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Challenges of post construction maintenance in infrastructural facilities: Ebonyi State as a case study

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This study examined the challenges of post-construction maintenance in infrastructural facilities in Ebonyi State, Nigeria, focusing on roads and buildings. Despite rapid urbanization and infrastructure development, the state exhibits poor maintenance culture characterized by reactive rather than preventive approaches. Using a mixed-method research design, structured questionnaires were administered to 47 respondents including students, engineers, business owners, and government workers, with data analyzed using SPSS descriptive statistics. Findings were triangulated with literature review of the highway maintenance manual, government reports, and academic journals. Results revealed a fundamental paradox: 97.9% of respondents understood maintenance importance, yet 46.8% observed systematic neglect until infrastructure failure. Key challenges identified include inadequate funding (perceived by 55.3%), reactive maintenance culture (70.2% reporting defect-triggered repairs), weak regulatory enforcement (44.7% unaware of government policies), uneven government attention (76.6%). Comparative analysis with best practices revealed substantial gaps in systematic condition assessment, preventive maintenance prioritization, dedicated funding mechanisms, and institutional capacity. The study concluded that maintenance challenges stem not from ignorance but from systemic barriers including weak institutional frameworks, inadequate financial commitment, poor enforcement, and cultural norms preventing translation of knowledge into consistent action. The research contributes empirical evidence specific to Ebonyi State while addressing broader Nigerian maintenance challenges, providing actionable strategies for the government, property owners and institutions.

Keywords: Post-construction maintenance, infrastructure sustainability, Ebonyi State, preventive maintenance, reactive maintenance, highway maintenance manual, institutional frameworks.