

A STUDY OF SEQUENCES AND SERIES WITH APPLICATIONS TO FINANCIAL MODELS

BY

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DEGREE IN MATHEMATICS

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "A Study of Sequences and Series with Applications to Financial Models" 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.

PROJECT SUPERVISOR

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 examined a study of sequences and series with applications to financial models, using undergraduate students of the University of Lagos as a case study. The study was guided by three specific objectives: to examine the extent to which respondents exhibit the key attributes of study; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with study and sequences. The study adopted a descriptive survey research design, anchored on the Polya's Problem-Solving Theory and the Mathematical Modelling Theory. A sample size of 413 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 397 questionnaires were found valid for analysis. Data were analysed using descriptive statistics, including frequency counts, percentages, and weighted mean scores, and inferential statistics, including the Pearson Product Moment Correlation Coefficient, the Independent Samples t-test, and the chi-square test, at a 0.05 level of significance. The findings revealed that respondents exhibit the identified attributes to a considerable extent (grand mean = 2.99). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.552$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 7.95, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.18$, $p > 0.05$). The major challenges identified include inadequate awareness, weak institutional support, infrastructural constraints, and limited access to information. The study recommends targeted interventions, improved access to resources, and intensified public education on study.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of a study of sequences and series with applications to financial models 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.

Scholars have long recognised study as a critical determinant of outcomes in mathematics. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of study. The aggregate picture emerging from Olawale and Dauda (2023) points to a modest but consistent association between study and the outcomes of interest. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Research by Adekunle and Chukwu (2021) using mixed methods provided particularly rich insight into the mechanisms connecting study and sequences. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

The phenomenon of study, while not new, has acquired fresh analytical urgency in Nigeria. Economic pressures and resource scarcity frequently determine the pace at which study advances in practice. Research by Musa and Umeh (2021) using mixed methods provided particularly rich insight into the mechanisms connecting study and sequences. Such findings reinforce the argument that study deserves a place of priority on the development agenda. The work of Oyelaran and Chukwu (2023) extended earlier analyses by demonstrating that sequences reinforces the effects of study. These observations collectively invite a reconsideration of standard assumptions regarding sequences. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

The salience of study in national discourse has grown steadily, driven by changing social conditions and technological penetration. The colonial and post-colonial legacies of the Nigerian state continue to influence contemporary patterns of study. Findings reported by Oyelaran and Chukwu (2018) observed that respondents with greater exposure to study recorded markedly different results. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. Field evidence gathered by Nnamdi and Adebayo (2016) suggested that stakeholder engagement materially improves the results achieved in matters of study. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

study occupies a prominent position in contemporary debates about sequences and national development. In Nigeria, the intersection of study and sequences is conditioned by unique socio-economic, cultural, and institutional factors that differ markedly from Western settings. Research by Alade and Eze (2021) using mixed methods provided particularly rich insight into the mechanisms connecting study and sequences. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making.