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# **PUTTING BROADBAND ON HIGH SPEED**

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**New public policies to  
encourage rapid deployment**

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**BY STEPHEN POCIASK**

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**ECONOMIC POLICY INSTITUTE**

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## About the Author

**Stephen Pociask** has worked in and consulted for telecommunications and high-tech industries for over 20 years. As president of TeleNomic Research, a consulting firm specializing in public policy analysis for information technology industries, he is responsible for a wide variety of applied economic studies. A number of his studies are filed at both federal and state regulatory commissions, and recently have included topics such as rate reform, deregulation, and productivity incentive plans. Mr. Pociask has appeared before the FCC in its open forums and at its staff meetings. He has spoken to numerous state and local legislators on broadband issues, and testified before the Congressional Subcommittee for Telecommunications, Trade, and Consumer Protection on Internet and broadband legislation. He has written about industry deregulation, industry cost structure, the economics of multimedia data networking, and broadband competition. His study, "MCI WorldCom's Sprint Toward Monopoly: An Analysis of the Proposed Telecommunications Merger," co-authored with Dr. Jack Rutner and sponsored by the Economic Policy Institute, accurately predicted the Department of Justice's decision to block the merger. He has appeared numerous times in the media, including Bloomberg News, CNBC, *Telecommunications Reports*, *Telephony*, *Congressional Quarterly*, America's Network, *NetworkMagazine* and CNET Radio. He is an affiliated expert for the New Millennium Research Council, an independent research project of the consumer and public affairs firm Issue Dynamics Inc.

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## About EPI

**The Economic Policy Institute** was founded in 1986 to widen the debate about policies to achieve healthy economic growth, prosperity, and opportunity.

Today, despite rapid growth in the U.S. economy in the 1990s, inequality in wealth, wages, and income remains historically high. Expanding global competition, changes in the nature of work, and rapid technological advances are altering economic reality. Yet many of our policies, attitudes, and institutions are based on assumptions that no longer reflect real world conditions.

With the support of leaders from labor, business, and the foundation world, the Institute has sponsored research and public discussion of a wide variety of topics: trade and fiscal policies; trends in wages, incomes, and prices; education; the causes of the productivity slowdown; labor market problems; rural and urban policies; inflation; state-level economic development strategies; comparative international economic performance; and studies of the overall health of the U.S. manufacturing sector and of specific key industries.

The Institute works with a growing network of innovative economists and other social science researchers in universities and research centers all over the country who are willing to go beyond the conventional wisdom in considering strategies for public policy.

Founding scholars of the Institute include Jeff Faux, EPI president; Lester Thurow, Sloan School of Management, MIT; Ray Marshall, former U.S. secretary of labor, professor at the LBJ School of Public Affairs, University of Texas; Barry Bluestone, Northeastern University; Robert Reich, former U.S. secretary of labor; and Robert Kuttner, author, editor of *The American Prospect*, and columnist for *Business Week* and the Washington Post Writers Group.

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## Executive Summary

Many industry experts agree that investments in high-speed Internet services are not taking place as fast as they should be and that public policy needs to create incentives for speeding investment in this area.<sup>1</sup> The lack of high-speed Internet service deployment is an issue that is receiving considerable attention at the Federal Communications Commission (FCC) and in Congress.<sup>2</sup>

In order to evaluate public policies that would speed deployment of broadband services, it is important to analyze the market convergence that is under way, the extent of high-speed service regulations and how they affect deployment, and concerns with market structure for these services.<sup>3</sup> Based on this analysis, we propose public policy changes and evaluate how these changes would speed deployment while protecting consumers. The major findings in this report are as follows:

- Cable television, wired telecommunications, and wireless telecommunications – once distinct industries – have converged into an information sector that now provides high-speed Internet services to consumers. However, regulations have not kept pace with this industry convergence, leading to *asymmetric regulation*, a situation where similar high-speed services are subject to dissimilar regulations. For example, cable modem services are generally free of regulations, while digital subscriber line (DSL) services face intrusive regulations, but only if these services are provided by incumbent local exchange carriers (ILECs).
- ILECs are discouraged from investing in high-speed services because of asymmetric regulations that require them to lease their network facilities to competitors at prices that do not fully recover costs. When businesses cannot recoup the costs of their investments, they are discouraged from investing, and consumers lose.
- Because of slow investment, DSL market penetration has fallen significantly behind that of cable modem services. In effect, asymmetric regulation has led to cable modem dominance and increased market concentration, which has reduced intermodal competition and increased anticompetitive risks to consumers.

Based on these findings, we propose a model of *symmetrical regulation*, one in which regulatory rules are reduced and equalized between the various broadband services. Symmetrical regulations would produce less risk to consumers and create substantial incentives for speeding broadband investments.

Some regulatory oversight, however, is needed in order to provide a minimum standard for open networks for Internet Services Providers (ISPs). In addition, because asymmetric regulation has promoted cable modem market concentration, mergers among these providers should be discouraged until regulatory symmetry has resulted in increased investment and intermodal competition.

The benefit of symmetric regulation is that it would encourage intermodal competition of broadband providers. This intermodal competition would speed benefits to consumers who would use these services to access bandwidth-intensive content and applications. One study predicts nearly \$500 billion in benefits to consumers, including the creation of new services, such as telemedicine, worker training,

public services, services to the disabled, and public safety. Another study estimates that 1.2 million new jobs would be created if broadband services were fully deployed. Because information technology (IT) jobs pay, on average, 85% more than other jobs, building a nationwide broadband network could provide an important source of high-wage jobs for working families.

In summary, there does not appear to be any benefit for continuing asymmetric regulations on broadband services. These regulations have prevented intermodal competition, discouraged DSL investment, and led to cable modem dominance. Conversely, symmetrical regulation would heighten intermodal competition, increase investment, lower consumer prices, and provide safeguards to consumers.

## Introduction

Over 80% of Americans have access to the Internet in some manner.<sup>4</sup> For consumers, most still use their telephone lines for dialup Internet access to news, electronic mail, entertainment, instant messaging, software downloads, shopping, and other online activities. As the Internet grows, however, so have consumer appetites for more bandwidth-intensive content, such as music, quick time video, software, and pictures. As **Figure A** demonstrates, the increase in bandwidth-intensive content has resulted in a 50% to 60% increase in downloading times for those consumers using dial-up Internet access. Waiting for computer screens to fill has resulted in \$25 billion a year in lost e-commerce<sup>5</sup> and countless billions of dollars in lost time for consumers.

Broadband services would provide much needed relief to this congestion, if they were widely available. However, broadband services have not been ubiquitously deployed in the United States, and 45 million households have no selection among broadband providers.<sup>6</sup> Furthermore, only about 4% of consumers subscribe to broadband services, much of it at speeds well below what the technology is capable of delivering.<sup>7</sup>

Coincident with the slow deployment of broadband services has been the financial turmoil affecting the IT sector over the last year. IT investment declined last year for the first time in decades, according to Department of Commerce data. In terms of job losses, half of layoffs announced last year were from corporations in the IT sector.<sup>8</sup> Despite talk of an economic recovery, the IT slowdown continues. The Internet-related economy has lost much of its luster, and IT stock prices, investment, and new orders for equipment have not rebounded.

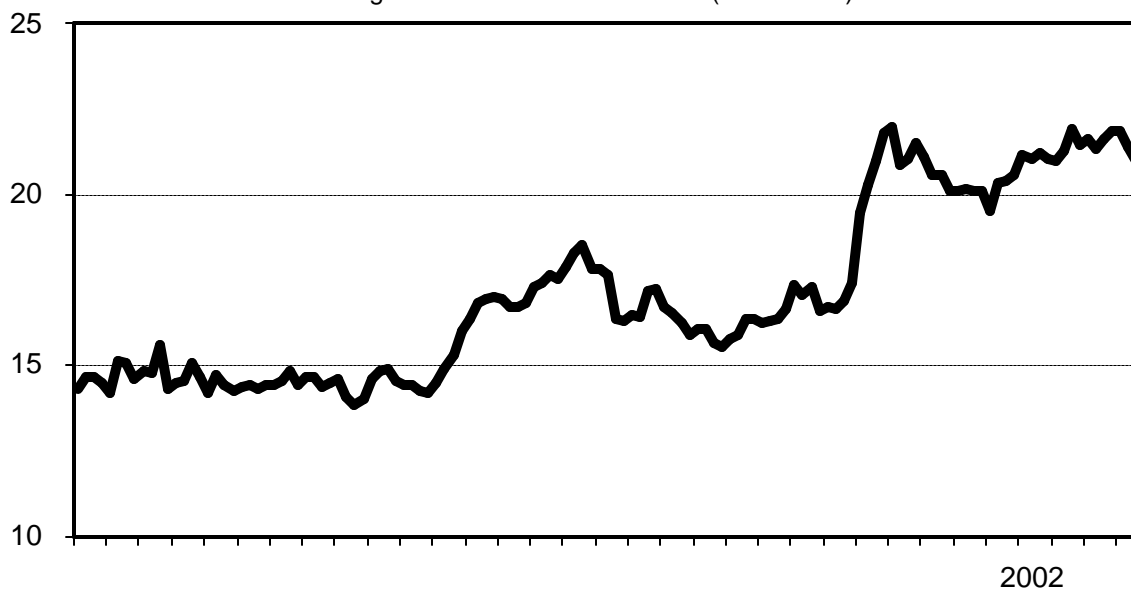
Can speeding broadband investment provide a boost to the IT economy and stimulate economic growth? Can speeding broadband services eliminate Internet delays and congestion? If broadband is so promising, why then is broadband deployment in the U.S. falling behind that of South Korea, Canada, Hong Kong, and Germany?

To better understand why consumer broadband services are not being deployed as fast as they should be, this report will provide an empirical review of the broadband market, its structure, and regulations. We will provide a basis for determining how public policies can be changed to promote broadband deployment and improve consumer welfare. Before exploring the public policy considerations for promoting high-speed services, it is important to understand why services such as these are so important to consumers and the general health of the economy.

**FIGURE A**

**Dial-up Internet services are getting slower**

Average consumer download time (in seconds)



Source: Keynote Consumer 40, Internet Performance Index, as of April 6, 2002.