Adoption of internet of things among Malaysian halal agro-food SMEs and its challenges

ABSTRACT

Safeguarding the high quality of halal food products is a new realm to explore with the advent of new technologies. The efficiency of food industry management has boosted the applicability of product traceability system with the aid of the internet of things (IoT). Traceability system with the use of IoT has facilitated food industry players in managing their product information along the supply chain. As one of the halal food industry key players, halal agro-food small and medium enterprises (SMEs) are reportedly yet to embrace the adoption of IoT. With IoT, halal agro-food SMEs supply chain has undoubtedly provided a trusted platform. However, halal related issues and scandals in the market are recurring persistently. Besides, the emergence of IoT in the agriculture sector requires active involvement by halal agro-food SMEs. Thus, the objective of this study was to investigate the adoption of IoT among Malaysian halal agro-food SMEs and its challenges. A self-administered questionnaire was employed to gather data from selected 158 halal agro-food SMEs. Descriptive analysis, mean score analysis, and Pearson correlation analysis were carried out to analyze the data. The results showed a lack of IoT adoption among halal agro-food SMEs in managing their business activities. The SMEs were also found to be low tech-savvy users of IoT in managing their halal products. Therefore, a vast improvement is needed in implementing IoT among Malaysian halal agro-food SMEs.