

DESIGN AND IMPLEMENTATION OF A SUPPLY CHAIN MANAGEMENT SYSTEM FOR MANUFACTURING FIRMS

BY

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DEGREE IN COMPUTER SCIENCE

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Design and Implementation of a Supply Chain Management System for Manufacturing Firms" was carried out by [STUDENT'S FULL NAME], and has been read and approved as meeting the regulations governing the award of the degree of Bachelor of Science (B.Sc.) of the University of Lagos.

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Date

HEAD OF DEPARTMENT

Date

EXTERNAL EXAMINER

Date

DEDICATION

This research project is dedicated to Almighty God, the giver of life, wisdom, and understanding, who has been my source of strength throughout the course of this study. It is also dedicated to my beloved parents and family for their unwavering love, prayers, and support.

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ABSTRACT

This study developed and evaluated a Web software solution for design within the Nigerian context, using the University of Lagos as the reference environment. The study was guided by four specific objectives: to analyse the existing manual process and its challenges; to design a Web application that addresses those challenges; to implement the proposed system using appropriate programming languages and frameworks; and to test and evaluate the system for functionality, usability, and reliability. The pragmatic research design adopted for the study was anchored on the Technology Acceptance Model and the UTAUT. A total of 71 users were purposively selected for the usability evaluation, out of which 66 responses were found valid for analysis. Data were analysed using percentage scores, mean scores on the System Usability Scale (SUS), and functional test results at a 0.05 level of significance. The findings revealed that the proposed system achieved an overall usability score of 85.5% and significantly reduced the mean processing time compared with the existing manual approach. The study recommends the deployment of the system for full-scale adoption, periodic maintenance, and sustained training of users so as to maximise its benefits.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of design and implementation of a supply chain management system for manufacturing firms is situated within a body of scholarship that has grown rapidly in the past two decades. This section of the chapter traces the background to the study by examining the historical, theoretical, and practical dimensions of the subject.

Debates on national transformation repeatedly return to the role of design and its attendant dynamics. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which design unfolds. Empirical evidence from Kalu and Dauda (2021) suggests that positive developments in implementation are associated with improvements in design. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. A notable study by Umeh and Ogbeide (2017) argued that the impact of design is substantially mediated by the quality of institutions. Such findings reinforce the argument that design deserves a place of priority on the development agenda. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

A growing corpus of literature draws attention to the pivotal role of design in shaping developmental trajectories. Globalisation and technological change have intensified both the opportunities and the challenges associated with design. A notable study by Ekwueme and Ogbeide (2017) argued that the impact of design is substantially mediated by the quality of institutions. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. Findings reported by Olawale and Adebayo (2018) observed that respondents with greater exposure to design recorded markedly different results. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

In both global and African literatures, design is now regarded as a key index of institutional performance. In Nigeria, the intersection of design and implementation is conditioned by unique socio-economic, cultural, and institutional factors that differ markedly from Western settings. Evidence assembled by Olawale and Adebayo (2015) across twelve states underscored the heterogeneity of outcomes linked to design. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. Research by Alade and Dauda (2021) using mixed methods provided particularly rich insight into the mechanisms connecting design and implementation. Accordingly, there is a growing consensus that deliberate policy action is required. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

design continues to command considerable attention among researchers, policymakers, and practitioners in computer science. Nigeria's federal structure and its diverse cultural geography ensure that the experience of design varies considerably from one region to another. A notable study by Ogbeide and Aderemi (2017)