An Exploratory Multiple Case Study on Mechanical Harvesting Adoption in The Corporate Sector Tea Plantation in Sri Lanka

Mahinda T.G.N.[1*], Esham M.[2], and Rosairo H.S.R.[2]

[1] Faculty of Graduate Studies, Sabaragamuwa University of Sri Lanka
[2,3]Department of Agribusiness Management, Sabaragamuwa University of Sri Lanka

mahinda2002@gmail.com

The mechanization of field practices has been recognized by tea sector experts to solve worker scarcity and to reduce the cost of production in tea plantations. However, the adoption of mechanization is lower than expected. According to the review of the literature, there has been very little research on this subject, either internationally or nationally. This study examines the possible driving factors in the adoption of Mechanical Harvesting (MH) of tea in selected tea plantations. To understand the adoption of MH, this exploratory study employed a qualitative multiple-case approach. Data collection was done by face-to-face interviewing of Estate Managers & staff in tea plantations using a semi-structured interview schedule. Interviews were transcribed through an intelligent verbatim in order to produce filtered interview transcripts. The results of this study demonstrate that multiple themes emerged as the factors that determine the adoption of MH. In the majority of cases, themes emerged as MH-enhancing determinants. Gender appears to have an impact on machine operators' performance and adoption. The performance of the continuous MH appears to be different from the general perception that has been established in the plantation sector. The results demonstrate that continuous MH improves green leaf quality while lowering harvesting costs. One of the key determinants in the adoption process is the employee's mindset. The findings show that harvesting machine technology needs to be improved further in order to facilitate the adoption. The results of this multiple case study contribute to the body of knowledge on how technology is utilized in the tea industry. Additionally, results suggest areas for additional research. This study shows that there are important factors connected to the adoption process that can be considered when trying to implement MH. This study precisely highlights adopters' practical experiences that will be beneficial to new users.

Keywords: *Corporate sector, Mechanization, Mechanical Harvesting, Technology adoption, Tea plantation*