



Faculty of Commerce
Accounting and Auditing Department

The Integration between Resource Consumption Accounting Approach and Theory of Constraints to Rationalize Capacity Utilization Decisions

"An Applied Study"

Thesis

Submitted in Fulfillment of the Requirements of the Master
Degree in Accounting

Submitted by

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَقَدْ اَعْمَلُوا فَسَيَرَى اللَّهُ عَمَلَكُمْ
وَرَسُولُهُ وَالْمُؤْمِنُونَ

صدق الله العظيم

سورة التوبة آية (١٠٥)



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Thesis Approval

Researcher Name: Nariman Mohamed Mohamed El-Essawy

Thesis Title: The Integration between Resource Consumption Accounting (RCA) and Theory of Constraints (TOC) to Rationalize Capacity Utilization Decisions

“An Applied Study”

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/ / 2018



Dedication

To:

My beloved Grandmother

whom I owe everything
I dedicate this effort to you

May GOD

Rest your precious soul..



Acknowledgement

*First and foremost, I submit all my gratitude to **Allah** whose help I always seek and to whom I owe every success in my life.*

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Nariman Mohamed Mohamed El-Essawy



DECLARATION

I declare that this thesis has not been previously submitted for any degree.

Also, it contains no materials published previously by anyone, and only the sources cited have been used.



Abstract

Nariman Mohamed Mohamed El-Essawy- The Integration between Resource Consumption Accounting Approach and Theory of Constraints to Rationalize Capacity Utilization Decisions "An Applied Study", Faculty of Commerce, Ain-Shams University, Accounting & Auditing Department, 2018.

The rapid development in the contemporary economic, technological, and political systems has led to a faster increase in fixed costs than variable costs in organizations, which is a result of the increase in the number of operations and product diversity that require a varied set of activities, in order to cope with these developments.

Expanding operations may lead to problems such as the existence of unused capacity or bottlenecks. Unused capacity leads to overspending which reduces income, while limited capacity resources represent bottlenecks which slow down operations. Both unused capacity resources and bottlenecked resources represent problems facing the organization. Organizations find it difficult to balance between the effective utilization of the capacity of its available resources and the constraints imposed on some of these resources. Accordingly, the main purpose of this study is to suggest a management accounting framework based on both resource consumption accounting (RCA) and theory of constraints (TOC) to rationalize capacity utilization decisions.

A case study was applied on one of the production lines of Dice Sports and Casual Wear organization based on actual detailed cost data from this organization. A mixed-integer programming model was constructed in order to integrate RCA with the TOC philosophy.

The integration between RCA and TOC will rationalize capacity utilization decisions. Organizations should focus on resources capacity and areas of constraints in order to achieve the best utilization of the capacity of resources and to maximize profits. This model will help organizations greatly to achieve this objective.

Keywords: Resource consumption accounting, theory of constraints, capacity utilization decisions.