**STUDY OF ROAD CONNECTIVITY IN OGBOMOSO NORTH**

**BY**

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**(182615)**

**A RESEARCH PROJECT SUBMITTED TO**

**THE DEPARTMENT OF TRANSPORT MANAGEMENT**

**FACULTY OF MANAGEMENT SCIENCES**

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**THE AWARD OF BACHELOR OF TECHNOLOGY (B.TECH)**

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**CERTIFICATION**

We certify that the project is carried out by AKINDEERE ZAINAB ABIKE (182615) of the Department of Transport Management , Faculty of Management Sciences, Ladoke Akintola University of Technology, Ogbomoso, Oyo State, Nigeria.

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DR. O.J BABALOLA Date

Supervisor

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PROF. REMI AWOREMI Date

Head of Department

**DEDICATION**

This project is dedicated to the Almighty God who has been my source of Strength, Grace and Wisdom throughout the period of my course, through whose Grace and Favor I have been able to run my course and scale through the hurdles of my academic pursuit

**ACKNOLEDGEMENT**

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ABSTRACT

This Research aims to conduct an in-depth examination of the road connectivity in Ogbomoso North, with a focus on understanding its current state, identifying potential challenges, and proposing strategic solutions for enhanced urban development. The study recognizes the pivotal role of effective road infrastructure in fostering economic growth, ensuring social well-being, and promoting overall sustainable development.

The research methodology encompasses a multi-faceted approach, combining field surveys, data collection, and advanced spatial analysis techniques. Geographic Information System (GIS) tools will be employed to map the existing road network, analyze traffic patterns, and evaluate the condition of key transportation arteries. Concurrently, interviews and surveys will be conducted with local residents, government officials, and transportation experts to gather qualitative insights into the community's perspectives on road connectivity.

The investigation will address critical aspects such as the adequacy of existing roads, the efficiency of traffic flow, accessibility to key facilities, and the impact of road conditions on the local economy. Additionally, the study will explore the environmental implications of road connectivity and propose eco-friendly solutions to minimize adverse effects.

The findings of this research are expected to contribute valuable information to urban planners, local authorities, and policymakers, aiding in the formulation of evidence-based strategies for optimizing road connectivity in Ogbomoso North. By aligning with the principles of sustainable urban development, the project seeks to enhance the overall quality of life for residents, promote economic prosperity, and create a blueprint for similar assessments in other regions.

In conclusion, this study aspires to be a comprehensive resource for understanding, assessing, and improving road connectivity in Ogbomoso North. Through a meticulous investigation of the current infrastructure and thoughtful recommendations for future development, the research aims to play a crucial role in shaping the sustainable growth of the region and providing a template for similar studies in other urban contexts.

CHAPTER ONE

INTRODUCTION

* 1. **Background of Study**

The global trend towards urbanization is unmistakable, with urban populations soaring from 13% in 1900 to 29% in 1950, and reaching 49% by 2005. Forecasts predict that by 2030, 60% of the world's population will reside in urban areas (UN, 2015). This rapid urban growth, however, brings forth a myriad of challenges for infrastructure and city planning. Unplanned construction, inadequate transport systems, extreme poverty, uncontrolled urban sprawl, and haphazard physical development are among the consequences of this rapid urbanization (Oladapo et al., 2021; UN-Habitat, 2013; Horne and Pope, 2014; Malawi and Haitian, 2014).

Urban progress is intricately linked with transportation, offering mobility for people and goods and influencing economic prosperity through enhanced land accessibility. A well-designed transportation system plays a pivotal role in the development of urban centers, aiming to optimize the movement of people, goods, and vehicles. Kohl (2017) emphasizes the importance of periodic analyses and the construction of alternative routes to continually improve transportation systems and maintain efficiency.

Ogbomoso, situated in Oyo State, Nigeria, has witnessed significant urbanization since its establishment in the mid-seventeenth century, evolving into one of Nigeria's prominent urban centers. With a population of approximately 645,000 people, predominantly from the Yoruba ethnic group, Ogbomoso is characterized by vital agricultural activities, including the cultivation of yams, cassava, maize, and tobacco. This study zeroes in on the road connectivity aspects of Ogbomoso North Local Government, one of the two local governments in the city.

Various studies have explored the relationship between urban expansion and road network development. Notable examples include Afolabi et al. (2018) and Adesuyi and Olawole (2018) investigating the implications of highway development in Abeokuta city, and Abbas and Hashidu (2019) assessing road transport network development in North-eastern Nigeria. Adaramo (1990) delved into the pattern and structure of road network evolution in Ilorin, revealing significant changes over the years.

Global Perspectives on Urban Growth and Transport Expansion: Beyond Nigeria, studies from different parts of the world, such as Zhao and Lu (2011), Niyonsenga (2012), Aljoufie (2013), Malawi and Haitian (2014), and Aljoufie et al. (2016), affirm the positive association between urban expansion and road network development.

Transport developments can catalyze changes in land use patterns within urban centers, a phenomenon observed by Bala (2015). The expansion of road networks parallels urban growth, ensuring necessary access to emerging land uses.

**1.2 Statement of Problem**

The final year project aims to address the critical issue of transportation infrastructure in the region. The problem lies in the inadequate road connectivity, leading to inefficient transportation systems, increased travel times, and hindered socio-economic development. The project seeks to analyze the existing road networks, identify bottlenecks, and propose strategic solutions to enhance overall road connectivity in Ogbomoso North for the benefit of the community and its economic activities.

**1.3 Justification of Study**

The study of road connectivity in Ogbomoso North represents a crucial and timely investigation with far-reaching implications for the socio-economic development of the region. Ogbomoso North, like many other urban areas, is grappling with the challenges of inadequate road infrastructure, which directly impacts the mobility and accessibility of its residents. This study aims to provide a comprehensive analysis of the existing road network, identifying key bottlenecks, areas of congestion, and potential areas for improvement. By delving into the specifics of road connectivity, the research seeks to uncover the underlying factors contributing to transportation inefficiencies and their subsequent impact on economic activities, public services, and overall quality of life. The findings from this study will not only serve as a valuable resource for local authorities and urban planners in Ogbomoso North but will also contribute to the broader academic discourse on the significance of effective road connectivity in fostering sustainable urban development.

**1.4 Aims and Objectives**

**1.5 Aim**

The aim of this research is to study the road connectivity in ogbomoso north

**1.6 Objectives**

The objectives of this project are to:

* Analyze traffic patterns and congestion points to identify areas where improvements in road connectivity could enhance traffic flow and reduce congestion.
* Identify key transportation routes and corridors that play a crucial role in connecting different parts of Ogbomoso North.
* Evaluate the current road infrastructure in Ogbomoso North, including the condition of roads, types of roads (urban, rural, highways), and their capacities.
* Assess the accessibility of various areas within Ogbomoso North and examine the connectivity between different neighborhoods, towns, and economic centers.
* Identify deficiencies in the existing road infrastructure, such as poor road conditions, lack of proper signage, or insufficient capacity.

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