

Executive Summary of paper presented at annual conference of American Association of Public Opinion Researchers, Phoenix, Arizona, May 13, 2011; basis of Article submitted to Socio-Economic Planning Science, an Elsevier-published peer-reviewed journal, June 2011

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Overview: Development of a statistical prediction model for determining the conditions under which a New Jersey household is more or less likely to adopt household-level broadband internet access. Focus is on modeling for high *predictive power* so that the model and analytics can provide a foundation for planning efforts to increase household adoption of broadband. Paper and article introduce and rely on data collected from 3,101 New Jersey households under the NTIA's Broadband Mapping and Planning Program by Bloustein Center for Survey Research for Telcordia Technologies, Inc., on behalf of NJOIT. Dataset includes an oversample of 1,241 nonadopting households. Model generates three relevant empirical findings:

- (1) behaviorally, the strongest facilitator for household-level broadband adoption is current or prior computer use;
- (2) structurally, the strongest barrier to such adoption is lack of resources, which encompasses responses that access is too expensive, that the household lacks a computer, etc. ; and
- (3) demographically, household-level broadband adoption New Jersey is colorblind: once we control for income, education, and age, race and ethnicity, in and of themselves, are meaningless in terms of the decision to adopt household-level broadband.

Although fit to New Jersey data, the model is robust and flexible enough to be adapted to other states so long as the data required to support the regressions are collected and the model is adapted to local circumstances.

Findings: The empirical findings of the predictive modeling provide a strong directional foundation for planning efforts to increase household adoption in the state of New Jersey. (1) The model supports programs and initiatives designed to make available opportunities for persons who have never used a computer to use one . The key facilitator for adoption is experience with a computer; this finding provides insight into a mechanism for increasing the propensity toward adoption. Once nonadopters have been identified and contacted (presumably through targeted recruitment), the approach is not so much cognitive, i.e., about changing the householder's mind with regard to the idea of, or ideas about, the internet, but rather experiential, i.e., exposing the householder to a "hands-on" engagement with an online computer, perhaps for the first time. In particular, programs designed to stimulate broadband adoption, where a nonadopting householder can sit at a computer and, with brief group training, access the internet, appear promising to result in conversion of the household to broadband-adoptive status. Of course, other factors prevail; the program should be properly marketed and conveniently scheduled and, given that the greater number of nonadopter householders will be low to low-low income, the program should be presented at very low cost.

(2) Resource-based initiatives, such as strategic commercial pricing or underwriting, direct government subsidies, or commercial-government cooperation, are likely to be effective and, if properly and cautiously administered, efficient in assisting those who do not adopt household-level broadband access because they cannot afford it.

(3) While the preliminary overview of the cross-sectional data shows Hispanic ethnicity and racial distributions at variance with general population proportions, the more complex and nuanced analysis provided by this two-step model demonstrates that these characteristics once we control for income, education, and age, in and of themselves are meaningless in terms of the decision to adopt household-level broadband.

(4) Additional insights from the modeling are as follows:

- Age is an important factor only over age 60 (no age category younger than sixty was statistically significant);
- As household income increases it becomes less relevant in the decision to adopt broadband; and
- Education behaves similarly to household income; that is, it is more significant at low levels of education.