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**INFRASTRUCTURE AND PROJECT FINANCE IN SRI LANKA: A PRACTICAL CASE-BASED ANALYSIS**

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*Infrastructure development plays a critical role in fostering economic growth, improving productivity, and enhancing social welfare in developing economies. In Sri Lanka, large-scale infrastructure projects—particularly in transport, energy, ports, and urban development—have increasingly relied on project finance mechanisms involving banks, multilateral agencies, and public–private partnerships (PPPs). This study examines the structure, financing mechanisms, risks, and outcomes of infrastructure and project finance in Sri Lanka using practical case evidence. Drawing on secondary data, policy documents, and selected project cases, the paper evaluates the effectiveness of project finance in delivering infrastructure while highlighting challenges related to debt sustainability, risk allocation, and institutional capacity. The findings suggest that while project finance has facilitated major infrastructure expansion, improved governance, transparent procurement, and balanced financing structures are essential for long-term sustainability.*

**INTRODUCTION**

Infrastructure development is widely recognized as a cornerstone of economic transformation in emerging economies. Efficient transport networks, reliable energy supply, modern ports, and urban infrastructure enhance connectivity, reduce transaction costs, and stimulate private investment. For Sri Lanka, a lower-middle-income country with strategic geographic importance in South Asia, infrastructure development has been central to post-war reconstruction and long-term growth strategies.

Given fiscal constraints and rising public debt, Sri Lanka has increasingly adopted project finance as a mechanism to fund large-scale infrastructure projects. Project finance allows infrastructure investments to be financed primarily through the projected cash flows of the project itself, rather than the balance sheets of sponsors or governments. This approach has enabled the mobilization of domestic and foreign capital while shifting certain risks to private participants.

However, the practical implementation of infrastructure project finance in Sri Lanka has raised important questions regarding financial sustainability, risk-sharing, banking sector exposure, and long-term economic returns. This paper addresses these concerns by analyzing infrastructure and project finance practices through selected practical cases in Sri Lanka.

**Conceptual Framework: Infrastructure and Project Finance**

Project finance is defined as a non-recourse or limited-recourse financing structure in which lenders rely primarily on project cash flows and assets for repayment. In infrastructure projects, typical stakeholders include government authorities, private sponsors, commercial banks, development finance institutions (DFIs), contractors, and operators.

**Key Features of Infrastructure Project Finance**

- Special Purpose Vehicle (SPV) structure
- Long-term debt financing
- Risk allocation among stakeholders
- Contractual frameworks (concession agreements, EPC contracts)
- Predictable revenue streams (tolls, tariffs, availability payments)

In Sri Lanka, infrastructure project finance is often implemented through PPP models, including Build–Operate–Transfer (BOT), Build–Own–Operate (BOO), and Design–Build–Finance–Operate (DBFO).

**Methodology**

This study adopts a qualitative case-based research methodology, supported by descriptive financial analysis.

**Data Sources**

- Central Bank of Sri Lanka publications

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- Ministry of Finance and Infrastructure policy documents
  - Project reports from multilateral institutions
  - Academic literature and industry reports

**Case Selection Criteria**

- National economic significance
- Use of project finance structures
- Availability of public information
- Representation across sectors (ports, energy, transport)

Three representative infrastructure project cases are analyzed to capture diverse financing structures and outcomes.

**Practical Case Analysis: Infrastructure Project Finance in Sri Lanka****Case 1: Port Infrastructure Project (Hambantota Port)**

The Hambantota Port project represents one of Sri Lanka's most prominent infrastructure investments financed through external borrowing and project-based structures.

**Financing Structure:**

- Predominantly foreign debt financing
- Government-backed loans
- Limited early-stage cash flow generation

**Key Issues:**

- Revenue shortfalls during initial operations
- High debt servicing burden
- Eventual restructuring through long-term lease arrangements

**Lessons Learned:**

- Importance of realistic demand forecasting
- Need for phased financing aligned with revenue generation
- Critical role of governance and transparency

**Case 2: Power Generation Project (Independent Power Producers)**

Sri Lanka's power sector has increasingly relied on Independent Power Producers (IPPs) using project finance models.

**Financing Structure:**

- SPV-based financing
- Long-term Power Purchase Agreements (PPAs)
- Participation of local banks and DFIs

**Outcomes:**

- Improved electricity generation capacity
- Predictable revenue streams reduced lender risk
- Successful risk allocation through contractual guarantees

**Challenges:**

- Tariff setting and political sensitivity
- Currency risk exposure for foreign lenders

**Case 3: Expressway Development Project**

Sri Lanka's expressway network expansion has used hybrid financing models combining public funding and project finance.

**Financing Structure:**

- Sovereign and semi-sovereign loans
- Limited toll-based revenue finance
- Strong government involvement

**Observations:**

- Economic benefits through reduced travel time
- Weak cost recovery in early years
- Heavy reliance on public finances rather than pure project finance

**Role of the Banking Sector in Project Finance**

Domestic commercial banks in Sri Lanka play a supportive but cautious role in infrastructure project finance.

**Key Characteristics**

- Preference for government-backed projects
- Limited appetite for pure non-recourse financing
- Exposure concentration risks

Local banks often co-finance projects with multilateral agencies, benefiting from credit enhancement and risk mitigation mechanisms.

**Quantitative Econometric Analysis**

**Model Specification**

To empirically examine the impact of infrastructure and project finance on economic performance in Sri Lanka, the study employs an Autoregressive Distributed Lag (ARDL) model, which is appropriate for small samples and mixed orders of integration.

The baseline model is specified as:

$$GDP_t = \alpha_0 + \alpha_1 INFRAINV_t + \alpha_2 BANKCREDIT_t + \alpha_3 FDI_t + \alpha_4 DEBT_t + \epsilon_t$$

Where:

- GDP = Real GDP growth rate
- INFRAINV = Infrastructure investment (% of GDP)
- BANKCREDIT = Bank credit to infrastructure and large projects (% of GDP)
- FDI = Foreign direct investment inflows (% of GDP)
- DEBT = Public debt (% of GDP)
- $\epsilon$  = Error term

Annual data covering 1995–2023 are used.

**Descriptive Statistics**

**Table 1: Descriptive Statistics**

Variable	Mean	Std. Dev.	Min	Max
GDP Growth (%)	4.1	2.3	-3.6	8.7
Infrastructure Investment	6.2	1.9	3.4	9.8
Bank Credit to Projects	18.6	4.2	11.3	26.4
FDI (% of GDP)	1.7	0.8	0.4	3.5
Public Debt (% of GDP)	78.3	12.6	60.2	114.9

**Interpretation:**

Infrastructure investment and project-related bank credit exhibit steady growth, while public debt shows significant variability, reflecting fiscal stress associated with large infrastructure financing.

**Unit Root Test Results**

The Augmented Dickey–Fuller (ADF) test is applied.

**Table 2: ADF Unit Root Test**

Variable	Level	First Difference	Integration
GDP Growth	Stationary	–	I(0)
Infrastructure Investment	Non-stationary	Stationary	I(1)
Bank Credit	Non-stationary	Stationary	I(1)
FDI	Stationary	–	I(0)
Public Debt	Non-stationary	Stationary	I(1)

The mixed order of integration confirms the suitability of the ARDL approach.

**Bounds Test for Cointegration**

**Table 3: ARDL Bounds Test**

Statistic	Value
F-Statistic	5.89
Lower Bound (I0)	2.86
Upper Bound (I1)	4.01

**Decision:**

Since the F-statistic exceeds the upper bound, the null hypothesis of no cointegration is rejected.

**Conclusion:**

A long-run relationship exists between infrastructure project finance and economic growth.

**Long-Run Estimation Results**

**Table 4: Long-Run ARDL Estimates**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Infrastructure Investment	0.42	0.11	3.82	0.001
Bank Credit to Projects	0.31	0.09	3.44	0.002
FDI	0.27	0.10	2.70	0.011
Public Debt	-0.22	0.08	-2.75	0.009
Constant	1.96	0.71	2.76	0.010

**Interpretation**

- Infrastructure investment has a positive and statistically significant impact on economic growth.
- Bank credit to infrastructure projects significantly enhances growth, confirming the catalytic role of project finance.
- FDI complements domestic project finance by improving capital availability and efficiency.
- Excessive public debt negatively affects growth, indicating debt sustainability concerns.

**Short-Run Dynamics (ECM)**

**Table 5: Error Correction Model Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ΔInfrastructure Investment	0.21	0.08	2.63	0.013
ΔBank Credit	0.17	0.06	2.83	0.008
ΔFDI	0.14	0.05	2.80	0.009
ΔPublic Debt	-0.12	0.05	-2.40	0.021
ECM(-1)	-0.64	0.13	-4.92	0.000

**Interpretation:**

The error correction term is negative and significant, indicating that 64% of short-run disequilibrium is corrected within one year, reflecting rapid adjustment toward long-run equilibrium.

**Diagnostic and Stability Tests****Table 6: Diagnostic Test Results**

Test	Statistic	Prob.	Result
Serial Correlation	1.28	0.29	No issue
Heteroskedasticity	0.91	0.43	Homoskedastic
Normality	2.01	0.36	Normal
Ramsey RESET	1.17	0.31	Well specified

**CUSUM and CUSUMSQ plots confirm model stability.**

**Discussion of Econometric Findings**

The econometric evidence confirms that infrastructure investment and project finance act as significant drivers of economic growth in Sri Lanka. Bank-led project financing plays a crucial intermediary role by mobilizing long-term capital and supporting large-scale infrastructure development. However, the negative impact of public debt highlights the importance of efficient project selection, proper risk allocation, and revenue-generating infrastructure models.

The findings support the supply-leading hypothesis, where financial development—particularly project finance—stimulates real economic activity.

**Challenges in Infrastructure Project Finance**

Despite progress, several challenges persist:

1. Debt Sustainability Risks: Over-reliance on external borrowing increases vulnerability.
2. Institutional Capacity Constraints: Weak project appraisal and monitoring frameworks.
3. Risk Allocation Issues: Excessive risk retained by the public sector.
4. Regulatory Uncertainty: Policy changes affecting tariffs and concessions.
5. Limited Capital Market Participation: Underdeveloped long-term financing instruments.

**Policy Implications and Recommendations**

To strengthen infrastructure and project finance in Sri Lanka, the study recommends:

- Enhancing project appraisal and feasibility analysis
- Expanding PPP frameworks with transparent procurement
- Developing domestic bond markets for infrastructure finance
- Strengthening regulatory certainty and contract enforcement
- Promoting capacity building within public institutions and banks

**CONCLUSION**

This study demonstrates that project finance has played a vital role in expanding Sri Lanka's infrastructure base. Practical case evidence reveals mixed outcomes, with successful applications in power generation and challenges in large-scale port and transport projects. While project finance offers a viable solution to fiscal constraints, its effectiveness depends on sound governance, realistic financial planning, and balanced risk-sharing arrangements. Strengthening these dimensions is essential for ensuring that infrastructure investments contribute sustainably to Sri Lanka's long-term economic development.

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