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● OPINION

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Delving into the Digital Divide

Is the digital divide due to poverty or an effect of underlying social and economic conditions? It certainly tracks the income divide worldwide

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The power of technology and market forces to solve the central social problem of our times--the extreme poverty and deprivation of sections of the population in every part of the world--has become almost an article of faith. In fact, the idea of closing the digital divide is now at the core of major poverty reduction efforts.

The information technology industry, having nearly sated demand in the developed countries, is naturally eager to create new markets elsewhere. Political leaders in many developing nations, having failed to address poverty in their countries, are grasping at new technologies and global trade as their last, best hope to raise their large populations' standards of living. Consequently, business executives and government officials are often on the same side of this issue, backed by powerful international agencies such as the World Bank and the World Trade Organization (WTO).

Frequently missing from policy statements, business initiatives, and other poverty reduction proposals, however, is an accurate understanding of what technology can do. A critical question is whether the digital divide is a *cause* of poverty or an *effect* of the underlying social and economic divides.

The United Nations Development Program (UNDP) is the premier international agency dedicated to fighting poverty. In its *Human Development Report for 2001,* it asserted that the technology divide does not have to follow the income divide. But the evidence to date shows that the current technology divide has consistently followed the income divide all over the world.

More than 96 percent of computers connected to the Internet are in the wealthiest nations,

home to 15 percent of the world's population. Nearly 60 percent of the U.S. population has some access to the Internet, a distribution that is highly correlated with household income. In India, less than 0.5 percent of the population has Internet access--which translates to about five million people with high enough income levels, education, and computer skills in a country of one billion people.

The haves get more

It is also instructive to look beyond access to technology and focus on outcomes. The latest U.S. economic boom was fueled in large part by new technologies. But in spite of all the prosperity and proliferation of technology, the national poverty rate remains above 11 percent-- essentially where it was before the computer revolution in the mid-1970s. Nearly 40 million Americans lack health insurance and over 15 percent of children are growing up in poverty. Technology and market forces have clearly stopped short of addressing poverty in the United States, and not surprisingly, they have stopped at the point where there is no profit to be made.

Moreover, the income gap between the rich and the poor in the United States has expanded by almost 50 percent over the last quarter century. The implication is that, as market forces propagate new technologies, people who are already doing relatively well are likely to benefit the most, reinforcing long-standing economic disparities. The digital divide is thus an effect and manifestation of these disparities in wealth.

The United States, of course, is a "best case" example. Poverty in developing countries is far broader and deeper. Most of the 1.3 billion people surviving on less than a dollar a day live in developing countries. Given the United States' failure under the best of economic conditions to eliminate poverty within its own borders, is it reasonable to expect that developing countries could use the same tools--technology and markets--to root out the same problem on a much larger scale?

The UNDP Report, to its credit, acknowledges that technology is created in response to market pressures, and not the needs of the poor. Markets, in turn, are driven by the investments and consumption patterns of the affluent sections of society. In many cases, technologies have been developed to make life comfortable and convenient for those who are not worrying about their next meal or wondering how to get medical care. Much of the recent focus on poverty reduction has been on applying these technologies of convenience to situations where fundamental human needs have yet to be met.

This is not to say that people in poor countries have no use for modern technologies or that market-based approaches cannot play a role in a broad attack on poverty. In Bangladesh, one of the poorest countries in the world, Grameen Bank has successfully used micro-credit to encourage entrepreneurship in several thousand villages. In each village, an entrepreneur purchases cell phone service from a subsidiary of the bank, and operates a pay-per-call service that in effect connects the whole village to the telephone network. These small-scale enterprises have turned a profit in most cases, and loan repayment rates are very high.

The digital divide seems quite meaningless for the multitudes everywhere who lack essentials like adequate nutrition, primary health care, basic education, safe water, and sanitary living conditions

While the program is quite small, Grameen Bank's experience suggests that micro-credit could work in poor countries, often at the level of just a few hundred dollars. The challenge is in applying innovative approaches like this on a broader scale without getting caught up in the hoopla surrounding new technologies and globalization.

Alvin Toffler, the futurist, has urged combining the idea of micro-credit with "micro-trade." He envisions poor people in small villages using the Internet to "identify markets 10 thousand miles away" for small amounts of agricultural products or crafts.

The obvious problem with this argument is that it requires people who might not even be literate, let alone computer savvy, to make sophisticated use of the Internet for marketing and sales over long distances. Moreover, while it is easy to send information around the world through the Internet, it is inefficient and complicated to ship large numbers of small packages everywhere, especially from hundreds of thousands of small villages often deficient in transportation infrastructure.

Gurcharan Das, a former business executive and now a venture capitalist in India, proposes in his recent book *India Unbound* (Alfred Knopf, New York, 2000) that, in the "globalized open economy governed by the WTO," developing countries like India should make only what they are good at and import the rest. As an example, he suggests that a little software could buy a great deal of a generic commodity like steel.

But what about the hundreds of millions of Indians who are producing other things and have no chance of participating in this trade regime? Global trade is no substitute for building diversified and healthy local economies.

Are the poor a business opportunity?

The digital divide is a major concern to technology companies, because it bars billions of people from buying their products. But it is difficult for industry to tap this market potential without addressing poverty as an issue. Microsoft chairman Bill Gates has publicly stated that he does not see the rural poor in developing countries as a significant business opportunity.

Hewlett-Packard, believing it can "do good while doing well," has responded more positively. Its World e-Inclusion program is a plan for working with local partners on applications that are "appropriate and relevant" in areas like telecommuting, e-commerce, and financial services. It remains to be seen how bottom-line pressures will influence the choice of applications. Moreover, some of the applications the company is interested in, such as "e-jobs" based on global telecommuting, seem appropriate only for those with fairly high levels of education and skills.

The technology divide is real for those who have moved beyond obtaining the basic necessities of life and are held back by lack of access to technology. Bridging the divide might well make a big difference to this section of the population, while bringing new revenues to technology companies.

On the other hand, the digital divide seems quite meaningless for the multitudes everywhere who lack essentials like adequate nutrition, primary health care, basic education, safe water, and sanitary living conditions. Access to information technology cannot be useful unless such needs are also met at the same time. Even if a primary school in a village is equipped with computers, a child will not benefit if she is malnourished, if her parents are struggling to make a living, or if her family cannot get medical care.

Any serious solution to such deep poverty will necessarily have to reach beneath the digital divide and confront the underlying disparities in society. Ultimately, the nature of the problem should dictate the solution. An age-old human problem like poverty suggests a people-centric approach that is built around meeting the needs and aspirations of human beings, using whatever technologies are appropriate and sustainable. Society must find ways for the poor-- the landless laborers and subsistence farmers in rural areas, the low-wage workers living in urban slums--to earn a living wage and supply their own needs with a measure of dignity.

This would take nothing less than a paradigm shift in how we view and tackle poverty in this age of information and globalization.

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