

**UNIVERSITI TEKNOLOGI MARA**

**THE INFLUENCE OF INTERNET OF  
THING (IOT) USAGE ON THE  
GRASSROOTS INNOVATORS'  
SUSTAINABILITY IN MALAYSIA**

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## ABSTRACT

The purpose of this study was to examine the influence of the Internet of Things (IoT) usage on grassroots innovators' sustainability in Malaysia. The role of grassroots innovators is crucial to the Malaysian economy since it helps translate business innovations into social well-being and economic growth. It addresses environmental concerns and is used for commercial purposes. Therefore, the sustainability of grassroots innovators at all levels must be preserved. This study examines the constructs that contribute to the usage of the Internet of Things, which contributes to the sustainability of the grassroots innovators. Among the independent constructs are perceived usefulness, perceived ease of use, social influence, perceived technology resistance, perceived relative advantage, perceived compatibility, perceived complexity, perceived trialability and perceived observability. The instruments for measuring the construct were adapted from the literature and modified to suit the current study. The study used a probability sampling method to obtain respondents randomly from a sampling frame of grassroots innovators. The selected respondents were given a self-administered questionnaire to complete at their convenience. A total of 218 responses were usable for analysis. The study employed Structural Equation Modelling (SEM) in IBM-SPSS AMOS 24.0 to model and estimate the required parameters for testing the hypotheses. The study connects the theoretical aspects of previous technology models, such as the TAM, the UTAUT and the DOI, with the sustainability of grassroots innovators using two mediating factors. The results showed certain constructs have a significant influence on the usage of IoT. More importantly, the results indicate IoT usage has significant effects on the sustainability of grassroots innovators. The results of this study have certain implications on the theory and practice. . The study also conceptualised a model of the influence of IoT usage in relation to grassroots innovators' sustainability in Malaysia. The researcher offers a thorough discussion of the theoretical and practical contribution of this study. The novel aspects of this study are the model linking several influential factors to Internet of Things usage and the link between IoT usage and the sustainability of grassroots innovators. The study won the Gold Award and the Diamond Award at the 2019 Invention, Innovation and Design Exposition (iidex) at UiTM Shah Alam. Meanwhile, in 2020, the study obtained the Gold Award and the Most Innovative Award at the Innovation Productivity Exposure (iPEX) at Malaysia Productivity Corporation (MPC). It also won a Merit and a Bronze Award at the Virtual Expo of Innovation Products and System Design (VIDE) 2020, Universiti Malaysia Perlis, and a Silver award at IoT Poster/Montage, UniKL. Furthermore, part of the study has been published in two (2) Scopus-indexed journals, namely the International Journal of Innovation, Creativity and Change, Volume 7, Issue 4, 2019 and the Academy Science Open Journal, 14, 2021.

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