

# **FACTORS AFFECT ON ADOPTION OF FACTORY AUTOMATION IN LOW COUNTRY TEA MANUFACTURING PROCESS**

A dissertation submitted to the  
Faculty of Animal Science and Export Agriculture of  
Uva Wellassa University  
in partial fulfillment of the requirements for the award of the degree of  
Bachelor of Science in Tea Technology and Value Addition

**By**  
**MANEKA MADHUSHANI ABEYNAYAKE**

**Faculty of Animal Science and Export Agriculture**  
**Uva Wellassa University**

**2013**

## ABSTRACT

Tea processing is the one of energy and labor intensive food processing industry in Sri Lanka. Sri Lankan tea manufacturers are still traditional orthodox tea manufacturers working with old machineries and highly depend on workers. Though tea processing is a science, some still consider it as an art. Therefore several critical judgments are left to subjective decisions of the factory staff. Arising from the worker shortage, low labor productivity, lower efficiency in recent time, management of the factories focus is on automation of tea processing, to minimize over-dependence on workers and improve efficiency of the works. Even though, only a few have modernized to a notable degree. The study was aimed to assess the factors affecting for adoption to factory automation in tea manufacturing and identify the barriers to implement it in tea factories. This study mainly based on the primary data gathered from the tea factories situated in Galle, Matara, Ratnapura districts in Sri Lanka. Data was mainly collected through a structured questionnaire from random sample of 50 tea factories in those areas and analyzed qualitatively and quantitative techniques using SPSS software. Descriptive statistical analysis was applied to determine the level of adoption to factory automation and ordinal logistic regression was used to find out the relationship between the adoption level and explanatory variables.

The study reveals that production capacity, attitude, experience of the manager, Ownership<sup>1</sup> (Private), quality certificates and good knowledge regarding automation were significantly affect to the adoption to factory automation in tea manufacturing. According to the discussions conducted with managers, the major barriers for adoption to factory automation are lack of finance, lack of government involvement, negative attitude regarding automation technology.

Key words: Automation, labor intensive, worker shortage, efficiency, tea manufacturing