

## **Executive Summary**

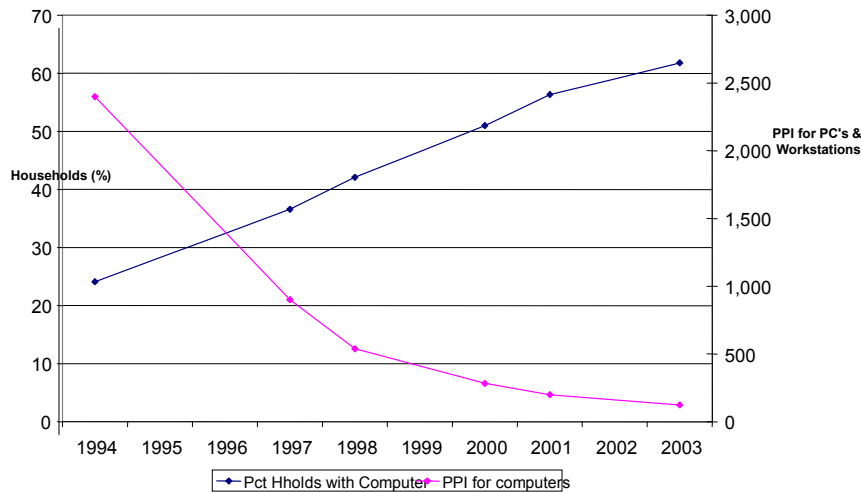
The introduction of new technologies, especially those with the capacity to change the way people work and live, raises important public policy issues about how to ensure broad access to those innovations. The heart of the issue is what approach can best accelerate the spread of valuable technologies? This question is being raised today in Congress and some states as they debate proposals to reform cable franchise rules and open the video marketplace to Internet Protocol Television (IPTV), a potential breakthrough technology that could not only deliver entertainment in new ways, but also significantly expand broadband Internet access and information-sharing.

Policymakers need to know whether the application of “build-out” requirements often associated with cable franchise rules to new IPTV competitors will increase or impede broad access to the new service for Americans of every income level, living in urban, suburban and rural communities. Stated plainly, would the absence of build-out rules deny access on the basis of people’s income or geographical location, race or education?

To explore these questions, this study, “Creating Broad Access to New Communications Technologies” examines and analyzes public data from the U.S. Commerce Department, Census Bureau and Federal Communications Commission regarding the growth and spread of the two most important breakthrough technologies, home computers and Internet access, along income and geographical lines. The study also applies regression analysis to further test its analysis. The findings are clear: Broad social access to these technologies has been achieved not by build-out requirements, but by sharply-declining prices driven by both fierce competition and the normal and rapid process of technological advance in these areas. Moreover, numerous economic studies have found that applying requirements such as build-out rules to new competitors will only reduce investment and competition, ultimately producing higher prices and more limited and restricted access.

The data show that competition and technological advance, not build-out rules, provide the most efficient and effective route to the broad spread of new technologies. When a valuable, new technology is first introduced, early-adopters take it up quickly. But when the technology has proven to be broadly useful and valuable, many competing providers enter the market; and that competition, combined with the technical advances that characterize the telecommunications market and information technology sector, sharply drives prices down to create broad access. These dynamics can be represented clearly by graphing computer prices and computer ownership rates over time:

**Percent of U.S. Households with Computers and Computer Price Index**



Further analysis of the data establishes that this broad access to critical technologies extends increasingly across the economic spectrum. For at least a decade now, computer ownership and Internet access have consistently increased at higher rates among low-income households and those living in rural and central city areas, than among higher-income households and those living in metropolitan areas. For example:

- From 1994 to 2003, Americans with incomes of less than \$20,000 increased their computer ownership at an average annual rate of 18.1 percent, more than twice the 8.3 percent average annual rate of those earning over \$50,000.
- In the most recent period for which data are available, 2001 to 2003, those with incomes under \$20,000 increased their computer ownership rates by 21.9 percent, compared to 6.2 percent for those with incomes over \$50,000.
- From 1994 to 2003, Americans with incomes under \$20,000 increased their rates of Internet access at an average annual rate of 27.6 percent, or two-thirds higher than the 16.5 percent annual rate for those earning over \$50,000
- In the 2001 to 2003 period, Americans with incomes of less than \$20,000 increased their rates of Internet access by 14.6 percent, compared to 6.3 percent of those with incomes of more than \$50,000.

Regardless of the social or economic group that first adopts a valuable new technology, others across the economic spectrum will increasingly adopt it too, so long as build-out requirements or other comparable regulatory burdens do not dampen the competition and investments that make that process possible.

The question remains, whether advanced video services such as IPTV will follow this pattern. The available evidence suggests that the answer is “yes.”

Build-out requirements are based on the view that those providing competitive telecommunications services will systematically bypass areas that include large numbers of households with relatively low incomes. The economic literature and economic logic, as well as the data on the spread of computers and Internet access, all argue otherwise.

In addition to the basic process by which Internet access and computer ownership spread increasingly across all economic and geographic boundaries, certain features of these services and their likely market create compelling economic incentives to provide access on as broad a basis as possible. First, the new video services will be offered through fiber optic networks in a bundle with voice and high-speed Internet; and this bundling will promote greater investment by expanding the potential revenues and shortening the payback period on the investment. In addition, businesses go where their customers are, and there is substantial evidence that lower-income households provide a highly attractive market for advanced video services.

Today, low-income households already subscribe to current video services at roughly the same rates as high-income households, providing the basis for deploying fiber for video in low-income areas. In addition, African-American and Hispanic households subscribe to the premium channels of current video services at higher rates than other groups. There is also evidence that minorities are “early adopters” of some new video technologies, purchasing digital televisions at higher rates than other groups, for example. In the case of advanced video services, lower-income households and minority neighborhoods appear to be very high-value customers that businesses will seek. This view is supported by a recent study which found that a new provider that offered such video services, in a bundle with voice and high-speed Internet, would find it profitable to extend its network to 84 percent of Census blocks with average earnings of under \$20,000 -- a higher level than required under build-out requirements.

The data and other evidence show that the soundest course for promoting broad social access to advanced telecommunications and information technology services, including the new video services, is to reject build-out requirements and instead promote competition and continuing technological advance.