, for example, Sagafi-nejad and Dunning, 2008: 107).

4. Promoting regional infrastructure projects

Many developing countries see their small national economies and limited access to international markets as serious constraints on economic growth and on attracting FDI. Regional integration can be a possible solution. But since successful regional integration requires improved infrastructure across the member countries, it is important to encourage the development of cross-border infrastructure. In Latin America, for example, the Central American Interconnection System was set up to enable the creation of a wholesale electric power market and a regional grid (Fay and Morrison, 2007). In Africa, NEPAD is placing strong emphasis on cross-border projects in such areas as transportation and energy.

However, it is often difficult to implement regional projects. They require the highest political backing, and even with this there can be major hurdles to securing agreement among participating governments on project design and implementation. A major problem in Africa is the lack of harmonization of laws and regulations, which is creating substantial delays in project development and implementation. Some projects have been in the planning stage for as long as 20 years (box V.14).

The need for international assistance in this area is increasingly recognized. For example, the number of regional integration projects in the pipeline of the World Bank Group has been growing, with more than $2 billion worth of projects set to be financed over the next three years. This includes projects in transport, energy, water and telecommunications based on the NEPAD Short Term Action Plan priorities and the Africa Action Plan.[86] Financial support from the members of ICA (box V.10) to projects which connect two or more countries or which have an important regional impact more than doubled, to $1.9 billion in 2007.[87] A recent European initiative that aims at improving regional infrastructure projects in Africa is the EU-Africa Infrastructure Fund (box V.15). The action plan for the period 2008–2012 emerging from the Tokyo International Conference on African Development (TICAD) gives special emphasis to regional transport and power infrastructure and to greater involvement of regional institutions (TICAD, 2008).

E. Conclusions

Policymakers need to give priority to the development of physical infrastructure. The needs are huge, and will require an optimal use of the private sector, including TNCs. This applies particularly to LDCs, where infrastructure improvements are critical for realization of the MDGs. At the same time, low-income countries are often too poorly equipped to attract TNCs into infrastructure and to extract benefits from TNC involvement. Thus, finding the appropriate mix of public and private sector involvement is not easy. Whatever approach is chosen, adequate institutions and enforcement mechanisms are essential to ensure efficient and equitable delivery of infrastructure services. For many developing countries, this is a daunting challenge that will require a concerted effort by all parties concerned – host and home countries, the international community and the companies involved.

Expectations should be realistic: TNCs will only be willing to invest in projects in which they can expect adequate returns, and the higher the perceived risks associated with a project, the greater will have to be the expected returns. A further complication is that demands for infrastructure investment in developed countries and in large emerging economies may hamper the ability of low-income countries to compete for TNC investment.

A first priority of host country governments in developing countries should be to strengthen the rule of law, including protection of property and

Box V.14. The Grand Inga Hydropower Project

While regional infrastructure projects can have huge development potential, they are also challenging to implement. The Grand Inga Hydropower project proposed for the Congo River in the Democratic Republic of the Congo is a good illustration. Based on the existing Inga 1 and Inga 2 dams and the proposed Inga 3 dam, the Grand Inga project constitutes the world's largest hydropower scheme. It is part of a greater vision to develop a trans-Africa power grid that could help spur the continent's economic and social development. The project's backers include Eskom (South Africa), NEPAD and SADC.

When completed, the Grand Inga could produce up to an estimated 39,000 MW of electricity – more than twice the power generated by the Three Gorges Dam in China and more than a third of the total electricity currently produced in Africa. While feasibility studies are yet to be completed, the project is already being projected as a way to "light Africa". Mining companies are said to have a particularly strong interest in the Grand Inga, and electricity shortages in South Africa and neighbouring countries have underlined the importance of the project.[a] A decision to proceed with Grand Inga will only be made once Inga 3 has been completed. Construction work for the Grand Inga is planned to start in 2014 and it is expected to begin operating between 2020 and 2025.

Mega projects such as the Grand Inga entail many risks. Its development has been hindered by poor maintenance and financial problems of the nearby Inga 1 and Inga 2 dams, as well as civil war and poor governance in the Democratic Republic of the Congo.[b] Moreover, the project faces a number of challenges, such as corruption, the need to raise funds, environmental concerns (e.g. threat to the local environment as well as the Congo River basin) and social concerns (e.g. the displacement of local communities).

A particular challenge stems from the Grand Inga being a regional project involving multiple stakeholders. Regional projects require coordination, legal harmonization, coordinated administrative decisions, strong political will and, most importantly, sound governance by all participants. Poor governance and a lack of legal harmonization create significant delays in project development and implementation. A major effort is therefore needed to ensure smooth implementation of such projects by improving governance on a regional basis and by agreeing at the outset on how projects will be implemented, including the allocation of responsibilities to implementing agencies and the time frame for implementation.

Source: UNCTAD, based on International Rivers (www.internationalrivers.org).

[a] According to Eskom, demand for electricity in South Africa alone is rising at the rate of 3% per annum, with no new generators to meet this growing demand.

[b] The Inga 1 and 2 dams are undergoing a major rehabilitation with financial assistance from the World Bank, the European Investment Bank and the African Development Bank. The Inga 2 rehabilitation is also financed through a partial privatization scheme with the company, MagEnergy (Canada), and financial support from the Industrial Development Corporation of South Africa.

contractual rights, and the development of transparent and predictable sectoral laws and regulations. A high-quality general institutional and regulatory framework is crucial for fostering infrastructure investments, with or without TNC participation. It is the best way of reducing the risks associated with infrastructure projects, and of securing benefits from the investments. Within the overall governance framework, governments should identify how infrastructure projects may support broader development objectives and what potential role TNCs should play in their implementation.

Many developing countries would need to accord higher priority to infrastructure investments when allocating public funds. This requires considerable political will and commitment to long-term investments in the maintenance of existing and development of new infrastructure. Experience to date shows that TNC investment cannot substitute for public investment in infrastructure, but it can be an important complement (chapter IV). Increased government spending on infrastructure investment is therefore needed – with or without TNC involvement. Especially in electricity and water, government investment is likely to help "crowd in" foreign investment.

For developing countries with large endowments of mineral resources, the current commodity price boom offers a window of opportunity. They need to ensure that windfall gains are managed and used in ways that promote development objectives. This includes infrastructure investments and the building of the necessary skills and capabilities to manage those investments. Some countries have linked the granting of mining concessions to commitments by foreign companies to develop infrastructure (chapter III). It is also important that the long-term sustainability of projects is factored in from the outset. To this end, governments should ensure they benefit from sufficient knowledge transfers from TNC partners to enable them to assume responsibility for the projects, if necessary, when their contract period expires.

Governments also need to develop the capabilities to assess the suitability of different forms of infrastructure provision – whether public, private or through some form of PPP – as well as to design and monitor specific projects. This will require training personnel in how to operate and maintain

Box V.15. The EU-Africa Infrastructure Trust Fund

In the context of the Gleneagles Declaration on Africa emerging from the G-8 Summit in 2005 and the EU Council's adoption of an EU Strategy for Africa, the EU and its African counterparts initiated a Partnership for African Infrastructure (the Partnership). To support its implementation, the EU-Africa Infrastructure Trust Fund (the Trust Fund) was launched in 2007.[a] It encourages the financing of infrastructure programmes which facilitate interconnectivity and regional integration on the African continent. It aims to support synergies between European development agencies for the benefit of Africa, leveraging additional funds by blending grants and loans. To date, 11 donors have joined the Trust Fund, with financial commitments of €97 million.[b]

A major project being supported by the Trust Fund with a €2.6 million subsidy is the East African Submarine Cable System (EASSy). It is expected to deliver high-speed Internet access to 20 Eastern and Central African countries. The EASSy cable will be owned and operated by a consortium of internationally licensed operators, either wholly private or with mixed public-private ownership. Some large operators will participate in the consortium directly in their own right, while others will receive co-financing from the European Investment Bank (EIB) and several other development finance institutions. These will channel their investments through the West Indian Ocean Cable Company Ltd (WIOCC), a special purpose vehicle (SPV) created to exist alongside the direct consortium members. The main purpose of the hybrid SPV model is to incorporate key development policy objectives into the WIOCC's shareholder agreement and other project documents. The grant from the Trust Fund will ensure efficient management of this complex project by funding the costs of a core management team during its set-up period.

The Trust Fund gives priority support to projects in the energy, water, transport and telecommunications industries. To be eligible, these projects must be sustainable and encompass a cross-border dimension and/or have a regional impact, be driven by public or private sector entities or with mixed public-private capital, contribute to poverty alleviation and economic development, and involve at least one country located in sub-Saharan Africa (and projects located in South Africa must involve another sub-Saharan country).

Support comes in the following forms: interest rate subsidies on medium and long-term loans; technical assistance and capacity building, including project preparation activities; subsidies for certain capital investments with an environmental or social component that are directly linked to the infrastructure project; and insurance premiums to cover country risks during the construction phase of large projects, for a two to three year period.

Source: UNCTAD based on information provided by the EIB.

[a] See: www.eib.org/acp.

[b] The donors include the European Commission and nine EU member States (Austria, Belgium, France, Germany, Greece, Italy, Luxembourg, the Netherlands, Spain and the United Kingdom).

infrastructure facilities (see, for example, Campos and Vines, 2008). To the extent that TNC involvement is desired, it would also be necessary to develop the expertise and capabilities to administer often complex projects. In countries that possess limited experience of projects involving TNCs, it would be appropriate to start on a small scale and to concentrate on projects that are less contentious. Furthermore, it may be easier to begin with contractual arrangements that have a relatively low level of TNC involvement, such as management and operations contracts.

Active promotion by IPAs can contribute to raising awareness of existing investment opportunities among potential investors. In this context, it is important for IPAs and other agencies involved to identify the main players and their respective responsibilities in the different infrastructure segments. The rise of TNCs from the South and the growing interest in infrastructure projects among sovereign wealth funds and private equity funds (chapter III) should also be considered when developing promotional strategies. At the same time, governments need to strengthen their negotiating skills with regard to investment contracts with TNCs to maximize the development gains from any inflows of investment. They need to develop a clear understanding of the wide range of possibilities of TNC involvement in order to identify what is most appropriate for a given situation. For example, innovative, small-scale solutions could be explored for rural and other low-income areas. The form and content of the contracts have a major influence on the allocation of risks among the different parties. Governments should avoid offering overly generous subsidies or guarantees that may result in very large contingent liabilities. Similarly, TNCs should not seek too large subsidies or guarantees as this may backfire at a later stage and increase the likelihood of renegotiation and/or disputes.

With a view to fostering greater investment, many countries have complemented their national legislation and contractual arrangements with various international treaties in order to enhance investor protection. The proliferation of investment agreements has recently been paralleled by an increased incidence of investment disputes related to infrastructure. These developments have triggered an intense debate among policymakers on how to ensure that the use of IIAs facilitates much-needed investments without imposing too much of a

constraint on the legitimate needs of governments to adjust regulatory frameworks or renegotiate contracts when circumstances change. This consideration makes it important for governments to enhance their understanding of the implications of concluding IIAs.

Increased regional collaboration among developing countries should be encouraged in the area of infrastructure development. Closer regional integration can help create larger markets and thereby promote growth opportunities. But this requires supporting regional projects to enable an effective economic exchange among the members of the region. Various initiatives are already under way to speed up the development of such projects. However, it has often proved difficult to implement specific projects, partly due to the lack of harmonization of national laws. Regional support entities could play a key role in assisting national regulators to achieve such harmonization. For example, commonly agreed project definitions in law (that can be transposed to national laws) could help reduce the cost of developing contracts.

The actions of TNCs themselves obviously matter for securing benefits from foreign investment. In this context, all companies – private or State-owned, large or small, from the North or the South – should seek to abide by high standards of corporate behaviour. It is important to engage new corporate players in ongoing processes aimed at securing sustainable development gains from foreign investments. Financial institutions involved in infrastructure projects are becoming more aware of environmental and social issues. For example, the Equator Principles – a set of guidelines for determining, assessing and managing social and environmental risk in project financing – have been adopted by about 50 banks and other financial institutions, including 19 lead arrangers, which in 2006 were responsible for arranging close to half of all project loans. The Principles now have to be applied to virtually all infrastructure projects (Esty and Sesia, 2007). While more financial institutions should be encouraged to abide by them, further research is needed to examine their actual impact.

Regarding development assistance, development partners should honour their ODA commitments for infrastructure. They can also do more to help mitigate risks associated with infrastructure projects, especially in low-income countries. Bilateral and multilateral organizations need to become more willing to assume risks and to allocate a greater share of their activities to the needs of low-income countries. In addition, they should keep all options open. While a strong case can often be made for facilitating greater involvement of the private sector, including TNCs, other solutions should not be ruled out. In some projects, notably in water and some electricity segments, there may be strong arguments for keeping the operation of basic services in public hands. But also in other industries, weak institutional capabilities may make private sector involvement too risky. In such situations, international support efforts focused on revitalizing existing public sector producers may be more effective (Estache and Fay, 2007). Thus it is important that development partners give sufficient attention to financing those infrastructure projects for which it may not be possible to mobilize private sector involvement.

But it is not only a matter of providing more money. Given the massive requirements for supporting infrastructure development, an urgent need is to address the "infrastructure paradox" (i.e. the non-utilization of available funds). International support for capacity-building in all relevant areas, especially in LDCs, is necessary to address this situation. Depending on the specific circumstances of each country, assistance may be provided for developing legal and regulatory frameworks, assessing different policy and contractual options, preparing project proposals, and monitoring and enforcing laws, regulations and contracts. Considering the nature of infrastructure projects, all levels of government – national, provincial and municipal – in many developing countries are in dire need of some form of assistance. While steps have been taken to meet these needs, current efforts remain vastly inadequate. In addition, even funds available for capacity-building are reportedly not always used. It would be worth exploring how the United Nations could play a more active role in this context, for example by helping developing-country governments to evaluate management contracts and review agreements.

Notes

1 As privatization and various forms of PPPs raise many complex issues and their implementation can be demanding in regulatory and contractual terms, failure to build the necessary capacity can lead to skewed risk allocation, inadequate development gains and poor performance (Scott, 2007).

2 In practice, however, as long as the regulator's budget is controlled by the government, complete independence from the government is not possible to achieve. Therefore, it may be appropriate to finance the operating budget of an agency through levies on the regulated industry (Guasch, 2004). In England and Wales, for example, the water regulator is funded by a fee from the companies involved, and the independence of funding is enshrined in law.

3 They are capital-intensive and self-sufficient projects, with the customer relationship in effect being between the municipality and the contract operator.

4 The World Bank increased its emphasis on private sector involvement in infrastructure industries in the early 1990s, in light of the disappointing performance of State-owned utilities as well as rising government debts in many developing countries (World Bank, 1995).

5 A study by the Independent Evaluation Office of the IMF recently reconfirmed the need to reduce the volume of structural

conditionality and to limit the use of conditionality to the core areas of IMF expertise (IEO, 2007).

6 This picture is confirmed by project data, which showed that Latin America and the Caribbean received close to two-thirds of all foreign investment commitments in developing and transition economies during the period 1996–2000 and about 30% of all such investment commitments in 2001–2006 (chapter III).

7 Another study concluded that electricity utilities are owned and operated by the State in 55%, of all developing countries covered in the World Bank's *PPI Database* (Kikeri and Kolo, 2005).

8 In developed countries, this was followed by British Telecom (United Kingdom), Teleglobe (Canada) and NTT (Japan).

9 For example, the Democratic People's Republic of Korea, which had previously prohibited FDI, in January 2008 allowed Orascom Telecom (Egypt) to introduce third generation mobile services in the country. A joint venture company, 75% owned by Orascom and 25% by the Korea Post and Telecommunications Corporation) will provide the service. Orascom plans to invest up to $400 million on the project over the next three years ("Orascom Telecom Receives The First Mobile License in the Democratic People's Republic of Korea." Press Release (www.orascomtelecom.com), 30 January 2008.

10 Comoros, Costa Rica, Djibouti, Ethiopia, the Federated States of Micronesia, the Libyan Arab Jamahiriya, Myanmar, Nauru, Palau and Tuvalu (Minges, 2008).

11 "A Proclamation to provide for the amendment of telecommunications proclamation", Proclamation No. 281/2002, 2 July 2002.

12 The State-owned Instituto Costarricense de Electricidad (ICE) has had a monopoly on telecommunications services.

13 See "Lawmakers give final OK", 15 May 2008; available at: http://www.sellingcr.com/main-content/lawmakers-give-final-ok-3.html.

14 See http://www.networkworld.com/news/2007/020707-verizon-enters-indias-long-distance.html.

15 See "Morales nationalizes Bolivian telecom, foreign gas companies", *Mercurynews.com*, 1 May 2008.

16 Some countries, such as the Netherlands and Uganda, have passed laws banning privatization of public water supply (Hall, Lobina and de la Motte, 2004).

17 There is full privatization in Chile (TNCs and local firms) and China (local firms). In India, Jamshedpur's water assets and operations have always been developed, owned and operated by Tata Steel. In developing countries, except for Chile, all contracts where the assets are held by the private sector are with local companies (Owen, 2008).

18 This estimation is based on data provided to UNCTAD by the *Envisager Water and Wastewater Database*, which covers a total of 343 water-specific private sector contracts serving at least 10,000 people in developing economies and awarded between 1987 and 2008.

19 The countries covered were Canada, China, France, Germany, India, Japan, the Netherlands, the Russian Federation, the United Arab Emirates, the United Kingdom and the United States.

20 New legislation approved by the Russian Duma in April 2008 requires foreign investors seeking to acquire more than 50% of the shares of Russian companies operating in strategic sectors to obtain government approval (see Foreign investment in Russian strategic industries: Duma approves Bill, in: *Policy Matters*, April 2008; available at: ttps://www.usrbc.org/pics/File/Member%20Contributions/PolicyMatters_April2008.pdf).

21 In many cases, when IPAs do not actively promote FDI in infrastructure, it is because FDI promotion for this sector is sometimes handled by another government agency (47%). In general, however, reasons also seem to be IPA-specific (e.g. lack of capacity, different focus), or country-specific (e.g. only public investment permitted or via public concessions).

22 Infrastructure projects are often governed by an overarching concessionary agreement. However, for a large project, a cluster of over 40 contracts may formalize arrangements among the numerous actors involved (Esty, 2004).

23 See "Best practices for contract renegotiation", *IT Business Edge Negotiation*, 3 September 2005, (www.itbusinessedge.com/item/?ci=17180).

24 The small number of firms and the market dominance of lawyers from these two economies may be tied to the dominance of investment bankers from these jurisdictions in financing infrastructure projects globally (Flood, 2002).

25 Also, issues related to legal house tenure and gender discrimination can be very important considerations with regard to access to water, but are not strictly related to water management.

26 Tariffs appear to have been better designed in the electricity sector (Fay and Morrison, 2007).

27 In this context, recent arbitrations have underlined the importance of so-called domestic "conformity clauses", requiring that investments be made in accordance with the law of the host country. Such clauses gain special significance when investments violate domestic law. Depending upon the circumstances, claims by an investor concerning such investments will not be allowed by international tribunals. See, for example, *Fraport AG Frankfurt Airport Services Worldwide v. Republic of the Philippines*, ICSID Case No. ARB/03/25 (Germany/Philippines BIT), Award of 16 August 2007; *Inceysa Vallisoletana S.L. v. Republic of El Salvador*, ICSID Case No. ARB/03/26 (El Salvador/Spain BIT), Award of 2 August 2006; *Desert Line Projects LLC v. Republic of Yemen*, ICSID Case No. ARB/05/17 (Oman/Yemen BIT), Award of 6 February 2008.

28 On the other hand, such a strategy might also be based on protectionism, in which case arbitrators would decide whether it is a valid defence (UNCTAD, forthcoming c).

29 The seminal decision in this respect is the "Neer" case (*Neer v. Mexico*, Opinion, United States-Mexico General Claims Commission, 15 October 1926, A.J.I.L. 555, 1927).

30 A regulatory taking can be defined as a government measure that, while leaving the property rights of an investor formally untouched, has the effect of depriving the investor of all or a substantial part of the economic value of the investment.

31 This number does not include cases that are exclusively based on investment contracts (State contracts), and cases where a party has so far only signalled its intention to submit a claim to arbitration, but has not yet commenced the arbitration (notice of intent). Since the International Centre for Settlement of Investment Disputes (ICSID) is the only arbitration facility to maintain a public registry of claims, the number of actual treaty-based cases is likely to have been still higher. See UNCTAD, "Latest developments in investor-State dispute settlement", *IIA Monitor* No. 1, 2008, UNCTAD/WEB/ITE/IIA/2008/3.

32 Of the 95 known disputes related to infrastructure 70 were filed with ICSID (or the ICSID Additional Facility), 20 under the arbitration rules of the United Nations Commission on International Trade Law (UNCITRAL), 3 with the Stockholm Chamber of Commerce and the remaining 2 through ad-hoc arbitration.

33 See also *Azurix v. Argentine Republic*, ICSID Case No. ARB/01/12 (Argentina/United States BIT), Award of 14 July 2006; and *Aguas del Tunari S.A. v. Republic of Bolivia*, ICSID Case No. ARB/02/3 (Bolivia/Netherlands BIT), registered on 25 February 2002; and several disputes against Argentina following emergency laws.

34 See *Consortium Groupement L.E.S.I.- DIPENTA v. Algeria*, ICSID Case No. ARB/03/08 (Algeria/Italy BIT), Award of 10 January 2005, *L.E.S.I. S.p.A. et ASTALDI S.p.A. v. Algeria*, ICSID Case No. ARB/05/3 (Algeria/Italy BIT), Decision of 12 July 2006.

35 See, for example, *Nagel v. Czech Republic*, SCC Case 49/2002 (Czech Republic/United Kingdom BIT), Award of 9 September 2003.

36 See, for example, *Telekom Malaysia Berhad v. Republic of Ghana*, Case No. HA/RK 2004, 667 and 788 (Ghana/Malaysia BIT), Decision of 18 October 2004.

37 See, for example, *France Telecom v. Lebanon* (France/Lebanon BIT), Award of 22 February 2005.

38 See, for example, *Telefónica S.A. v. Argentine Republic*, ICSID Case No. ARB/03/20 (Argentina/Spain BIT), Registered on 21 July 2003; *E.T.I. Euro Telecom International N.V. v. Republic of Bolivia*, ICSID Case No. ARB/07/28 (Bolivia/Netherlands BIT), Registered on 31 October 2007.

39 Two known disputes also arose with regard to the setting up of a motor vehicle registry.

40 See, for example, *Jan de Nul N.V. and Dredging International N.V. v. Arab Republic of Egypt*, ICSID Case No. ARB/04/13 (Belgium-Luxembourg/Egypt BIT), Decision on Jurisdiction of 16 June 2006.

41 See, for example, *Bayindir Insaat Turizm Ticaret Ve Sanayi A.S. v. Islamic Republic of Pakistan*, ICSID Case No. ARB/03/29 (Pakistan/Turkey BIT), Decision on Jurisdiction of 14 November 2005.

42 See, for example, *Bayindir Insaat Turizm Ticaret (op. cit.)* and *Walter Bau AG v. Kingdom of Thailand*, UNCITRAL (Germany/Thailand BIT), 2007.

43 See, for example, *Lanco International Inc. v. Argentine Republic*, ICSID Case No. ARB/97/6 (Argentina/United States BIT) Award on Jurisdiction of 8 December 1998.

44 See, for example, *Walter Bau AG v. Kingdom of Thailand*, UNCITRAL (Germany/Thailand BIT), 2007.

45 See, for example, *Consortium R.F.C.C. v. Kingdom of Morocco*, ICSID Case No. ARB/00/6 (Italy/Morocco BIT), Final Award of 22 December 2003.

46 See, for example, *ADC Affiliate Limited and ADC & ADMC Management Limited v. Republic of Hungary*, ICSID Case No. ARB/03/16 (Cyprus/Hungary BIT), Award of 2 October 2006.

47 See, for example, *PSEG Global et al. v. Republic of Turkey*, ICSID Case No. ARB/02/5 (Turkey/United States BIT), Award of 19 January 2007.

48 See, for example, *Impregilo S.p.A. v. Islamic Republic of Pakistan*, ICSID Case No. ARB/03/3 (Italy/Pakistan BIT), Decision on Jurisdiction of 22 April 2005.

49 See, for example, *Noble Energy, Inc. and Machalapower CIA. LTDA v. Republic of Ecuador and Consejo Nacional de Electricidad*, ICSID Case No. ARB/05/12 (Ecuador/United States BIT), Decision on Jurisdiction of 5 March 2008.

50 See, for example, several cases related to Argentina.

51 See, for example, *M.C.I. Power Group L.C. and New Turbine, Inc. v. Republic of Ecuador*, ICSID Case No. ARB/03/6 (Ecuador/United States BIT), Award of 31 July 2007.

52 See, for example, *Hrvatska Elektroprivreda d.d. v. Republic of Slovenia*, ICSID Case No. ARB/05/24 (Energy Charter Treaty), Registered on 28 December 2005.

53 See, for example, *Société Générale v. Dominican Republic*, UNCITRAL (Dominican Republic/France BIT), 2007.

54 See, for example, *Barmek Holding A.S. v. Republic of Azerbaijan*, ICSID Case No. ARB/06/16 (Energy Charter Treaty), Registered on 16 October 2006; *Empresa Eléctrica del Ecuador, Inc. (EMELEC) v. Republic of Ecuador*, ICSID Case No. ARB/05/9 (Ecuador/United States BIT), Registered on 26 May 2005; *Libananco Holdings Co. Limited v. Republic of Turkey*, ICSID Case No. ARB/06/8 (Energy Charter Treaty), Registered on 19 April 2006.

55 A large number of arbitration awards can be found in the UNCTAD database at: www.unctad.org/iia; other main sources on the Internet include: http://ita.law.uvic.ca, www.investmentclaims.com (subscription required), and http://icsid.worldbank.org/ICSID/Index.jsp.

56 These figures do not include claims for, and awards of, interest and legal costs.

57 See also Dolzer and Schreuer, 2008.

58 For example, in *Compañía de Aguas del Aconquija S.A. and Vivendi Universal v. Argentine Republic*, the tribunal concluded that a unilateral lowering of tariffs by the regulator and a prohibition to pursue lawsuits and enforce judgements rendered against debtors constituted an illegitimate campaign against the foreign investor amounting to a violation of the FET standard, ICSID Case No. ARB/97/3, Award of 20 August 2007 at para. 7.4.39.

59 See *PSEG Global et al. v. Republic of Turkey*, ICSID Case No. ARB/02/5 (Turkey/United States BIT), Award of 19 January 2007 at para. 252-253.

60 *Parkerings-Compagniet AS v. Republic of Lithuania*, ICSID Case No. ARB/05/8 (Lithuania/Norway BIT), Award of 11 September 2007.

61 See, for example, *Parkerings-Compagniet AS v. Republic of Lithuania*, *(op. cit.)* at para. 331: "The expectation is legitimate if the investor received an explicit promise or guaranty from the host-State, or if implicitly, the host-State made assurances or representation that the investor took into account in making the investment. Finally, in the situation where the host-State made no assurance or representation, the circumstances surrounding the conclusion of the agreement are decisive to determine if the expectation of the investor was legitimate. In order to determine the legitimate expectation of an investor, it is also necessary to analyse the conduct of the State at the time of the investment." See also *M.C.I. Power Group L.C. and New Turbine, Inc. v. Ecuador*, ICSID Case No. ARB/03/6 (Ecuador/United States BIT), Award of 31 July 2007 at para. 278.

62 For a discussion of the cases, see Muchlinski, 2006 and 2007.

63 *ADC (op. cit.)*, para. 476.

64 *Compañía de Aguas del Aconquija S.A. and Vivendi Universal (op. cit.)*.

65 *Vivendi*, *(op. cit.)*, at paras. 7.5.22 and 7.5.25. See also *Consortium RFCC (op. cit.)*, para. 165; *Azurix Corp (op. cit.)*, para. 315; *Parkerings-Compagniet AS (op. cit.),* paras. 443–456.

66 *LESI-DIPENTA (op. cit.)*, para. 25(ii) [English translation of the original award in French]. The case dealt with difficulties in execution and finally the cancellation of a contract that the claimant was awarded for the construction of a dam to provide drinking water to the city of Algiers.

67 *El Paso Energy International Company v. Argentine Republic*, ICSID Case No. ARB/03/15 (Argentina/United States BIT), Decision on Jurisdiction, 27 April 2006, para. 81. The dispute arose in the context of the Argentinean financial crisis. The United States-based claimant argued that measures taken by Argentina to counter the crisis had impaired its investments in four Argentine companies involved in the electricity and hydrocarbons industries.

68 *Azurix Corp.(op. cit.)*, para. 384. See also *CMS Gas Transmission Company v. The Argentine Republic*, ICSID Case No. ARB/01/8 (Argentina/United States BIT), Decision on Annulment of 25 September 2007.

69 *El Paso (op. cit.)*, para. 84: "[T]here is no doubt that if the State interferes with contractual rights by a unilateral act, whether these rights stem from a contract entered into by a foreign investor with a private party, a State autonomous entity or the State itself, in such a way that the State's action can be analysed as a violation of the standards of protection embodied in a BIT, the treaty-based arbitration tribunal has jurisdiction over […] the claims arising from a violation of [the foreign investor's] contractual rights."

70 See OECD, 2006b: 9–14.

71 Another example would be if the investor has obtained an investment contract by means of false representation (see also Muchlinski, 2007).

72 A few countries, in particular Canada and the United States, have already done so (UNCTAD, 2007k).

73 In relative terms, growth in commitments was the highest in water supply and sanitation (198%) and the lowest in energy (30%).

74 China is the biggest external provider of finance for infrastructure investment in Africa. Its commitments in 2006, estimated at

around $15 billion, far exceeded the combined commitments by OECD countries (United Kingdom, DFID, 2007).

75 According to this study, "total capital…at the IFC is now close to total commitments of loans, equity and debt securities…and the institution's capital adequacy ratio has risen from 45% in 2002/3 to 57% for 2006/7. The FMO's [The Netherlands Development Finance Company's] capital adequacy has increased from 38.4% in 2000 to 50.5% in 2005" (Te Velde and Warner, 2007: 2).

76 In the investment insurance area (synonym for political risk insurance), members of the Berne Union – the leading association for export credit and investment insurance – had provided coverage amounting to $54.5 billion in 2007. At the end of that year, Berne Union members had an investment insurance exposure of $143.1 billion on their books. The share of private market insurers in these two figures was around 40%.

77 See www.iaigc.net.

78 The ICIEC is a multilateral agency, based in Jeddah, with 35 member countries. Part of the Islamic Development Bank Group, it has become very active in investment insurance in recent years. For example, ICIEC cooperated with MIGA in covering the Doraleh Container Terminal project in Djibouti (see also box V.13), covering $50 million of the total coverage of $427 million.

79 Membership in ATI is open to all African States that are or could become members of the African Union (including Burundi, the Democratic Republic of the Congo, Djibouti, Eritrea, Kenya, Madagascar, Malawi, Rwanda, Uganda, the United Republic of Tanzania and Zambia) as well as international development finance institutions and regional economic organizations (www.ati-aca.org). Private corporations with the competence, interest and commitment to support trade and investments in Africa may also join ATI as corporate members. Current corporate members include COMESA, Atradius Group, the Eastern and Southern African Trade and Development Bank (PTA Bank) and PTA Reinsurance Company.

80 Its FDI insurance covers the investor or financier against loss of equity in a project due to confiscation or broad political *force majeure*. Risks covered include, *inter alia,* inability to transfer dividends overseas in hard currency, confiscation, expropriation, nationalization, breach of concession rights, forced abandonment and political violence.

81 Despite these drawbacks, an exchange-rate guarantee for a specific project may be preferable to government financing of a project because the exchange-rate guarantee exposes the government to a single risk rather than to the full range of project risks.

82 Communication by the Berne Union.

83 See www.pidg.org.

84 The additional funding, received in 2008, was provided by the United Kingdom ($12 million), Norway ($9 million), and the African Development Bank ($10 million).

85 When established, this facility will, among other things, provide legal advice and help develop legal competencies in complex commercial transactions, project finance and investments agreements. It has been proposed that funding would come from contributions from the Bank, from member and non-member countries of the Bank, and other international organizations.

86 See web.worldbank.org/wbsite/external/countries/africaext/extregini/extafrreginicoo/0,,contentmdk:20625610~menupk:1631231~pagepk:64168445~pipk:64168309~thesitepk:1587585,00.html.

87 Communication from ICA.