

Reducing the International Digital Divide

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It is a great pleasure for me to speak to you today here in Jackson Hole on a subject that is both topical and extremely important. It is not a simple subject, because there are many divides of different kinds within the digital world and they have many features.

Before looking at the international digital divide, you may be interested to learn that despite the dot.com crash, the Internet continues to grow strongly. While the Nasdaq has fallen from its peak of February 2000, the number of Internet subscribers has increased substantially. Moreover, the number of Internet hosts has also grown, as has the number of secure servers. A just-released study from Dr. Lawrence Roberts, a respected Internet expert, suggests that Internet traffic continues to expand, growing by a factor of 4 in the first part of this year.

So, you can see that while some of the familiar firms in this sector are drawing back from the exuberance of the dot.com daze, the rest of the economy is still expanding Internet applications very effectively.

Now, I turn to the question, How can developing countries best participate in this growth and the digital opportunities that lie ahead?

I have distributed charts to demonstrate the magnitude of what I would call the service and technological digital divide, that is empirical

evidence of the uneven penetration of information and communication technologies (ICTs) in countries both within the OECD and beyond.

These statistics are based on a definition of the digital divide, which some refer to as the “gap between people who have the opportunity for regular access to the Internet and people who have irregular or no opportunity to access the Internet.”

However, the use of technology requires much more than it simply be available. Specifically, my message today is that bridging the digital divide requires good governance, technology, and learning or, if you like, competent well-trained people.

The automobile analogy is quite good in this context. The arrival of the combustion engine and the automobile transformed our societies. But an automobile or any number of them are of little use without roads to run on. And their efficient use depends on good access to those roads in all communities. As the roads link to highways and super highways, the system becomes even more efficient by being faster and able to handle greater volumes of traffic. But the vehicles carrying people and produce must have capable drivers. And those drivers must be well trained by competent instructors. So, we need highways, access to highways, vehicles, trained drivers, and instructors. And we also need the rules of the road consistently applied.

As applied to ICT and the Internet, the absence of any one of these elements creates a digital divide. Thus, at the moment we see these divides, namely the absence of capacity to fully exploit ICT, in various degrees across all countries, including the United States.

This is illustrated by Internet usage where more than 60 percent of the population of Norway uses Internet, while under 5 percent are online in Indonesia and Ukraine. The United States comes in at between 55 and 60 percent. Surprisingly, some G-8 countries, e.g. Italy is only at 30 percent, considerably behind, for example, Israel and Taiwan. One might conclude from this that some of the elements

mentioned in my automobile analogy are not present. In the developed countries, this is more often the lack of effective regulatory liberalization and competition. In OECD, opening telecommunication markets to competition has led to more investment, new services, lower prices, and higher usage. At the OECD, we call this regulatory reform, and it is not unique to ICT. Utilities, gas, electricity in particular, transportation, even the retail sector, all have been beneficiaries of market liberalization in OECD countries, but telecommunications is of particular interest for today's discussions. Competition has resulted in more and cheaper access to the Internet, but, of course, in the developed world much of the basic infrastructure was already in place.

To simplify our discussion, I will focus on the so-called international digital divide, which was addressed at the Okinawa Summit in 2000 and resulted in an initiative to which the OECD contributed. The conclusions were presented to G-8 leaders at the Genoa Summit a few months ago.

There were nine action points in the Dot.Force Report presented to the Genoa Summit, among which:

- Improve connectivity, increase access, and lower costs;
- Enhance human capacity development, knowledge creation, and sharing;
- Establish and support universal participation in addressing new international policy and technical issues raised by the Internet and ICT;
- Establish and support dedicated initiatives for the ICT inclusion of least-developed countries.

The reason the G-8 seized upon this issue, namely closing the international digital divide, is because of the potential of ICT to contribute to development in the poorest regions of the world. In this world of

plenty, 1.2 billion people survive on less than one U.S. dollar per day and a further 1.6 billion on less than two dollars. Some 840 million people are severely malnourished, and nearly a billion adults are totally illiterate.

For many years, we have struggled with approaches to the alleviation of poverty. Frankly, I find it discouraging that as early as 1969, the UN Commission on International Development, chaired by Lester B. Pearson, produced a report titled, "Partners in Development," which outlined a comprehensive strategy for international development. In my opinion, it has only been implemented in a fragmentary way. The framework is as valid today as it was in 1969. Amongst its recommendations, the commission concluded that a major effort is needed to revitalize education and increase the capacity to absorb, adapt, and develop scientific and technical knowledge in developing countries. The G-8 saw ICT as an important tool in pursuing that objective.

The widening of the wealth/poverty gap is not really the issue. ICT is seen as a source of increased wealth for developed and developing countries alike. Our challenge is to explore ways to ensure that ICT can be used to achieve the development objectives we have been pursuing for more than half a century with limited success.

Focusing on the North/South gap, in terms of access to telecommunication services, the gap between rich and poor countries is striking. OECD countries, which account for less than 20 percent of the world's population, have two-thirds of all access channels and 77 percent of all mobile subscribers. When it comes to access to the Internet, the gap is even wider: More than 95 percent of Internet hosts and secure servers used for electronic commerce are located within the OECD area.

In developing countries where there is no infrastructure, or limited infrastructure, how will it be built? Infrastructure needs in developing countries—not only in ICT—are huge: Estimates run into trillions of dollars over the next few decades. Public money alone will not be in a position to match these needs. It is encouraging that, at the beginning

of August, the World Bank and Australia launched a \$750 million program to provide education and training via the Internet to the world's poorest countries, described as a "virtual Colombo Plan." Notwithstanding such worthy initiatives, securing the involvement of the private sector is key. How will that be achieved?

The starting point is "good governance," or, as Jim Wolfensohn puts it in his Comprehensive Development Framework (CDF), good, clean governance. It is truly the real infrastructure that all developing countries need, and many of the emerging market economies as well, if they are to obtain the private investment necessary for extensive use of ICT. This means more than the elimination of corruption. Applications of the rule of law, market liberalization, fair competition laws, an appropriate regulatory framework, a well-functioning financial sector, and so on, are all part of that good governance infrastructure.

How is this to be accomplished? Let me turn to some developing countries as examples where telecommunication market competition was introduced.

When a country has only one telephone line per 100 inhabitants, the challenge is to break out of the cycle of underdevelopment. There is an increasing realization that competition is a tool that can be applied to achieve this goal. New entrants not only bring much needed capital and skills, but also stimulate the incumbent to expand service and increase efficiency. One example is Sri Lanka, which, as a low-income country in 1995, had one of the lowest access line penetrations in the world, with just one telephone line for every 100 inhabitants. After the government of Sri Lanka took the decision to liberalize the provision of fixed and mobile infrastructure in 1996, the country reached a figure of more than six telephone lines per 100 inhabitants within four years. A critical element in this success was the governance provided by a strong and independent regulator.

Another example is Uganda, where, following the opening of the domestic telecommunications market to competition, the number of

fixed and wireless telephone lines has quadrupled in two years from 40,000 to nearly 160,000. Countries like Nigeria and Ghana, which have also begun liberalizing their telephone services (four companies now compete for cellular customers in Ghana), have seen a dramatic development in wireless telephony. These developments also create a momentum for the creation of core infrastructure. In turn, this makes it possible to bring connections at an economic rate to areas and villages that previously did not have a telephone.

Unfortunately, there are also examples of where governance is not up to the task—where vested interests defeat public interest. Kenya provides an example. Currently, if an Internet user of one internet service provider (ISP) in Kenya calls up a Web page hosted by another Kenyan ISP (or sends an e-mail to a fellow Kenyan on a different ISP), that traffic is exchanged in the United States. But, some 80 percent of Kenyan Internet traffic is between domestic users, yet still transits over multiple slow and expensive international links. It doesn't have to be this way.

At the end of last year, a group of Kenyan ISPs, with assistance from Cisco, formed the second Internet exchange point in sub-Saharan Africa. The potential benefits were a dramatic reduction in costs and a huge improvement in the quality of service. The exchange was up and running for two weeks before being closed by the Kenyan regulator based on a complaint from the telecommunication monopolist. As we know, the pressure of vested interests is not confined to the developing world. This is why the Dot-Force identified regulatory training as a key element in development.

I conclude by citing the four prerequisites to closing the digital divide in the developing countries, in developed countries, and within countries, namely: availability, accessibility, affordability, and capability.

The latter, capability, is the primary area of public responsibility.

As for developing countries, educate people, build good clean governance, apply the rule of law, liberalize telecommunication markets:

Create that environment and private investment will come. The digital divide will start to close.