

Big Data Analytics Adoption Intention Among Small & Medium Enterprises in Malaysia: A Conceptual Framework

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Abstract

Big Data Analytics (BDA) has been rapidly increasing its significance globally as information technology evolves. The expansion of data has allowed the business to gain access to valuable insight and has drawn business attention to generating various opportunities by exploring its usage in favouring for lucrative return. However, there is a gap in understanding the Small and Medium Enterprises (SMEs) to adopt BDA despite the promising returns. Therefore, the study has proposed to adopt the integrated TAM-TOE framework to understand the factors that affect the adoption intention of BDA among Malaysia's SMEs. The study has drawn on the adoption factors based on perceived compatibility, complexity, relative advantage, top management support, financial readiness, perceived usefulness, perceived ease of use, competitive pressure, and government and regulation support. The findings of this study could contribute to a large community in the SME business landscape and further assist the government in initiating activities to adopt BDA among SMEs to improve their business performance. The study also contributes to the current BDA knowledge body on understanding a firm's BDA adoption.

Keywords

Big Data, Big Data Analytics, Small and Medium Enterprises, TOE-TAM and Malaysia.

Biographies

Chong Siu Hou is an MBA graduate from the Faculty of Business and Accountancy, University of Malaya, Malaysia. He is currently pursuing his PhD degree in the same faculty. His main research interest is in big data-related topics, data Analytics, data mining, operations management, business management, and sustainability-related topics.

Azmin Azliza Binti Aziz is a senior lecturer in the Faculty of Business and Accountancy, University of Malaya. She received the BSc. in Industrial Mathematics degree from Universiti Teknologi Malaysia (UTM) and Masters in Applied Statistics from Macquarie University, Sydney, Australia, in 2004 and 2006. She graduated from the University of Warwick, the United Kingdom, with a PhD degree in Operations Research in 2012. Her research interests include optimisation problems, big data analysis, halal logistics and social media related studies. Over the last nine years, Dr Azmin Azliza has published articles in some good-ranked journals, including Journal of Islamic Marketing (JIMA), Journal of Science and Technology Policy Management, International Journal of Operations and Quantitative Management and International Journal of Electronic Customer Relationship Management. She has also published several book chapters on halal related studies and operations management issues.

Suhaiza Hanim Mohd. Zailani is a Professor of Supply Chain at the Faculty of Business and Accountancy, University Malaya. Her main research interest is on the development of quality management, supply chain management and Halal issues. Her achievement in supply chain management is excellent, as evident in the number and quantum of publications, research grants, consultations, training, industrial linkages, and professional appointments that she has successfully secured and fulfilled. Her expertise has also been recognised within academia as she is the editorial board member for multiple international referred journals and conferences.