telecommunications infrastructure, often allowing the private equity share in the network operation to build up over time. Although providing fewer benefits than full privatization might, these approaches can also be attractive to private investors, and they provide quantifiable benefits—new lines, upgraded switching capabilities, new services and sources of information, and lower costs to consumers.

The need for capital investment is particularly acute in countries with underdeveloped telecommunications infrastructures, where limited government resources often make private financing a necessary complement. To attract private capital, many countries that seek to improve their information infrastructures, which will improve interconnection to the evolving GII, are taking concrete steps to:

- Create a stable operating environment supported by transparent regulation;
- Establish fair and open bidding practices for all communications and information infrastructure projects;
- Recognize the return on capital that potential investors require;
- Establish sound repatriation policies; and
- Demonstrate a political commitment to private investment through appropriate modifications in the legal framework.

The information services sector, traditionally privately-owned, has experienced tremendous growth due to the largely open investment and competitive market environments in most countries around the world. In the United States, for example, the largely unregulated information services market is projected to have reached \$135.9 billion in revenues in 1994.<sup>2</sup>

Removing barriers to private investment—and providing incentives for the creation and dissemination of information services through effective protection of intellectual property rights—is the best means of sustaining this worldwide growth.

## Recommended Action

From the wide range of available options, governments can develop a strategy best suited to their particular needs. At the same time, they must institute the appropriate regulatory, legislative, and market reforms to create the conditions necessary to attract private investment in their telecommunications. information

technology, and information services markets. To facilitate this process, the United States will join with other governments to:

- Identify and seek to remove barriers to private investment, and develop policies and regulations that improve investment incentives in both growing and mature telecommunications and information markets;
- Ensure that applicable laws, regulations, and other legal rules governing the provision of telecommunications and information services and equipment are reasonable, nondiscriminatory, and publicly available;
- Engage in bilateral, regional, and multilateral discussions to exchange information on the various options that have been successfully pursued to attract private investment, including, but not limited to, privatization, liberalization, and market reforms;
- Work with major international lending institutions, such as the World Bank and the regional development banks, and major private financial institutions to determine the best means of attracting both private and public capital, and establish workshops to train officials in the different liberalization approaches; and
- Encourage international lending institutions to recognize the ways in which funded social projects, such as the delivery of education and health care services, can be advanced through improved information infrastructures.

## B. Promoting Competition

Nationally and internationally, the information technology and information services markets have flourished in the past decade. The highly competitive computer equipment, software and networking industries are among the most dynamic in global markets, providing users with steadily increasing computing power and functionality and stimulating further demand for more advanced, integrated capabilities. Similarly, the information services industry has expanded as barriers to cross-border trade and investment have been removed. In many countries there are few or no restraints on the services provided. In other markets there are varying, but fairly light, degrees of regulation. As a result, the world market for information services is expected to grow from \$275 billion in 1993 to \$465 billion in 1998, a growth rate of 11 percent annually.3

One important exception has been a tendency in a few countries to erect

barriers to foreign competition in entertainment programming services. There is no body of evidence that limiting foreign competition has been successful in achieving the desired effect of stimulating local entertainment programming industries. The effects of such measures in retarding the development of private investment in infrastructure also deserves greater attention.

In contrast to the liberal market and regulatory environment for information technology and information services, the pace and scope of liberalization and privatization in the telecommunication sector is varied, ranging from competition in particular market segments to full liberalization. For example, there has been a discernable trend over the past decade toward increased competition in the provision of both value-added services and telecommunications terminal equipment. Some countries have liberalized further, taking steps to open their long distance, local fixed telephony, cellular, communications satellite, cable, and broadcast markets.

Evidence of positive results from such increased competition is mounting: Networks have steadily incorporated innovative technologies, producing greater efficiencies; both residential and business users enjoy lower prices and greater choices in equipment and services; service providers are more responsive to user needs; and lower costs of service have stimulated increased network usage.

However, in the largest and most profitable market segments—basic public voice telephone services and the underlying network infrastructure—both competition and foreign investment have been restricted.

Maintaining barriers against potential new entrants in these markets will inhibit infrastructure deployment.

Moreover, these barriers will retard the introduction of new information and telecommunications services that require competitive access to underlying networks in order to flourish.

Competition in basic telecommunications services has been growing, however, in a number of key markets around the globe. In countries such as Australia, Canada, Chile, Japan, New Zealand, Sweden, the United Kingdom, and the United States, the introduction of alternative service providers and networks, which often deploy advanced technologies at lower costs, has reduced bottleneck control by the dominant facilities-based providers. These results have spurred other countries to reconsider their policies. The member countries of the European

<sup>&</sup>lt;sup>2</sup> International Trade Administration, U.S. Department of Commerce, "U.S. Industrial Outlook 1994", at 25–1, January 1994.

<sup>&</sup>lt;sup>3</sup> U.S. Department of Commerce, International Trade Administration, Office of Service Industries,