

# How Digitalization in the Finance Sector Contributes on Green Energy Transition: Malaysian Experience

Maya Puspa Rahman,  
Al-Qasimia University, College of Economics and Management, Sharjah, UAE.

Mohamed Asmy Bin Mohd Thas Thaker  
International Islamic University, Kulliyyah of Economics and Management Sciences, Malaysia.

Nurcan Kilinc-Ata  
Al-Qasimia University, College of Economics and Management, Sharjah, UAE.  
Institute for Statistical Studies and Economics of Knowledge,  
National Research University Higher School of Economics, Moscow, Russia.  
E-mail: nurcankilinc@yahoo.com

## Overview

Malaysia has been making significant efforts in the last few years on digitalization and green energy transition. The government has made digitalization a top priority and has started a number of efforts to encourage the use of digital technologies across the economy. The financial industry is one of the primary industries that contribute significantly to the country's green economy expansion. Backed by a strong digital infrastructure spanning broadband Internet and 5G networks, Malaysia appears to be making good progress in digitization, with the approval of five digital banks in April 2022, the introduction of robot advisors, and the use of blockchain technology to improve security and efficiency. A further indication of these countries' heightened commitment to promoting digitalization and a sustainable green economy is the Framework for Cooperation in the Digital Economy and Green Economy that was signed by Malaysia and Singapore on January 30, 2023.

A number of publications have also emphasized the significance of digitalization for scaling up green finance in the direction of a more resilient and environmentally friendly economy (Hao et al. 2023; Salman and Ismael 2023; AFI 2020; UNEP 2018; Kilinc-Ata and Tanriover 2018) and specifically the potential of green energy transition and digitalization in Malaysia (Khalili et al. 2023; Ordoñez de Pablos 2023; Chua and Oh 2011). Furthermore, a comprehensive methodology to advance digitalization through the use of fintech and digital currency in Islamic green financing was underlined because Malaysia is recognized as one of the top centers for Islamic finance (Thaker et al. 2022).

This study intends to provide a record of Malaysia's financial sector's digitalization initiatives and explore the potential role they may play in the transition to green energy. The current research study specifically tries to address the following issues:

- *How has the adoption of digitalization improved the effectiveness and accessibility of the provision of financial services in the energy sector?*
- *How can digitalization in the financial sector contribute to the green energy transition?*

## Methods

Both qualitative and quantitative approaches will be used in this study. The qualitative method of examining documented and published study data will be used to answer the first research question. Bibliometric analysis or meta-analysis will be used, depending on the quantity of the relevant papers. In order to gain further insight into the continuing endeavor toward digitalization, it might also be necessary to conduct some interviews with government agencies and industry participants. The interview data would then need to be subjected to an appropriate thematic analysis.

Referring to the second research question, it is intended to gather specific macroeconomic information as well as environmental indicators including carbon emissions, digital finance, and green energy. The Autoregressive Distribution Lag (ARDL) model will be used to examine long-term relationships between digital finance and green indicators.

## Results

Expanding on the initial research question, this study is planned to emphasize the financial industry's prior and current digitization efforts and how these affect the efficiency and accessibility of financial services within the energy sector. The government's mandated agenda on digitalization will be highlighted in the second research question, which will empirically examine the long-term impact of digital finance on sustainable and inclusive economic growth in Malaysia.

## Conclusion

The empirical findings can also be presented as possible evidence-based policy recommendations for the Malaysian government to update the relevant blueprints of Malaysia's digital and green economy in the future.

## References

- Alliance for Financial Inclusion-AFI (2020) Inclusive green finance: from concept to practice. <https://www.afi-global.org/publications/inclusive-green-finance-from-concept-to-practice/> Accessed 26 February 2023.
- Chua, S.C. and Oh, T.H., (2011). Green progress and prospect in Malaysia. *Renewable and Sustainable Energy Reviews*, 15(6), pp.2850-2861.
- Hao, X., Li, Y., Ren, S., Wu, H. and Hao, Y., 2023. The role of digitalization on green economic growth: Does industrial structure optimization and green innovation matter? *Journal of Environmental Management*, 325, p.116504.
- Khalili, A., Ismail, M.Y. and Abdulrazak, S.N., (2023). Exploring the interrelationships between green manufacturing practices and Malaysian green sustainable performance. *International Journal of Productivity and Quality Management*, 38(1), pp.1-25.
- Kilinc-Ata, N. and Tanriover, B., (2018). A quantitative analysis of the impact of renewable energy deployment on sustainability: the Turkish case. In *Value Sharing for Sustainable and Inclusive Development* (pp. 309-321). IGI Global.
- Ordoñez de Pablos, P. (2023). "Digital tools, innovation and competitiveness: lessons for the digital transition". *Journal of Science and Technology Policy Management*, 14(1), 1-5.
- Rahman, M.P., (2020). Has the Yield Curve Accurately Predicted the Malaysian Economy in the Previous Two Decades? In *Banking and Finance*. IntechOpen.
- Salman, D. and Ismael, D. (2023), "The effect of digital financial inclusion on the green economy: the case of Egypt", *Journal of Economics and Development*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JED-05-2022-0087>
- Thaker, M.A.B.M.T., Khaliq, A.B., Thaker, H.B.M.T., Amin, M.F.B. and Pitchay, A.B.A., (2022). The Potential Role of Fintech and Digital Currency for Islamic Green Financing: Toward an Integrated Model. In *Green Digital Finance and Sustainable Development Goals* (pp. 287-308). Singapore: Springer Nature Singapore.
- United Nations Environment Programme - UNEP (2018) Digital finance and citizen action in financing the future of climate-smart infrastructure. UNEP, Geneva.