The Realities of Government Construction Projects in Nepal: Systemic Inefficiencies and Challenges

Rijan Gautam[1], Ashmita Shakya[2,*], Sushil Kadariya[3]
[1]Nepal Engineering College, Lalitpur, Nepal
[2]Department of Urban Development and Building Construction, Kathmandu, Nepal
[3]Pashupati Shivajee Construction, Kathmandu, Nepal
*Corresponding author: ashmitashakya777@gmail.com

Abstract

Nepal, a developing and landlocked country with diverse geography and challenging terrain, relies heavily on infrastructure development to enhance regional connectivity and stimulate economic growth. However, government-led construction projects often suffer from systemic inefficiencies rooted in political instability, poor governance and bureaucratic hurdles. Frequent changes in government disrupt policy continuity and delay crucial decision-making processes, resulting in stalled project approvals and implementation gaps. Political interference in project selection, contract awarding and staffing contributes to favoritism and reduces accountability. Additionally, excessive bureaucratic procedures and weak institutional coordination lead to significant time delays, cost overruns and compromised construction quality. These challenges not only waste public resources but also hinder access to essential infrastructure, slowing down national development. This paper critically examines these effects and highlights the urgent need for policy reform, improved institutional capacity, and political stability to ensure successful infrastructure delivery in Nepal.

Keywords: Systemic inefficiencies, Cost Overruns, Political Risk, Project Performance, Public Construction Projects and Institutional Weakness

1. Introduction

Infrastructure development is a cornerstone of national progress, directly impacting economic growth, social well-being, and the quality of life. In developing countries like Nepal, public construction projects, particularly those led or financed by the government play a vital role in improving transportation, energy access, communication systems, and public services. However, Nepal's government-led construction sector has long been marred by systemic inefficiencies, project delays, cost overruns, and substandard outcomes. A study by [4], [40], [41]highlighted that more than 60% of public infrastructure projects in Nepal face significant delays and budget escalations. Similarly, reports from the Office of the Auditor General [28] consistently point to chronic underperformance in government infrastructure initiatives.

The core of these inefficiencies lies in poor contract enforcement, political interference, limited institutional capacity, and a lack of transparency and accountability mechanisms [2], [50]. For example, major national projects such as the Nijgadh International Airport, Budhi Gandaki Hydropower Project, and the Kathmandu-Terai Fast Track have suffered years of stagnation despite high public expectations and substantial financial allocations [16]. These failures not only erode public trust but also impede Nepal's overall development trajectory.

1.1 Problem statement

Despite several assessments on procurement inefficiencies, there remains a research gap in identifying common structural inefficiencies that persist across large-scale government-funded construction projects, including those supported by international donors such as the Asian Development Bank (ADB) and the World Bank. In Nepal, many large infrastructure projects including foreign-funded or large contracting work remain incomplete or delayed, with contracts subject to repeated deadline extensions and marked by cost overruns (Office of the Auditor General (Office of the Auditor General, 2024) Furthermore, in MDB practice, projects over USD 10 million under ICB norms are regularly shown to suffer from delays, cost overruns, and stakeholder coordination issues [49], [51](World Bank, 2021; (World Bank , 2023). In construction, contracts are typically formed between the client (purchaser of the work) and the contractor (responsible for completing the work). Upon agreement, certain terms and references, known as the conditions of contract, bind all parties involved [41]. These conditions outline the rights, responsibilities, and risks of each party [1]

The motivation for this study stems from the growing need to critically examine these recurring inefficiencies. Understanding why public infrastructure projects consistently fail to meet their objectives is vital for proposing actionable reforms. These insights will be useful not only for government stakeholders but also for development partners and civil society who play roles in planning, monitoring, and financing public projects.

1.2 Objectives and Scope

The primary objective of this research is to analyze the systemic inefficiencies and governance challenges that affect government construction projects in Nepal. Specifically, this paper aims to:

- Identify key institutional, political, and administrative

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barriers that contribute to project failures.
- Examine case studies of major delayed or failed projects in Nepal.
- Propose a strategic framework for improving project delivery through policy reform, institutional capacity building, and enhanced accountability.

This study focuses on infrastructure projects in Nepal with budgets exceeding USD 10 million, implemented under government leadership or in collaboration with major development partners.

2. Literature Review

Construction projects in developing countries such as Nepal routinely suffer from systemic challenges including delays, cost overruns, poor quality, and coordination failures. These issues often stem from structural and institutional weaknesses [11], [15]. Flyvbjerg's concepts of "optimism bias" and "strategic misrepresentation" illustrate how stakeholders tend to underestimate costs and overestimate benefits, resulting in unfeasible project outcomes [12].

In Nepal, these global issues are intensified by centralized bureaucracy, political interference, and weak governance structures. According to [7], over 70% of surveyed construction projects experienced delays, budget inflation, or substandard quality due to weak monitoring, unrealistic bidding, and poor inter-agency coordination. Similarly, [**?**], [37] highlight that the lack of timely monitoring and evaluation during the project implementation phase exacerbates these issues, leading to inefficiencies and compromised project outcomes

[38] find that hydropower projects like Budhi Gandaki and Upper Tamakoshi are delayed by land disputes, environmental assessments, and political instability. Similarly, [34] notes that although World Bank–funded projects use more sustainable procurement methods than GoN-funded ones, unsustainable low-bid contracting still undermines project quality and timeliness.

On a regional scale, [42](Sourav, et al., 2024) compared stakeholder perceptions in Bangladeshi infrastructure and found significant disparities across agency types with the Development Project Proposal (DPP) approval emerging as a major delay source. This aligns closely with Nepal's challenges, especially regarding bureaucratic bottlenecks. Globally, the [48] and [3] call for strengthening procurement practices, capacity building, e-monitoring systems, and greater decentralization in Nepalese infrastructure sectors. Nepal's World Bank–financed Provincial & Local Roads Improvement Program (2024) exemplifies this approach, emphasizing institutional strengthening and digital monitoring (World Bank & Government of Nepal, 2024).

Insights from opinion pieces and local reporting confirm these systemic problems. (Fiscal Nepal, 2024) reports billions in contractor arrears due to delayed government payments; The Kathmandu Post (Post, The Kathmandu, 2023) and Nepal Live Today (Nepal Live Today, 2023) highlight how lowest-cost bidding, political meddling, and contract disputes frequently stall public projects. [41] note that conditions of contract, which bind all parties upon agreement, outline the rights, responsibilities, and risk of each stakeholders [1]. weak enforcement of these conditions often exacerbates disputes and undermines project integrity, as emphasized by [26], who points out to endemic corruption in procurement and governance.

Synthesis: The literature demonstrates that infrastructure inefficiencies in Nepal are systemic not isolated caused by governance weaknesses, politicized administration, insufficient capacity, and incentive distortions. These insights justify the need for comprehensive reforms, including transparent bidding, procurement modernization, institutional strengthening, public-private collaboration, and digital oversight.

3. Research Methodology

3.1 Research Design and Data Collection

This study adopts a **qualitative research design** based on **secondary data analysis**, aimed at identifying systemic inefficiencies in Nepal's large-scale government construction projects. Rather than using field surveys, this method relies on document-based data collection to extract factual and policy-relevant insights.

Secondary data were collected from the following sources:

- **Government documents** such as annual audit reports from the Office of the Auditor General (OAG), project performance reports, and procurement evaluations.
- **Reports from multilateral institutions** such as the World Bank and the Asian Development Bank (ADB).
- **Academic literature** including peer-reviewed journal articles, books, and theses.
- **Credible news articles** and publicly available online data repositories.

The inclusion criteria were large-scale construction projects (contract value exceeding USD 10 million) implemented under **International Competitive Bidding (ICB)** over the past **ten years**. Projects were selected only if they experienced **time or cost overruns**.

3.2 Analytical Framework and Procedure

The study follows these key analytical steps:

- **Document Review:** Carefully review project audit reports, performance evaluations, and academic papers to extract recurring inefficiency themes.
- **Content Analysis:** Conduct a thematic content analysis on the collected documents, especially focusing on delay justifications and contract failure cases.
- **Cause-and-Effect Analysis:** Utilize a Fishbone Diagram (Ishikawa Model) to visually organize the root causes of systemic inefficiencies based on themes emerging from the data.
- **Theme Categorization:** The causes are grouped under four primary categories aligned with the Fishbone structure:

- Institution & Bureaucratic Challenges: e.g., red tape, coordination failures.
- Political & Governmental Issues: e.g., political interference, lack of transparency.
- Financial & Contractual Delays: e.g., late payments, poorly structured contracts.
- Procurements: e.g., vendor lock-in, monopolistic bidding.

Each category includes sub-factors derived from multiple sources, ensuring triangulation and thematic saturation.

3.3 Scope and Population of the Study

The population consists of large-scale infrastructure projects (USD 10 million and above) either fully funded by the **Government of Nepal** or co-funded by international institutions such as the **World Bank** and **ADB**. The study focuses on projects implemented over the **past decade (2014–2024)** that experienced **significant time and/or cost overruns**.

4. Results and Discussion

Table 1 presents (as annexed in annex A) a list of 10 ICB projects undertaken between 2015 and 2025 that experienced significant delays, highlighting systemic inefficiencies that prevented these projects from being completed within the anticipated or contractually stipulated timeframes.

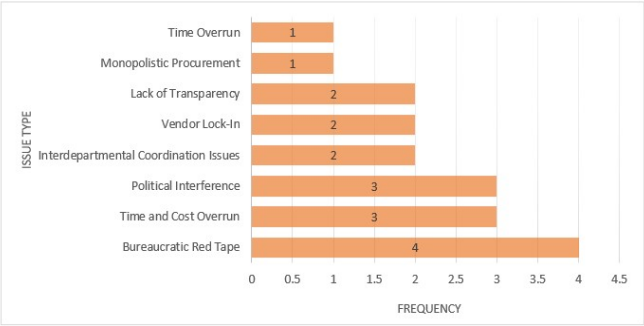

Figure 1. Frequency of Issues in Major Government construction Projects

The frequency chart highlights the recurring systemic challenges affecting major government construction projects in Nepal. Among the most prevalent issues, bureaucratic red tape stands out, appearing in four of the ten projects analyzed. This reflects the widespread administrative inefficiencies that delay decision-making, approvals, and overall project execution. Closely following is political interference, cited in three projects, illustrating the disruptive impact of unstable political environments, policy shifts, and politically motivated decisions on long-term infrastructure initiatives.

Time and cost overruns are also a significant concern, recurring in three projects. These overruns indicate a consistent pattern of poor planning, inaccurate budgeting, and weak monitoring and evaluation systems. Furthermore, vendor lock-in and monopolistic procurement practices are noted in two cases, suggesting a lack of competitive bidding and over-reliance on a limited set of contractors, which compromises quality and cost-efficiency.

Other issues such as lack of transparency, interdepartmental coordination problems, and project-specific legal and financial complications appear less frequently but are no less critical. These challenges, while sometimes unique to individual projects, still point to systemic weaknesses in governance and institutional capacity.

Overall, the chart demonstrates that these issues are not isolated; they are structural problems embedded within Nepal's infrastructure development ecosystem, calling for comprehensive reforms in project governance, procurement practices, and inter-agency coordination.

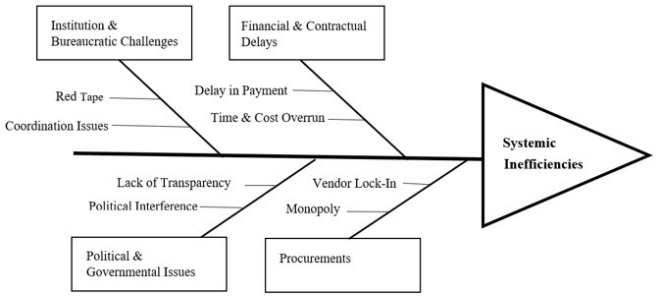

Figure 2. Fishbone Diagram Representing Root Causes of Systemic Inefficiencies

This fishbone diagram illustrates the root causes of systemic inefficiencies in Nepal's infrastructure projects, categorized into four main areas: institutional/bureaucratic challenges (red tape, poor coordination), financial/contractual delays (late payments, cost overruns), political/governmental issues (interference, lack of transparency), and procurement problems (vendor monopolies). These interconnected factors such as multi-agency approvals, corruption, frequent leadership changes, and biased tendering create cycles of delays, inflated costs, and project failures, as seen in cases like the Nijgadh Airport and Kathmandu-Terai Fast Track. Addressing these inefficiencies requires holistic reforms across governance, finance, and procurement systems.

(1) Bureaucratic Red Tape:

Bureaucratic inefficiencies remain one of the most persistent and debilitating barriers to infrastructure development in Nepal. According to the World Bank's Doing Business 2020 report, Nepal's regulatory framework is encumbered by excessively complex approval processes that significantly prolong project timelines (World Bank, 2020). For example, a single road infrastructure project may require clearance from up to 17 different agencies. In the energy sector, bureaucratic inefficiencies, including overlapping institutional mandates and protracted approval processes, significantly delay hydropower project implementation in Nepal [40]

1.1 Case Studies:

- The Budhi Gandaki Hydropower Project, initiated in 2015, has yet to see tangible progress, primarily due to bureaucratic entanglements. Frequent changes in project modality, unresolved land acquisition issues, and indecisiveness over relocation plans have stalled physical works for nearly a decade [33].

- Similarly, the Nijgadh International Airport project faced significant setbacks as it became mired in lengthy legal and environmental review processes. Ultimately, the project was halted following a Supreme Court decision, demonstrating the paralyzing effect of procedural and institutional delays [17].

These bureaucratic hurdles not only delay implementation but also deter both domestic and foreign investment. As highlighted by the Asian Development Bank [2], such inefficiencies contribute to the chronic underutilization of Nepal's infrastructural and economic potential.

1.2 Global Comparisons

- In India, the government successfully reduced the average approval timeline for highway projects from three years to just six months by launching PARIVESH, a centralized single-window digital portal. This platform streamlined the clearance process by integrating multiple environmental, forest, and wildlife approvals into a unified online system (World Bank, 2023).
- In Vietnam, project delays were reduced by 40% following the creation of a National Public-Private Partnership (PPP) Office, which was tasked with coordinating inter-agency functions and serving as a centralized authority for major infrastructure projects [2].

1.3 Lessons for Nepal

- The Government of Nepal should implement a centralized digital platform modeled after India's PARIVESH system, to simplify and expedite the environmental and administrative approval process across all infrastructure sectors.
- INepal should also consider establishing a dedicated lead agency for mega-infrastructure projects similar to Vietnam's National PPP Office to improve inter-ministerial coordination, ensure continuity, and reduce delays stemming from overlapping institutional mandates.

(2) Time delays and budget overrun: A significant number of government-led infrastructure projects in Nepal are plagued by chronic delays and budget overruns. This inefficiency is particularly evident in the urban development sector, where the Government of Nepal has allocated only 3.8% of its total national budget equivalent to NPR 66.17 billion out of a total NPR 1.75 trillion for the fiscal year [19]. The reliance on manual approval processes further aggravates these delays, as each administrative decision must pass through multiple bureaucratic layers, often leading to prolonged timelines and inefficiencies.

2.1 Case Studies:

- The Kathmandu-Terai Fast Track Project, although designated as a strategic national priority, has faced repeated deadline extensions. Its delays are attributed not only to the complex terrain but also to limited planning flexibility and inadequate inter-agency coordination [31].
- Likewise, the Kamala–Kanchanpur Road Extension project, initiated nearly a decade ago, has achieved only around 56.28% physical progress as of December 2023, reflecting broader systemic inefficiencies in project execution and monitoring [3]
- These delays result in a loss of public trust, escalating financial costs, and inefficient use of public resources. As emphasized by the World Bank in 2021 (World Bank, 2021) persistent time and cost overruns undermine development goals and hamper economic growth in Nepal.

2.2 Global Comparisons

- A 2023 case study of the Ameroro Dam project showed that using a PMIS dashboard functioning as a digital twin provided real-time visibility into project status, enabling more timely decision-making and corrections that can help mitigate delays. (Saputra et al., 2023)
- In Brazil, the Public-Private Partnership (PPP) model for the São Paulo Metro Line 6 has been highlighted by the World Bank as a mechanism that improved risk-sharing and reduced fiscal burdens on the state, showcasing how innovative procurement approaches can deliver efficiency gains [52]

2.3 Lessons for Nepal

- The Government of Nepal should adopt AI-based project monitoring tools, similar to the real-time digital dashboards used in Ethiopia, to improve project oversight, reduce administrative lag, and minimize delays.
- Nepal should also consider introducing alternative bidding mechanisms, such as Auction-in-Reverse models, for large-scale infrastructure procurement. This would encourage competitive pricing, improve cost efficiency, and reduce the risk of budget overruns.

(3) Lack of Transparency & Corruption Nepal's governance landscape is significantly hindered by persistent corruption and a lack of transparency. In the **2024 Corruption Perceptions Index**, Nepal scored **34 out of 100**, ranking **107th out of 180 countries**, reflecting widespread perceptions of bribery and administrative malpractice [46]. The nation's development stagnation is not solely due to resource constraints but is deeply rooted in systemic governance failures. Endemic corruption, along with entrenched bureaucratic bribery, continues to obstruct development efforts, discourage investment, and erode public trust.

3.1 Case Studies:

- TA parliamentary probe panel recently uncovered systematic embezzlement in the construction of the Pokhara International Airport, estimating losses of over NPR 14 billion. The case exposed corruption embedded throughout all project phases [19].
- The Budhi Gandaki Hydropower Project in Nepal has faced significant criticism due to non-transparent contractor selection processes and irregularities in compensation disbursement. In 2017, the Nepalese government scrapped a contract with China Gezhouba Group Corporation (CGGC) for the project's construction, citing lack of transparency and legal requirements (The Himalayan Times, 2017)
- The Belahiya-Butwal Six-Lane Road Project faced public

backlash when structural cracks were observed before its official completion, raising serious questions about construction quality, monitoring, and accountability mechanisms [44].
- Without transparency, public oversight mechanisms weaken, creating an environment conducive to mismanagement and resource leakage. Robust anti-corruption frameworks are essential for ensuring fiscal accountability and the integrity of infrastructure development.

3.2 Global Comparisons

- In Georgia, the government significantly reduced corruption by approximately 65% after implementing an electronic government procurement (E-GP) system and introducing live-streamed tender openings, which greatly enhanced transparency in public procurement processes [49].
- Since its establishment in 2002, Indonesia's Corruption Eradication Commission (KPK) has significantly contributed to the nation's anti-corruption efforts, recovering substantial amounts of state assets; for example, by early 2025, the KPK had helped recover approximately 6.7 trillion IDR (about $401 million USD) through exposing corruption cases [47]

3.3 Lessons for Nepal

- The Government of Nepal should mandate the adoption of Open Contracting Data Standards (OCDS) for all infrastructure projects exceeding NPR 1 billion, following Georgia's example, to ensure transparency, traceability, and public access to procurement data.
- The Commission for the Investigation of Abuse of Authority (CIAA) should be strengthened with legal provisions similar to Indonesia's KPK, granting it the authority to freeze suspect contracts mid-process, initiate independent investigations, and prosecute high-level corruption cases.
- The government should pilot the use of block chain-based auditing systems for high-risk projects particularly national pride initiatives to create immutable, real-time records of project decisions, transactions, and changes that can be publicly verified.

(4) Political Interference & Instability

Frequent changes in government, accompanied by shifts in ministerial leadership and bureaucratic transfers, have been major obstacles to the timely execution of governmental projects in Nepal. Over the past decade, Nepal has witnessed nine different governments, each introducing new leaders and ministers, resulting in significant disruptions to ongoing projects. Factors such as the dissolution of the House of Representatives, judicial interventions, and perceptions of India's role in Nepal's infrastructure development have consistently contributed to political instability and interference in government initiatives. The alignment of bureaucracy with specific political parties has further undermined good governance. When bureaucrats are divided along partisan lines, the government's ability to function effectively is severely compromised. [8]

4.1 Case studies:

- The Nijgadh International Airport, a project declared as a national pride initiative, was stalled due to conflicting political interests and leadership changes [24].
- The Upper Arun Hydropower Project has faced delays in securing financial closure, primarily due to policy uncertainty and insufficient political support, leading to missed deadlines for finalizing financing arrangements [25]
- Political cycles heavily influence the continuity of infrastructure agendas, thereby negatively impacting the sustainability and long-term success of such projects [2].

4.2 Global Comparisons

- In Malaysia, the government established the Project Delivery Unit (PIDM) under the Prime Minister's Office (PMO), which insulated 92% of infrastructure projects from disruptions due to cabinet reshuffles or political transitions. This direct reporting mechanism provided greater continuity and institutional protection for long-term development initiatives . [49].
- In Rwanda, the introduction of "Imihigo" performance contracts—which tie ministerial promotions and job security to the timely delivery of development projects—helped reduce political interference in infrastructure planning and implementation by 40% (Republic of Rwanda, 2024)

4.3 Lessons for Nepal

- The Government of Nepal should establish a National Infrastructure Protection Authority (NIPA) modeled after Malaysia's PIDM. This independent body should have a legal mandate requiring a two-thirds majority in Parliament to modify or cancel priority infrastructure projects, thereby protecting them from political fluctuations.
- Nepal should also amend the Civil Service Act to introduce greater project continuity. This includes mandating a minimum five-year tenure for project directors and adopting a performance scorecard system similar to Rwanda's "Imihigo" contracts, linking bureaucratic promotion to project completion.
- To ensure financial stability and long-term planning, Nepal should create an Infrastructure Continuity Fund with five-year budget cycles, and introduce a legal provision that requires Supreme Court approval for any mid-cycle reallocation of these funds.

(5) Delay in Payment to Contractors

Delayed payments to contractors in Nepalese government projects have severe repercussions on project implementation, quality, and the achievement of overall development goals. Such delays often result in work stoppages, compromised construction quality, increased litigation and disputes, public dissatisfaction, and wider economic ripple effects. The financial strain on contractors became particularly acute during the final week of the fiscal year 2023/24, when the government released only NPR 15 billion for contractor payments. Despite this disbursement, approximately NPR 20 billion remains

outstanding, leaving many contractors in precarious financial positions [19]

5.1 Case Studies:

- Projects like the Belahiya-Butwal Six-Lane Road have experienced work stoppages and contractor withdrawals directly linked to delayed payments [18].
- Similarly, the Kathmandu-Terai Fast Track Project has seen numerous complaints from contractors concerning delays in financial disbursements.

Cash flow disruptions significantly reduce the pace and quality of work, undermining project timelines and standards [50]

5.2 Global Comparisons

- In the Philippines, the introduction of a digital contractor invoicing, and certification platform led to a 70% reduction in payment delays, thereby improving cash flow predictability [2].
- South Korea operates a Construction Guarantee Fund that ensures timely payment to contractors and provides liquidity support, particularly to small and medium-sized enterprises [29]

5.3 Lessons for Nepal

- The Government of Nepal should implement a digital platform to automate contractor billing and certification processes to reduce bureaucratic bottlenecks and enhance transparency.
- SEstablishing a national-level Construction Payment Guarantee Fund can provide financial resilience for contractors during disbursement lags.
- Government contracts should include a mandatory clause that enforces payment to contractors within a maximum period of 30 days from the date of invoice certification.

(6) Inadequate Capacity Building and Skill Development

The lack of adequate training for government staff in Nepal significantly hampers project execution, efficiency, accountability, and sustainability. Insufficient capacity building leads to inefficient planning and implementation, weak compliance with standards, low technical adaptation, and accountability issues.

6.1 Case studies

- Projects such as the Nuwakot Solar Power Station, although partially operational, faced technical and procedural delays due to a shortage of skilled energy technicians and insufficient capacity-building initiatives [51].
- Similarly, the Nagdhunga Tunnel Road Project experienced delays partly because of a shortage of locally skilled labor specialized in tunnel engineering, necessitating reliance on foreign experts [3]

The data in Table 2 (as annexed in annex B) shows that annually just about 2100-3100 civil servants only receive training in Infrastructure Development. Development projects are modernized every time so all the bureaucrats should be updated in their professional timeframe.

6.2 Global Comparisons

- The Centre of Excellence in Infrastructure (CoE-Infra) at CEPT Research & Development Foundation has been actively engaged in capacity-building initiatives and advisory projects throughout 2023, aiming to support government bodies in enhancing infrastructure planning, procurement processes, and project management practices [9]
- Bangladesh has developed the LGED Academy under its Local Government Engineering Department, providing continuous training in planning, engineering, and project supervision tailored to evolving development needs [2].

6.3 Lessons for Nepal

- The existing training center under MoUD should be expanded and upgraded to offer specialized modules on emerging topics such as climate-resilient infrastructure, BIM, and green building certifications.
- A minimum annual requirement of 40 hours of continuing professional development (CPD) should be mandated for all technical and managerial staff involved in infrastructure planning and delivery.
- National infrastructure training programs should be linked with internationally recognized certifications, thereby encouraging global standards in project execution.

(7) Vendor Lock-In and Monopolistic Procurement

Monopolistic procurement is a recurring concern in government infrastructure projects, where procurement processes are designed intentionally or unintentionally in ways that favor a single supplier or a limited group of vendors. Often, the technical specifications are drafted by consultants or bureaucrats to include highly specific features that only certain products or companies can meet, effectively eliminating wider competition. Once tenders are published, procurement laws restrict bureaucrats from modifying these specifications, even if flaws or biases are later identified. Moreover, due to limited technical capacity and a heavy administrative workload, there is usually no independent third-party verification of these specifications. This lack of oversight allows monopolistic conditions to persist, undermining transparency, distorting market fairness, increasing project costs, and compromising quality in public infrastructure development.

7.1 Case studies:

- Budhi Gandaki Project was criticized for the awarding of contracts without competitive bidding, raising concerns about vendor favoritism. [22]
- Tamakoshi V Hydropower Project saw disruptions during the tendering process due to limited qualified bidders, illustrating monopolistic procurement risks These limits bargaining power and leads to inflated project costs and time (World Bank, 2020)..

7.2 Global Comparisons

- The ChileCompra Observatory in Chile specifically promotes standards of quality, transparency, integrity, and efficiency in public procurement processes through alerts, monitoring, and consulting. It is a proactive tool used by

Chile's public procurement platform to detect gaps and improve procurement practices across numerous public agencies. (Open Ownership, 2024)
- India requires third-party technical vetting of large-scale tender documents by independent advisory units to ensure openness, fairness, and technical neutrality [52]

7.3 Lessons for Nepal

- A system of third-party technical vetting for all public tenders above NPR 500 million should be introduced to ensure competitive neutrality and minimize vendor lock-in risks.
- A Procurement Audit Cell under the Public Procurement Monitoring Office (PPMO) should be formed to routinely assess high-value tenders for possible monopolistic tendencies.
- Mandatory preliminary market assessments and vendor consultations should be integrated into the pre-tendering phase to ensure that technical specifications are inclusive and market-friendly.

(8) Interdepartmental Coordination

A significant bottleneck in Nepal's infrastructure projects is the inadequate coordination among government agencies. Departments often operate in silos without shared planning, leading to redundancies and delays. A notable example is the recurring conflict between the Department of Roads (DoR) and the Nepal Electricity Authority (NEA).

In several road expansion projects, such as the Belahiya–Butwal Six-Lane Road Project, construction has been stalled due to delays in relocating electric poles and transformers managed by NEA. Despite DoR's early requests, NEA's sluggish response time and lack of synchronized scheduling have led to unnecessary hold-ups, even after physical construction had commenced. This reflects a broader systemic issue where overlapping responsibilities and weak communication mechanisms among departments hinder efficient project execution.

8.1 Case Studies:

- Kathmandu-Terai Fast Track Project has faced issues due to poor coordination between security agencies, local governments, and road authorities. Construction contracts in Khokana, the expressway's starting point, have been delayed due to unresolved land acquisition disputes and local resistance, impacting the project timeline (New Business Age, 2024)
- The Upper Arun Hydropower Project faced delays due to environmental approval processes and forest land clearance (New Business Age, 2024) ; [21]
- Weak inter-agency coordination creates inefficiencies and hinders integrated project planning [3].

8.2 Global Comparisons To improve infrastructure delivery, the NIP 2050 emphasizes building institutional capacity and capability in planning, monitoring, budgeting, finance, procurement, project preparation, and management, thereby fostering collaboration across sectors and government departments to ensure integrated decision-making and effective execution. (Government, 2022)

Infrastructure Australia is working closely with the Department of Infrastructure, Transport, Regional Development, Communications and the Arts, and the Minister's Office to deliver a programme focused on national infrastructure priorities, supported by an advisory council and coordination bodies to enable cooperation and ensure alignment across jurisdictions. [14]

8.3 Lessons for Nepal

- For multi-agency infrastructure projects, cross-departmental memoranda of understanding (MoUs) should be made mandatory prior to DPR approval, to define shared responsibilities.
- District Infrastructure Coordination Units with rotational leadership between key departments should be established to enhance field-level integration.
- For national pride projects, weekly joint coordination meetings should be institutionalized under the Prime Minister's Office to ensure inter-agency alignment and timely conflict resolution.

5. Conclusion

From the analysis and discussion, it is evident that the realities of construction projects in Nepal are compromised by multiple factors, including bureaucratic red tape, lack of transparency, corruption, political interference, delays in contractor payments, and inadequate training of civil servants. While Nepal is steadily progressing towards infrastructure development, the ground reality remains challenging, placing the construction sector at a critical crossroads.

Infrastructure development is vital for Nepal's overall socio-economic growth, but to overcome existing barriers, the country must urgently pursue comprehensive and systematic reforms. As [39] highlight in their analysis of Nepal's LDC graduation pathway, accelerating investment in resilient infrastructure such as hydropower and transportation is essential for economic diversification, reducing vulnerability to natural disasters, and ensuring sustainable prosperity post 2026.

These include streamlining approval processes, enforcing stringent anti-corruption measures, strengthening pre-execution planning, enhancing contract enforcement mechanisms, decentralizing decision-making, ensuring timely and adequate fund flow, and investing significantly in capacity building and continuous training for civil servants.

Looking ahead, Nepal should also focus on adopting international best practices tailored to its local context and empowering institutions to improve governance and project management. Encouraging public-private partnerships, leveraging digital technologies for project monitoring and transparency, and fostering greater community participation in project planning and execution can further enhance accountability and efficiency.

By committing to these reforms and innovations, Nepal has the potential to transform its construction sector, overcome systemic inefficiencies, and achieve sustainable infrastructure

growth that supports long-term development goals.

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ANNEX A

Table 1. Key Issues Identified in ICB Projects

S.N.	Project Name	Initiation Year B.S. (A.D.)	Sector	Location	Funding Type	Current Status / Delays	Key Issues Identified	Source
1	Nagdunga Tunnel Road Project	2076 (2019)	Road / Transport	Kathmandu	ADB	Under construction; facilities delays	Time and Cost Overrun; Coordination Issues	ADB (2022); DHM (2023)
2	Bhati–Babai Diversion Multipurpose Project	2072 (2015)	Irrigation / Energy	Surkhet / Bardiya	Government of Nepal	Progressing slowly; under construction	Time and Cost Overrun; Coordination Issues	MoWRI (2021); Thapa (2020)
3	Kathmandu–Terai Fast Track Project	2074 (2017)	Expressway	Kathmandu–Terai	Government of Nepal	Delayed; deadline extended	Political Interference; Red Tape	NPC (2023); Khatiwada (2022)
4	Kamala–Kanchanpur Road Extension	2071 (2014)	Road / Transport	Eastern Nepal	Government of Nepal	Only ∼56% completed	Vendor Lock-in; Monopolistic Procurement	DoR (2020); World Bank (2019)
5	Nuwakot Solar Power Station	2075 (2018)	Energy	Nuwakot	World Bank	Delayed; partially operational	Bureaucratic Red Tape	NEA (2022); World Bank (2021)
6	Nijgadh International Airport	2071 (2014)	Aviation	Madhesh Province	Government of Nepal	Halted by Supreme Court (2016)	Political Interference; Lack of Transparency	SC Nepal (2016); CIAA (2021)
7	Belahiya–Butwal Six-Lane Road Project	2071 (2014)	Road / Transport	Rupandehi	Government of Nepal	Incomplete; cracks pre-completion	Time Overrun; Lack of Transparency	DoR (2021); Pokharel et al. (2020)
8	Budhi Gandaki Hydropower Project	2072 (2015)	Energy	Gorkha / Dhading	Government of Nepal	Project stalled	Political Interference; Red Tape	MoE (2023); Shrestha (2021)
9	Upper Arun Hydropower Project	2075 (2018)	Energy	Sankhuwasabha	Government of Nepal	Financial closure delayed	Bureaucratic Red Tape	MoE (2022); ADB (2021)
10	Tamakoshi–V Hydropower Project	2074 (2017)	Energy	Dolakha	Government of Nepal	Tendering disputed; not started	Vendor Lock-in; Time and Cost Overrun	NEA (2023); Dhungana (2022)

ANNEX B

Table 2. Total Infrastructure Specific Training (Annual Estimates)

Institution / Program	Annual Participants (Range)	Key Focus Areas	Source
Nepal Administrative Staff College (NASC)	750–1000	Project Management, Procurement	NASC Procurement Training Programs (nasc.org.np)
Department of Roads (DoR)	500–700	Road Engineering, GIS, Seismic Design	MoPIT / DoR Publications (Technical Training Policy)
Department of Urban Development & Building Construction (DUDBC)	200–300	Urban Planning, Building Codes	DUDBC Official Training Schedules
Local Government Training (MoFAGA)	150–200	Local Planning, Governance	MoFAGA Capacity-Building Frameworks (Ministry Website)
JICA / World Bank / UNDP Joint Programs	300–500	Disaster Management, Road Safety	UNDRR / UN Nepal Urban Resilience Training
National Disaster Risk Reduction & Management Authority (NDRRMA)	200–400	Disaster Response, Earthquake Risk Reduction	NDRRMA E-learning Platform and Training Modules