

The impact of Big Data analytics and data security practices on service supply chain performance

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Abstract

Purpose – The purpose of this paper is to investigate the effects of Big Data analytics, data security and service supply chain innovation capabilities on services supply chain performance.

Design/methodology/approach – The paper draws on the relational view of resource-based theory to propose a theoretical model. The data were collected through survey of 145 service firms.

Findings – The results of this study found that the Big Data analytics has a positive and significant relationship with a firm's ability to manage data security and a positive impact on service supply chain innovation capabilities and service supply chain performance. This study also found that most service firms participating in this study used Big Data analytics to execute existing algorithms faster with larger data sets. **Practical implications** – A main recommendation of this study is that service firms empower a chief data officer to establish the data needed and design the governance of data in the company to eliminate any security issues. Data security was a concern if a firm did not have ample data governance and protection as the information was shared among members of service supply chain networks.

Originality/value – Big Data analytics are a useful technology tool to forecast market preference based on open source, structured and unstructured data.

Keywords Malaysia, Big Data analytics, Data security, Service supply chain, Services supply chain performance, Supply chain innovation capabilities