

Thesis Title	Factors Affecting the Adoption of Blockchain Traceability Platform in Thailand Rubber Supply Chain Using UTAUT Model
Author	Jeeranan Wandee
Degree	Master of Business Administration (International Logistics and Supply Chain Management)
Advisor	Samatthachai Yamsa-ard, Ph. D.
Co-Advisor	Damrongpol Kamhangwong, Ph. D.

ABSTRACT

This study aimed to identify the challenges of Thai rubber industry under the responsibility of RAOT and to test a solution which explore the acceptance of blockchain traceability platform by a proposed UTAUT model among all stakeholders in the rubber industry supply chain in Thailand. The study employed the conventional UTAUT model by incorporating the Technological Anxiety (TA) factor, which was hypothesized to influence stakeholders' acceptance of the blockchain traceability platform. The conventional UTAUT model included Social Influence (SI), Facilitating Conditions (FC), Performance Expectancy (PE), and Effort Expectancy (EE) factors, all of which were theorized to influence Behavioral Intention (BI). Data was collected from the focus group and developed a questionnaire survey of 27 statement items with 130 stakeholders' respondents. Firstly, it was found that the major challenge in the rubber industry supply chain is price fluctuation, while the imbalance between local demand and supply is a minor challenge. Moreover, this study investigated the root causes of the rubber industry's minor challenge in Thailand and identified potential solutions within the authority of RAOT. Secondly, the results were analyzed by using Structural Equation Modeling (SEM), testing the proposed UTAUT model that incorporated the TA factor. The initial results of the proposed UTAUT model were not consistent with the empirical data. In contrast, the path analysis showed that the individual factor (SI, FC, PE, TA) influenced BI, except for EE. In conclusion, FC

directly influenced BI ($\beta = 0.974$; $p < 0.001$) that FC could support the active stakeholders' involvement in the process of rubber supply chain. Additionally, it is also highlighting the importance of facilitating conditions (FC) e.g., IT infrastructure, updated rules and regulations, and capacity building in blockchain technology for all stakeholders in promoting acceptance. Based on these findings, the study provided recommendations for each factor, suggesting that RAOT should support and encourage the acceptance and adoption of blockchain traceability platform in Thailand's rubber supply chain. Furthermore, recommendations for future studies have been proposed based on the findings.

Keywords: UTAUT, Rubber Supply Chain, Blockchain Technology, Acceptance Behavior

