Broadband Developments in the United States Subsequent to the Federal Communications Commission’s 2010 National Broadband Plan

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ABSTRACT

The United States Federal Communications Commission delivered to Congress a national broadband plan in 2010. The purpose of this article is to analyze key economic arguments involving the development of the broadband plan addressing open network and competition issues, to make recommendations to the Commission in its formulation of federal policy as to positions that make the most economic sense, and to indicate recent economic and legal developments in broadband markets since publication of the broadband plan. One critical issue prior to the development of the broadband plan and subsequent to its publication is the competitiveness of the Internet Service Provider market. There is emerging evidence that, at least with respect to very high-speed broadband markets, a cable monopoly may be looming. The authors continue to predict with confidence that technological innovations are likely to make many opposing legal arguments obsolete in the near future.

Keywords: Broadband Markets, Broadband Plan, High-Speed Broadband, Internet Service Provider Market, Open Network

INTRODUCTION

The Federal Communications Commission (FCC) developed the national broadband plan in response to a charge given to it by Congress in the American Recovery and Reinvestment Act of 2009 (Public Law No. 111-5, 123). The process for developing the plan began when the FCC issued a Notice of Inquiry (NOI) in spring 2009 (FCC, 2009). The NOI identified...
broadband issues and critical questions and asked stakeholders to respond to these issues and questions with data and analysis.

One purpose of this article is to examine the arguments made by stakeholders concerning the specific issues of open networks and competition (sections C. 5. and 6. in the NOI) and indicate how proposed solutions to these issues can aid in the achievement of the nation’s broadband goals. Also, the article makes recommendations to the FCC in its development of the broadband plan as to the position on a specific issue that makes the most economic sense. Finally, the article reviews events subsequent to the adoption of the plan and critiques how actual events match up to the predictions of key stakeholders in their comments to the FCC regarding the national broadband plan.

While the focus of this article is on how public policy in the United States can promote adoption, diffusion, and utilization of broadband, there is a significant body of prior research that examines demand and supply factors that influence broadband adoption and diffusion. For instance, Papazafeiropoulou and Dwivedi (2009) review 49 studies examining broadband adoption and diffusion in developed and developing economies and construct a framework that consists of a listing of and a count of the number of studies associated with factors that influence adoption and diffusion decisions at the national level, the consumer level, and for small and medium size enterprises. In particular, with respect to consumer adoption and usage, the authors identify 34 key micro factors that include demographics/user characteristics (14 papers), cost/price/subscription fee (11 papers), and content/applications (6 papers). Another line of empirical research examines households who have chosen not to subscribe to broadband and compares them to consumers who have adopted broadband. For example, Dwivedi and Irani (2009) find empirical evidence suggesting that there are factors other than subscription fee and speed of access that matter to non-adopters. In particular, to increase consumer adoption of broadband, non-adopters must perceive that broadband is better than narrowband and that broadband will enhance the effectiveness of household activities.

Residential consumers’ purchase of broadband service has grown remarkably in the 21st century. In 2000, only 3% of American residential homes subscribed to broadband service, whereas by August 2009 the percentage of broadband Internet residential subscribers was about 67% (Horrigan, 2009). As of October 2012, the percentage of American households that have broadband Internet at home at least at baseline speeds is 72.4 (an increase of 3.8 percentage points since July 2011) which is equal to 88 million households (NTIA, 2013a). However, the provision of broadband Internet access appears to be heavily concentrated. According to FCC and network provider data, in 2010, incumbent cable broadband providers (providing cable modem service) had a 57% share of the fixed residential broadband access market and incumbent phone companies (providing digital subscriber line service (DSL) or fiber-optic broadband service) had 39%, with the remainder spread equally among cable over-builders, competitive local exchange carriers, and others (satellite, wireless, and powerline providers) (Free Press, 2009). By the end of 2012, these overall percentages of the market remained roughly the same but the trend in new additions indicates that cable modem service is starting to dominate DSL service, especially for higher speeds. For example, in the first three quarters of 2012, cable added 1.66 million broadband customers and phone companies added only 250,000 (Leichtman, 2013).

Generally, Congress hoped that the creation and implementation of a broadband plan would achieve the following national goals:

1. Increased deployment of advanced broadband networks to unserved and underserved regions of the nation, such as the states of Mississippi, West Virginia, Alabama, New Mexico, and Montana. The FCC estimated that between 3 and 6 million homes do not have access to a broadband connection,
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