**University of Nairobi**

**School of Computing & Informatics**

# ADOPTION OF AUTOMATIC MANUFACTURING DATA CAPTURE IN KENYA'S CARTON MANUFACTURING INDUSTRY:

## CASE STUDY

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In partial fulfillment for the requirement of MSc in Information Systems

## DECLARATION

This Project, as presented in this report is my original work and to the best of my knowledge has not been presented for any other university awards.

Signed:........................ Date:...25/10/2013...

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This project has been submitted as part of fulfilment of the requirement for the award of Master of Science in Information Systems of the School of Computing and Informatics of the University of Nairobi, with my approval as the University Supervisor.

Signed:........................ Date: ...7th NOV 2013...

Mr Lawrence Muchemi

# ABSTRACT

Information communication technologies (ICTs) have significantly revolutionized the way companies capture manufacturing data. Manufacturers can maximize productivity by utilizing a complete shop floor system to electronically capture, manufacturing process data with very high accuracy in real time basis. However, the number of firms that have chosen to adopt or use such technologies in Kenya is still very low. The few firms that have adopted the technology only use it partially. Therefore there is need to assess the acceptance of such technologies to establish factors that hinder or promote their acceptance.

This study applied Technology Acceptance Model to examine the factors that influence the adoption of automated manufacturing data capture in Kenya. The study specifically focused on the evaluation of carton manufacturing firms in Kenya. A survey was conducted to gather data which was coded in SPSS 17. Frequency and Descriptive analysis methods were used for data analysis and presentation while factor analysis and multiple regression were used to validate the study model.

Out of a total of 87 questionnaires distributed to five carton manufacturing firms, 83 were returned and validated. The analysis revealed that Perceived Ease of Use, Perceived Usefulness, Subjective Norm, Perceived Cost and Facilitating Conditions significantly influenced senior managers' attitude towards adoption and usage. The results of the data analysis contributes to the body of knowledge by demonstrating that the above factors are important in intention to use Automated data capture applications in Kenya. These results form a good foundation for providing practical recommendations to the manufacturing industry, and directions for further research.

**Keywords:** Automated Data Capture, Technology Acceptance Model, Adoption