Determinants of Adoption of Health Information Technology by Clinics

Brant Callaway*[1]

and

Vivek Ghosal*[2]

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Abstract

Healthcare expenditures in the US account for roughly 17% of GDP and have been growing at about 7% per year. The current level of healthcare expenditures are about $2.5 trillion, and projected to reach $4.5 trillion by 2019. There is considerable debate whether these high expenditures are delivering a high quality and level of care. The commonly known dichotomy is that the US is significantly below other advanced countries in the provision of primary and preventative care, but does somewhat better in the provision of high-end catastrophic care. Against this backdrop, we examine one of the proposed initiatives designed to improve the effectiveness and efficiency of US healthcare provision: increased adoption of *Health Information Technology* (**HIT**). We compile a database of several thousand healthcare clinics from the States of Florida, Georgia, Texas, Illinois and New York. Our dataset contains *clinic-specific* information on the age of the clinic, when they adopted HIT, the specialty of the clinic, the number of physicians, and *market-specific* data on location of the clinic, demographic, income, health insurance, environmental, among others. After reviewing the theoretical literature on technology adoption, and noting the predictions, we use Logit and Hazard Rate models to examine the factors that influence HIT adoption. Some of our findings are that the probability of

adoption of HIT: (1) increases if the clinic is part of a "chain" of clinics, with non-chain clinics having significantly lower probability of adoption even when they are relatively large; (2) increases if the clinic is located in a large city county or a large city metropolitan area, with rural area clinics having significantly lower likelihood of adoption. Clinics in small cities or small city metropolitan areas do not show any significant increase or decrease in likelihood compared to sample averages; and (3) is higher for primary care, family practice, internal medicine and multi-specialty clinics, and lower for urgent care and women's clinics. After we control for the effects related to clinic-type, and for the large city, small city and rural markets, we do not find that other market-specific characteristics have additional explanatory power. We discuss the implications for increasing the HIT adoption rates in US clinics and on current healthcare policy to increase the efficiency and effectiveness of healthcare.

* Affiliations:
[1] Brant Callaway: PhD student, Department of Economics, Vanderbilt University, Nashville TN.
[2] Vivek Ghosal (Contact author): Professor, School of Economics, Georgia Institute of Technology (Atlanta, USA); Research Fellow, CESifo (Munich, Germany).
Email: vivek.ghosal@econ.gatech.edu
Web: http://www.econ.gatech.edu/people/faculty/ghosal
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