

A STUDY OF THE APPLICATIONS OF INFORMATION AND
COMMUNICATIONS TECHNOLOGY FOR BUSINESS ENVIRONMENTAL
SCANNING IN THE MANUFACTURING INDUSTRY IN SOUTH WESTERN
NIGERIA

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A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF DEGREE OF DOCTOR OF
PHILOSOPHY IN

TECHNOLOGY MANAGEMENT

TO

TECHNOLOGY PLANNING AND DEVELOPMENT UNIT,
FACULTY OF TECHNOLOGY,
OBAFEMI AWOLowo UNIVERSITY, ILE-IFE, NIGERIA.

2007



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ABSTRACT

This study examined the Information and Communications Technology (ICT) resources and capabilities in manufacturing companies in Southwestern Nigeria and the extent of their applications for business environmental scanning with a view to developing effective strategies for ICT-based environmental scanning.

Eighty four companies from five sectors: Automobile and Tyres (ATT); Foods, Beverages and Tobacco (FBT); Pharmaceutical, Chemical and Paints (PCP); Breweries (BRW); Building materials, Industrial and Domestic Products (BIP) were sampled using Maximum Variation Sampling technique. The sample consisted of 6 small scale, 54 medium scale and 24 large scale companies. Three sets of questionnaires were designed to address the objectives of the study and administered in three departments in each of the companies sampled. The data were analyzed using descriptive and inferential statistics.

The result of the standard normal Z-test of proportions performed for the aggregate data and four population groups using a hypothesized population proportion of 0.50 at the 0.05 level showed that the business environment was complex-changing but analyzable. Companies were actively engaged in environmental scanning using the search or discovery mode. The ICT utilization index computed from a five-point Likert scale was 3.84; 3.77; 3.63 and 3.55 for information gathering, analysis and interpretation, decision support and organization memory respectively. The level of computerization of some value chain activities examined was shown to be low having mean computerization level of between 2.30 and 2.70. The print media was more intensively used to interact with the environment than all the electronic media except the telephone. The Internet was the least used ICT resource with only 6% of companies engaging in e-commerce. Companies use the Internet predominantly for e-mail and company news. Large scale companies were found to use the Internet less intensively compared to medium scale companies.

ICT literacy level of different cadre of staff measured on a five point Likert scale was found to be between 2.07 and 2.39. Frequency of training was similarly found to be low with indices ranging between 2.39 and 2.71. However, there was a significant correlation with coefficient $r = 0.69$ at the 0.05 level between ICT literacy level of management staff and ICT capability development plan of companies. Ninety-two percent of the companies have development programmes for ICT capability building.

The study concluded that the intensity of ICT application in environmental scanning in the manufacturing companies depends largely on the degree of uncertainty in the business environment.