

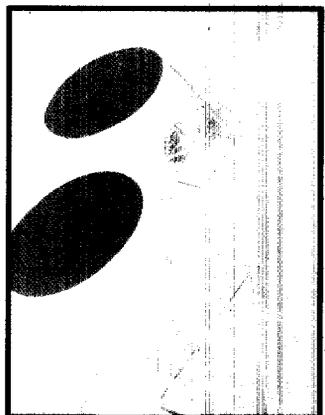
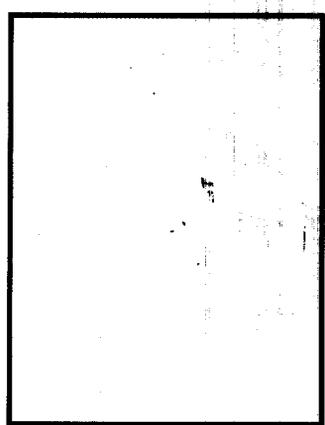
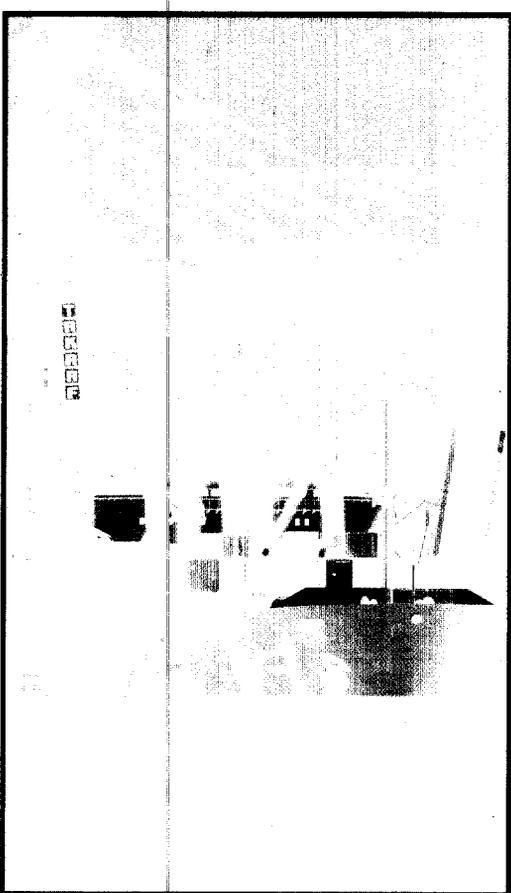
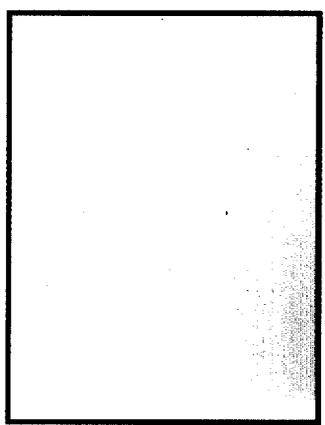


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Getting Connected

*Private Participation in Infrastructure
in the Middle East and North Africa*



*Graham R. Smith
Nemat Shafik
Pierre Guislain
James A. Reichert*



WORLD BANK MIDDLE EAST AND
NORTH AFRICA ECONOMIC STUDIES

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*Graham R. Smith
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*The World Bank
Washington, D.C.*

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Foreword

Well-functioning infrastructure services are the sinews of economic development. Efficient power supplies, well-designed transport systems, and easily accessible telecommunications networks support private sector-led economic growth and strengthen the international links on which such growth increasingly depends. Moreover, these services—along with others such as water supply, sewerage, and solid waste disposal—improve people's lives and broaden their opportunities.

The Middle East and North Africa region has made substantial investments in infrastructure. But fast-growing populations and increasing demand from nontraditional sources (especially private businesses) are stretching services to and beyond their capacity. Meanwhile, budget constraints are limiting governments' ability to shoulder the burden of expansion and upgrading.

In October 1996 the World Bank and the European Commission sponsored an international conference of regional leaders and international business representatives in Istanbul, Turkey, to discuss the region's infrastructure needs and identify the best ways to meet them—with an emphasis on harnessing the innovations, management methods, and investment capacity of the private sector. This report, originally prepared as background for the conference, is now being formally published so that its findings can reach a wider audience of policymakers and business leaders in the region and beyond. It is hoped that the findings presented here will catalyze in the Middle East and North Africa the private participation in infrastructure needed to transform service provision and support the accelerated growth the region is striving for.

Kemal Derviş
Vice President, Middle East and North Africa Region
The World Bank

Abstract

This report, originally prepared for the Conference on Private-Public Partnerships in Infrastructure in the Middle East and North Africa (held in Istanbul, Turkey, in October 1996), analyzes the infrastructure needed for the region's economies to compete in global markets. Drawing on international best practice, it proposes new approaches to infrastructure provision based on unbundling monopolies, opening up services to private participation, and promoting competition for and in infrastructure markets. Recommendations are made about the new roles to be played and actions to be taken by the region's governments—with support from the World Bank Group—to reduce investors' perceptions of risk and ensure fair and transparent arrangements for awarding contracts and providing services. The report concludes with a summary of the proceedings of the Istanbul conference.

Acknowledgments

This report was prepared by Graham Smith, Pierre Guislain, and James Reichert under the supervision of Nemat Shafik and with advice and comments from Amir Al-Khafaji, James Bond, Bruce Fitzgerald, Assaad Jabre, Omer Karasapan, Alastair McKechnie, Richard Stern, Bjorn Wellenius, and other World Bank Group staff. The report was edited by Paul Holtz and laid out by Mark Bock of American Writing Corporation. A draft version of the report was prepared for a conference on Private-Public Partnerships in Infrastructure in the Middle East and North Africa, held on October 15–17, 1996 in Istanbul, Turkey. Comments from numerous conference participants were very helpful in revising the report. A summary of the proceedings of the conference appears in annex 2. Both this report and the Istanbul conference were carried out under the general direction of Kemal Derviş, Vice President of the Middle East and North Africa Regional Office at the World Bank.

Executive summary

Private participation in infrastructure—including power, telecommunications, transportation, and water and sanitation—brings the promise of better, faster, and cheaper ways of providing the services that link economies and improve lives. This vast potential has revolutionized thinking about the role of government in providing a range of services, fundamentally changing the way these services are provided in many industrial countries and in much of East Asia and Latin America. Most countries in the Middle East and North Africa are in the early stages of preparing or implementing their first transactions involving private participation in infrastructure. These transactions present demanding choices and challenges for the region's governments. This paper shows why a strong effort to encourage private participation is needed and identifies key policy issues governments will have to address.

Efficiency is the main reason private participation has become an imperative. Experience in other countries has shown that introducing competition and encouraging private providers can serve consumers' demands and save governments money in ways that monopoly public providers are simply incapable of. Moreover, the measures needed to make private participation feasible—stabilizing the economy, breaking up monopolies, and introducing sound tariff policies to eliminate underpricing and rationalize subsidies—all have the potential to strengthen incentives for better public performance as well.

Better infrastructure for plugging into the world economy

Countries need efficient infrastructure to plug themselves into today's integrated global economy. They need the right connectors to other economies—well-functioning roads, ports, airports, power grids, telecommunications networks, and oil and gas pipelines. Most Middle Eastern and North African countries need more of these connectors, and those that they have often need to be of better quality or more consistent with international norms. Improving the region's connections with the rest of the world will require a major effort in policy reform and financing. Policies that determine the cost and quality of infrastructure services are in the hands of the region's governments. Increasing efficiency and financing the needed improvements will require a partnership between governments and the private sector.

Opportunities to upgrade infrastructure are large

Middle Eastern and North African countries, especially those with oil revenues, have invested considerable resources in infrastructure. But upgrading is still needed in most countries. About 45 million people in the region—most of them in rural areas—do not have access to safe drinking water. Only 20 percent of urban wastewater is treated, compared with 60–70 percent in the United States and Europe.

In 1993 electricity production in the Maghreb was well below the average of countries with similar incomes. And while most lower-middle-income countries outside the region averaged 10 telephone main lines per 100 people in 1994, the Maghreb countries had barely half as many.

The quality of service is as much of an issue as the quantity

In many countries services are often of poor quality, a deficiency that hits the production costs and competitiveness of firms. Investors in the region rank poor infrastructure as the third biggest constraint to investment—after the cost and availability of finance and the level and administration of taxation. They have a point. Until very recently waiting periods for telephone line installation could be very long. In Jordan, Lebanon, and the West Bank and Gaza it could take a citizen the better part of a decade to get a connection, and Algerians had to wait up to eight years. Citizens of Egypt and Yemen had shorter waiting periods than the average for low-income countries—but it still took nearly six years. The recent introduction of cellular phones has begun to ease these shortages (especially for business) while governments launch efforts to expand and modernize conventional services. In most of the region less than half the paved roads are in good condition, and road safety is a major concern.

Fast-growing populations and rapid urbanization will require massive infrastructure investments that are beyond the public sector's capacity to finance

Although better management of existing facilities is obviously essential, introducing competition and boosting investment in new infrastructure should also be priorities. Potential infrastructure investments in the region are estimated at \$300–350 billion over the next ten years (1997–2006), including \$60–100 billion for the eight economies now borrowing from the World Bank. Given fiscal austerity in much of the region, governments are unlikely to be able to finance all this needed investment. International financial institutions like the World Bank can help, but their capital and exposure limits will prevent them from lending more than about \$15 billion. That leaves a potential market for private participation of about \$50 billion over the next decade. With the right policies and incentives, this market could be larger still. But raising private participation from its current low levels to 15–20 percent of the total will require rapidly implementing the major changes in policy many governments are now initiating.

Bringing in the private sector requires governments to play new roles

Governments contemplating more private activity in infrastructure provision are grappling with three sets of issues:

- How far can competition be introduced in the provision of infrastructure services?
- Where competition is not feasible, what are the best ways to involve the private sector?
- To what extent are government financial support or guarantees necessary to attract private partners?

The answers vary by sector, and the terms of private participation differ across countries and individual projects. For example, governments must choose the appropriate type of private participation (concessions, build-operate-own/transfer schemes, full privatization, and so on), the degree of restructuring and nature of regulation required, and the mechanisms for ensuring competition and resolving disputes. To maintain popular support, these processes must be as transparent as possible, with the goal being clear and simple bidding procedures guiding participation in competitive and contestable markets. Moreover, decisions about government guarantees must reflect an overall investment and financing strategy.

Because of the complexity and magnitude of the investments, it is essential that governments get high-quality advice on designing arrangements for private participation in infrastructure.

With the better connectors that private participation can bring, firms and households will be able to reap the benefits of an increasingly integrated world economy

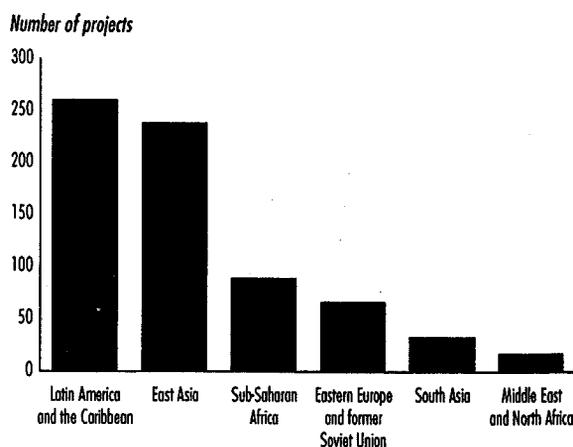
As Middle Eastern and North African countries devote more attention to promoting exports of goods and services, better infrastructure will provide the basis for firms to compete in international markets. As trade liberalization proceeds worldwide, efficient infrastructure services are becoming increasingly crucial to maintaining the competitiveness of agriculture, industry, tourism, and other sectors. With the instantaneous transmission of information that modern telecommunications can bring and with the rapid transit of goods across efficient roads and ports, exporters will stand a far better chance than they do today. Moreover, infrastructure can provide better and cheaper services and inputs to consumers and domestic producers. Recognizing these new realities, the region's governments have started reforming policies and encouraging the private sector to help increase the efficiency and quality of infrastructure services. Doing so will also promote better performance of both the public and private sectors throughout the region.

Private participation in infrastructure is growing rapidly around the world. Between 1984 and 1995 some ninety countries privatized nearly 550 infrastructure companies and more than eighty countries had nearly 600 active new private infrastructure projects. During 1984–94 private investment flows to infrastructure projects and entities averaged \$60 billion a year (World Bank 1996c).

But barely 1 percent of this investment flowed to the Middle East and North Africa (defined here as Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, West Bank and Gaza, and Yemen). The region had fewer than 10 infrastructure projects involving private investment—mainly gas pipelines and telecommunications projects—of the more than 600 such projects worldwide (figure 1). There is a growing appreciation, however, of the substantial benefits that private infrastructure can bring both directly, through the investments made and management skills brought to bear, and indirectly, through the incentives it creates for better performance from public suppliers of infrastructure services. As a result most Middle Eastern and North African countries are starting to experiment with private participation in infrastructure in a variety of sectors, including telecommunications, power, transport, and water and sanitation.

Better infrastructure will become even more central to the region's development as its dependence on natural

Figure 1. The region has had few projects involving private participation in infrastructure



Note: Number of actual projects or transactions, 1984–96.
Source: World Bank, Private Infrastructure Database.

resources (especially oil) diminishes and is replaced by the production of goods and services oriented to world markets. With growing populations, rapid urbanization, and high unemployment, there is enormous pressure to create jobs and raise incomes. A strategy for achieving future prosperity must rely on liberalizing markets, encouraging private investment, improving education, and providing opportunities to the poor (World Bank 1995a). Doing so will enable Middle Eastern and North African countries to take advantage of regional trading opportunities and integrate more effectively with Europe and the rest of the global economy. Better infrastructure can provide the basis for achieving many of these objectives. What are the key issues, and how can the countries of the region attract private infrastructure investment to foster economic development?

Better infrastructure to support development

Well-functioning infrastructure facilities and services that meet a nation's commercial and social needs are critical to economic development. In today's global economy the ability to create modern and competitive industries and services depends on the extent and quality of a country's infrastructure networks. Investors carefully consider the quantity and quality of a host country's infrastructure when deciding where to locate new activities (box 1). Good infrastructure is essential because:

- Manufacturers require sufficient levels of power for production activities
- International trade is not possible without advanced telecommunications
- Distributors must be able to quickly and efficiently transport their products to market
- Tourism operators are directly affected by the reliability, quality, and cost of a broad range of infrastructure services.

Over the past two decades major advances in telecommunications, transportation, and storage technologies have helped rapidly expand worldwide trade. Vast improvements in logistics management have cut the costs of inventory and working capital. Nearly two-thirds of production in OECD countries is done using "just in time" delivery. To compete with these developments, the Middle East and North Africa must develop better trading facilities and advanced communications systems.

Box 1. Breaking down barriers to private investment

How do investors decide where to put their capital? Surveys of investors have identified a number of weaknesses in the business environment of Middle Eastern and North African economies—weaknesses that must be remedied if the region is to be seen as an attractive destination for investment. Among these, poor infrastructure ranks as the third biggest constraint to investment—after the cost and availability of finance and the level and administration of taxation.

Constraint	Rank
Finance (cost and availability)	1
Taxation (level and administration)	2
Poor infrastructure	3
Inadequate skills	3
Complex regulations	4
Legal system	4

Source: World Bank 1995a.

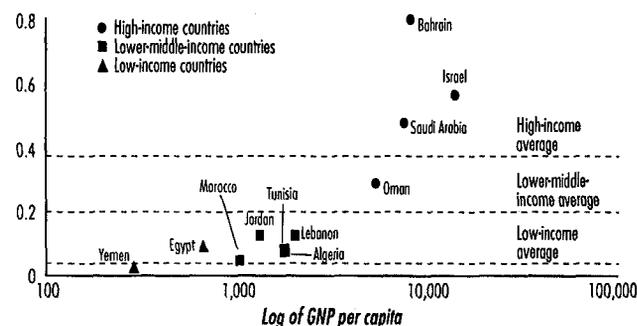
Coverage needs improvement

The public sector in the region has done a poor job of managing infrastructure. Only the Gulf countries and Israel provide infrastructure services that are comparable in quality and coverage to those in countries with similar income levels. Elsewhere in the region—especially in the Maghreb—coverage is lower than in many comparable countries (figure 2). For example, in 1993 kilowatt hours of electricity produced per capita amounted to 0.73 in Tunisia, 0.66 in Algeria, and 0.41 in Morocco—well below the 2.44 average for comparator countries.

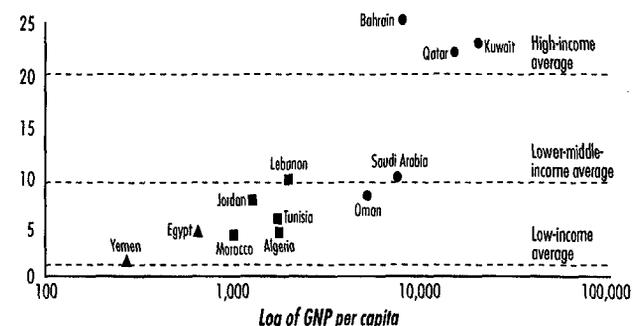
North Africa was undersupplied with telephone lines. Lower-middle-income countries outside the region averaged nearly 10 telephone main lines per 100 people in 1994; Tunisia had only 5 and Algeria and Morocco only 4. Per capita investment in telecommunications in much of the region was well below the norm (figure 3). At the same time, there were marked differences between countries. In Yemen (where international telecommunications services have been privatized since 1971) per capita investment was twice that of peer countries.

Figure 2. Infrastructure coverage in some countries has lagged behind others with comparable incomes

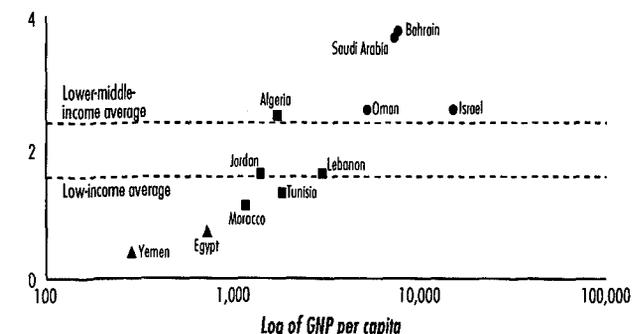
GWH hours produced per 100 inhabitants (electricity), 1993



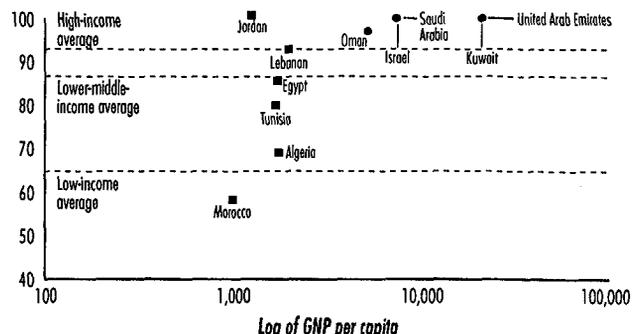
Telephone main lines per 100 inhabitants, 1994



Kilometers of paved road per 1,000 inhabitants, 1994

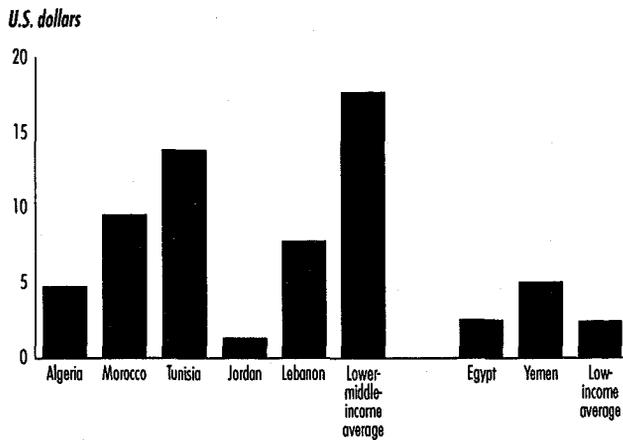


Access to safe drinking water, 1994 (percent)



Source: World Bank data; ITU 1995; IRF 1995; WRI 1996.

Figure 3. Per capita telecom investment has been low



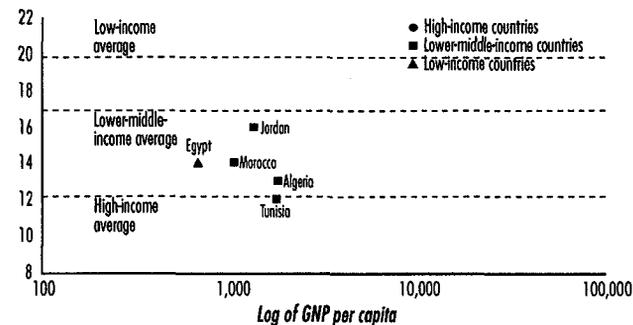
Source: ITU 1995.

Roads are adequate, although considerable reconstruction is needed. This situation is most acute in Lebanon, where car ownership is relatively high (250 vehicles per 1,000 inhabitants). Road safety is a major concern. Accident rates are high because road capacity and design have failed to keep pace with growing traffic.

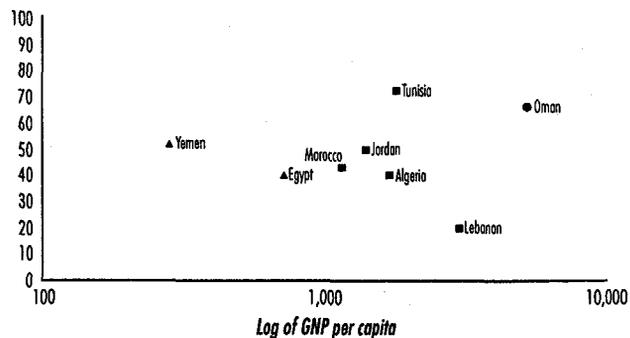
Most urban populations are connected to a safe drinking water supply; rural populations, however, often are

Figure 4. The efficiency of services is also a big problem

Electricity system losses, 1990 (percent)



Paved road in good condition, most recent data available (percent)



Source: World Bank data; ITU 1995; IRF 1995; WRI 1996.

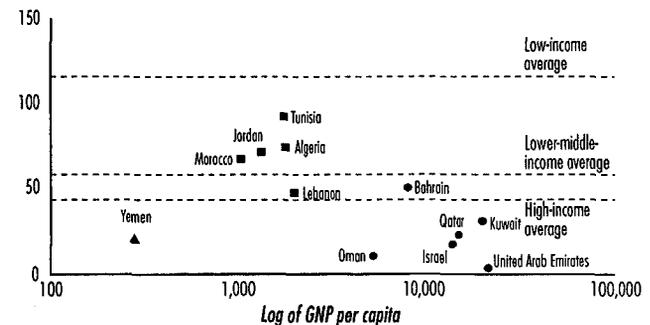
not. Moreover, distribution losses often cause water supply shortages. For example, even though a sizable portion of Algeria and Jordan's populations has access to safe drinking water, half the drinking water produced is lost because of physical leakages and uncollected tariffs. In addition, access to sanitation is inadequate in many areas.

Efficiency and quality also must be improved

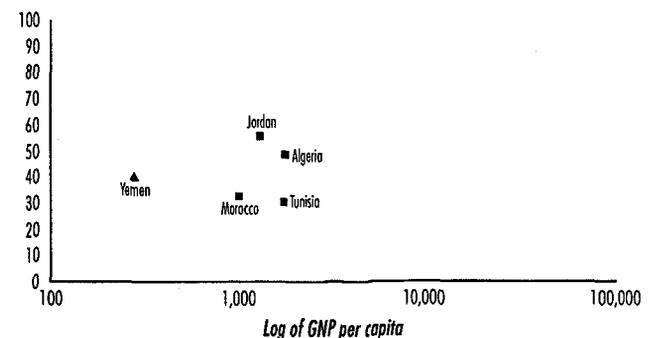
Access is one thing, but efficiency matters too. Even when governments manage to provide services to most of their citizens, the inefficient delivery of such services—whether because of underpricing or poor management—can be a severe drain. For example, distribution losses in the region's power networks range from 13–16 percent (figure 4). Lowering system losses by even a couple percentage points would mean fewer power outages and ease pressures on the region's power distribution networks.

Until the recent introduction of cellular services, waiting periods for telephone line installation could be very long. In Jordan, Lebanon, and the West Bank and Gaza it could take the better part of a decade to get a connection. In 1994 Algerians had to wait up to eight

Telephone faults per 100 main lines, 1994



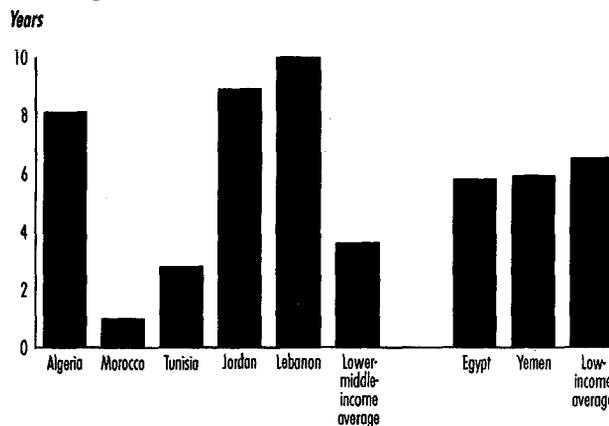
Unaccounted-for water, 1994 (percent)



years, and citizens of Egypt and Yemen nearly six years (figure 5). (By contrast, in most industrial countries the waiting period for a telephone connection can be measured in days and often in hours.) And even if citizens got phones, they had trouble using them because telephone faults were frequent. In Jordan just 45 percent of calls went through on the first attempt. In Lebanon the call completion rate was just 30 percent. Realization of the economic costs of poor telecommunications has led many governments to plan major improvements in service. Jordan, for example, plans to double the number of phone lines by the end of 1997 (box 2).

Although the region's paved road coverage compares favorably with other countries, less than half the

Figure 5. The waiting period for telephone service has tended to be long, 1994



Source: ITU 1995.

Box 2. Telecommunications in Jordan: Accelerating growth and modernization

Although Jordan's telecommunications network ranks around the average for emerging economies, there are more than 100,000 outstanding applications for telephone service. Basic access is limited, and the more advanced services increasingly needed by businesses are only now being introduced. Moreover, there is considerable potential for improving service quality and reducing costs. Recognizing these challenges, Jordan's government is gradually opening the country's telecommunications market to the private sector and to competition.

The highly profitable state telecommunications monopoly was reorganized in 1996 as a public limited company, Jordan Telecommunications Company (JTC), initially 100 percent state-owned. JTC is investing about \$220 million to double the number of telephone customers to 570,000, improve commercial management, and install modern information systems. These investments are partly financed by a 1995 issue of \$50 million in seven-year bonds in domestic and Eurobond markets. Repayment of the principal is guaranteed by the World Bank. With World Bank assistance, the government intends to further increase private participation in JTC by selling a 26 percent stake to a strategic partner by the end of 1997. JTC's license is being revised and financial advisers are being selected to prepare and carry out the transaction.

At the same time a nationwide digital cellular network is being developed by JMTS, a joint venture between Motorola and private Jordanian investors. In 1994, under competitive bidding, JMTS was awarded a fifteen-year license with a four-year exclusivity period to provide Global System for Mobile Communication cellular ser-

vices. During the exclusivity period the company is required to build a network providing coverage to 95 percent of the country's populated areas. Once the exclusivity period ends, additional licenses will be issued to other cellular operators. The company already has about 25,000 customers and is likely to exceed its initial target of 60,000 customers in ten years. The project, estimated to cost \$85 million, is partly financed by a \$15 million loan from the International Finance Corporation (IFC), \$20 million from Jordanian banks, and \$3 million in IFC equity.

Other new players in the Jordanian telecommunications market include a joint venture between U.S. Sprint and local investors to provide Internet services, a second radio paging operator, and a private contractor for telephone directories. The provision of customer equipment and of private networks and their interconnection to public networks have been largely deregulated. The opening of basic services to competition, a key element of privatization in other emerging economies, has not yet been decided.

To support these structural changes, in 1995 the government enacted a new telecommunications law and established an independent regulatory authority with the power to issue and enforce licenses, regulate prices, establish interconnection and other rules, set service standards, manage the radio spectrum and numbering system, and settle disputes. Developing this agency remains an urgent priority. A telecommunications policy department had already been established in the Ministry of Posts and Telecommunications. Technical assistance from bilateral donors is helping to build capacity in both agencies.

roads are in good condition. This situation reflects inadequate road maintenance programs throughout the region. Between 1990 and 1995, for example, Yemen's highway agency allocated less than 5 percent of its annual budget to preserving primary and secondary roads, and little if any attention was given to unpaved roadways. Maintaining Yemen's road system would require ten times what is currently being spent (World Bank 1996e).

Many World Bank-supported infrastructure projects in the region have been rated unsuccessful or only partially successful upon completion. Physical components have been implemented (though sometimes with delays and cost overruns), but efforts to strengthen the financial management of utilities and otherwise build up the institutional capacity of national and local governments to manage infrastructure have had disappointing results. Water and power projects, for example, have suffered problems with financial management that reflect endemic weaknesses in national policies on the management of utilities (box 3).

Future capital requirements for infrastructure will be large

Outside the countries of the Gulf Cooperation Council (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates), much of the region has not spent enough on infrastructure over the past several decades. Moreover, a widespread tendency to underprice services deprives utilities of internally generated cash—a key source of investment capital—and extensive government subsidies undercut incentives for better performance and cost recovery. Unless tariffs are raised to support cost recovery, it will be difficult to attract private infrastructure investment.

Like the Middle East and North Africa, Southeast Asia has had to cope with surging labor forces and swelling urban populations, straining metropolitan services to the point of collapse. It has responded by allocating sizable portions of investment to infrastructure projects, with the aid of private capital. This example is a good one to follow. Middle Eastern and North African government spending on public works and utilities should be increased to a level sufficient to eliminate the coverage and efficiency gaps described earlier. If the region continues to spend 3–4 percent of GDP

on infrastructure—assuming annual GDP growth of 3.0 percent among World Bank borrowers and 2.5 percent among non-Bank borrowers—about \$300 billion will be invested over the next decade (the “base case” scenario). Although this would probably be enough to replace old assets and expand coverage to keep pace with population growth, it would not be enough to close the coverage gaps.

Middle Eastern and North African governments are determined to do better. If, for example, the eight economies (Algeria, Egypt, Jordan, Lebanon, Morocco, Tunisia, West Bank and Gaza, and Yemen) currently borrowing from the World Bank manage to double annual GDP growth to about 6 percent and to increase investment in infrastructure to about 5 per-

Box 3. Problem projects in water and power

A 1993 World Bank review of water and power projects found that nine of twenty-one projects in the Middle East and North Africa had serious problems—a worse record than the regional portfolio and worse for the two sectors than in any other region. The problem? Project utilities failed to meet agreed financial targets. All the utilities in question were essentially bankrupt (generating insufficient cash flow to cover debt service) and a burden on governments that had limited fiscal capacity to subsidize utilities indefinitely. Performance varied by country, however. All five water and power loans to Yemen had serious problems, and there was a high incidence of problems throughout the Mashreq. The Maghreb generally performed better, and Tunisia had no serious problems.

Problems included low employee productivity, tariffs set below long-run incremental cost, high unaccounted-for water or power losses, accumulation of unpaid accounts receivable (particularly from public sector consumers), and long delays in conducting financial audits. Even though the country environment and macroeconomic performance help explain some of these problems, political interference in day-to-day operations and capricious regulation were even more of a factor. Utilities established as civil service departments performed less well than corporate bodies, and none of the countries had anything close to an independent regulatory body. A better approach is to entrust water and power systems to private companies or at least to autonomous corporate utilities under an arms-length relationship with rule-bound, predictable regulators.

cent of GDP, they could make major strides toward ensuring universal coverage and upgrading services (the "accelerated case" scenario). This high rate of infrastructure investment is not without precedent. Countries in Southeast Asia have spent an average of 4–5 percent of GDP on infrastructure, and some have spent as much as 8 percent (Kohli 1995 and Ringskog 1995).

The combined GDP of the region's current World Bank borrowers was about \$155 billion in 1994. If these eight economies begin spending 5 percent of their GDP on public infrastructure between 1997 and 2006, investment will exceed \$100 billion. Taking Southeast Asian spending during the 1970s and 1980s as a model, this might mean about 1.7 percent of GDP spent on power, 0.8 percent on telecommunications, 1.7 percent on transportation, and 0.8 percent on water and sanitation (figure 6).

Because each country is at a different stage of economic development and the level of service provision in each sector varies, the data in figure 6 are merely indicative. The actual investment mix will depend on the country and sector. For example, citizens of the Maghreb countries generally have more disposable income to spend on services than in the Mashreq, and in Yemen, with its large rural population, the requirement for rural water facilities will be greater than in Tunisia. Economies that have major reconstruction needs—Iraq, Lebanon, the West Bank and Gaza, and Yemen—clearly will have bigger investment needs.

Where will governments find the money to finance the difference between current and desired levels of investment? Conventional borrowing from international development institutions and development banks within the region will not be sufficient to bridge the gap. The answer lies with the private sector, which offers capital and technological know-how to overcome many of the constraints faced by the region's governments. By allowing private investors to assume a greater role in building and operating infrastructure facilities and services, governments throughout the region will harness a powerful mechanism for meeting the growing demand.

Of the \$100 billion needed by World Bank borrowers under the accelerated case scenario, governments may be able to finance about \$70 billion. International

financial institutions can probably finance an additional \$15 billion. That leaves a potential market for private participation of about \$15 billion (or 15 percent of the total)—an amount that can only be achieved if governments make a concerted effort to remove barriers to entry and other impediments to investment.

In the Gulf countries and the rest of the region infrastructure needs will be less pressing, given the large stock built up during the oil boom. If these economies continue to grow at a minimum level of 2.5 percent a year, their infrastructure requirements will total about \$200–250 billion over the next decade (about 3.5 percent of GDP). If, like the Bank borrowers, these countries succeed in attracting private capital to finance about 15 percent of their needs, their market for private infrastructure will be at least \$35 billion.

Thus the potential market for private infrastructure finance in the region could be more than \$50 billion over the coming decade, more than three times the amount provided by international financial institutions. Is such a dramatic transformation possible? The answer depends, in large part, on how quickly the region's policymakers can develop the legal, regulatory, and business framework needed to encourage and attract private investment.

Private participation is key for improving infrastructure performance

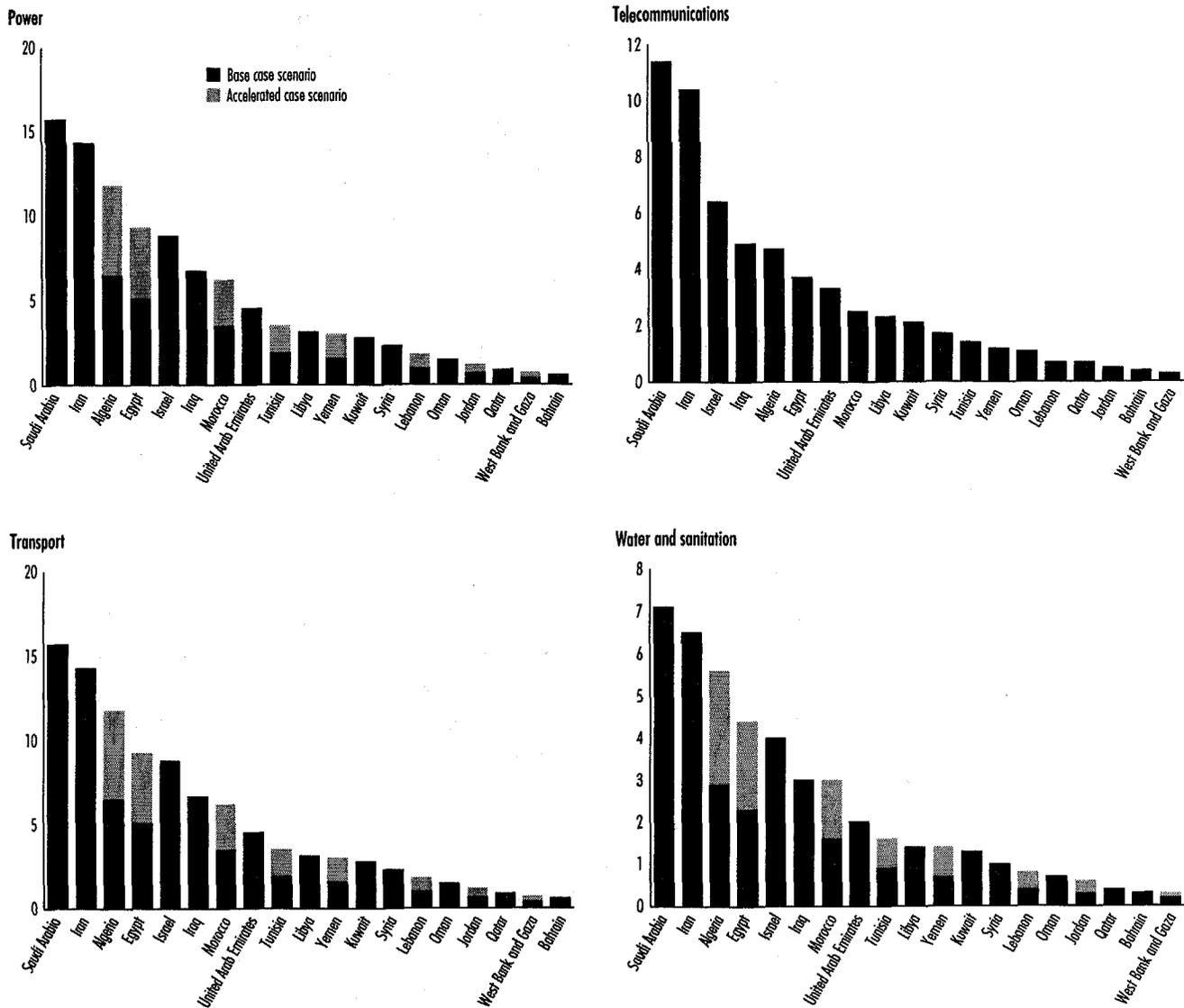
National governments have a range of options for improving the performance of infrastructure: introducing competition in infrastructure services, making state enterprises work better, decentralizing responsibilities to cities and local governments, and bringing in the private sector. Involving the private sector should be a top priority, especially since the measures needed to make private participation feasible—including stabilizing the economy, breaking up monopolies, and introducing sound tariff policies—have the potential to strengthen incentives for better public sector performance as well.

Reform state enterprises

The World Bank's *World Development Report 1994* sets out recommendations for improving the performance of state-owned enterprises. These recommendations

Figure 6. Projected investment requirements are great—potential investment is even greater

Billions of U.S. dollars



Note: Base case scenario assumes annual GDP growth of 3 percent for World Bank borrowers and 2.5 percent for non-Bank borrowers. Investment allocations are 1.1 percent of GDP for power, 0.8 percent for telecommunications, 1.1 percent for transport, and 0.5 percent for water and sanitation. Accelerated case scenario assumes annual GDP growth of 6 percent for World Bank borrowers and an additional 0.6 percent of GDP invested in both power and transport and an additional 0.3 percent of GDP invested in water and sanitation. Source: Author's calculations.

involve adjustments in the system of governance of infrastructure agencies, in their degree of financial autonomy, and in their cost recovery policies. Continued reliance solely on state-owned enterprises may not be the best approach, however. For example, during 1987–90 Morocco implemented policies and measures to rationalize the public enterprises in charge of the national power, water, and railway companies, as well as two petroleum refineries and the petroleum distribution company. These efforts sought to promote

financial independence, develop administrative and managerial autonomy, and rationalize the role of the state in the economy and divest where appropriate. The World Bank supported the program with a \$240 million loan. Although the program improved the enterprises' financial health and ability to deliver services, the sustainability of the improvements is in doubt, and there is growing consensus in Morocco that only increased competition and private participation will ensure more lasting improvements in performance.

Decentralize

Decentralization also offers opportunities for improving infrastructure performance. Over the past decade a number of countries in Latin America and Eastern Europe have devolved responsibility for municipal infrastructure from national to local and regional governments. By contrast, services in the Middle East and North Africa remain a centralized responsibility. (The West Bank and Gaza are an exception, where all government started out as municipal.) Decentralization seeks to give beneficiaries a greater say in setting service levels and tariffs, in the expectation that this will lead to a closer alignment of the services offered with consumers' willingness to pay: making sure they get what they pay for and pay for what they get. Establishing the necessary institutional capacity at the local level is not without its difficulties, however. Parallel efforts have to be made to match technical capabilities with sound mechanisms of corporate governance and municipal finance systems capable of attracting stable funding.

Privatize

Since the late 1980s private participation in infrastructure has grown rapidly worldwide, including in Australia, Hungary, New Zealand, the United Kingdom, the

United States, Latin America, and Southeast Asia. Such efforts are only now beginning in the Middle East and North Africa, including a few projects supported by the World Bank Group (box 4). Contracts have also been awarded to private operators for solid waste and telecommunications (two competing cellular phone licenses) in Lebanon, wastewater in Oman, and a port terminal in Yemen. The list of projects under study or preparation is growing and includes a container port in Oman, private power in Morocco, Tunisia, and several Gulf countries, private water in Egypt, Lebanon, Morocco, and Tunisia, privatization of the Jordanian telecommunications network, and studies on the award of concessions for toll roads in Jordan, Lebanon, Morocco, and Tunisia and for port services in Morocco and Tunisia.

What is the best approach?

The region's governments are making some important decisions on how to approach private participation in infrastructure. Three sets of issues are being addressed:

- How far can competition be introduced into the provision of infrastructure services?
- Where competition is not feasible, what are the best ways to bring in the private sector?

Box 4. Private infrastructure projects in the Middle East and North Africa supported by the World Bank Group

Oman Independent Power Generator

Under a BOOT arrangement United Power Corp. is building and will own and operate a 90-megawatt thermal power facility at Al Manah, as well as 186 kilometers of transmission lines and associated substations. Once completed, the company will sell electricity to the government electricity monopoly. The project will cost \$204.5 million, with a \$15 million loan from the International Finance Corporation (IFC), \$57 million from syndicates, and \$4 million in IFC equity.

Water and Sanitation Services Project in Gaza

This project, designed to improve the quality, quantity, and management of water and sanitation services in Gaza, will support the operation of the water and sanitation system in Gaza's sixteen municipalities and village councils. In addition to \$25 million from the World Bank, funds to expand and improve services are being provided by the European Investment Bank (30 million ECU), the

European Union, and other donors, including Canada, Italy, Japan, Norway, and the United States. In May 1996 a four-year performance-based management contract was awarded to Lyonnaise des Eaux following an international competitive bidding process. The private management contract started on September 1, 1996. The operator's remuneration includes a fixed fee and an incentive fee to achieve specified performance targets—such as reducing unaccounted-for water, repairing or replacing meters, and lowering accounts receivable—and is financed by the World Bank through the Trust Fund for Gaza and the West Bank. In addition, the Bank is providing operating investment funds to finance the goods, equipment, work, and services required to improve services and achieve performance targets. A third project component provides technical assistance to strengthen the newly created Palestinian Water Authority and to provide independent auditors to monitor the operator's technical and financial performance.

- Should the government provide financial support to private partners? If so, what kind and how much?

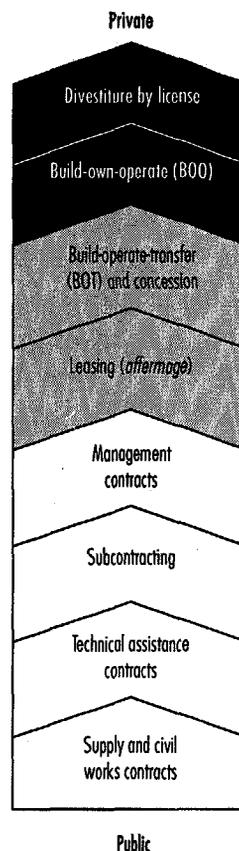
Bringing in the private sector

Private involvement can take many forms, depending on the intended degree of risk to be transferred from the public to the private sector. The spectrum runs from management contracts with performance-related fees to leasing (responsibility for operations and maintenance but not for major investments) to full concessions (responsibility for investment but with an obligation to return the assets to the government) to actual sale of public assets or companies (figure 7). At one extreme the government cedes the least control but retains the most risk, while at the other the government hands over all control (except what it retains through regulatory mechanisms) and the private investor or operator assumes most risks. At all levels private investors will act only if the expected rewards are commensurate with the degree of risk.

Getting prices right. Private investors will not enter markets unless they have the incentives to do so. One of the most powerful incentives is the perceived potential for returns. If prices are not realistic—that is, if underpricing impedes adequate returns to the provision of infrastructure services—investors are unlikely to step in. Although governments may be tempted to set low tariffs so that poor people can have access to services, targeted subsidies are a better way of achieving this goal.

Introducing competition. It used to be argued that the economies of scale inherent in telecommunications, power, and railway networks required large, vertically integrated monopolies. Technological developments now make it possible for separate firms to use each other's networks (power transmission, rail, local telephone cables) or to duplicate them cheaply (long-distance telephony). Moreover, in many cases the diseconomies of inefficient state-owned enterprises far outweigh remaining economies of scale. Countries that have privatized infrastructure have done so by unbundling old monopolies and opening to competition and private participation those activities that lend themselves to competitive supply, such as long-distance telephony and value-added services, power generation, and port operations (table 1). This approach allows demand to be met without requiring significant

Figure 7. A broad range of options is available for private participation in infrastructure



Source: Guislain and Kerf 1995.

Table 1. Unbundling sectors into their component activities

	Competitive components	Monopolistic components
Physical infrastructure	Power stations	Power transmission and distribution networks
	Wireless and long-distance networks	Water transport and distribution
	Warehouses, terminals	Roads, rail track Port quays and channels Airport runways
Services	Telecommunication services	Port or river dredging
	Passenger and freight transport (all modes)	Traffic safety (all modes)
	Stevedoring, handling	
	Equipment supply	
Market options	Normally private	Choice between private and public
	Competition in the market	Competition for the market
	No special regulation	Detailed regulation

Source: Guislain 1997.

new investment, relying instead on using existing assets more effectively.

Awarding concessions. In some markets or market segments (water distribution) a sole provider may still be the best option. But even in those cases the government can create incentives for private operators not to abuse their monopoly by making the market contestable, that is, by putting it up for bid periodically in the form of a concession (or franchise) or by ensuring that barriers to entry are kept low (box 5). This approach can be thought of as competition for the market, as distinct from competition in the market.

Developing regulation. Where competition is limited, governments must provide some form of regulation. A license or concession contract to provide an infrastructure service usually will provide for indexation of tariffs and establish mechanisms for resolving disputes. For independent power producers with long-term arrangements to sell power to state-owned utilities, regulatory provisions may be imbedded in transaction-specific contracts between the government and the producer. Under management contracts

and leasing contracts for water treatment plants, which typically run five to seven years, the threat of the license being transferred to another entity on expiration may help discipline the concessionaire. Concessions that have longer lives and that involve providing services to the public are the most likely to warrant creation of a special regulatory body. An electricity regulator, for example, could issue and enforce licenses and concessions, set prices when there is insufficient competition in the market, monitor the financial viability of operators, set service standards and monitor compliance, arbitrate disputes between operators and between operators and consumers, and provide information and advice to the ministry of energy (Tenenbaum 1995).

An effective, arms-length regulator is almost as rare as an efficient, depoliticized state-owned enterprise. Rather than rely on regulators, it is safer to open as many activities as possible to competition—not awarding exclusive rights to concessionaires—so that operators are subject to the discipline of market forces. Even though the threat of competition makes conces-

Box 5. Private providers—Better services at lower prices

Until 1993 the greater Buenos Aires water and sewerage network was owned by a public entity, Obras Sanitarias de la Nación. With World Bank assistance, the entire system was privatized using competitive bidding for a thirty-year concession. The winning bidder, Aguas Argentinas, promised a 27 percent reduction in tariffs.

The tender requires Aguas Argentina to invest about \$4 billion in rehabilitation and expansion over the life of the concession, allowing the connection of all residents lacking water and sanitation services. Voluntary redundancy programs have cut the company's workforce from 7,800 to 3,500 employees. The IFC helped finance the initial two-year investment program, which included essential repairs and rehabilitation, acquisition of new equipment, and a portion of the retirement plan and pre-operational expenses. The IFC also has advised the company on financial restructuring and mitigated some of the risks inherent in a long-term, phased project that depends on continued access to financing and requires a transparent and effective regulatory environment. The IFC plans to work closely with Aguas Argentina to develop its access to both domestic and foreign capital markets.

Proper classification of users and water metering will improve demand management and help lower per capita consumption. The company also plans to reduce water losses by repairing physical weaknesses in the system. Use of poor-quality ground water will be eliminated, and the city's wastewater will be treated, improving the health of the population.

Aguas Argentinas has expanded the water network to 600,000 new residents, eliminated water shortages, and increased drinking water production by 26 percent. Annual revenue increased by 35 percent between 1993 and 1994, from \$216 million to \$293 million, and net income went from a deficit of \$23 million to a profit of \$25 million. The company's ability to fine customers for late payments and to suspend services for nonpayment increased the collection rate from 81 percent to 93 percent. These results have made Argentina's experience a model for water privatization in other developing countries. The IFC plans to provide additional assistance with the post-privatization program by arranging financing from nontraditional lenders—including domestic and foreign pension funds and insurance companies—for the 1996–97 investment program.

Source: Donaldson 1995.

sions less attractive and hence reduces the capital value likely to be bid, this loss of revenue to the government must be weighed against the potential for greater benefits to users. For example, to bridge the transition to a competitive market the license for cellular phones in Jordan grants exclusive rights for just the first four years of a fifteen-year license, while the network is put in place (see box 2). Once the exclusivity period ends, additional licenses should be issued to other cellular operators.

Deciding on bidding and contract requirements. Entry processes that are not transparent run the risk of political backlash later, even if the project still provides benefits to the country. Competitive bidding is the most transparent approach but must be adapted to the complexity of project finance transactions and the desire to derive maximum benefit from the flexibility and innovation that private entrepreneurship can bring. The International Finance Corporation's experience with financing private infrastructure, growing quickly from a small base since the beginning of the 1990s, illustrates the importance of tailoring concession award approaches to country and project circumstances:

- *International competitive bidding* is better suited to large, long lead-time projects where government capacity to manage the process has been developed and there is widespread interest from sponsors. Competitive bidding may also be preferable during the early stages in developing countries, when establishing transparency and credibility is essential.
- Under *competitive negotiation* the government selects several short-listed bidders using specific criteria and then negotiates with each. In Pakistan, for example, the government set a ceiling rate for power based on the maximum tariff that it would accept (\$0.065 per kilowatt hour), and invited bids. It received offers totaling 20,000 megawatts in potential projects and is proceeding with 5,000 megawatts, including several projects financed by the IFC.
- *Negotiated entry* is often used for a country's first few private infrastructure projects, since there is usually insufficient knowledge to specify terms for a competitive tender. Negotiations are used to determine what is required to attract private sector interest. Although this approach has sometimes been necessary in sectors where the expected return to private equity is not obvi-

ous and the level of potential government support is unclear (IFC 1996), the potential for inefficient outcomes requires that competitive processes be given preference whenever feasible.

Closely linked with the selection process is the question of how much the government should specify the services to be supplied. Public sector responsibility for design can range from a full, detailed design (as is conventional under public sector procurement supported by the World Bank) to preliminary design or performance specifications. In cases where the government provides no design, the private sponsor is likely to conclude a design-and-build or turnkey contract with a supplier. Less public sector responsibility for design allows the private sector to propose innovative solutions and better match design specifications to market demand. The competing proposals that result may be hard to compare, however.

Selling existing facilities. Great Britain was the first country to comprehensively privatize power and water services. It did so by unbundling the power system into its main components (generation, transmission, distribution) and floating the shares of the new companies on the stock market. Ten regional water companies were sold in the same way. Argentina, Chile, and Hungary are among the developing countries that have opted for this "big bang" approach to selling off assets, but others may lack the capital market, regulatory capacity, and legal framework it requires. Other countries that have privatized utilities have done so incrementally, using pilot transactions to test their approach and to gauge investor interest and public acceptance.

In some countries the proceeds from sales of public assets and bids for concessions have accrued to the national treasury. In others these proceeds have been used to service the public enterprise's debt or plowed back into the new company. Under Bolivia's innovative "capitalization" program, for example, half the shares of public enterprises have been put out to bid, and the proceeds are used to renew and expand the company's assets.

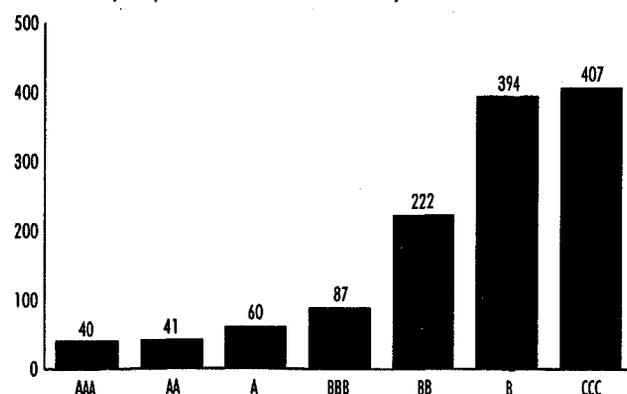
Identifying sources of private finance. A number of financing methods can be used to mobilize private capital for infrastructure: debt and equity, domestic and foreign. Civil works contractors, equipment suppliers, and utility operators have been the main source of equity for

private investment in infrastructure and are likely to remain so. Portfolio equity (infrastructure funds) and revenue bonds require relatively sophisticated capital markets that are able to meet the information needs of investors who have no special stake in infrastructure. Long-term lending instruments are needed in local capital markets to meet the substantial local currency financing needs of infrastructure projects that require loans extended over ten to fifteen years.

Expanding the sources of finance for private infrastructure projects will require developing the better market information provided by credit rating agencies. Many sovereign governments in the Middle East and North Africa have received ratings, including Bahrain, Egypt, Israel, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, Tunisia, and the United Arab Emirates. None of the utilities in the region has yet been evaluated by the international rating agencies. But there is a potentially good fit between, on the one hand, the desire of institutional investors (such as pension funds and insurance companies) for long-term investments with predictable returns and, on the other, the revenue potential of power and water utilities and toll roads. The discipline required to acquire and hold on to an investment-grade bond rating is a powerful incentive for sound financial performance. Raising a company's rating from BB to BBB (the lowest investment grade rating) can lower borrowing costs by 130–140 basis points and greatly widen the market to which the company has access (figure 8).

Figure 8. Higher credit ratings mean lower borrowing costs

Industrial bond yield spreads and intermediate U.S. Treasury bills



Note: Spreads are for senior unsecured debt with less than fifteen years to maturity, as of September 30, 1996.

Source: Standard & Poor's Fixed Income Research.

Establishing collateral and other security mechanisms. A basic principle of infrastructure finance is that lenders take security not on the assets of the parent companies of the project sponsors (corporate or balance sheet financing), but on the revenues and assets of the company set up to own and operate the service in question. This arrangement may require countries to change laws governing collateral, particularly if once-public assets (such as a stream of revenue from electricity consumers) are to be pledged to a foreign lender. Foreign lenders often require that project revenues intended for debt service be channeled through an offshore escrow account, which may require that foreign exchange regulations be liberalized.

Determining government contributions to private infrastructure projects

One of the main reasons for seeking private investment in infrastructure is to reduce claims on the government budget. Government support may sometimes be warranted, however. One case is when the project has large external benefits—such as the environmental benefits of a sewage treatment plant—that cannot be captured in the operator's revenues. Another is when the project's potential is strong but private investors perceive much higher risk than the government because there is no history of private investment. In both cases the government's contribution should be just enough to bring the expected returns up to a minimum threshold. Negative competitive bidding, in which the contract is awarded to the bidder seeking the smallest government contribution, is a transparent way of setting the "right" level. It should be remembered, however, that projects with weak economics—a borderline expected rate of return and much uncertainty—are poor candidates for private financing, and government efforts to use partial financing to prop them up are unlikely to succeed.

Government financial support can take many forms, including equity guarantee, debt guarantee, exchange rate guarantee, grant, subordinated loan, minimum revenue or physical throughput guarantee (such as in a power purchase agreement), guarantee of performance of public enterprises or other public entities, revenue enhancements (such as income from duty-free shops at an airport), and concession extension. These mechanisms have varying abilities to facilitate private financ-

ing, resulting in varying government financial exposure. The World Bank Group offers a variety of instruments to help governments attract private investment on the most favorable terms (see annex 1).

Going from player to referee

The role for governments in private financing of infrastructure is to set the rules of the game and ensure a level playing field. Instead of being a monopoly provider of infrastructure services, governments should focus on defining rules that enable private investors to compete to provide the best services to consumers. To create the right incentives and disincentives, governments should:

- Strengthen the regulatory regime by abolishing monopolies where possible, promoting and protecting competition in the market, and regulating monopolistic activities (including concession terms, interconnection tariffs, and so on).
- Develop procedures for awarding infrastructure concessions by setting guidelines for competitive bidding and direct negotiations, disseminating criteria and procedures for evaluating competitive bids, establishing criteria and mechanisms for government contributions, and so on.
- Bring the legal and judicial framework in line with the requirements of private investment in infrastructure by reviewing the appropriateness of business legislation (including company and bankruptcy laws), allowing for private and foreign ownership of infrastructure assets, providing effective dispute resolution mechanisms (including international arbitration), and ensuring the capacity of the courts to process suits fairly and expeditiously.

- Build up local capital markets by strengthening prudential regulation of banks and disclosure and audit requirements and removing impediments to private sector securities issues, particularly to pension funds and life insurance companies.
- Improve foreign exchange management by promoting convertibility, transferability, and forward markets.
- Review taxation to ensure consistent and fair treatment rather than special, case-by-case regimes and tax breaks.
- Review legislation governing collateral and other security mechanisms, including off-take contracts and guarantees (sovereign and partial), insurance (political and commercial), and offshore escrow accounts.

Initial efforts at private participation in infrastructure investment may require appointing a special agency, such as a ministry of privatization, to oversee this agenda of actions. This entity should be supported by a team of advisers, consultants, and lawyers to get the best available expertise and ensure an effective, coordinated approach.

National governments also have a role to play in bringing the private sector into municipal services. Leases and concessions granted at the municipal level have worked well in decentralized systems (such as Spain's) thanks to a framework of administrative law. If these laws do not exist, early contracts can be difficult, especially those involving long-term private financing. Central governments can promote private entry in local services by defining process rules (such as requiring that local concessions be tendered competitively) and developing contract models that help local governments reduce the cost of individual transactions and make fewer mistakes. They also can support a few pilot transactions by, say, helping local governments secure expert advice or by providing noncommercial risk guarantees.

Annex 1. The World Bank Group's role

The World Bank Group stands ready to help governments that want to mobilize new sources of investment capital for infrastructure by opening up markets to competition and allowing private entry. Available assistance includes conventional IBRD loans (or IDA credits for low-income countries), IFC loans and equity investments for private firms, advice on improving the legal and institutional framework for managing privatization and awarding concessions, and guarantees from MIGA and the IBRD (box A.1). The World Bank Group also provides advice on unbundling infrastructure monopolies and introducing competition in infrastructure sectors, and on improving the legal and institutional framework for managing privatization, awarding concessions or licenses, and regulating the reformed sectors.

The Bank already has a sizable portfolio of (mostly public sector) infrastructure projects in nine Middle

Eastern and North African countries (figure A.1). Between fiscal 1987 and fiscal 1996, \$3.5 billion in IBRD loans and IDA credits were approved for forty-four projects. Yemen is the only IDA country in the region; the average IBRD loan to the other countries was \$100 million. Loans and credits typically financed about 40 percent of total investment. Only Morocco has been a steady borrower, with eleven infrastructure operations during this period. Algeria and Yemen, the next most frequent borrowers, each had seven projects. The others all had six or fewer.

Lending has varied considerably over the past decade, going from as little as \$43 million in fiscal 1990 (the year of the Gulf war) to as much as \$770 million in fiscal 1993 (figure A.2). The variability is largely due to the sporadic pattern of requests for infrastructure finance. At different times regional conflicts and social unrest have kept Iran, Jordan, Lebanon, and Yemen away, and Egypt has mostly relied on bilateral financing. The West Bank and Gaza began receiving World

Box A.1. World Bank Group guarantees

MIGA's political risk insurance can play an important role in reducing private investors' perception of risks. Political risk insurance covers investors' equity, loans, and loan guarantees, as well as loans by financial institutions, against expropriation, war and civil disturbance, and foreign exchange inconvertibility. MIGA also covers various types of service agreements. In addition to small investments in Egypt, Morocco, and Saudi Arabia, MIGA activity in the Middle East and North Africa has covered investments in large projects in Kuwait (petrochemicals) and Tunisia (oil and gas).

In the Tunisia project MIGA provided \$64.8 million in political risk coverage for British Gas's investment in the form of a loan guarantee. The insurance protects British Gas should it have to pay under its guarantee of a commercial bank loan as the result of a covered political event. MIGA is reinsured for up to \$14.9 million by the United Kingdom's Exports Credit Guarantee Department. The project involves the construction and operation of offshore platforms, an undersea gas pipeline, and an onshore natural gas processing plant.

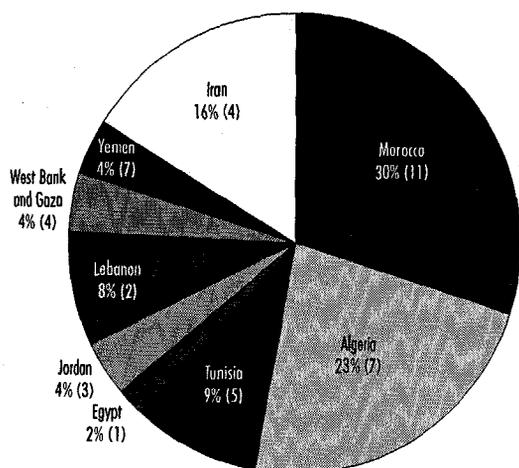
The IBRD's partial guarantees also help lower private investors' perception of risks. Political risk insurance covers investors' equity against expropriation, war and civil disorder, or foreign exchange inconvertibility. Partial

guarantees, a new instrument in the World Bank Group's toolkit, cover risks to debt service on loans from foreign investors. Two options are offered. A partial risk guarantee (also known as a contractual compliance guarantee) protects against such risks as a state-owned power distributor failing to pay its bills for electricity delivered by an independent power producer or a government failing to keep its promises to allow regular indexation of tariffs. All commercial risks are left with the concessionaire. A partial credit guarantee (also known as a late maturity guarantee) covers all risks but only in the years beyond what private banks would otherwise be willing to lend for, giving them sufficient comfort to lend for, say, ten years instead of seven.

The first transaction in the Middle East to benefit from a World Bank partial credit guarantee was the issue by the (state-owned) Jordan Telecommunications Corporation, in late 1995, of a \$50 million, seven-year floating rate note. The guarantee of principal repayment at maturity enabled the issue to be floated with a significantly longer term than current market terms for foreign currency borrowings in Jordan, and represents the longest term achieved to date by any Middle Eastern borrower in the Euromarkets.

Source: World Bank 1996b.

Figure A.1. World Bank infrastructure loans to the Middle East and North Africa, 1987-96



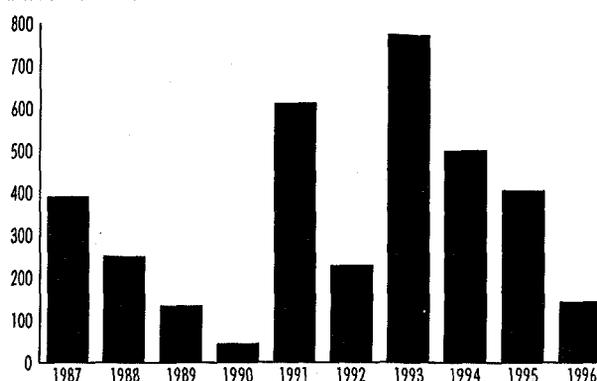
Note: Numbers in parentheses are the number of projects in each country.

Bank Group assistance in fiscal 1994, from a special trust fund on IDA terms. Iraq and Syria did not borrow at all during this period. The strong expansion in infrastructure lending over the past five years suggests that lasting peace in the region could open the way for much higher and more sustained levels of investment. Over the next four years the Bank expects to make infrastructure loans to the Middle East and North Africa totaling \$550 million a year, although there is scope for much higher levels of support if suitable projects arise.

The IFC has the most experience, worldwide, in financing private infrastructure projects (mainly in power, telecommunications, and water) in developing countries. It can take equity positions, provide loans, and syndicate loans to raise additional funds. Through its catalytic effects each dollar of IFC financing is associated with an average of nine additional dollars in new infrastructure investment. The IFC also provides privatization advisory services for client governments seek-

Figure A.2. World Bank infrastructure lending to the Middle East and North Africa, fiscal 1987-96

Millions of U.S. dollars



ing to transfer significant ownership and control to the private sector. These services help ensure acceptable terms for investors under appropriate regulatory and legal frameworks.

The IFC has invested in two infrastructure projects in the Middle East and North Africa: a power generation plant in Oman and a cellular phones project in Jordan. Although these are only a small portion of the IFC's rapidly expanding infrastructure portfolio (about 150 projects worldwide), the IFC could provide much greater support if the region's governments do more to encourage private participation in infrastructure.

The Foreign Investment Advisory Service, a joint initiative of the Bank and the IFC, has organized conferences on private financing of infrastructure in Asia, Eastern Europe, and Sub-Saharan Africa, and is available to do the same in the Middle East and North Africa. The service also advises governments on the policy framework for foreign investment in infrastructure to facilitate the implementation of such projects.

A summary of the World Bank Group's products and services for infrastructure development is shown in table A.1.

Table A.1. World Bank Group products and services for infrastructure development

	IBRD	IFC	MIGA
Debt finance			
Public	X		
Private		X	
Equity and quasi-equity finance		X	
Investment funds			
With government guarantee	X		
Without government guarantee		X	
Loan syndication: Syndicated loans mobilize third-party funds for projects in developing countries.		X	
Political risk guarantees: Coverage is provided for equity and quasi-equity (such as shareholder loans and loan guarantees), commercial bank debt, and other forms of investment (such as technical assistance, production sharing agreements, operating leases) for the following political risks: currency transfer restriction, expropriation, war and civil disturbance.			X
Partial risk guarantees: Cover the lenders against the risks arising from nonperformance of sovereign contractual obligations or from force majeure related to a project.	X		
Partial credit guarantees: Extend maturities beyond what creditors would provide by guaranteeing late date repayment or by providing incentives for lenders to roll over medium term loans.	X		
Policy or institutional reform: Advice to client governments on reform of sector policies and institutions in infrastructure through technical assistance programs, economic and sector work, and technical advice in project preparation.	X		
Financial advisory services: Fee-based advisory services to governments for privatization and structuring of private entry into infrastructure. Includes help to governments in redesigning sectors and implementing transactions.		X	
Advice to corporate clients: Independent of project financing, advisory services that cover broad financial and industry-specific issues. Includes formulating business plans and debt reduction strategies, revising accounting practices, and restructuring physical operations.		X	
Enabling environment: Advice, technical assistance, training, and financial support for the design and implementation of legal, financial, and regulatory frameworks to facilitate private sector participation in a country.	X		
Foreign investment advice: Advice to governments in developing cross-sectoral policy frameworks to facilitate private participation in infrastructure.	X	X	X

Annex 2. Summary of conference proceedings

Conference on Private-Public Partnerships in Infrastructure in the Middle East and North Africa

Istanbul, October 15–17, 1996

Private capital must join public efforts to upgrade infrastructure if Middle Eastern and North African countries are to achieve rapid economic growth. After almost fifteen years of stagnant economic performance, the region appears poised for an economic turnaround. Successful macroeconomic stabilization and more growth-oriented structural policies are improving the outlook for many countries. But better infrastructure is a necessary foundation for sustained economic recovery—and without private participation the region will be unable to realize the scale and quality of required investment.

These were the findings of a conference on Private-Public Partnerships in Infrastructure in the Middle East and North Africa held in Istanbul, Turkey, on October 15–17, 1996. The conference, sponsored by the European Commission and the World Bank, enabled potential private investors, governments, banks, and other interested parties to exchange views on the contribution private participation in infrastructure can make to the region's economic growth. The conference highlighted the importance of high-quality infrastructure services for economic development and international competitiveness, the size of future infrastructure markets, the benefits private participation and competition can bring, the various forms they can take, the lessons to be learned from comparable experiences in other parts of the world, and the policy issues governments must address as they open up their infrastructure to private participation.

The conference was attended by nearly 200 participants representing almost every country in the region. Attendees included seven ministers as well as representatives of public utilities and other enterprises responsible for providing infrastructure services; ministries of infrastructure and planning; civil works contractors, equipment suppliers, and private operators of infrastructure services; commercial banks and international financial institutions; and financial and engineering consultants and law firms.

In his keynote address Kemal Derviş, the World Bank's Vice President for the Middle East and North Africa, noted that many of the region's economies are showing the first signs of an economic upturn after some fifteen years of stagnation. Regional GNP is expected to grow by 5 percent in 1996. To sustain this resumption in growth, Derviş called on the region's lower- and middle-income countries (the World Bank's active borrowers) to set a long-term target of 6 percent annual GDP growth and to adopt policies that can sustain such a rate of growth. If this target is achieved, per capita incomes will be 75 percent higher in 2010 than in 1995. Making this happen will require a concerted effort to raise both the level and the efficiency of investment throughout the economy. This will be particularly true for investment in infrastructure. Recent developments in other regions have shown the feasibility of major improvements in performance resulting from attracting large volumes of private finance into infrastructure. The infrastructure needs of the low- and middle-income countries in the region will be massive: up to \$16 billion a year over the next fifteen years under the high-growth scenario. Of this, the market for private capital will be at least \$3 billion a year.

The European Commission, represented by Marc Pierini, Chief of Economic Cooperation for the Mediterranean, welcomed recent initiatives by the region's governments to open up their economies and to strengthen trade links around the Mediterranean. It affirmed the European Union's readiness to support this process with substantial technical assistance, as well as bilateral association agreements with individual countries. The commission announced that, in cooperation with the World Bank, it would be expanding its efforts to promote private infrastructure in the southern Mediterranean region. The Arab Fund for Economic and Social Development likewise welcomed recent government efforts and stated its readiness to support the region's reform and development efforts.

A clear and unanimous message—Private participation in infrastructure is essential

All the ministers who spoke on *national strategies for private participation in infrastructure*—from Algeria, Egypt, Jordan, Morocco, Tunisia, the West Bank and Gaza, and the host country, Turkey—affirmed their governments' political

commitment to opening up infrastructure to a much higher degree of private participation. A broad consensus was that the volume of investment required could be achieved only through a much higher inflow of private capital and that efficiency improvements required increased competition in the provision of infrastructure.

The governments provided participants with vivid examples of current and planned infrastructure operations involving significant private participation, sharing the lessons of their experience. It was made clear that the trend toward private participation in infrastructure in the region is already strong and accelerating rapidly.

Caution was expressed about the need to avoid unregulated private monopolies, and to ensure that governments do not abrogate their responsibilities for infrastructure services. There was a strong sense, however, that governments should concentrate their efforts on social policy objectives rather than on commercial functions that are best delivered by the private sector. All the participants agreed that competition, wherever possible, is the best regulator, and that better definition and management of risks are essential for successful private participation in infrastructure. All the ministers stressed the need for transparency in the awarding of contracts to the private sector and in the regulatory process. Views varied on the extent to which governments should provide guarantees or otherwise retain responsibility for specific risks.

The first day concluded with a panel from the private sector and the International Finance Corporation speaking on *private perceptions and expectations on private participation in infrastructure* in the region. It was emphasized that private investors far prefer transactions that can be brought to financial closure quickly. To avoid drawn-out and inconclusive negotiations and so enhance a country's credibility, expert financial and legal advice can help put governments on a more equal footing when negotiating private infrastructure transactions with major international investors. The clearer is a country's regulatory framework and the more credible its macroeconomic management, the lower are the returns investors require from investments.

Sectoral sessions revealed major opportunities

The second day of the conference was devoted to parallel workshops on the main infrastructure sectors. The

session on *telecommunications* demonstrated that information infrastructure (telecoms and information technology) is a key element of the new knowledge-based economy. Economic development is increasingly about knowledge; the information revolution holds inestimable promise for people in the developing world. The session underscored technology and market forces as driving forces of the information revolution, as well as the new opportunities they offer to emerging economies, particularly through increased investment triggered by sector reform.

Telecommunications services are best managed and financed by the private sector. Demand for these services is strong, and the investment requirements cannot be completely fulfilled by the public sector. Investment must come from private sources, especially when enormous technological advances and dramatic cost reductions make competition—even in local telephone services—a real possibility that countries should take advantage of.

Thus regional actors in the sector need to move from a public utility model to a framework compatible with competitive private involvement, in which the government is a referee rather than a player. Government policy should focus on organizing and regulating competitive markets while ensuring that basic social needs (such as access to telecommunications for low-income groups) are met.

The parallel session on *motorways* noted that the underlying economics of toll roads vary considerably depending on function, physical characteristics, and market demand. Predicting traffic demand (especially on new roads) and difficulties in obtaining rights of way make toll roads especially risky. A project with weak economics in the public sector is no more likely to succeed in the private sector.

A recently completed review of eight privately financed toll motorways around the world shows that concession award procedures range from competitive bidding on price (for example, the lowest average toll) for a fully specified project to negotiation with pre-qualified firms on the basis of multiple criteria, leaving many design decisions to the bidders against a performance specification. Speakers with experience in industrial countries stressed the merits of flexible procedures that encourage innovation in project design

and execution. Others stressed that in developing countries with no track record of build-operate-transfer (BOT) arrangements, transparency and the need to establish the government's credibility argued for competitive approaches.

The presentations showed that government financial support can take many forms, including donation of existing highway sections, minimum traffic guarantees, subordinated loans, and grants or shadow tolls, as well as allowing concessionaires to develop service areas and other real estate. Experience with a motorway in Thailand illustrates that a failure to specify clearly in the concession agreement who will be responsible for what (including in the event of delays) can trigger major conflicts as a project develops. This risk is particularly applicable to acquisition of right-of-way and construction permits, which are best left with governments.

The session on *water and wastewater treatment*, like the other sectoral sessions, emphasized that private participation can take many forms in the spectrum from limited to full assumption of risks and rewards by the private parties. The most common arrangements in the sector are management contracts, concessions, and BOT arrangements.

Representatives of the private companies that were recently awarded contracts to operate water and sanitation services in Gaza, Tunis, and Antalya (Turkey) noted a general reluctance of governments to move boldly with privatization of water and sanitation services. The lack of commercialized utilities, chronic underpricing of services, and shortages of water may make divestiture or utility concessions difficult in some countries. But there is scope for build-own-operate (BOO) arrangements for major facilities and performance-based management contracts for utilities as transitional arrangements. The session included a lively debate on how to strike the proper balance between price and technical competence when evaluating competing bids for water concessions. It was emphasized that consumers' willingness to pay for water is often underestimated, since the poor often have no choice but to buy water from private suppliers at tariffs that are several times those of public suppliers.

The workshop on *power and gas* recognized that energy is a promising sector for private investment, with substantial scope for competition among generators and

fairly predictable demand. Expectations are for growth in new private power projects, although privatization of existing state power companies has not yet begun. The long-term sustainability of the power sector will require downstream reforms in transmission and distribution to create creditworthy customers and depoliticize tariff setting. Innovation in BOT arrangements is already evident in the region. Approaches have included accessing local financial institutions and markets in Oman and minimizing guarantee requirements in Morocco by providing access to receipts from creditworthy customers.

Participants envisioned major opportunities for regional trade in power and gas. Increased trade would also help promote competition and efficiency. Some participants, however, argued that political risk mitigation will be needed for investors in risky transnational projects in the early years. This area could hold a major role for the international financial institutions, requiring them to develop instruments to support transnational as distinct from national projects.

The session on *municipal services* noted the considerable scope for private delivery of infrastructure services at the subnational level. Where local governments are responsible for infrastructure services, it should be remembered that they are often less creditworthy than national governments and less familiar with contracting procedures and regulatory options, and that information about them often is not readily available. Thus local governments' capacity for contracting and regulating needs to be strengthened.

Central governments could play a key role in this effort by standardizing national accounting, budgeting, and auditing systems to improve information flows in local governments; establishing a common national framework for procurement procedures, use of model contracts, and regulatory guidelines; encouraging the formation of associations of local governments to make it easier for small towns to contract jointly; helping with risk pooling mechanisms and pooled risk funds; and making available noncommercial contractual compliance risk guarantees. The workshop concluded that such efforts are worthwhile because competition in local services can generate large efficiency gains. Studies show that when the private sector is involved in solid waste collection, for example, it can provide services costing 10–40 percent less than public monopolies.

The session on *ports, railways, and logistics* noted that today's trading patterns have created demand for speed in handling and for the integration of services, both of which the private sector is much better at than public enterprises. Although governments are likely to remain responsible for basic port infrastructure, such as breakwaters and dredging, private operators could take responsibility for the superstructure of specialized terminals.

There are several opportunities for private ports in the region, including in Tangiers, Aden, and the Red Sea. Experience in preparing a private container terminal project in Aden has shown that, even in a country with limited experience and skills for awarding and regulating concessions, success is possible if project economics are strong and sponsors are knowledgeable, committed, and able to draw on substantial equity during the development phase.

The recent concessioning to private operators of many railways in Latin America, as well as of some important railways in Africa and elsewhere, has made it clear that railways also can benefit from private participation if the transactions adhere to the general principles required for the other infrastructure sectors.

Competition, regulation, and risk allocation should guide public-private partnerships

The third day of the conference addressed financing and regulatory questions in plenary sessions. On *government policy toward private participation in infrastructure (regulatory and contractual issues)* many participants stressed the importance of unbundling sectors into their constituent parts to allow competition in the market wherever possible and competition for the market where markets remain monopolistic. Competition can ensure efficient outcomes in areas such as power generation, wireless and long-distance telephone services, warehouses and terminals, and passenger and freight transportation. But regulation will be required for transmission and distribution networks for power and water and for roads, rail track, airport runways, and port quays and channels.

Although the breaking up of monopolies creates a more complex web of contractual relationships among service providers and the government, regulatory tasks become much simpler to the extent that the behavior

of the various players is shaped by enforceable contracts, the process of awarding concessions is transparent, and regulators are independent from the firms they regulate. Autonomy is aided by secure and stable funding of the regulatory agency. A shortage of regulatory skills among civil servants can be eased by contracting out the oversight and monitoring function.

A session on the *spectrum of public-private partnerships (options for private sector involvement)* showed that the spectrum is growing richer as new instruments and contracts are found to apportion responsibilities and risks. The number of approaches has grown (BOO, BOT, and so on), as has the range of instruments for changing the intertemporal characteristics of project financing. An example of the latter is the German build-transfer program for roads, in which the government assumed responsibility for debt service at the end of the construction phase. Still, important obstacles remain to the use of such innovations, including insufficient long-term finance in local capital markets, the reluctance of institutional investors to take on the greater risks of project finance, and the sometimes confusing array of options for government support to private infrastructure projects.

The conference's final session, on *mobilizing finance and managing risk*, explored further the need to develop local capital markets to reduce foreign exchange exposure. Because infrastructure projects mostly generate local currency revenues, reliance on foreign borrowing creates a currency mismatch, with high risks in case of devaluation. In most Middle Eastern and North African countries investors have no or limited access to local financial markets, equity markets are shallow, and debt markets offer short maturities at best. Financial sector reform is thus required to open up these markets, remove barriers to entry (including for foreign insurance companies and banks), foster domestic savings, and reduce the crowding-out effects of public sector borrowing.

Speakers from several banks stressed that finance will always be available for good projects, but that private financing cannot make a project profitable that is economically unviable in the public sector. The region must reduce the perceived risks of investing in its infrastructure. Participants identified a number of instruments for achieving this goal, including the partial risk

guarantees and partial credit guarantees that the World Bank is making available to projects in which governments are willing to provide counter guarantees. Judicious use of guarantees and other enhancements as a transitional arrangement should be part of a coherent strategy for encouraging private participation in infrastructure. Participants also noted that infrastructure projects become considerably less risky after construction and the start-up of operations, suggesting that distinct financing instruments should be tailored to the start-up and implementation phases.

Development of local debt markets and a greater role for institutional investors will depend heavily on better market information on default risks. Obtaining a credit rating from one of the international rating agencies can lower borrowing costs and widen access to capital markets. The impact of ratings on borrowing costs is enormous, with the spread on bonds falling by 130–140 basis points between Standard & Poor's BB and BBB ratings. None of the region's infrastructure projects has yet received a credit rating, but several countries (including Bahrain, Egypt, Israel, Jordan, Kuwait, Qatar, Saudi Arabia, Tunisia, and the United

Arab Emirates) have received sovereign credit ratings. Credit rating agencies are being established in Egypt and Tunisia.

The conference closed with a strong endorsement of private participation in infrastructure in the Middle East and North Africa. Despite the complexity of such partnerships it is clear that the inefficiencies of public infrastructure monopolies cannot provide a basis for rapid future growth. As experience with private participation in infrastructure accumulates in the region, the speed and simplicity of transactions should accelerate. Although the region's current level of private participation in infrastructure is low by international standards, the trend—as illustrated by recent sector reforms and the awarding of concessions and licenses in many countries, and by the new private infrastructure initiatives announced by the ministers attending the conference—is most encouraging. The European Commission and the World Bank Group are committed to supporting the countries of the region in building their capacity to design and implement such reforms and transactions through policy advice, technical assistance, loans, guarantees, and equity contributions.

Annex 3. Conference program

Tuesday, October 15, 1996: Opening sessions

Plenary session	Speakers
Keynote Addresses Looking to the Future: Private/ Public Roles in Providing Infrastructure Services	Recep Tayyip Erdogan , Mayor of Greater Istanbul Kemal Derviř , Vice President, Middle East and North Africa, World Bank Abdlatif Al-Hamad , Chairman and Director General, Arab Fund for Economic and Social Development Marc Pierini , Chief, Economic Cooperation, European Commission
Strategies for Private Participation in Infrastructure in the Middle East and North Africa <i>Chair: Kemal Derviř</i> , Vice President, Middle East and North Africa, World Bank	Abdelaziz Meziane , Minister of Public Works, Morocco Nabil Sha'ath , Minister of Planning and International Cooperation, Palestinian Authority Nawal El-Tattawy , Minister of Economy and International Cooperation, Egypt Ayfer Yilmaz , Minister of State, Turkey Rima Khalaf Hunaidi , Minister of Planning, Jordan Mohamed Ghannouchi , Minister of International Cooperation and External Investments, Tunisia Smaine Dine , Minister of Infrastructure and Regional Planning, Algeria
Private Participation in Infrastructure: Private Perceptions and Expectations <i>Chair: Assaad Jabre</i> , Director, Infrastructure Department, IFC	Assaad Jabre , Director, Infrastructure Department, IFC Fouad Sultan , Chairman, Al Ahly for Development and Investment, Egypt John Sellers , Director of Project Finance, Paribas, Paris Joseph Battat , Foreign Investment Advisory Service

Seminar sponsored by the World Bank and the European Commission with the collaboration of Servicios de Asesoramientos Financieros y Economicos S.A. (SAFESA), Spain

Wednesday, October 16, 1996: The main sectors

Session topic	Speakers
Telecommunications <i>Chair: James Bond</i> , Division Chief, Telecoms and Informatics, World Bank	James Bond , Division Chief, Telecoms and Informatics, World Bank Judith O'Neill , Partner, Ried and Priest, United States Mohsen Khalil , Telecommunications Division, IFC Jean-Francois Soupizet , Telecommunications Directorate, European Commission Pierre Avril , Director, Middle East and Africa, France Telecom Renzo Mazzeo , Director, International Affairs, STET, Italy Lennart Broman , Director, International Projects, Telia Overseas, Sweden
Motorways <i>Chair: Abdelaziz Meziane</i> , Minister of Public Works, Morocco	Gregory Fishbein , Mercer Management Consulting, United States Karim Ghellab , Ministry of Public Works, Morocco Paul Chambert-Loir , Director, International Activities, Cofiroute, France Patrick Quinn , Group Vice President, Louis Berger International, United States Hikmet Tuglu , Head, Motorway Department, Ministry of Public Works, Turkey
Water and Wastewater Treatment <i>Chair: Amir Al-Khafaji</i> , Division Chief, North Africa Private Sector Development, Finance, and Infrastructure, World Bank	Alfred Watkins , MENA Technical Department, World Bank Jamal Saghier , Middle East Private Sector Development and Infrastructure Division, World Bank Marc Fornacciari , Vice President, Mediterranean/Africa, Lyonnaise des Eaux Abdel Guennoun , President, National Water and Sanitation Authority, Tunisia Hasan Subasi , Mayor of Antalya, Turkey
Power and Gas <i>Chair: Richard Stern</i> , Director, Infrastructure and Energy Department, World Bank	Richard Stern , Director, Infrastructure and Energy Department, World Bank Michael Palmieri , Power Division, IFC Ron Croll , Budget Director, Ministry of Finance, Israel Simon Blakey , Director, Cambridge Economic Research Associates, Paris Jacques Degouve , Senior Vice President, Asea Brown Boveri Project Finance, Zurich Abdelaziz Dali , Secretary General, COMELEC, Algeria
Municipal Services (Tourism and Solid Waste) <i>Chair: Anthony Pellegrini</i> , Director, Transport, Water, and Urban Development Department, World Bank	Anthony Pellegrini , Director, Transport, Water, and Urban Development Department, World Bank <i>Solid waste services: Jan Drozd</i> , MENA Technical Department, World Bank <i>Tourism infrastructure: Samih Sawiris</i> , Vice President, ORASCOM, Egypt Rafi Benvenishty , Senior Adviser to Minister of Finance, Israel <i>Urban transport: Salem Miladi</i> , Director General, Ministry of Transport, Tunisia
Ports, Railways, and Logistics <i>Chair: Graham Smith</i> , MENA Technical Department, World Bank	<i>Ports: Zvi Raanan</i> , Hon. President, Wydra Institute for Shipping Research, Haifa Mohamed Halab , Director General of Port Operations, Morocco George Tharakan , Middle East Private Sector Development and Infrastructure Division, World Bank William Tolbert , President, Meneren Corporation <i>Logistics Centers: Dr. Joseph Vardi</i> , Chairman, Intertechnology Group, Israel <i>Railways: Graham Smith</i> , MENA Technical Department, World Bank
Municipality of Greater Istanbul: Presentation of Needs for Private-Public Partnerships	

Thursday, October 17, 1996: Financing issues

Plenary session	Speakers
Government Policy toward Private Participation in Infrastructure: Regulatory and Contractual Issues Setting the rules of the game <i>Chair:</i> Marc Pierini, European Commission	Pierre Guislain , Private Sector Development Department, World Bank David Brodet , Managing Director, Ministry of Finance, Israel Youssef Fassy Fehri , Coordinator in State Enterprises Department, Ministry of Privatization, Morocco
Spectrum of Public-Private Partnerships: Options for Private Sector Involvement From management contracts to BOTs <i>Chair:</i> Alastair McKechnie, Division Chief, Middle East Private Sector Development and Infrastructure, World Bank	Michael Elland-Goldsmith , Partner, Clifford Chance, Paris Laurie Mahon , Managing Director, Global Project Finance, Chase Securities, New York Ulrich Stucke , First Vice President, Deutsche Morgan Grenfell, Frankfurt
Mobilizing Finance and Managing Risk Financing instruments; development of foreign and domestic capital markets; Islamic banking; guarantees, insurance, and security mechanisms; credit rating <i>Chair:</i> Nemat Shafik, Manager, Private Sector Development Team, MENA, World Bank	Frans van Loon , Director, Emerging Markets Group, ING Amsterdam Patrick Walsh , Chief, Middle East Division, European Investment Bank Vipul Bhagat , Capital Markets, IFC Iqbal Ahmad Khan , General Manager, Islamic Investment Co. of the Gulf Ian Mackintosh , Managing Director, Standard & Poor's, London Amir Al-Khafaji , Division Chief, North Africa Private Sector Development, Finance, and Infrastructure, World Bank
Closing Session Concluding remarks, challenges ahead, follow-up actions	Kemal Dervis , Vice President, Middle East and North Africa, World Bank Marc Pierini , Chief, Economic Cooperation, European Commission

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