

Will Blockchain Technology Meets Diffusion and Adoption Traceability Technology of Supply Chain Management Among Mangosteen Farmers?

Resista Vikaliana

PhD Student

Faculty of Technology Management and Business

Universiti Tun Hussein Onn Malaysia

Johor, Malaysia

dosenresistaok@gmail.com

Raja Zuraidah Raja Mohd Rasi

Associate Professor in Supply Chain Management

Faculty of Technology Management and Business

Universiti Tun Hussein Onn Malaysia

Johor, Malaysia

rzuraida@uthm.edu.my

I Nyoman Pujawan

Full Professor in Industrial Engineering

Department of Industrial Engineering, Institut Teknologi Sepuluh November,

Surabaya, Indonesia

pujawan@gmail.com

Irwansyah

Researcher in Operation Management

Department of Management, STIE Syariah Gasantara,

Sukabumi, Indonesia

irwansyah.supandi@gmail.com

Abstract

Technology that suits the needs of the community can answer the problem and can be used easily and can increase economic and environmental value added. So that in its application it is needed the right pattern of technology dissemination so that people as users can receive it physically and psychologically and mentally (accepted). This study aims to examine the readiness of technology application in the mangosteen supply chain management using blockchain technology. The study considers different conditions both socially, environmentally, production capacity and products produced on the basis of mangosteen commodity. This research was conducted with a qualitative approach by collecting primary data from 5 mangosteen farmers, 1 collector and 1 quality controller of trader. The results show that the success of technology diffusion and adoption, especially blockchain technology, is greatly influenced by various factors such as: the pattern of dissemination from technology providers, business scale, technological suitability, readiness of the recipient or user of technology and market response.

Keywords

Adoption, Diffusion, Innovation, Blockchain Technology, Mangosteen Farmers

Biographies

Resista Vikaliana. is currently a Ph.D. Student in the Faculty of Management Technology and Business, UTHM. She is under supervise Associate Professor Raja Zuraidah Raja Mohd Rasi and Professor I Nyoman Pujawan. She has completed research project in traceability using blockchain technology in Indonesia. Her research interest include supply chain management, logistics management, operation management.

Raja Zuraidah Raja Mohd Rasi is an Associate Professor at Faculty of Technology and Business Management, Department of Production and Operations Management, UTHM. She earned bachelor in technology management from Universiti Teknologi Malaysia, master in business administration from Universiti Kebangsaan Malaysia, and PhD in Industrial Science from Swinburne Technology University. She is an Associate Researcher in Institute of Integrated Engineering, Center for Industry Excellence - Rail (ICOE -REL) and Main Researcher in Fakultas Teknologi dan Manajemen Bisnis, Center of Research on Service and Operations Management (CRSOM). Her areas of research interest are green supply chain management, halal supply chain, quality improvement tools. She has published journal and conference papers. Her research interests include manufacturing, simulation, optimization, reliability, scheduling, manufacturing, and lean.

I Nyoman Pujawan, is a Full Full Professon in supply chain engineering. He has consulted companies in various supply chain management problems, including: transportation modelling, supplier management, supply chain improvements, strategic supply management plan, transportation and distribution, warehousing, inventory management for raw materials as well as spareparts, analyzing component commonality, and developing metrics for measuring supply chain performance. He is delivering supply chain courses for certification (CSCA, CPLM, CSCM frim ISCEA). He also delivered various training / courses such as basic supply chain management, inventory management, purchasing / supply management, and warehousing. Companies also invited him for few hours seminars. He has published over 45 articles in respected international journals, presented papers in many international conferences, and actively involved in professional societies. He has authored two books written in Bahasa Indonesia (Ekonomi Teknik; Supply Chain Management) and he has been supervising many research students, including PhDs. His specialities are: Supply chain management, logistics management, purchasing / supply management, inventory He was a Chief Editor of Operations and Supply Chain Management: An International Journal (Scopus Indexing Journal).

Irwanyah is a researcher in operation management. His research interest include operation management, logistics management and risk management.