

**IDENTIFYING THE EFFECT OF INFORMATION TECHNOLOGY.
ON TOTAL QUALITY MANAGEMENT**

A Study of Manufacturing Organizations in the Greater Colombo Region

A PROJECT REPORT PRESENTED BY

SENAKA RAMYANATH GINIGE

to the Board of Study in Statistics & Computer Science of the

POSTGRADUATE INSTITUTE OF SCIENCE

*in partial fulfillment of the requirement
for the award of the degree of*

MASTER OF SCIENCE IN APPLIED STATISTICS

of the

UNIVERSITY OF PERADENIYA

SRI LANKA

2007

617760

C
001.642
GIN

IDENTIFYING THE EFFECT OF INFORMATION TECHNOLOGY ON TOTAL QUALITY MANAGEMENT

S. R. Ginige

Department of IT & Decision Sciences

University of Sri Jayewardenepura

Nugegoda

Sri Lanka

Two organizational practices, Information Technology (IT) and Total Quality Management (TQM) are emergent as the most important factors in increasing the organizational performance and each has been widely researched. However, there is a very little research carried out to identifying the relationship between IT and TQM, particularly how IT influence TQM. This research presents an empirical study which examines the interrelationship between IT & TQM and the importance of these practices on organizational performance in terms of operations performance, which consists of four dimensions: Cost, Quality, Delivery, and Flexibility. The empirical data was drawn from forty two Sri Lankan manufacturing organizations through a mailed questionnaire survey and the data were analysed using correlation analysis, factor analysis and multiple regression analysis methods. The findings indicated that, IT does not have a direct significant effect on operations performance while TQM had a direct significant effect on operations performance. Level of IT usage on TQM dimensions also had a significant effect on organizational operations performance. Further results justified that an extensive use of IT had a significant effect on the level of IT usage on TQM dimensions as well. The correlation between IT and TQM practices are also positive and significant. Detailed path analysis clearly illustrated the various relationships among concept variables. Finally, conclusions and future research areas are discussed.