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Capitalizing on Health Information Technology to Enable Digital Advantage in U.S. Hospitals

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Abstract

This research examines hospital digital advantage, defined as a hospital's technological edge relative to its competitors across a composite of technologies supporting the hospital's various functions and processes. Drawing on Bourdieu's forms of capital and the logic of digital options, we develop an integrative conceptual framework to identify and organize antecedents of digital advantage, which can translate to hospital performance through the creation of digital options. Focusing on the antecedents of digital advantage for our research model and hypotheses, we suggest that digital advantage is influenced by (1) economic capital, (2) institutional-arrangement-based social capital that results in knowledge sharing through information exchange networks and parent organization membership, (3) geographic-proximity-based social capital due to locational externalities that facilitate knowledge spillover, and (4) cultural capital that reflects the hospital's health information technology (HIT) knowledge stock. Our findings, based on the aggregate adoption of 90 HITs by 953 hospitals, support main effects; complementary effects of the two forms of social capital; and substitutive effects between (1) economic capital and other forms of capital such that cultural capital and both types of social capital mitigate the effects of inadequate economic capital, and between (2) institutional-arrangement-based social capital and cultural capital such that knowledge shared through institutional arrangements mitigates the effects of having inadequate in-house HIT expertise. We also provide preliminary evidence to show that hospital digital advantage is positively associated with hospital performance.

Keywords: Healthcare information technology, adoption, diffusion, knowledge spillover, cultural capital, social capital, economic capital, institutional-arrangement-based social capital, geographic-proximity-based social capital, saidin index, digital advantage