

**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**

**JENNIFER UGONNA OPUTA**

**07CF05865**

**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.

JENNIFER UGONNA OPUTA

.....

**Researcher**

**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.

Mr.Philip John Ainkwokhai

.....

**(Secretary, School of Postgraduate Studies)**

**Signature &Date**

Professor Samuel Wara

.....

**(Dean, School of Postgraduate Studies)**

**Signature &Date**

## 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.

Jennifer Ugonna Oputa

.....

**Researcher**

**Signature & Date**

Dr. Olaleke Ogunnaike

.....

**Supervisor**

**Signature & Date**

Dr. O. Iyiola

.....

**Head of Department**

**Signature & Date**

.....

**External Examiner**

.....

**Signature & Date**

## **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

## TABLE OF CONTENTS

<b>PART A</b>	<b>Page</b>
Cover Page	
Title page	i
Declaration	ii
Acceptance	iii
Certification	iv
Dedication	v
Acknowledgement	vi
Abstract	vii
Table of contents	viii
List of tables	xi
<b>PART B</b>	
<b>CHAPTER ONE: INTRODUCTION</b>	
1.1 Background to the Study	1
1.2 Statement of the Problem	4
1.3 Objective of the Study	5
1.4 Research Questions	6
1.5 Research Hypotheses	6
1.6 Scope of the Study	7
1.7 Significance of the Study	7
1.8 Limitation of the Study	8
1.9 Operationalization of research variables	8
1.10 Definition of Terms	9



## **CHAPTER TWO: LITERATURE REVIEW**

2.0 Introduction	11
2.1 Conceptual Framework	11
2.1.1 Linear Programming Models	11
2.1.2 The Transportation Model	20
2.1.3 Markovian Models	29
2.1.4 Games Theory	32
2.1.5 Forecasting Model	39
2.1.6 Queue Model	41
2.1.7 Cost	48
2.1.8 Profit	49
2.1.9 Operational Effectiveness	50
2.1.10 Operational Efficiency	51
2.2 Theoretical Framework	52
2.2.1 Bottleneck Theory	52
2.2.2 Theory of Constraint	53
2.2.3 Systems Theory	54
2.3 Empirical Framework	55
2.3.1 Linear Programming	55
2.3.2 Forecasting Model	57
2.3.3 Transportation Model	58
2.3.4 Queue Model	59
2.3.5 Game Theory	61
2.4 Gaps in Literature	62

## **CHAPTER THREE: RESEARCH METHODOLOGY**

3.0 Introduction	63
3.1 Research Design	63
3.2 Population of the Study	63
3.3 Sample Frame	64
3.4 Determination of Sample Size	64

3.5 The Sampling Technique	65
3.6 Sources of Data Collection	65
3.7 Instrument for Data Collection	66
3.8 Validity of Research Instrument	66
3.9 Reliability of Research Instrument	66
3.10 Method of Data Presentation and Analysis	67
3.11 Ethical Consideration	67

## **CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION**

4.0 Introduction	68
4.1 General Response Rate	68
4.2 Socio Demographic Profile of Respondents	69
4.3 Descriptive Analysis of Data and Relevant Variable	73
4.4 Test of Hypothesis	77
4.4.1 HYPOTHESIS 1	77
4.4.2 HYPOTHESIS 2	79
4.4.3 HYPOTHESIS 3	81
4.4.4 HYPOTHESIS 4	83
4.4.5 HYPOTHESIS 5	85
4.5 Discussion of Findings	87
4.5.1 Introduction	87
4.5.2 Discussion of Findings	88
4.5.3 Theoretical Findings	88
4.5.4 Empirical Findings	89

## **CHAPTER FIVE: CONCLUSION AND RECOMMENDATION**

5.0 Introduction	92
5.1 Summary of the Work	92
5.2 Conclusions	93
5.3 Recommendations	94

5.4 Suggestion for Further Studies	94
5.5 Contribution to Knowledge	95
References	96
Appendix	104

## **LIST OF TABLES**

4.1.1 Analysis of response rate	68
4.2.1 The gender of the respondents	69
4.2.2 The age of the respondents	69
4.2.3 The number of years worked in the industry	70
4.2.4 The highest educational qualification of the respondents	71
4.2.5 The company of the respondents	71
4.2.6 Responses about the company applying any operation research technique	72
4.2.7 Responses about OR decisions solved with the aid of OR Techniques	72
4.3.1 Linear Programming	73
4.3.2 Transportation Model	74
4.3.3 Markov Model	75
4.3.4 Game Theory	75
4.3.5 Forecasting Model	76
4.3.6 Queueing Model	77