

Executive Summary of

Modeling Digital Exclusion: The Impact of Poverty, Social Isolation, and Political Disengagement (Rutgers Second Peer Review Submission under NTIA Broadband Mapping & Planning Project)

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In this paper we undertook a quantitative analysis using the household survey data to test the hypothesis developed by Amy Bach and Todd Wolfson in their recent paper funded under this same NTIA project.

The Bach-Wolfson paper, titled “Poverty, Inequality, and the Social and Political Effects of the Digital Divide,” was delivered under Activity 2 of the Planning work and showed that the digital divide is intricately entwined with other forms of social and economic exclusion. Specifically, Bach and Wolfson summarized new qualitative scholarship that highlights the ways in which digital exclusion both *intersects with* social and economic exclusion and also the ways that social and economic exclusion *are further exacerbated by* digital exclusion. The qualitative analysis by Bach and Wolfson addresses the connections between digital exclusion, poverty, social isolation, and political disengagement.

In this paper we developed a testable model among these same four factors using the household survey data. More specifically, we use *estimated* values of broadband non-adoption derived from our earlier analysis as the dependent variable.¹ We use three independent variables: “poverty” (a 0-1 indicator based on respondent’s 2009 household income and household size); “lives alone” (a 0-1 indicator based on whether the respondent lives alone); and “political disengagement” (a 0-1 indicator based on whether the respondent reported a political leaning or did not have a substantive answer to that question).

Our results support the Bach-Wolfson work and show quantitative evidence that poverty is a key driver for broadband non-adoption and, further, that both social isolation and political disengagement are found in combination with poverty and are secondary drivers of digital exclusion. The data also strongly support the argument that poverty, whether expressed as economic exclusion or lack of resources, is the most significant stable barrier to the household-level non-adoption of broadband internet access.

In further analysis, we assessed the data on household broadband adopters and their use of the internet for common social, educational, civic, and commercial interactions that typically signify inclusion in society. Our key finding is that, when we compare those adopters in poverty to those adopters not in poverty, the proportion of the sample in poverty using the internet for these common interactions is statistically significantly smaller than the proportion of the sample not in poverty.

Finally, we also compared dial-up only users against high-speed broadband users in their use of these same common social, educational, civic and commercial interactions to see if our findings applied here as well. We again found significant impacts in the dial-up user population having diminished use of the internet for these interactions.

¹ Weiner, Marc D., Orin T. Puniello, Robert B. Noland, Chintan Turakhia, and David Ciernicki. (2012). “Consider the Non-Adopter: Developing a Predication Model for the Adoption of Household-Level Broadband Access.” Forthcoming, *Socio-Economic Planning Sciences*.