

# **Technological Integration and Sustainable Performance in Manufacturing Firms**

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## **Abstract**

A brilliant way of maintaining business performance is sustainability and one of the essential parts of sustainability transition process is developing innovative and constructive corporate culture through integration. This study therefore aims to determine the relationship between technology integration and sustainable performance. The study focused on Malaysian Standard (MS) ISO (International Organization for Standardization) 14001 certified manufacturing firms in Malaysia. Self-administered surveys were used to gather data and information for the study from 722 organizations operating in Malaysia. Statistical Package for Social Science (SPSS) was used to analyze the data. The results identify significant associations between technology integration and sustainable performance from the perspective of economic, environmental and social performances. Technology integration has always been significant predictors of sustainable performance as it is a necessity and key driver in most industries toward environmental achievements in manufacturing firms. The findings from this study provide some specificity to relationship that had been illustrated and explained previously in a conceptual framework. Technology integration has been found to have a positive relationship with three dimensions of sustainable performance (economic, environmental, and social). A basis for future research and practical application are provided by a framework of identified associations to improve the sustainability performance.

## **Keywords**

Technology integration, sustainability performance, environmental performance, social performance, economic performance

## **Biographies**

**Mohamad Ghozali Hassan** is a Senior Lecturer at the School of Technology Management and Logistics, Universiti Utara Malaysia (UUM). His primary teaching interests is in technology and operation management. He has taught courses of this nature, both at the bachelor and master levels for the past 10 years. His main research interest is in the area of inter-organizational relations, antecedent factors of supplier-manufacturer relationship, outsourcing management, and environmental dynamism. Currently, he is the Principal of Residential Colleges at UUM. He is former Director of MSc Programme, OYA Graduate School of Business, UUM (2012-2013).

**Muslim Diekola Akanmu** is a Doctoral Researcher at Universiti Utara Malaysia, Sintok, Kedah, Malaysia specializing in Technology, operations and logistics Management. He earned his Master's degree in Technology Management from Universiti Utara Malaysia and Bachelor of Technology (B.Tech) in Agricultural Engineering at Ladoko Akintola University of Technology, Ogbomoso, Nigeria. He has worked as Teacher and Administrator under National Youth Service Corps at Mary Immaculate grammar school, Ado-Ekiti, Ekiti State, Nigeria where he taught engineering aspects of Agricultural Science and assisted in administrative works from July, 2012 to June, 2013. He is a graduate member of Nigeria Society of Engineers. Currently, he has been assigned as research assistant at School of Technology Management and Logistic, UUM.

**Rushami Zien Yusoff** bagged his Doctor of Philosophy in Management Marketing from University of Bradford, United Kingdom in 1992, Master's degree in Business Administration from Western Illinois University, United Kingdom in 1985 and Bachelor degree in Business Administration from Western Illinois University, USA in 1984. He currently works at the Research & Innovation Management Centre (RIMC), Universiti Utara Malaysia. He specializes in Total Quality Management (TQM), Marketing Orientation, Leadership Styles and Quality Management Systems. Rushami does research in International Economics, Manufacturing and Supply chain management. Their current project is "a Closed-Loop Supply Chain Model towards Malaysia Green Agenda: A Promised Sustainable Performance".