

**APPLICATION OF OPERATION RESEARCH TECHNIQUES AND THEIR EFFECTS
ON FIRMS PERFORMANCE**

**A STUDY OF MAY & BAKER PLC AND DE UNITED FOODS INDUSTRIES LIMITED
(DUFIL) OTA, OGUN STATE, NIGERIA**

BY

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**BEING A MASTERS THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION
(MBA) DEGREE IN THE DEPARTMENT OF BUSINESS MANAGEMENT, COLLEGE
OF BUSINESS AND SOCIAL SCIENCE, COVENANT UNIVERSITY OTA.**

MAY 2018

DECLARATION

I hereby declare that the project in hand is a study undertaken by JENNIFER UGONNA OPUTA of the Department of Business Management, College of Business and Social Science Covenant University under the supervision of Dr. OLALEKE OGUNNAIKE. The project has not been undertaken for any degree anywhere else. The views of this project were solely a product of the research conducted by me. Where the ideas of other researchers have been represented in this project, they have been duly acknowledged by me.

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Signature & Date

ACCEPTANCE

This is to attest to the fact that this dissertation is accepted in partial fulfillment of the requirements for the award of a Master’s degree (M.B.A) in Business Administration in the department of Business Management, College of Business and Social Sciences, Covenant University.

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CERTIFICATION

This is to certify that the research work titled Application of Operation Research Techniques and its Effect on Firms Performance: A study of May and Baker Plc and De United Foods Industries Limited was undertaken by JENNIFER UGONNA OPUTA with matriculation number 07CF05865 under the supervision of OGUNNAIKE OLALEKE and submitted to the Department of Business Management of the College of Business and Social Science, Covenant University, Ota.

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DEDICATION

This research is dedicated to God Almighty, to Him be all the glory.

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ABSTRACT

Application of Operations Research (OR) techniques is traceable to the era of the Second World War II. It has since then been found applicable in different works of life. In the light of the current economic downturn, Operation Research techniques has become more relevant and useful for business activities. The primary purpose of this study is to explore the applicability of Operation Research techniques as competitive tools for business performance in manufacturing firms. This study adopted a descriptive research design and draws its strength from Operation Research theories such as Linear Programming, Transportation Problem, Markov Chain, Game Theory, Queue Model as well as Forecasting Models. The population of the study was 550 as a result, the sample size determined is 220. A well-structured, self-administered questionnaire was used as the main tool for data collection and was administered to 220 respondents out of which 187 were retrieved and appropriately filled. The reliability of the research instrument was calculated and the value of the Cronbach Alpha test is greater than 0.7 thereby making the instrument reliable. Data were analyzed using the regression analysis and findings revealed that majority agreed to the claim that manufacturing firms apply OR techniques in their operations. The study concluded that OR techniques are significant tools for improving firm's performance. Finally, this study is an academic springboard for other related studies in the field of Operations Research and recommends that operations research techniques should be employed by firms for optimization of business performance.

Keywords: Operation Research techniques, Optimization, Performance

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