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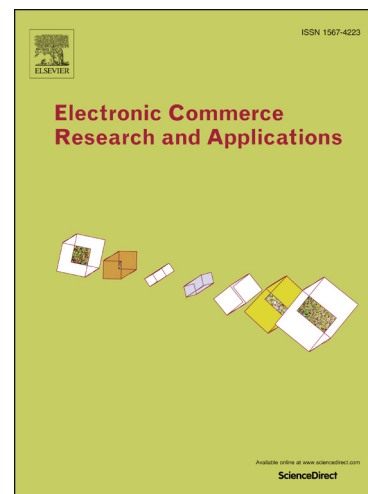
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## Adoption of Big Data and Analytics in Mobile Healthcare Market: An Economic Perspective

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### Abstract

This paper investigates the impact of big data and analytics (BDA) on health IT market competition as well as health IT provider's optimal BDA adoption decisions. To capture the specific characteristics of BDA in healthcare, we simultaneously model BDA's healthcare efficiency and privacy risk from consumer perspective and BDA's benefit and cost from provider perspective in a stylized two-dimensional product differentiation framework. The results indicate firm's optimal pricing strategies with the dynamic of BDA's efficiency and privacy risk. In addition, BDA's influence on firms' outcomes and social welfare are analytically pointed. Theoretically, this study has potentials to provide foundations for future big data research by stylizing an analytical model to understand firm's BDA adoption. Practically, insights for business managers on how to optimize strategies of BDA adoption, and for social planners on how to conduct better policies to improve healthcare service quality by promoting BDA adoption in healthcare, are derived.

**Keywords:** Big Data and Analytics; Wearable Devices; Healthcare; Two-Dimensional Product Differentiation; Efficiency; Privacy.

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