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UNIVERSITY OF VAASA

Kusum Sharma

Leadership Challenges in Resource-Constrained Residential Construction Projects in Nepal

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Author:	Kusum Sharma		
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ABSTRACT:

Nepalese residential construction projects have been found to be subject to chronic constraints such as inadequate finance, labour, materials, machinery, and information. Such project constraints mean that the performance of leadership plays an important role in the progress and success of the project. Even though literature on delays and inefficiency in residential construction projects in Nepal is not new, existing research focuses mostly on the technical and managerial aspects of construction without considering the impact of leadership on project management during resource shortages.

The research is concerned with addressing three major issues which include; (i) The leadership problems faced by primary contractors in the presence of certain constraints; (ii) How leaders deal with such constraints; and (iii) The effects of the leadership styles of primary contractors on secondary contractors. The research adopted a qualitative descriptive design, in which data were obtained using open-ended questionnaires targeting those involved in the process of constructing residential buildings.

It is evident from the research results that the shortage of money is the major limitation affecting the planning, control, and coordination process to a greater extent compared to other leadership styles. The time constraints, labour uncertainties, and lack of raw material availability force the leader to make reactive decisions rather than strategizing. There are also other secondary contractors such as electricians, plumbers, and suppliers who encounter limitations resulting from dependencies, such as lack of guidance, delays in payments, and insufficient power.

The study claims that the behaviour of leaders in this industry is motivated more by external factors than by any theory of leadership. Documenting well, coordinating better, and putting in place necessary institutional checks will help achieve more efficient and effective leadership as well as improve project results.

KEYWORDS: Leadership, Resource Constraints, Residential Construction, Nepal, Situational Leadership, Transformational Leadership, Project Resource Management

Contents

1	Introduction	9
1.1	Background of the Study	9
1.2	Statement of the Problem	10
1.3	Research Questions and Objectives	11
1.3.1	Objectives	11
1.4	Significance and Scope of the Study	12
1.5	Limitations of the Study	12
1.6	Structure of the Thesis	13
2	Literature Review	14
2.1	Introduction	14
2.2	Empirical Literature Review	15
2.2.1	Global and Developing Country Studies on Construction	15
2.2.2	Asian Residential Construction Studies	16
2.2.3	Nepalese Construction Studies	16
2.2.4	Leadership in Construction: Global, Asian, and Nepalese Perspectives	18
2.2.5	Emerging Themes in Construction Leadership	19
2.3	Theoretical Review	22
2.3.1	Definitions of Key Terms	22
2.3.2	Situational Leadership Theory (SLT)	23
2.3.3	Transformational Leadership Theory (TLT)	25
2.3.4	Project Resource Management Framework	28
2.4	Synthesis of Literature	29
2.5	Research Gap	30
2.6	Conceptual Framework	31
3	Research Methodology	34
3.1	Research Approach and Design	34
3.2	Study Area and Target Population	35
3.2.1	Study Area	35

3.2.2	Target Population	36
3.3	Sampling Technique and Sample Size	36
3.4	Data Collection Methods and Procedure	37
3.4.1	Primary Data Collection: Open-Ended Qualitative Questionnaires	37
3.4.2	Data Collection Procedure	38
3.5	Data Analysis and Coding Procedure	38
3.5.1	Reliability and Validity	40
3.6	Ethical Considerations	40
4	Data Analysis and Results	41
4.1	Introduction	41
4.2	Thematic Coding Framework	41
4.2.1	Interrelationship of Themes	43
4.3	Theme 1 Financial Constraints	45
4.4	Theme 2: Time Constraints	47
4.5	Theme 3: Manpower Constraints	48
4.6	Theme 4: Material Constraints	49
4.7	Theme 5: Equipment Constraints	51
4.8	Theme 6: Information Constraints	52
4.9	Thematic Frequency Analysis	53
4.10	Chapter Summary	53
5	Discussion of findings	56
5.1	Introduction	56
5.2	Interpretation of Key Findings	56
5.2.1	Resource Constraints as Determinants of Leadership Behaviour	56
5.2.2	Finance as the Most Influential Constraint	57
5.2.3	Time Pressure and Forced Leadership Styles	57
5.2.4	Manpower Shortages and Reduced Delegation Capacity	58
5.2.5	Material, Equipment, and Information Constraints	58
5.2.6	Interaction Effects among Constraints	59
5.3	Integration with Literature	59

5.3.1	Alignment with Nepalese Construction Studies	59
5.3.2	Leadership under Resource Scarcity	61
5.4	Relationship between Independent and Dependent Variables	61
5.4.1	Informal Leadership and Improvisation	62
5.5	Integration with the Conceptual Framework	64
5.6	Comparison between Contractor Types	65
5.7	Theoretical Implications	67
5.8	Practical Implications	68
5.9	Alignment with Research Questions and Objectives	70
5.10	Chapter Conclusion	71
6	Conclusions and recommendations	72
6.1	Conclusions	72
6.2	Answering the Research Questions	72
6.3	Synthesis of Findings	73
6.3.1	Practical Significance	74
6.4	Theoretical Contributions	74
6.4.1	Extension of Situational Leadership Theory (SLT).	74
6.4.2	Boundary conditions of Transformational Leadership.	74
6.4.3	Extending the Conceptual Framework for Project Resource Management Framework (PRMF).	75
6.5	Overall Conclusion	75
6.6	Recommendations	75
6.6.1	Recommendations for Primary Contractors	76
6.6.2	Recommendations for Secondary Contractors	76
6.6.3	Recommendations for Clients and Homeowners	77
6.6.4	Recommendations for Policymakers	78
6.6.5	Recommendations for Training Institutions	78
6.6.6	Recommendations for Industry Associations	79
6.7	Limitations and future research	80
6.8	Limitations	80

6.9 Future Research	81
References	83
Appendices	89
Appendix 1: Coding Framework and Thematic Analysis	89
Appendix 2. Summary Questionnaire	91

Figures

Figure 1. Situational Leadership Model (BrainBOK, (n.d.))	24
Figure 2. Transformational Leadership Framework (Mgutshini et al., 2018)	26
Figure 3. Resources Performance Domain Processes Overview (PMI, 2025)	28
Figure 4. Conceptual Framework	33

Tables

TABLE 1. Definition of Key Term	22
TABLE 2. Sample Composition Details	37
TABLE 3. Thematic Coding Framework	42
TABLE 4. Interrelationship of Resource Constraint Themes	44
TABLE 5. Analysis of financial instability problems between primary and secondary contractors.	46
TABLE 6. Thematic Frequency of Leadership Challenges	53
TABLE 7. Comparison Between Primary and Secondary Contractors	67

Abbreviations

APA	American Psychological Association
BERA	British Educational Research Association
COVID-19	Coronavirus Disease 2019
FCAN	Federation of Contractors' Associations of Nepal
ICT	Information and Communication Technology
IJDRR	International Journal of Disaster Risk Reduction
NVivo	Qualitative Data Analysis Software by QSR International
PM	Project Management
PMI	Project Management Institute

PMBOK	Project Management Body of Knowledge
PRMF	Project Resource Management Framework
QDAS	Qualitative Data Analysis Software
RQ	Research Question
SLII	Situational Leadership II
SLT	Situational Leadership Theory
SME	Small and Medium-sized Enterprise
TA	Thematic Analysis
TLT	Transformational Leadership Theory
UK	United Kingdom
USA	United States of America

1 Introduction

This chapter presents an overview of the research and describes the overall direction of the research. It begins with the background of the residential construction industry in Nepal followed by statement of the problem. Thereafter, it describes the research question and objectives of research along with its scope. All in all, this chapter will provide a perspective to the core of research in the form of leadership problems in resource-limited residential construction.

1.1 Background of the Study

It is commonly understood that the construction sector is one of the most manpower-intensive industries, and the complexity of its operation in the developing nations like Nepal is even more pronounced. The growing trend of urbanization and post-earthquake reconstruction requirements in Nepal have greatly fueled the need for housing (Paul et al., 2024). Thus, residential construction works remain one of the most dynamic industries in the national economy despite operating under informal organizational settings.

In most of the single-family housing construction projects in Nepal, individual entrepreneurs or small-scale organizations initiate the projects without proper training in project management (Niroula, 2025). The entrepreneurs face continuous limitations, such as financial limitations, unavailability of skilled labour, fluctuations in materials, and shortage of equipment, which have been reported as critical factors leading to delays and cost overruns in construction projects in developing nations (Assaf & Al-Hejji, 2006; Sambasivan & Soon, 2007). The administrative problems also contribute to the limitation in resource availability.

It is found through international studies that many construction projects fail due to problems associated with management, scarcity of resources, and other contextual factors like bureaucracy (Frimpong et al., 2003). It becomes essential for a leader to manage all these aspects while managing different stakeholders, resource allocation, and keeping the project on track (Müller & Turner, 2010). Leadership for small-scale residential construction projects has been neglected in Nepal, which needs more attention in this regard.

1.2 Statement of the Problem

Nepali residential building construction initiatives have continued to face problems like delayed completion times, high costs, and poor-quality work despite the rising need for residential homes. The reasons for such problems can be attributed to a shortage of labour, materials, equipment, funding, and ineffective planning and coordination activities (Bhattarai, 2023). Small-scale residential construction ventures in Nepal are mainly initiated and managed by individual contractors, engineers, or clients who do not necessarily have adequate knowledge and training in project management skills (Niroula, 2025). Though many authors have explored construction delays and operation issues in Nepal, most studies have focused on technical and logistical aspects, including material shortages, labour issues, and procurement problems (Giri et al., 2025). Internationally, research findings indicate that poor leadership, lack of clear goals, and inadequate supervision are key contributors to the failure of development projects in developing countries (Frimpong et al., 2003; Fandi et al., 2025). However, leadership, particularly the problem solving skills of project leaders when faced with insufficient resources, remains one area that requires further exploration.

In addition, the effect of the leadership challenge to primary contractors as well as to secondary contractors like plumbers, electricians, and suppliers who are highly reliant on the decision-making and coordination of the main contractor have not yet been ex-

tensively studied. Since very few empirical studies have been conducted regarding leadership in resource-constrained residential construction, there seems to be a gap in the literature when it comes to knowledge acquisition and application. Thus, this study aims to explore the leadership challenges faced by various individuals in the residential construction industry in Nepal.

1.3 Research Questions and Objectives

This study is guided by the following research questions:

1. What are the leadership challenges faced by primary individual contractors in residential construction projects in Nepal?
2. What strategies can be employed to overcome problems arising from limited resources in residential construction?
3. What are the leadership challenges faced by secondary contractors due to resource constraints?

1.3.1 Objectives

The main goal of this study is to analyze how leadership works in resource-limited construction projects in Nepal. In particular, the study intends to find out the leadership problems encountered by the main contractors involved in managing projects that are under-constrained by financial resources, material resources, labour resources, machinery resources, and time resources. Another goal of the study is to know how those in charge of the projects manage to handle such resource shortages in practice. Also, an additional goal of the study is to find out the leadership problems of secondary contractors who have their projects influenced directly by primary project leaders.

1.4 Significance and Scope of the Study

The study deals with the leadership behavior in single family construction projects in Nepal. Specifically, the study considers how limited resources like financial resources, labour, materials, equipment, and time affect the leadership behavior of the main leaders of the project and the secondary contractors involved. This is a relatively small scale project where the leadership behavior differs from other commercial or infrastructure projects due to different contexts, decision making process, and limited resources.

The paper contributes academically to the area of construction management, which has not received much attention compared to the construction sector. While there have been many studies conducted in different places in the world regarding leadership in resource-poor environments, Nepal is still one of the countries where there have been fewer studies conducted. The theoretical framework under which this study was conducted includes the Situational Leadership Theory, Transformational Leadership Theory, and the Project Resource Management Theory.

In terms of practice, the research provides an understanding of how to plan, coordinate, and manage resources in challenging situations. It is also essential to note that the study highlights the importance of the secondary contractor in a project despite the failure of other previous studies to do so.

1.5 Limitations of the Study

There are some limitations in this study. First, the method of the study is qualitative research which provides an in-depth understanding, but the generalizability of the study is limited. Second, the scope is restricted to single-family residential building projects, the study may not represent a variety of larger construction projects. Third, the study is based on the self-reported response from the respondents. Thus, self-reporting bias is

possible. Fourth, the study is limited to chosen region of Nepal, so that resource constraints due to the different cultural or topographic characteristic may not fully be identified.

1.6 Structure of the Thesis

There are seven chapters in this thesis. Chapter 1 discusses the introduction and research background, problem statement, research questions, research objectives, research significance, scope of research, terminology, and limitations of research. Chapter 2 reviews the existing literature regarding leadership and construction project management. Chapter 3, research design, data collection and method of research analysis. Chapter 4 presents the research result and findings. Chapter 5 discusses the findings for the data collected. Chapter 6 contains conclusions and recommendations, and chapter 7 discusses limitations of research and future work.

2 Literature Review

2.1 Introduction

Construction works that are carried out within developing nations normally face the issue of resource scarcity, poor institutions, and logistical breakdowns. This kind of situation presents a context in which the role of leadership is crucial in determining the outcome of the project. Residential construction projects in Nepal are normally small-scale and informal projects where leadership is very much influenced by the decisions of the contractor, client, and subcontractor. Leadership issues are thus not peripheral issues; rather, they determine the success of the project.

Material, manpower, machine, and monetary shortages have been identified as a systemic issue affecting the efficiency of construction projects through international research conducted in Saudi Arabia, Malaysia, Ghana, and Jordan (Assaf & Al-Hejji, 2006; Sambasivan & Soon, 2007; Frimpong et al., 2003; Odeh & Battaineh, 2002). In addition, the issue of delays in construction projects has been attributed to issues related to leadership, such as inefficient supervision and coordination and decision-making, and not technical issues. This is of particular importance when referring to Nepal, since the absence of leadership hierarchy in Nepal is well known.

Despite the significant role of leadership in addressing resource-related challenges, the majority of literature on Nepalese construction concentrates on technical and management problems without much discussion about leadership behavior, styles, or strategies. Consequently, this chapter considers the literature on empirical and theoretical studies related to leadership problems under resource scarcity in Nepalese residential construction projects. This chapter is divided into five broad sections. The first section is on the review of literature regarding empirical research in the global context, Asian context, and Nepalese context. The second section is based on theoretical perspectives of leadership

and resource management. The third section discusses the synthesis of empirical and theoretical results. The fourth section is on research gaps.

2.2 Empirical Literature Review

2.2.1 Global and Developing Country Studies on Construction

Not only do construction delays occur everywhere in the world, but they occur frequently in developing countries. Many earlier researchers have identified some common causes. As reported by Assaf & Al-Hejji (2006), in Saudi Arabia, construction delays are mostly caused by the unavailability of materials, contractor misconduct, and poor planning. As seen from their findings, delays in construction are not sporadic events but part and parcel of the construction industry. In the case of Ghana, Frimpong et al. (2003) have shown that financing issues, breakdowns in equipment, and labour shortage are some common causes of construction delays. Odeh & Battaineh (2002) have indicated that poor supervision, changes in designs, and poor coordination are common causes of construction delays in Jordan.

The importance of such studies emanates from the realization that there are various causes of construction delays, among which are technical, managerial, and institutional factors. Furthermore, most of these challenges such as inadequate supervision, lack of coordination, and decision making are significantly related to the practice of leadership. There are therefore extremely good grounds for undertaking such studies of leadership behaviour and not treating construction delays purely as technical challenges. This helps the researcher develop a theoretical framework where resource availability is linked to leadership challenges.

2.2.2 Asian Residential Construction Studies

Findings from research carried out in Asia are similar in regard to constraints associated with resources, together with other factors such as quick growth in urbanization, labour mobility, and material prices that fluctuate. As pointed out by Doloi et al. (2012), residential building projects in India suffered substantial delays because of ineffective project management, inadequate labour availability, and poor skills at contracting. In Pakistan, Haseeb et al. (2011) have pointed out that inflation, political turmoil, and volatility in material costs were among the main reasons for project delays.

As per Rahman and Kumaraswamy (2008), inadequate coordination and lack of proper communication among the various parties was one of the main reasons for poor project management in Bangladesh. Leadership becomes a critical issue in this context since the role of a leader is significant as far as communication and conflict resolution are concerned. According to Hwang and Ng (2013), information technology disparity is another challenge in project coordination in China.

Asian studies indicate that problems of resource shortages and coordination among stakeholders are common in the Asian region. It should be noted that leadership behavior is not studied in Asian studies as a key factor determining the success of projects. The reason for the above is quite obvious – leadership is a means to solve problems of resource shortages.

2.2.3 Nepalese Construction Studies

Literature on construction delays and their impact on performance in Nepal reveals the difficulties that arise within the industry; however, there is little research that addresses such issues without a strong technical approach or that discusses leaders' actions. The one of the most prominent studies is the systematic review by Bhattarai (2023), who

analyzed information found in six scholarly journals and provided the major factors leading to delays in Nepalese construction. This researcher identified factors such as poor planning, lack of proper supervision, shortage of materials, labour shortage, unrealistically tight contract periods, changes to the design, difficult site conditions, low bidding, and political instability. These variables are highly interrelated and affect all phases of project development. The study conducted by Bhattarai is important for its ability to compile scattered evidence and show that delays in Nepal cannot be explained through technical problems alone but are caused by systemic weaknesses. Nonetheless, the research does not consider the way that project managers react to these challenges or how their behavior affects delay prevention. Finally, the research does not make a distinction between major infrastructural projects and smaller housing projects, which form the subject of this study.

A more localized approach is offered by Giri et al. (2025), who conducted an analysis on private residential constructions carried out in Pokhara Valley. Specifically, their mixed-methods research entailed both a survey administered to 361 participants, as well as the examination of secondary sources, namely, data from the Electronic Building Permit System. According to Giri et al. (2025), delay causes can be observed in terms of actions undertaken or lack thereof on behalf of consultants, clients, and contractors. In particular, consultant-induced delays include prolonged inspection process, untimely reactions to inquiries raised by contractors, as well as insufficient qualification of engineering staff members. Client-related delays pertain to late payments, delayed decision-making processes, and conflicts with neighbours. Meanwhile, contractor-related delays may involve the lack of motivation, a dearth of equipment, suboptimal supervision, and inefficient communication with stakeholders. Finally, external delay factors include lack of materials, adverse weather conditions, labour shortage, and malfunctioning equipment. Even though Giri et al. (2025) offer an in-depth exploration of delay causes in residential construction, no attention was paid to the leaders' conduct and possible strategies to tackle the problem. Moreover, no distinction was made between primary contractors and their subcontractors, who have different perspectives on residential constructions.

Nepalese construction-related organizational and management issues were additionally investigated by Niroula (2025), who provided practice-oriented insights into project management processes in the work of NGOs, government organizations, and donor-sponsored projects. According to his conclusions, there are no formalized project management positions in Nepal; such functions are often performed by engineers, programme officers, or field coordinators, who are not trained in project management techniques. Moreover, the author highlighted unequal use of information technologies, financial instability resulting from late donor payments, and inconsistent supervision, causing overlapping tasks and inefficiencies. Small organizations face difficulties associated with scarcity of funds and rapid turnover of personnel. Thus, it can be concluded that numerous project managers in Nepal do not receive support from the institutional side or management mechanisms. Thus, it becomes essential to look into the behavioral aspects of project leaders during residential constructions on small scales.

In conclusion, it has been noted that many management and technological problems arise in Nepal through research conducted, but the aspect of leadership problem does not get enough focus. Even though the authors have mentioned various leadership problems including poor supervision, poor coordination, and motivation among others, they do not delve into the aspects of leadership behavior that give rise to these outcomes.

2.2.4 Leadership in Construction: Global, Asian, and Nepalese Perspectives

Various studies have identified the importance of leadership in determining the outcome of construction projects. In his research study, for example, Odusami (2002) mentions that leadership style plays an extremely important role in determining the success of a project, especially when the situation becomes uncertain. Leadership is emphasized to be of great significance regarding stakeholder coordination, decision making, and conflict resolution. According to the results obtained by Toor & Ofori (2008), leadership in the construction industries in Asia is mainly reactive and informal in nature.

In the context of uncertainty and the complexities involved with the stakeholders, the importance of leadership can be realized, according to Müller & Turner (2010). It is clear that leadership is an important aspect when it comes to handling ambiguities, making reconciliations, and ensuring that communication takes place. When talking about Nepal, the problem of leadership can be understood through the problems of insufficient supervision, poor coordination, and slow decision-making, although there has been no specific study conducted about leadership. This is a great gap, considering that leadership addresses resource constraints.

There have been indirect references to the challenges of leadership in Nepal by mentioning issues such as lack of effective supervision, poor coordination, and delays in decision making. In Nepal, however, no effort has been made to examine the phenomenon of leadership, which is a significant omission because leadership is the means by which limitations of resources are addressed.

2.2.5 Emerging Themes in Construction Leadership

2.2.5.1 Informal Leadership in Weakly Structured Project Environments

Studies conducted in various developing nations reveal that informal leadership emerges wherever the project management process lacks formality and consistency. According to Toor & Ofori (2008), in such conditions, a project leader has to depend on his or her own personal experience, instinct, and social interaction more than anything else. Such observations are quite consistent with the Nepali scenario where most residential building projects in the country are led by individual builders having little formal experience of the project management process. In such circumstances, leadership is all about making decisions based on individual assessment, negotiation skills, and networking. The lack of organizational structures means that there are different ways of practicing leadership

and, therefore, varied processes of supervising, communicating, and decision making. Such a situation brings a lot of difficulties to the project manager when resources are scarce and require quick decision making.

2.2.5.2 Growing Dependency on Subcontractors

Another emerging issue in construction leadership is Dependence on Sub-contractors. According to Doloi (2013), subcontractors would most likely receive unclear instructions and late payments. There were also difficulties in coordinating the subcontracting activities, thereby negatively affecting project efficiency. Dependence on subcontractors is even more relevant to the case of Nepal since residential building construction in Nepal depends heavily on masons, electricians, plumbers, carpenters, and small-scale material suppliers. Poor performance of subcontractors results when the construction leader performs poorly or communication is inadequate. Poor subcontractor performance also negatively affects project efficiency. Dependence on subcontractors makes leadership complicated since there is coordination required among many independent subcontractors with varied agendas and working conditions.

2.2.5.3 Digitalisation Gaps and Communication Bottlenecks

The problems associated with digitalization pose an equal threat to the management of construction. According to Hwang & Ng (2013), a majority of the small scale construction projects carried out in Asia had not adopted any digital solutions such as Building Information Modelling (BIM), digital scheduling, and digital documentation systems. Failure to adopt these systems will result in the emergence of information silos, increased risks of miscommunication, and additional pressure on coordinators when implementing the construction project. This problem becomes even more important in the case of Nepal because most of the construction projects that involve building residential structures still use verbal communication, handwritten notes, and informal documentation. Under such

circumstances, the construction project leader will find it difficult to control the construction process, monitor the project's progress, and communicate any changes made during its development.

2.2.5.4 Resource-Based View (RBV) and Strategic Resource Allocation

The RBV serves as an effective theory to analyse leadership within resource-constrained environments. As per Barney (1991), the success of an organisation hinges upon how efficiently scarce resources can be allocated and leveraged. Within the Nepalese residential construction industry, resource constraints are a constant issue, which includes a lack of materials, labour, tools, and funds. Thus, leadership in such settings requires a constant balancing act in terms of making trade-offs and prioritising work while allocating scarce resources to avoid any unnecessary delays and ensure high-quality work. Leadership within the RBV framework is characterised by sound judgement, strategic decision-making, and the foresight to predict potential problems with resource acquisition. In essence, leaders have to manage various pressures, bargain with suppliers, and manage work schedules depending on the availability of resources.

2.2.5.5 Leadership in Post-Disaster Reconstruction Contexts

Post-disaster reconstruction leadership represents another perspective that would be appropriate for studying residential construction in Nepal. According to Mannakkara and Wilkinson (2014), the reconstruction setting requires from leaders to act quickly, adjust to new settings, and involve numerous stakeholders in the process amid considerable uncertainty. Despite the fact that the scholars focused their attention on the reconstruction setting, the key issues associated with it are rather pertinent in the context of construction. Many issues that construction managers should deal with are comparable to the problems that emerge during reconstruction processes. They include unex-

pected climate change, material shortage, and unreliable workforce, among other factors. This perspective proves useful for gaining insight into the issues leaders encounter within the residential construction industry.

2.3 Theoretical Review

This theoretical review provides a theoretical lens through which our research problems will be analysed. Initially various keywords and definition related to the research is defined. It is followed by three most relevant theories for this research that is Situational Leadership Theory (SLT), Transformational Leadership Theory (TLT) and Project Resource Management Theory.

2.3.1 Definitions of Key Terms

Table 1 provides the definitions of the major concepts employed in this study. The following definitions give clarity of meaning for leadership, constraints on resources, residential construction projects, and construction project management.

Table 1. Definition of Key Terms

Key Term	Definition
Leadership	Leadership in project management is described as the process of giving directions, influencing other people, and coordinating individuals towards common objectives (Müller & Turner, 2010). Leadership entails motivation, communication, and decision-making amid uncertainty. In this study, leadership is defined as the competence of construction project managers to lead and organize construction teams within resource constraints.
Resource Constraint	Resource Constraint refers to the restriction imposed on important resources required for project execution such as budget, manpower, time, material, equipment, and information (Kerzner & Kerzner, 2017). These resource constraints have been categorized by Sears et al. (2015) into six types,

	namely, cost, time, material, equipment, manpower, and information constraints. Resource constraints are especially applicable to projects being executed in Nepal.
Residential Construction Project	Residential construction entails activities related to the erection, modification, or maintenance of houses for people or families. Such projects are relatively small in scope and informally managed, including client involvement in decision-making. In Nepal, residential construction projects are usually informal and lack technical expertise (Giri et al., 2025).
Construction Project Management	Construction project management is concerned with the planning, coordination, and control of the activities involved in a project from start to finish. Project management encompasses all aspects of scope, schedule, cost, quality, resources, and risks (PMI, 2025). Resource-limited conditions necessitate continual trade-offs in construction project management.

2.3.2 Situational Leadership Theory (SLT)

The best leadership theories which emphasize that no single style of leadership is best over another is Situational Leadership Theory (SLT) which was proposed by Paul Hersey and Kenneth H. Blanchard in 1969. The goal of a situational leader is to help followers increase their maturity level so that they can eventually perform their tasks with the Delegating style. It also states that leaders need to modify their behaviour based on the given situation and the readiness level of their followers. This theory puts rather emphasis on the follower readiness, skills and level of commitment. If a follower's readiness for a specific task change, the leader must adjust their style accordingly (Mgutshini et al., 2021).

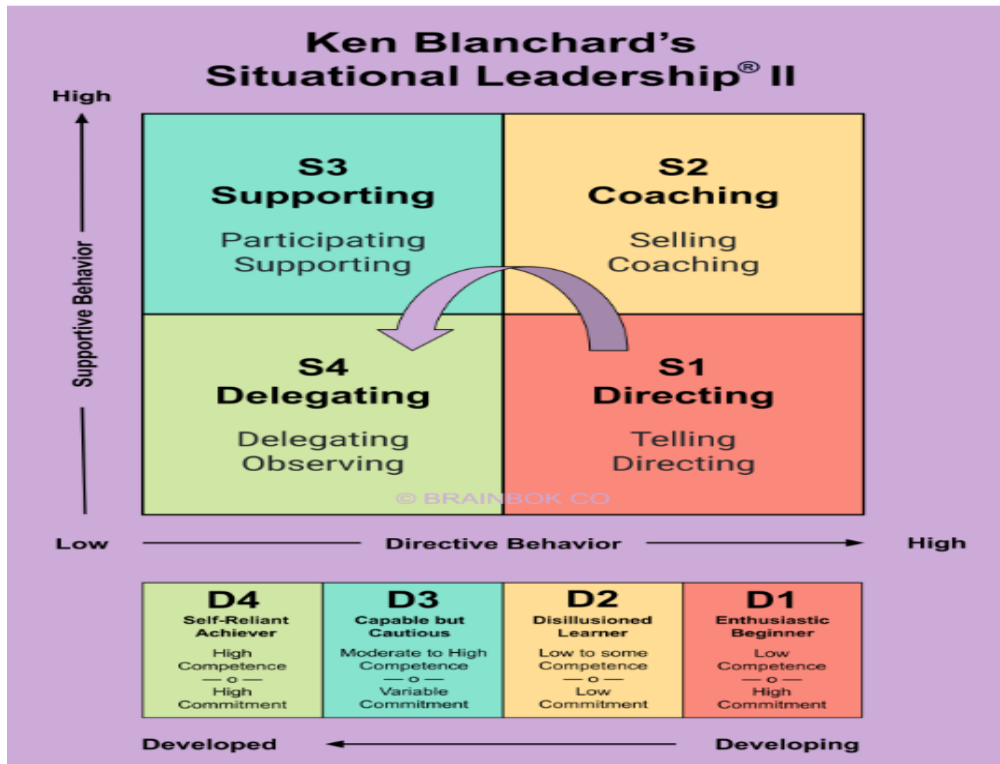


Figure 1. Situational Leadership Model (BrainBOK, (n.d.))

The model categorizes leadership into four quadrants based on the level of directive (task-focused) and supportive (relationship-focused) behaviour provided:

(1) S1: Directing (Telling)

The Focus of the leader is on High task and low relationship. This type of relationship is best with followers with low competence but high commitment for e.g., new or inexperienced employees. In this the leader provides specific instructions and closely supervises performance of the follower. (Mgutshini et al., 2021)

(2) S2: Coaching (Selling)

The focus of the leader is on High task, high relationship. This type of relationship is best with followers with some competence but low commitment (they may be discouraged or still learning). In this the leader explains decisions, solicits suggestions, and provides both direction and emotional support for the follower. (Mgutshini et al., 2021)

(3) S3: Supporting (Participating)

The focus of the leader is on Low task, high relationship. This type of relationship for best with followers with high competence but variable commitment (they have the skills but may lack the confidence or motivation to work alone). In this the leader facilitates and supports decision-making, sharing responsibility with the follower. (Mgutshini et al., 2021)

(4) S4: Delegating

The focus of the leader is on Low task, low relationship. This type of relationship is best with followers with high competence and high commitment (highly skilled and self-motivated individuals). In this the leader turns over responsibility for decisions and implementation to the follower, providing minimal supervision to the follower. (Mgutshini et al., 2021)

SLT additionally places follower development at four levels D1–D4, again from low competence/high commitment to high competence/high commitment. SLT key strength is its flexible applicability which makes it feasible in business, military, project management etc. Nonetheless, SLT has been criticized for its weak empirical validation and oversimplification of the human behavior. Although it has limitations, it is widely used in training and development programs for leaders.

2.3.3 Transformational Leadership Theory (TLT)

Transformational Leadership Theory (TLT) was introduced by James MacGregor Burns which was later expanded by Bernard M. Bass. This theory emphasizes a leader's ability to motivate or inspire followers to work beyond their own self-interests for the greater good of the organization.

This theory states that the strongest organizational culture and employee engagement is created by transformational leaders. Burns explains that this leadership style is highly

effective during the crisis or organizational changes (Mgutshini et al., 2021). Despite its strengths, it also faces notable criticisms. It has been criticized as overemphasizing the role of the leading figure, while placing less emphasis on situational and structural factors (Müller & Turner).

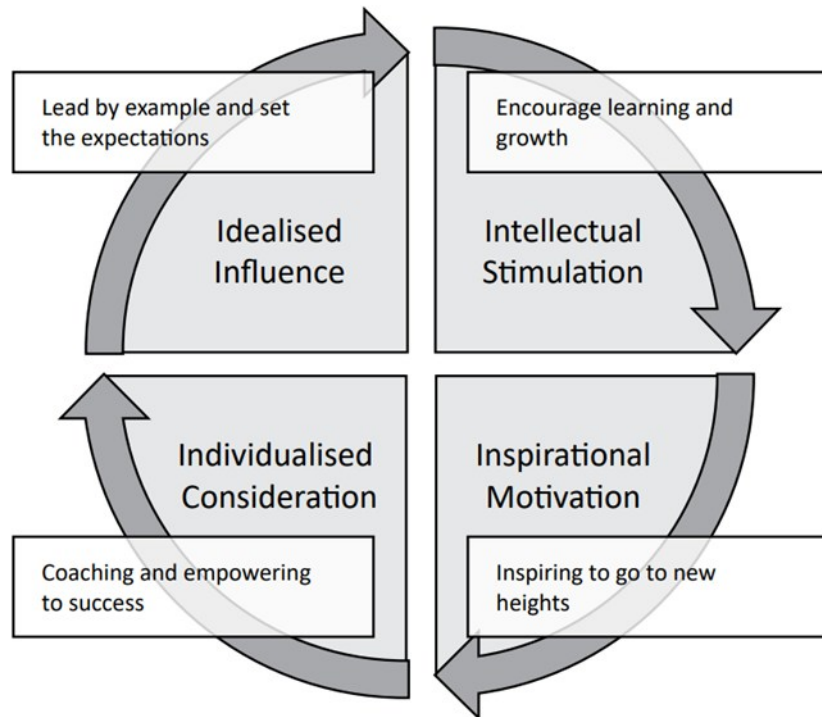


Figure 2. Transformational Leadership Framework (Mgutshini et al., 2018)

Transformational leadership is divided into four core components which is often referred to as “Four I’s” which states as follows:

(1) Idealized Influence (The Role Model)

In this the leader is the "character" component. Leaders act as strong role models in front of their followers, embodying the qualities that they want their team to have. The leader prioritizes the organization’s needs over their own personal gain and maintains high ethical standards. Gradually the follower trusts the leader and earns the respect of

the followers. This results in the followers emulating their leadership and internalizing the value that their leaders show.

(2) Intellectual Stimulation (The Innovator)

This component focuses on the "mind." Transformational leaders actively challenge the situation and encourage followers to be more creative and innovative.

The leader does not penalize followers for making mistakes instead they encourage followers to rethink and solve the problem with new logic. This results in the team to become adaptive and gains capabilities to take decisions independently.

(3) Inspirational Motivation (The Visionary)

This is the "heart" component. Leaders effectively communicate vibrant and exciting visions of the future. Leaders use the symbols, emotional appeals and straightforward communications. This creates a sense of meaningfulness around the work environment.

Leaders challenge people with high expectations, yet they also energize and inspire them. This results in the followers believing that those objectives are within their reach. Followers gradually feel a sense of purpose and are motivated by a shared mission of the organization rather than just a paycheck.

(4) Individualized Consideration (The Mentor)

This is the "human" component. The leader treats each follower as an individual rather than just a member of a group. Leaders act as a coach or mentor by listening to the specific concerns of the follower and needs of each person. So, by identifying an individual's unique strengths and weaknesses the leader helps them grow professionally. This results in followers getting higher job satisfaction and they feel seen and supported.

2.3.4 Project Resource Management Framework

The Project Management Institute (PMI, 2025) has defined resource management as a core performance domain. So, it is one of the core pillars of work that a leader must master. In order to deliver the value from the project a leader must make sure that there are the right team and materials at the right time. As illustrated in figure 4 this framework describes the essential processes needed to plan, estimate, and procure resources for the successful completion of any project. The framework divides the resources into two categories that are physical resources such as equipment with materials and another is team resources like human labour, expertise, and leadership. The fundamental theoretical assumption is that resources are limited by nature. Therefore, effective leadership should have a structured lifecycle of planning, acquiring, leading, and monitoring these assets (PMI, 2025).

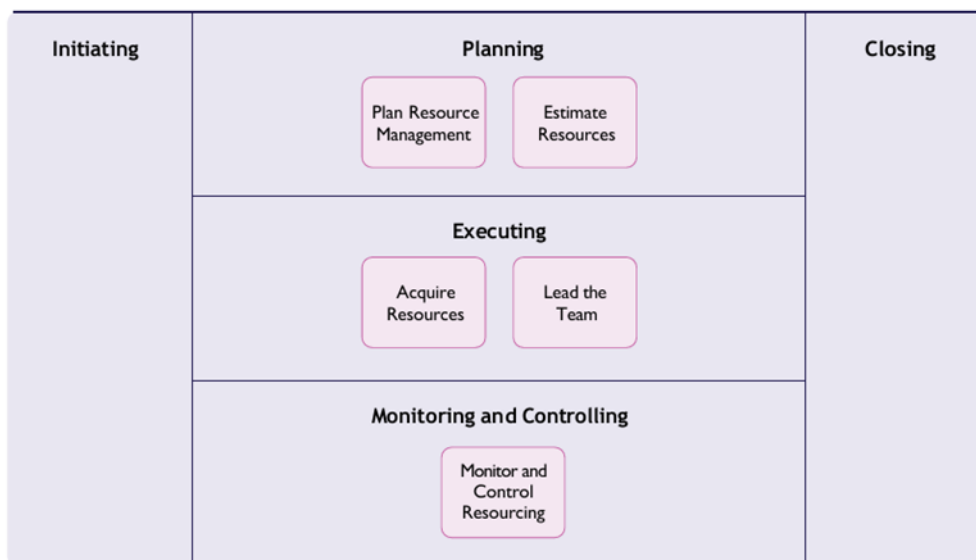


Figure 3.Resources Performance Domain Processes Overview (PMI, 2025)

According to the latest 2025 standards, the key processes within this framework include:

1. **Plan Resource Management:** The planning of resource management includes the strategic process which pushes the leader to estimate, acquire, lead and utilize both physical and team resources. (PMI, 2025)
2. **Estimate Resources:** This describes the technical process of determining the specific types and quantities of team resources and physical assets such as cement, steel, or machinery necessary to perform project work. (PMI, 2025)
3. **Acquire Resources:** This describes the logistical and interpersonal activity of securing the required team members, facilities, and materials to deliver project activities. (PMI, 2025)
4. **Lead the Team:** A team leading process to embrace team members, enhance the skills of each member and resolve conflicts through the effective framing of projects. (PMI, 2025)
5. **Monitor and Control Resourcing:** The continuous process of ensuring that resources are being used as planned, and taking corrective action when there is a variance. (PMI, 2025)

In the resource-constrained environment of residential construction in Nepal, these frameworks provide a structured logic for leaders to take the decisions. By integrating these theories, this research can analyze both leadership behaviors from SLT and TLT. Plus, the Project Resource Management Framework helps leaders to cope with constraints. This framework also bridges the gap between leadership theory and the day-to-day operational realities faced during the construction project management.

2.4 Synthesis of Literature

Several insights can be drawn from both the empirical and theoretical literature discussed in this chapter. First, resource constraints are common obstacles that confront construction projects in all contexts, including globally, in Asia, and in Nepal. Resource constraints can manifest themselves through a lack of availability of materials, manpower, machinery, finances, institutional support, and inadequate supply chains. Second,

effective leadership is necessary for addressing such resource constraints, although there is little discussion in the construction literature on the behaviour of leaders within such situations.

The theoretical literature is indeed rich in insight when it comes to understanding leadership behaviour; however, it does not capture the dynamics of resource-constrained situations. According to Situational Leadership Theory, a leader needs to be flexible in changing his/her behaviour to meet followers' readiness, but this theory also implies flexibility from a leader's side. As for Transformational Leadership Theory, it speaks about vision, motivation, and creativity; yet, in the case of resource constraints and small-scale residential projects, applying this leadership style could be difficult.

It is evident from the synthesis of empirical and theoretical literature that there is a gap between what is being discussed in the literature and what is being explained in the literature. Empirical literature identifies the problems associated with resource constraints; however, there is no analysis about how leaders deal with these problems. Similarly, theoretical literature provides information regarding the behaviour of leaders; however, it does not consider all the difficulties in resource-constrained situations. Hence, the need for an integrated approach is evident from the gap identified above.

2.5 Research Gap

A review of the literature on empirical studies and theories highlights a number of critical gaps, which call for this research project. First, while there is extensive documentation of construction delays and difficulties in project management in Nepal, there has been very little scholarly attention paid to the issue from a technical and managerial perspective. Bhattarai (2023), Giri et al. (2025), and Timilsina et al. (2020) highlight issues such as ineffective supervision, poor coordination, lack of adequate labour force, delayed materials, and unrealistically set deadlines. However, there is no analysis of the behaviour

of leaders responsible for the observed problems. Therefore, leadership is considered as an implicit concept in these works rather than being explicitly studied.

Secondly, while addressing the question of resource scarcity, one of the distinctive features of the housing industry in Nepal, the scholars usually look at it as a technical problem rather than that of leadership. While it is widely acknowledged that construction companies face various issues related to a lack of resources, material, manpower, tools, finance, etc., none of the authors have addressed the question of how a company's management tackles the problem of resource scarcity, what priorities are set for the activities to be performed, and how the leadership style adapts to the circumstances.

Third, there is a near total absence of studies based on the viewpoints of secondary contractors such as masons, electricians, plumbers, and small-time suppliers. These people work within the framework determined by the primary contractors, but they themselves have remained unexplored in terms of their experience and leadership problems. It is important to explore these perspectives since these workers provide the foundation of Nepal's domestic construction industry.

These gaps collectively justify the need for a study on the subject of leadership, taking into consideration the views of both primary and secondary contractors while analyzing leadership behavior under relevant theory. This research attempts to fill the identified gaps by investigating how leaders in Nepal's residential construction industry operate within conditions of resource shortage.

2.6 Conceptual Framework

The conceptual framework of this research positions the dependent variable is leadership, and it is affected by the following six independent variables about the limits to resources: costs, time, labour, materials, equipment and information.

Resource constraints are seen as the fundamental pressure points within the residential construction project operation environment in Nepal. It is assumed that as the level of resource constraint increases, leadership problems also escalate, thereby impacting decision-making, coordination, quality, and stakeholder management.

Budget constraints include constraints such as budgetary limits, unpredictable cash flow, delay in payment by the client, and lack of availability of credit. They limit the ability of a leader to buy materials on time, hold onto employees, and ensure that the process does not stop. Time constraints include problems such as limited project time frame, unrealistic deadlines, and delay as a result of other conditions like the weather.

Labour constraints consist of lack of labour force, irregular attendance, and variable labour supply. The above factors compel the leader to change his style of leadership, motivate employees, and restructure activities to sustain productivity. Material constraints emanate from late arrival of materials like cement, steel, aggregates, and other materials. It necessitates negotiating with the supplier, changing activity planning, and informing clients and sub-contractors about the changes. Equipment constraints encompass shortage of equipment, machinery malfunctioning, and use of hired equipment.

Information constraints include vague illustrations, insufficient instructions, poor communication, and the lack of digitization. All these contribute to a higher risk of misunderstanding or mistakes and necessitate the provision of clearer instructions and more monitoring by the leaders.

Three different theoretical lenses are used to create the framework. According to Situational Leadership Theory (SLT), leaders change their approach depending on the competences and commitment of their teams. This is especially applicable in cases where there are differences in the skills of workers. According to Transformational Leadership Theory (TLT), leaders should be flexible, motivated and have a clear vision, which can be useful while motivating employees when payments are delayed or materials run out. Project

Resource Management Framework (PMI, 2025) offers a more systematic view on how leaders plan, obtain and manage resources constrained by external conditions.

These three theories are incorporated into the conceptual framework to demonstrate the relationship between resource constraints, leadership practices and their outcomes. The framework suggests that an increase in constraints leads to increased challenges for the leader and affects projects' success. This framework will help understand the relationship between resource constraints and the behaviour of leaders in the context of Nepalese residential construction.

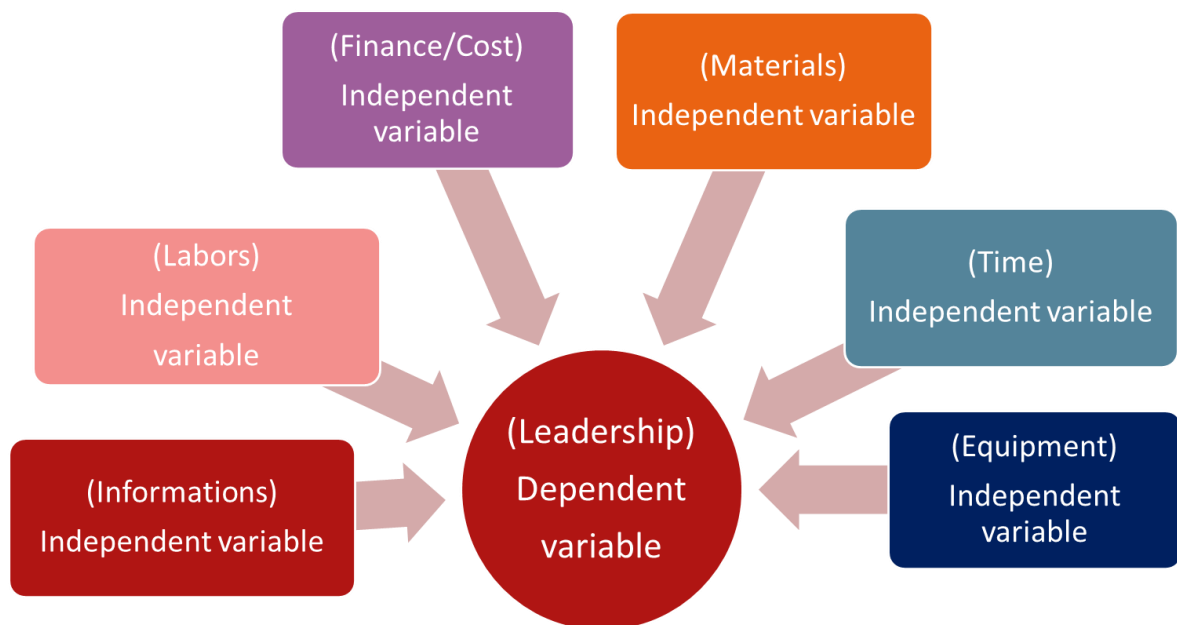


Figure 4. Conceptual Framework

3 Research Methodology

This chapter focuses on the research methodology that was applied for exploring the leadership problems in resource-constrained residential construction projects in Nepal. This chapter includes detailed explanation about the research approach, research design, study area and population, data collection method and procedure, data analysis procedure using manual thematic analysis, reliability and validity, and ethical issues. In this chapter, the research methodology that was adopted for achieving the three research questions set out in chapter one such as, to find out what were the leadership problems for individual contractors in resource-constrained residential construction projects, to find out the strategies adopted to overcome resource constraints, and to explore leadership problems of secondary contractors, were detailed out (Creswell & Poth, 2018).

3.1 Research Approach and Design

This research employs the qualitative descriptive design for analysing the issues faced during the leadership process in resource-constrained residential construction projects in Nepal. A qualitative design is suitable for the current research because, through it, the researcher can analyse the actual experience and meaning attached to this experience by the respondents, especially in cases where there are contextual influences on the behaviour of leaders (Creswell & Poth, 2018). It is not about quantification but analysis of perceptions held by contractors in regard to the issue.

The three reasons for selecting this method are the following. First, the leadership problems faced by residential contractors in Nepal are situational in nature. The same problem might have different impacts on different contractors based on their economic strength, supplier relations, or team dynamics. Secondly, leadership practices in Nepal's residential construction industry are less explored topics, and exploratory research designs can be useful in discovering knowledge in relatively unexplored topics (Bhattarai,

2023). Lastly, open-ended questions give respondents the freedom to answer in their own way.

The research adopts an interpretivist approach since it presupposes that the understanding of reality is based on personal perceptions of individuals. The interpretivist approach is appropriate since the purpose of the research is to explore the perceptions of contractors regarding leadership challenges and their resourcefulness while performing their duties (Saunders et al., 2019). In such cases, the role of researchers is to interpret and analyse individual accounts.

A cross-sectional methodology was chosen, with all the data collected at a certain moment of time. Participants of the study were asked to think about their residential construction projects performed recently or currently and talk about the leadership challenges they have faced and overcome during the process. Such a methodology is appropriate when dealing with the issue since there is no need for any long-term observation.

3.2 Study Area and Target Population

3.2.1 Study Area

The research was undertaken in Nepal, which is known for the fast-paced development of residential buildings as a result of rapid urbanization, increase in population and rebuilding after the 2015 Gorkha earthquake. Generally speaking, construction of residential buildings in Nepal takes place under conditions of low-budget operations, changing availability of labour, delays in supply of materials and lack of equipment. As opposed to big projects that are executed through formal organizations, residential building construction is mostly done by one contractor, architect or engineer individually, without any system of project management being used.

3.2.2 Target Population

The target population comprises of the currently working and recently working workers engaged in the residential construction projects in Nepal.

Primary contractors

This is the group of people managing the implementation and co-ordination of the construction projects as whole. It comprises main contractors, main project implementing civil engineers, main project managing architects and self-managing owners and clients of the construction works.

Secondary contractors

This is a group of workers executing the specific activities, who are dependent on the primary contractors for instructions, payment and access to resources. This group comprises workers such as, masons, carpenters, tile fixers, painters, water proofers, plasters, plumbers, electricians, false ceiling fixers, parquet fixers, aluminium, metal workers, furniture fixers and material suppliers.

3.3 Sampling Technique and Sample Size

Participants in this study have been purposively selected based on their experience within the field of residential construction leadership or subcontracting. Such a selection process guaranteed that all participants in the study had the necessary knowledge that would help answer the research questions posed (Etikan et al., 2016).

There were 30 participants in this study. The sample size in qualitative studies focuses more on gaining insights rather than achieving large numbers. It is estimated that data

saturation will be achieved in relatively homogeneous samples within 15 to 30 participants (Hennink & Kaiser, 2022).

Sample composition: The final sample comprised 6 primary contractors and 14 secondary contractors from the following professions:

Table 2. Sample Composition Details (Source –Own Survey 2026)

Profession	Number of Participants	Contract Type
Civil Engineer	8	Primary (8)
Architect	5	Primary (5)
General Contractor	2	Primary (2)
Owner	1	Primary (1)
Plumber	2	Secondary (2)
Electrician	2	Secondary (2)
Interior Designer	1	Secondary (1)
Tiling Contractor	1	Secondary (1)
Painter	1	Secondary (1)
Waterproofing Agent	1	Secondary (1)
UPVC Door/Window Installer	1	Secondary (1)
False Ceiling Installer	1	Secondary (1)
Tile/Granite Installer	1	Secondary (1)
Furniture Installer	1	Secondary (1)
Parquet Installer	1	Secondary (1)
Iron Metal Installer	1	Secondary (1)
Total	30	Primary (16), Secondary (14)

The diverse composition of participants ensured that both key leaders and numerous subcontracting trades were represented, which made it possible to conduct a thorough analysis of leadership concerns in the residential construction sector (Patton, 2015).

3.4 Data Collection Methods and Procedure

3.4.1 Primary Data Collection: Open-Ended Qualitative Questionnaires

The data were gathered through a self-administered, open-ended qualitative questionnaire on Google Forms. This offered participant ease and confidentiality. Additionally, it removed geographical limitations, and produced extensive and comparable answers for six resource constraints. The questionnaire are attached in Appendix 2.

3.4.2 Data Collection Procedure

The research participants were approached through the researcher's professional connections within the Nepalese construction industry. The participants were contacted individually by telephone and/or through messaging applications, invited to take part in the study and a Google Forms link was provided to them. The collection process continued for 3 weeks with one reminder after 1 week. The data collected were imported into Excel.

3.5 Data Analysis and Coding Procedure

In order to conduct the analysis, thematic analysis was applied as this method allows systematically identifying, organizing, and interpreting the patterns present in qualitative data (Braun & Clarke, 2006). Thematic analysis was deemed to be applicable to investigating challenges faced by leaders in resource-limited situations as there could be many factors affecting decision making and actions in such scenarios.

To begin with, the gathered answers were organized using Microsoft Excel. The answers were studied repeatedly until complete familiarity with the material was achieved.

1) Familiarisation with Data

All responses were thoroughly studied multiple times in order to gain a profound understanding of the recurring problems, patterns and participant viewpoints.

2) Initial Coding (Open Coding)

Important phrases, statements and pieces of information were singled out from the data set and assigned preliminary codes. In doing so, attention was paid to using terminology that is close to that used by the participants to minimise any biases in interpretations.

3) Categories and Themes Formation

Similar codes were put together under broader categories according to conceptual similarity. Then, these categories were classified into six major themes corresponding to the framework of this study: financial constraints, time constraints, manpower constraints, material constraints, equipment constraints, and information constraints.

4) Coding Scheme Formation

A systematic coding scheme that would enable consistent analysis was developed, including themes, codes, their descriptions and examples of quotes given by participants. All these can be found in the Appendix 1.

5) Pattern Recognition

Interconnections between themes were explored to understand the interplay of various constraints and its effect on leadership activities. At this stage, findings were linked directly to research questions posed by the study.

6) Literature Linkage

Found themes and patterns were matched with the literature presented in Chapter 2 of this paper.

Coding took place manually, without the employment of any particular software for qualitative data analysis. Manual coding facilitated the opportunity to interact more closely with the data and improve on the themes and codes as the analysis progressed.

3.5.1 Reliability and Validity

The research was conducted in such a way as to adhere to participants' own wording to enable reliability and validity. Reliability was enhanced by using several rounds of coding. A number of quotes from participants are used to back up the identified themes. The researcher's knowledge in construction assisted in understanding and interpretation of the data, with constant reflection in order to avoid researcher bias.

3.6 Ethical Considerations

The research followed the ethical standards of the University of Vaasa and the GDPR. All subjects were given information about the survey and signed a consent form via the submission system. No personal data was collected, and all answers were kept confidential and accessible only to the researcher. The experiment entailed no risks for the subjects, as no controversial or criminal behaviour was examined.

4 Data Analysis and Results

4.1 Introduction

The current chapter provides a detailed qualitative analysis of the findings obtained through responses gathered from 30 construction professionals (R1-R30), consisting of 16 primary contractors and 14 secondary contractors engaged in the construction of residential buildings in Nepal. This qualitative analysis is intended to explore the issue of leadership challenges that arise from six major resource constraints.

The results of this chapter reveal that there is an intricate relationship among the factors affecting leaders in residential construction projects. Leaders in such settings are compelled to compromise among various dimensions of their activities, including the costs incurred, the period taken to complete the project, its quality, and the level of safety experienced during construction. Such results concur with other research works, which reveal that construction leadership under resource-limited conditions is situational and experience-driven (Toor & Ofori, 2008).

Furthermore, this chapter offers valuable information on the means through which contractors deal with conflicting interests, cope with uncertainties, and make progress on projects under constraints. Not only does it highlight the important issues, but it also examines the efficiency of the solutions adopted by contractors.

4.2 Thematic Coding Framework

A thematic coding framework was created to facilitate and ensure a structured approach to analysing qualitative data, based on the answers that were gathered from the 30 re-

spondents (R1-R30). Thematic coding frameworks serve as an efficient tool for organizing huge amounts of textual information into categories, which helps determine common patterns associated with leadership challenges in limited construction conditions.

The coding procedure was conducted using the method of open coding, when important quotations, repeated phrases, and main ideas were detected within all answers. The codes were subsequently clustered into categories by using axial coding, thereby establishing connections between the corresponding notions. In addition, six broad themes have been extracted out of these categories, each one representing one of the major constraints on residential construction projects.

The above structure ensures that the accuracy and validity of the results are improved since themes are derived from the data collected through interviews (Braun & Clarke, 2006; Nowell et al., 2017). The thematic framework obtained is as follows.

Table 3. Thematic Coding Framework (Source Own Survey 2026)

Theme	Sub-Themes	Description
Financial Constraints	Payment delays, cost pressure, personal funding	Challenges related to Budget constraints, delays in payment, and dependence on own money, resulting in stress and poor decision-making by leaders.
Time Constraints	Deadlines, coordination pressure, rushed work	Problems due to tight deadlines, improper planning, and rush to finish work, causing problems with quality and safety.
Manpower Constraints	Skill shortage, absenteeism, workload imbalance	Management problems associated with the availability of manpower, skills, and their productivity that impact the development of projects and effectiveness of leaders.

Material Constraints	Material shortages, low-quality substitution, supply delays	Difficulties connected with the procurement, supply, and quality of materials and ending up with substandard construction works.
Equipment Constraints	Lack of tools, equipment sharing, manual substitution	Issue related, Shortage of equipment and tools and its effect on low efficiency and additional labour input.
Information Constraints	Poor drawings, miscommunication, lack of documentation	Design-related problems such as those arising from incomplete design data, poor communication, and lack of documentation.

These six themes have been identified based on the empirical data gathered from participants and construction management literature available. These themes are reflective of the resource constraints faced by leaders in residential construction projects. According to project management theory, any successful outcome in construction projects is dependent on managing critical resources including time, costs, manpower, materials, and information (PMI, 2017). The reason behind the identification of information and equipment as themes separately lies in the practical observations made within the realm of construction, especially in underdeveloped countries.

4.2.1 Interrelationship of Themes

These six elements are interconnected rather than being independent, which suggests that any limitations within one element will affect other elements. Financial limitations can lead to the use of inferior quality materials as well as inadequate labour force and equipment. Limitations of time can lead to poor work output and safety problems. Limitations in information can affect the way labour force will be utilized as well as the management of materials and time.

Interconnectivity plays an important role in emphasizing the concept of resource dependence in construction activities where limitations in any area have an effect on the overall system (Toor & Ofori, 2008). Understanding these interrelationships is critical in comprehending leader's behavior in situations of constraints.

Table 4. Interrelationship of Resource Constraint Themes (Source own Survey 2026)

Primary Constraint	Linked Effects	Impact on Leadership
Financial Constraints	Low-quality materials, reduced manpower, limited equipment	Forces cost-driven compromises; increases stress and risk-taking
Time Constraints	Rushed work, errors, safety risks	Shifts leadership from planning to reactive decision-making
Manpower Constraints	Low productivity, skill gaps, absenteeism	Requires increased supervision and micromanagement
Material Constraints	Delays, substitutions, quality issues	Creates conflict between client expectations and project realities
Equipment Constraints	Manual labour, inefficiency, safety hazards	Reduces productivity and increases physical strain
Information Constraints	Miscommunication, rework, scheduling issues	Weakens coordination and decision-making across all areas

Analysis through thematic coding becomes more scientific when the information is categorized during qualitative research. This is because the process enables the comparison of the main contractor with the secondary contractor and also relates the information

to theories discussed in Chapter Two. The themes that emerge provide more depth in the analysis, which goes beyond the descriptive stage.

4.3 Theme 1 Financial Constraints

The issue of financial limitations was found to be one of the most prominent topics in this study, playing a major role in shaping the behaviours of leaders in the residential construction industry. From a total number of 30 respondents, around 24 individuals admitted facing difficulties that involved finance-related issues, suggesting that financial concerns are common in the residential construction industry and impact both main and sub-contractors. Some of the respondents who experienced financial issues included R1, R2, R4, R19, R20, R22, R23, R24, R25, R26, R27, R28, R29, and R30 for main contractors and R3, R5, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, and R18 for sub-contractors.

A variety of recurring financial problems were coded in the responses of the participants. These problems included delays in payment, personal financial risk taking, conflicts between cost and quality, pressure from suppliers, and insufficient funds. All of these problems found expression in the comments of the respondents. Thus, R3 mentions that “Delayed payment... slowed down the work,” referring directly to the negative consequences of poor cash flows for the pace of project implementation. Likewise, R9 notes that “Many times I had to use my pocket money,” emphasizing the extent to which contractors have to take personal financial risks to keep their projects going. Furthermore, R16 mentions the issue of profitability by noting that “When I provide good wages, then I have zero profit,” thereby showing that satisfying workers does not guarantee making money. Finally, R7 emphasizes the difficult balancing of interests involved in project management by noting that “I was caught between keeping the client happy and not working at a loss.”

The analysis of the above research findings indicates the existence of various leadership stresses as a result of financial instabilities. Leaders tend to focus on the continuation of

projects rather than quality. This can be observed from the tendency for the utilization of poor quality materials and the narrow margins of profit. Moreover, the problem of financial instability does not only affect contractors but can be felt by workers through delayed payment or reduced salary. It has been observed that such financial stresses spread across the entire project system.

Table 5. Analysis of financial instability problems between primary and secondary contractors.
(Source Own Survey 2026)

Contractor Type	Nature of Financial Challenges
Primary Contractors	Budget control, client expectations, cost overruns, financial planning pressure
Secondary Contractors	Payment delays, wage management difficulties, dependence on primary contractor payments, survival-based decision-making

The results obtained here support the theoretical construction management concepts, which stress the importance of financial issues for project success. At the same time, it is clear that there is a discrepancy between theory and practice, as many interviewees use informal financial approaches such as using their savings (R9, R11, R29) or getting materials on credit (R3, R12). Another aspect of the results obtained that supports the concept of the risks associated with informal financial approaches is related to the lack of any formal methods of financial security such as having a proper payment system in place or using appropriate contracts. It contradicts some best practices described in Chapter 2. As far as leadership is concerned, financial restrictions compel contractors to be more reactive and adaptive in their decision-making processes. Though this can help in sustaining projects in the short term, it may create inefficiencies in the long run. To sum up, financial restrictions are one of the vital elements that affect leadership during residential construction projects.

4.4 Theme 2: Time Constraints

One of the key constraints identified was that of time limitations, which were indicated by 22 participants as being issues of tight schedules, coordination problems, and rapid implementation. The categories generated from the coding process included factors such as scheduling pressures, coordination delays, working under pressure of time, overtime work, and compromising on quality.

Project-related delays tended to have far-reaching consequences among project stages. Respondent 7 talked about having to finish the work within *"18 days,"* thus putting considerable pressure on the schedule. On similar grounds, respondent 3 explained that work depended on civil work *"...very little time."* Such quotes clearly indicate that time limitation is usually a consequence of delays in different processes.

The effect of time pressure on the quality of work and safety was also noticeable. As said by R1, *"shuttering were removed in less time which makes structure less strong."* Similarly, R10 commented that *"doing work in hurry...accidents"* was one of the effects of time pressure in the process of construction. The above findings clearly show that besides affecting the efficiency, time pressure also affects the safety of the buildings and their workers.

Time pressure led to some strategies adopted by respondents including overtime work and more labour force. As pointed out by R3, *"we worked extra hours to meet deadlines,"* showing that overtime was needed to cope with time pressure. Moreover, other respondents hired more workers for the time being.

The comparison of various contractor types clearly shows that primary contractors are subjected to time constraints at the managerial level since they need to plan, coordinate, and monitor the progress of their work within different groups of workers. The secondary contractors have time constraints at the execution level because they are expected

to finish their assignments in the allotted time due to the time constraints resulting from delays encountered by the primary contractors upstream.

In fact, despite all of the attention paid to systematic scheduling and process flow, the study shows that such time management strategies rarely apply in practice. The prevalence of time management codes, such as overtime work and task compression, is evidence that there is little use of systematic approaches in managing time, which affects overall efficiency and can result in errors and rework. Consequently, time management has a great effect on leadership practices.

4.5 Theme 3: Manpower Constraints

There were 21 respondents who indicated manning problems as one of the main constraints, which means that manpower issues are critical for construction project management. Coding revealed several categories like labour shortage, skill gap, worker absenteeism, work overload, and motivation challenge.

An important problem emphasized by the participants is the lack of skilled labour force. Participant R3 mentioned "*a shortage of skilled plumbers*" and categorized it into labour shortage and skill gap. Moreover, participant R5 pointed out cases when "*the workers had different skills*" and needed to be supervised all the time because of the discrepancy between skill level and labour productivity.

The problem of worker absenteeism is also important. Participant R5 stated that "*workers suddenly left... major disruption*" and classified it under worker absenteeism. Furthermore, participant R10 stressed the necessity to work alone because "there were too many tasks and there was no one around."

The response to manpower constraints by most leaders included reallocation of tasks, training, and motivating workers to achieve desired goals. For instance, as noted in R1,

there were attempts to "*motivate workers for overtime*" in relation to motivation challenges. In any case, such measures aid in retaining productivity, but at the same time, they add pressure to the leader's work.

Secondary contractors will be the most affected by manpower limitations because of their reliance on skilled labour for the accomplishment of intricate assignments. On the other hand, primary contractors give consideration to the distribution of their employees to different project areas. This is because they have varying roles to play.

According to the criticism, the research underscores the importance of establishing human resource management frameworks within the construction industry. Although the present body of theory stresses the need for personnel planning and skill development, the presence of these codes through ad hoc hiring and on-site training suggests that there is an ad hoc approach.

Overall, it is important for the management to show great flexibility under manpower limitations when it comes to productivity, quality, and satisfaction of workers. However, because there is no proper plan for workforce management, it is inevitable for the management to work under emergencies.

4.6 Theme 4: Material Constraints

The issue of material limitation has been cited by 23 respondents, and it is closely associated with the problem areas of finances and logistics. The themes that emerged from the coding process include material shortage, poor material substitution, delays in material supply, workflow interruptions, and cost considerations, which impact the construction process.

Inadequate materials due to delay has been cited a few times in the interviews. For example, according to R3, "*Materials were not available on time,*" implying material shortages and workflow interruptions. Also, R8 stated that "*Delays in tile delivery resulted in work interruption.*" Another major challenge highlighted by the respondents is the use of substandard materials. According to R19, "*Sub-standard materials were used.*" This represents one of the problems associated with the use of poor-quality substitutes. It must be emphasized that this method was the cause of many future problems such as cracking and leaks.

In order to overcome these difficulties, the management employed approaches like strategic planning, coordinating with suppliers, and finding substitute materials for the materials. R5 advocated for the use of "*cost-effective materials,*" which represents cost-driven selection, indicating difficulty in balancing the requirements related to finances, aesthetics, and functionality. It should be noted that the distinction between primary and secondary contractors is that primary contractors are concerned about planning and supplier negotiations, whereas secondary contractors face material limitations in execution.

Significantly, the results have shown that the process of procurement has been inefficient and lacks measures to ensure quality. Even though theories in construction management stress the importance of systematic procurement processes, the current process is hindered by its dependency on local suppliers and informal procurement processes. The constant use of inferior substitutes proves that cost often takes priority over quality.

Leaders must be able to continuously make decisions amidst uncertainties. They are required to consider many aspects of material constraints like cost, availability, and efficiency.

4.7 Theme 5: Equipment Constraints

The problems with regard to equipment were raised by fifteen respondents, and even though they occurred relatively rarely, they had important consequences in terms of efficiency and safety. Examples of codes were: lack of machinery, manual dependency, sharing of equipment, reduced efficiency and safety hazard.

One of the examples included problems connected with the lack of equipment and manual labour being needed. Thus, R1 claimed that he *“didn’t have dozer...used manpower”* referring to manual dependency, leading to higher costs. Moreover, R7 reported pain resulting from the lack of adequate tools referring to safety hazard and reduced efficiency.

Another problem with equipment referred to its sharing among various people, resulting in low efficiency. Thus, R5 reported that the equipment was *“shared across several teams,”* illustrating a problem with equipment planning and coordination especially in team projects. Leaders responded to these problems in different ways including scheduling equipment usage, tool renting and using alternative ways of accomplishing tasks; however, all of them had one thing in common extra cost and effort. The comparison made shows that secondary contractors suffer from these problems on a daily basis, whereas primary contractors worry about equipment allocation and planning.

Importantly, the results show there is low investment in technology related to construction and equipment management. The use of manual processes conflicts with modern techniques which require more technological innovation and efficiency. The physical challenge, therefore, becomes an obstacle towards faster completion of the projects.

4.8 Theme 6: Information Constraints

Information constraints were cited by 19 respondents including the problems relating to unclear drawings, miscommunications, lack of documentation, rework, and decision confusion. The information constraint is an important issue that needs to be addressed since construction projects heavily rely on effective communication.

Lack of documentation and unclear drawings was one of the biggest constraints faced by the respondents. For instance, R3 explained that there was a problem with *“unclear drawings.”* Also, R1 explained that there was no *“paper drawing”* which indicates the lack of documentation.

Another problem faced by respondents was that of miscommunication. Specifically, R2 mentioned the problem of *“miscommunication and poor decision making”* which was put under the category of decision confusion. Likewise, R5 said that *“rework happens when there are problems with instructions and lack of clarity”*. The effects of information constraints include delays, cost increases, and decrease in quality. To overcome such problems, leaders use verbal instructions and clarify things at the construction site. Information limitations are unique in that their impact is experienced by both primary and secondary contractors alike, as communication difficulties can happen at any level within the project structure.

From a critical point of view, this finding emphasizes the lack of established communication systems and methods for recording. Even though models have emphasized the importance of managing information, communicating through informal systems renders one prone to errors.

Good leadership calls for good skills at communication and information management. But, without established systems, these will be highly unreliable.

4.9 Thematic Frequency Analysis

As seen from the frequency distribution, the most common problem encountered was the problem of finance (16), followed by the problem of time (14). The problem of manpower and materials was also experienced by 13 respondents each, while the problem of information and equipment was experienced by 10 and 9 respondents, respectively.

Table 6. Thematic Frequency of Leadership Challenges (Source Own Survey 2026)

Theme	Respondents (Codes)	Frequency
Financial Constraints	R1, R3, R4, R5, R7, R9, R11, R12, R13, R16, R19, R20, R25, R28, R29, R30	16
Time Constraints	R1, R2, R3, R5, R7, R8, R10, R13, R20, R22, R23, R25, R27, R30	14
Manpower Constraints	R1, R3, R5, R8, R9, R10, R13, R16, R20, R22, R23, R25, R28	13
Material Constraints	R1, R3, R5, R8, R9, R10, R13, R16, R19, R22, R23, R24, R25	13
Information Constraints	R1, R3, R5, R7, R8, R20, R22, R23, R27, R30	10
Equipment Constraints	R1, R3, R5, R7, R8, R10, R20, R22, R23	9

Table 6. is a tabulation of the frequency of occurrences of themes within responses, which reveals the comparative importance of each challenge facing leadership. This shows that financial problems have been the main cause of leadership problems among residential building projects. Moreover, the relatively high number of time and manpower constraints indicates the interrelationship between the two types of constraints.

4.10 Chapter Summary

The current chapter highlights the results of a qualitative study of constraining factors that construction professionals have to deal with when performing construction activities in the residential building sector. The data obtained from the survey of 30 respondents (R1-R30) consisting of both prime and secondary construction contractors helped to identify six main constraining factors such as financial, time, labour, material, equipment, and information ones.

Of all the constraints, financial constraints seemed to be the most prevalent, including topics like payment delays, risks in one's own finances, and trade-offs between costs and quality. Similarly, time constraints were also very evident, considering that the project must be completed within a limited timeframe despite any delays in coordinating and completing tasks. Manpower and material constraints also influenced productivity and quality since at some point, respondents opted to use unskilled labourers and inferior materials just to continue with their operations.

It should be pointed out that there exists a connection between all these issues since lack of funds may influence other concerns such as manpower, materials, and machinery. Consequently, construction managers will learn to adjust to these conditions and scenarios and hence focus more on the accomplishment of the task than quality and sustainability.

In addition, it is important to recognize the disparity between the theory and practical aspects of construction management. Theory dictates that construction managers require a formal method of planning and managing risks. However, in practice, it has been seen that construction management relies on informal practices such as financing with personal money and verbal negotiations.

In summary, the above chapter shows that leadership in resource-constrained environments is very flexible yet responsive. Even though the above approach can be helpful in meeting project goals, there are several inherent risks associated with quality, efficiency,

and sustainability. The above details form the basis for the next chapter where the results are analysed based on current literature.

5 Discussion of findings

5.1 Introduction

This chapter will critically examine the results of the research as presented in Chapter 4 in light of the research questions, objectives, theoretical framework, and the review of related literature provided in Chapter 2. The objective of this discussion is not to reproduce the research findings but to understand the implication of those findings in leadership practice in the context of construction projects in Nepal. This chapter discusses the impact of resource constraints on leadership style, the interaction among resource constraints, and how primary and secondary contractors are affected differently by those constraints. Moreover, this chapter will also discuss how the research findings contribute to or deviate from established theories including Situational Leadership Theory, Transformational Leadership Theory, and Project Resource Management Model.

5.2 Interpretation of Key Findings

5.2.1 Resource Constraints as Determinants of Leadership Behaviour

From these findings, it can be concluded that leadership in residential construction is basically determined by the existence of constraints and not by leadership qualities alone. Constraint in terms of finances, time, manpower, materials, machines and information all form pressure from the external environment that affects behaviour and decision-making processes.

It shows how the hypothesis made at the beginning of chapter one that leadership in construction is very situational was right. It was hypothesized that these six constraints

would form the independent variables in affecting the effectiveness of leadership. However, it is seen that they do not affect in isolation but rather interact to make the leadership situation even more difficult.

5.2.2 Finance as the Most Influential Constraint

Finances were identified as the most significant determinant of leadership behaviour, supporting the popular belief that money plays a vital role as the “lifeblood” in construction projects. In line with the results from Chapter 4, late payment, limited budget, and dependence on personal finances compelled leaders to make reactive decisions based on the current situation.

More importantly, the study shows a chain effect, where the lack of finances affects the availability of human resources, materials, and equipment. It means that finances can be considered both as an independent and dependent variable, where it has a major effect on other variables.

This observation adds strength to the theoretical framework because of the interaction between the independent variable and the dependent variable through the mediating variables.

5.2.3 Time Pressure and Forced Leadership Styles

There was a huge restriction of time for the implementation of flexible leadership styles. Due to time pressure, leaders were forced to focus more on completing the tasks and not on developing the employees, hence being directive or autocratic.

The findings contradict those of the Situational Leadership Theory, which states that leaders can change their leadership styles depending on their followers' needs. This implies that some factors external to the leader's control may interfere with the process of leadership style adaptability.

As such, this research contributes to theory development through the introduction of resource limitation as a mediating variable.

5.2.4 Manpower Shortages and Reduced Delegation Capacity

It was established that manpower deficiencies constrained the delegation of activities by leaders, causing high workloads and poor supervision. Leaders often engaged in different functions, which contributed to fatigue and inefficiency.

The problem of unskilled labour in the trade sector was also another management issue, particularly when trying to maintain the quality of work. This is in line with the findings of earlier research on the importance of human capital for project success.

5.2.5 Material, Equipment, and Information Constraints

As a result of the lack of materials, managers were forced to decide whether to sacrifice quality for progress, which came before quality. The lack of appropriate tools resulted in too much manual labour, making the task more difficult and unsafe. For instance, such informational elements as the lack of an accurate sketch and misunderstandings had great relevance since they resulted in work being repeated, wasting time and making the task inefficient. It should be mentioned that one of the key characteristics of informational elements is that they are interdependent; for example, poor communication led to haste, which in turn created financial difficulties.

The interdependence reinforces the view that leadership issues in construction have a systemic origin.

5.2.6 Interaction Effects among Constraints

Another important point to consider is that resource limitations are interrelated and not independent of one another. In some cases, there was pressure in terms of time while at the same time there were few personnel to work on tasks. This was especially problematic as it was difficult to meet deadlines due to a lack of workers. In addition, monetary constraints frequently resulted in shortages of materials, which in turn caused more delays and monetary problems.

5.3 Integration with Literature

5.3.1 Alignment with Nepalese Construction Studies

The results from this study are very much consistent with existing studies done on the construction industry of Nepal as they all find the same reasons for delay and project inefficiency among other factors. The common factors identified include lack of finance, shortage of materials, and ineffective communication. According to previous studies conducted by Bhattarai (2023), Giri et al. (2025), and Timilsina et al. (2020), among others, payment delays, poor planning, and ineffective coordination have been found to be prevalent in projects conducted in Nepal.

In terms of confirming the findings, the current research goes beyond previous work in the way that it places greater emphasis on leadership behaviour when under certain constraints. Where previous literature sees financial, physical, and communication difficulties as purely technical and management-related matters, this research shows that they also serve as behavioural incentives that influence the behaviour of the leader in

thinking, deciding, and acting. Thus, whereas financial instability does not just lead to the postponement of a project, but forces a leader to resort to reactionary tactics involving the use of personal resources and compromise of standards, leading to changes in his/her behaviour. It is shown that in reality the difficulties described above do not occur in isolation from one another. Material constraints often arise out of financial instability, while poor communication contributes further to delays and rework. This integrated view offers a broader perspective than the fragmented approach seen in previous literature.

Another important contribution from this study is the identification of informal approaches used by construction managers in Nepal to cope with challenges in their projects. While prior studies acknowledge the flaws in the process, there is no discussion about the approaches taken to overcome those challenges. This study shows that the contractors use informal approaches like credit purchases, verbal contracts, and flexible scheduling among other things, revealing a gap between project management theory and practice.

In the current study, the distinction between the main and sub-contractor experiences is highlighted, which has been ignored in previous Nepalese construction re-searches. In all previous studies, contractors have been considered as a single entity. Yet, the present study shows that resource constraints can be unique based on the hierarchy of the contractors within their firms, hence making sub-contractors financially dependent.

Overall, even though the outcomes from this study are similar to those that have been produced in Nepalese construction literature on the basis of management problems encountered by constructors in projects, this study makes a valuable contribution by addressing such management problems as hierarchical and systemic problems related to leadership, behavioural adjustment, and resource limitations.

5.3.2 Leadership under Resource Scarcity

Conclusion drawn from this investigation presents an impressive case for literature stressing the effects of scarcity of resources in influencing leadership behaviours, especially within the construction context. Literature such as that written by Toor & Ofori (2008), for instance, maintains that leadership in the construction industry demands not only technological expertise but also management of uncertainties and resource scarcity. The latter is proven to be true since residential construction project leaders in Nepal face scarce resources always.

5.4 Relationship between Independent and Dependent Variables

Leadership was the dependent variable, while the six resource constraints, such as finances, time, labour, materials, equipment, and information, were the independent variables. The results obtained here provide substantial backing to the theoretical framework developed for the research question under discussion. Each constraint had an impact on decision-making individually; however, taken together, the whole situation posed a tremendous challenge to the leader. The conclusion drawn from the findings is that the efficiency of the leadership process does not only depend on the ability or style of the leader but also on the presence and availability of the resources.

Although previous researches recognize the presence of resource constraints, many of them assume that leaders maintain certain levels of strategic capability when faced with such problems. In this regard, the results of this research show that under resource constraints, the role of the leader becomes more reactive than proactive. This implies that the responses of the participants included measures such as delay in payment, cutting back on labour cost, use of lower quality materials, and using own money to keep things going. Clearly, this shows that leaders are not just managing resources, but are instead addressing emergencies constantly, making strategic leadership difficult to accomplish.

The above scenario can be described as “survival-oriented leadership”, where the main focus changes from achieving success to ensuring the continuity of the projects. As such, the above finding has important consequences for the effectiveness of leadership since such orientation makes it difficult for leaders to concentrate on areas such as quality, innovation, and leadership development within teams. Despite emphasizing the role of visionary and transformational leadership in construction, existing researchers have found these capabilities to be challenging to develop under chronic resource constraints. Theoretically speaking, this calls into question the existing presumption that the effectiveness of leaders is determined by their personal capabilities and styles. Indeed, according to the research conducted for the present paper, resources constrain leadership choices, thus proving that leaders should be analyzed within the framework of their operational environment. This contribution to theory shows that leadership in developing construction projects involves working through not only people but also systemic limitations.

Additionally, the resource deficit appears to generate the vicious cycle, which forces managers to make short-term decisions that have a number of negative consequences. Thus, inefficient management of resources leads to low project quality, rework, poor relationships between stakeholders, and other obstacles that are frequently neglected in the literature, where resources are considered in isolation.

Overall, though the results of the study seem to confirm the existing theories about resource limitations and their impact on leadership, they still contribute to the literature. Indeed, the main contribution of this paper is the discussion of how resource deficits influence leader's behaviour in construction projects and force it to adapt.

5.4.1 Informal Leadership and Improvisation

In addition, the findings of this research agree with previous studies which describe leadership within the context of Nepal's construction industry as a rather informal process

that is highly dependent upon experience. For instance, Niroula (2025) identifies a lack of formalized structures, management systems, and planning processes in smaller to medium scale construction projects. This study proves this idea by showing that leaders frequently employ negotiation, improvisation, and experience-based methods of solving daily problems.

The difference between this paper and others in its genre is that it provides us with a more holistic explanation for why such informal behaviors are motivated. It is evident here that, unlike others, informality in this specific instance does not just arise out of the cultural setting, but rather arises due to necessity because of certain conditions. Therefore, as a result, such environments make it very difficult to implement any type of formal approach to manage the construction projects. Such approaches include project schedule development, contract management, and risk management techniques. Such situations include where individuals use oral agreement instead of a written one, developed relationships with the suppliers for the supply of the materials on credit basis, and planned their work time on the availability of the resource. Though it helps solve some of the problems, there are still many disadvantages involved.

Regarding the significance of the conducted research in terms of critical theory, it is necessary to say that the implementation of the leadership style under discussion in the field of construction proves to be one of the most significant disadvantages of the construction management model, specifically, a significant difference between the theoretical framework and real-life practice. There is considerable focus on the process of planning and communication channel establishment within project management theories.

The next significant implication is that informal leadership in the construction sector is highly related to credibility and social capital in regard to the development of relations with other people. It is necessary to establish effective relations in order to organize a work process and resolve different problems. In this way, social capital is crucial for construction management in developing nations. Although there are numerous advantages

in this regard, the research also highlights the shortcomings that can arise due to informal leadership. Absence of formal processes makes misunderstanding and inconsistencies quite probable and makes organizations more susceptible to conflict situations. This point is particularly relevant for multi-stakeholder projects because of the absence of formal procedures that may adversely affect project outcomes.

In conclusion, apart from confirming that leadership in Nepal's construction industry is indeed characterized by informal elements, which can be observed in literature, the study contributes substantially by revealing that the informal nature of leadership is not voluntary but structural in nature. The study has also highlighted the pros and cons associated with improvisation.

5.5 Integration with the Conceptual Framework

The theoretical framework developed in this study has established six major resource constraints, namely financial, time, manpower, material, equipment, and information, as the major determinants of leadership behaviour in residential construction projects. Based on the analysis, the findings support the proposed theoretical framework since all the six major resource constraints have been found to significantly affect leadership decisions and behaviour. However, an in-depth assessment of the findings indicates that the assumptions made in the theoretical framework regarding the nature of resource constraints are too simplistic. According to the study findings, all the resource constraints are interrelated such that when one resource constraint is present, it creates other constraints. Specifically, financial constraints have been found to limit the availability of materials and labour. Similarly, lack of information about the tasks and procedures involved in the construction process has created the need for rework, which has resulted in time and cost constraints.

Another important realization from the findings is the importance of hierarchy within the contracting relationship in terms of how the aforementioned factors influence it. The theory in its initial form assumed that there would not be any difference in the way in

which constraints were experienced based on one's position within the project organization. Nevertheless, it is now clear that the two groups are subject to different types of challenges due to their positions within the hierarchy. Primary contractors tend to encounter coordination-based constraints, which involve having to coordinate a number of parties, dealing with the budgeting process, and ensuring that the projects continue uninterrupted. Secondary contractors, on the other hand, face restrictions due to dependency because their resources of money, materials, and information depend on their superiors. Thus, the theory must consider the organizational structure.

The relationship of interdependence on hierarchy is an issue in the sense that it exposes some other important issues faced in the construction project setting. These secondary contractors face a situation of "accountability without authority." This simply means that these people have the responsibility of getting something done, yet they have no control over the necessary resources for the desired outcome. This gives rise to the concept of "downward risk transfer." According to this concept, the risk involved in a particular situation is transferred to the bottom level of the organization hierarchy, especially financial risks, thus making it difficult for the lower-level personnel to undertake their role effectively. The conclusion drawn from this research clearly suggests that the effectiveness of leadership cannot be considered in isolation of the context in which it occurs.

5.6 Comparison between Contractor Types

From the results, it is evident that there is a definite difference in the structure of the two types of contracts as far as challenges due to resource limitation is concerned. The challenges faced by the primary contractor are mainly coordination-based because the responsibility of coordinating various construction activities, dealing with clients, and ensuring successful delivery of the project rests on him. In other words, the position of the primary contractor demands a leader who can coordinate all aspects such as financial management, time allocation, and communication among others. On the other hand, the challenge facing secondary contractors is mainly dependency-based because their

performance is largely dependent on the actions of the primary contractor in regard to payments, materials, and information among others.

The most important contributions from this study include the discovery of accountability without power of secondary contractors. Despite their being answerable to deliver quality performance on specified periods, they do not have any powers of controlling the necessary resources needed to ensure such performances. Delayed payments from primary contractors affect their financial situation, making it difficult for them to make timely payment to labourers or procurement of necessary materials. On top of this, delay on construction works carried out before them affects their working hours, forcing them to perform while under stress. In addition to affecting their productivity and efficiency, this situation may lead to poor quality in their performances as well as conflicts in the working environment. Secondary contractors are not free in their leadership like primary contractors because they do not have enough freedom to make decisions. The research has made significant contribution to the literature by shedding light on the aspect of risk and power asymmetry in construction projects, which is not well captured in previous construction research conducted in Nepal.

This point is demonstrated further by table shown below, where the problems faced by each contractor type are examined to highlight the differences. Primary contractors deal mostly with coordination, budgeting, and information exchange, showing that the three are critical aspects of project management. Secondary contractors, on the other hand, face much more crucial problems, which include financial reliance, lack of specific trade labourers, and information incompleteness. Particularly, the disparity in “information generation and control,” and “information incompleteness reception” is significant in reflecting the power imbalance within the construction industry, considering the gap in information. Overall, Table 5 above illustrates the differences between the two types of contractors in the same environment in relation to leadership problems.

The critical difference is that secondary contractors experience problems related not only to co-ordination but also to dependence. Where primary contractors’ primary prob-

lem is co-ordination among the various construction activities, the problems of secondary contractors stem from their dependence on primary contractors for their payments, materials, and data, thus resulting in uncertainty and delay in their activities. Secondary contractors have a problem of “authority without power” in that they are responsible for the completion of their activities without having full control of their resources. This is very important because, in the past researches done on Nepal’s construction industry, there have been many cases where only the delays in projects have been pointed out without considering the different roles played by main and sub-contractors.

Table 7. Comparison Between Primary and Secondary Contractors (Own Survey -2026)

Dimension	Primary Contractors	Secondary Contractors
Primary challenge type	Coordination-driven	Dependency-driven
Financial challenge	Managing overall budget, client payment delays	Payment delays from primary contractor
Time challenge	Coordinating multiple teams	Delays from other trades compressing work time
Manpower challenge	Overall labour availability	Trade-specific skilled worker shortages
Information challenge	Creating and communicating information	Receiving incomplete information
Accountability	Full project accountability	Accountability without authority

5.7 Theoretical Implications

This study makes several theoretical contributions to the leadership and project management literature.

The study has made two contributions toward Situational Leadership Theory. Firstly, the paper offers proof that constraints on the part of external resource availability may be able to override the leader's capacity to adapt style to follower readiness. It may, indeed, lead to negative consequences to the extent that, if leader has time pressure, directive

style is forced for a group that may need coaching or supporting style, regardless of leader's competence. That means, situational leadership theory needs to consider external resource availability as a moderator variable of the relationship between style and its effectiveness.

Second, the study provides a minimum level of resources that must be met before Transformational Leadership is no longer possible. Leaders cannot have time for Individualized Consideration when focused on surviving to meet a task demand, nor can they "get by" on Idealized Influence when they have to settle for subpar quality and cover the cost difference. This leads to the hypothesis that transformational leadership may be less context-independent than the theory suggests.

Third, it adds to the existing Project Resource Management Framework, as it records the effects of resource limitations on contractor hierarchy. While it's assumed that a single project organization exists for resource management, resource management is diffused amongst primary and secondary contractors for residential construction in Nepal, leading to interdependency and associated issues which are not discussed by the existing framework.

Fourth, it extends research on construction delays by identifying variations in contractors' responses. This study, unlike former works which did not separate contractors by role, analyses contractor replies without any differentiation for role. The results in this paper illustrate that resource constraints do not affect contractor's responses equally depending on their role.

5.8 Practical Implications

The findings have several practical implications for residential construction stakeholders in Nepal.

For the primary contractor the research showed that planning ahead for the availability of resources (through budgets, staged acquisition of materials and sharing of equipment) will avoid many ad hoc crisis decisions. For primary contractors, contingency plans should be developed for payment delays and agreements should be in place with at least two different material suppliers and for all data to be documented well to avoid duplication of effort.

In the case of secondary contractors, they require ways to control dependence on primary contractors. Such as requesting partial payments prior to the commencement of work; cultivating ties with more than one primary contractor, which provides the opportunity for more than one source of income; ensuring all change orders and communication with primary contractors are in writing; cultivating a network of referrals.

The research indicates that for the client/homeowner, delays in payment from client to contractor trigger a domino effect throughout the contractor system which impacts time and quality. Those clients who pay on time and hold reasonable expectations for cost, time, and quality will most likely receive optimal results. Those who exert intense pressure to minimize cost and/or time tend to create tension in the system which is undesirable for good results.

To the policymakers, this study indicates that institutional support to the small contractors, such as access to credit for acquiring construction materials, availability of standard contracts safeguarding the subcontractors, and a process to solve the problems of delayed payments, could significantly lessen the quality compromises discussed here. The fact that more than 30,000 small construction projects suffer due to scarcity of resources (Radio Nepal, 2026) shows the need for systemic intervention.

It is also able to highlight relevant skills of leadership required to construction practitioners for training purposes, such as financial planning under uncertainty, ability to adopt

flexible leadership style to different situations, handling conflicts and providing clear information as well as keeping the workforce motivated despite the scarcity of resources.

5.9 Alignment with Research Questions and Objectives

In this research, the aim was to find out how resource constraints have an impact on the leadership practices adopted by project managers in residential construction projects in Nepal. As evidenced from the results presented in this chapter, there is high consistency between the research problems and objectives and what we have found out. The first major research question asked for the identification of the characteristics of leadership challenges in an environment of scarce resources. Our findings make it clear that the practice of leadership is highly influenced by six different types of constraints: financial, time, manpower, material, equipment, and information.

The second objective was to examine the difference in experiences of primary and secondary contractors, which has been successfully met. The study revealed the existence of different patterns of constraint in the case of the two types of contracts while primary contractors encounter coordination constraints, such as team coordination, budgeting and managing information, secondary contractors face dependency-related constraints. The main discovery can be described as the "accountability without authority" principle. This principle emphasizes the imbalance in power relations on construction projects and adds to the discussion about leadership. Thus, the main goal has been achieved.

Finally, the third objective has been met since the analysis of coping techniques used by construction professionals proved the effectiveness of various methods of dealing with constraint, such as improvising, compression of schedule, labour management and adjusting information flows. While the mentioned techniques guarantee successful completion of projects, they may pose a threat to quality and long-term sustainability. Therefore, one can say that the targets set forth in the hypothesis have been achieved through the research conducted.

In summary, it can be said that this chapter has been successful in proving the accomplishment of all the objectives set for this study. The results are not only able to provide answers to the research questions raised but are also able to add value to existing literature by combining practical evidence with theories. The consistency between the research design, analysis of data, and discussions is able to enhance the reliability of the research.

5.10 Chapter Conclusion

In this chapter, the results found in Chapter 4 have been discussed critically by making sense of them from an interpretation point of view in the light of extant literature and the study's theoretical framework. It is clear from the findings that the process of leadership in construction residential projects in Nepal does not merely depend on one's ability but is heavily impacted by structural resource limitation issues as well.

The first contribution made in this chapter is related to the recognition of the interrelationship amongst the resource limitations and their inequality experienced at different levels in the hierarchy of contractors. Dependency and "accountability without authority" faced by secondary contractors add to the leadership problems of construction projects.

Another contribution made in this chapter is that resource limitations affect the adaptability and application of leadership theories. These resource limitations make leaders incapable of adapting and practicing their leadership styles.

All in all, this chapter has established a linkage between theoretical discussion and empirical findings. It provides the basis for discussing conclusions, recommendations, and future scope of research in the next chapter.

6 Conclusions and recommendations

6.1 Conclusions

The current study aimed at investigating the leadership issues faced by construction professionals in residential constructions with limited resources in Nepal. Through a qualitative interview with 30 participants, including 16 prime contractors and 14 secondary contractors, the study identified six types of constraints that impact leadership actions and decisions in residential constructions in Nepal. These include financial constraint, time constraint, manpower constraint, material constraint, equipment constraint, and information constraint. The results indicated that leadership in residential construction in Nepal is largely defined and constrained by the structural factors that prevail in the industry.

6.2 Answering the Research Questions

The first research question was about the leadership problems that arise from primary contractors. According to the research findings, most of the leadership problems associated with primary contractors result from coordination issues. Primary contractors need to coordinate several teams, communicate effectively among all parties involved, and balance between costs, time, and quality of work done. But, instability in the financial state, especially the lack of payment from clients, has a knock-on effect that causes problems in managing labour, getting construction materials, and planning the project altogether. Such situations make leaders resort to authoritarian and task-oriented styles of leadership even where supportive styles should be applied.

The second research question focused on how primary contractors deal with these constraints. According to the findings, contractors make use of both planning and improvisation methods to cope with the identified limitations. Firstly, they try to prioritize important tasks, conduct negotiations with vendors, and plan their cash flows with regard to sequential material deliveries. Secondly, they implement reactive measures including reallocating labour resources, sharing equipment among various projects, and intensifying supervision via regular site visits. Moreover, sometimes the quality of materials is sacrificed when installing building components in places that are hard to see.

The third research question examined the leadership difficulties faced by secondary contractors. In contrast to primary contractors, difficulties facing secondary contractors are largely driven by dependencies. Their operations are highly contingent upon the decisions taken by primary contractors, especially in areas like payment, provision of materials, and exchange of information. Payment delays lead to financial strain, often compelling secondary contractors to work under conditions of cash shortages or borrowing through unorthodox means. Furthermore, delayed processes in previous phases of construction leave secondary contractors with less time than necessary to carry out their specialized tasks. In addition, lack of information causes mistakes and re-work. Overall, secondary contractors face an operating environment that could be characterized as “accountability without authority.”

6.3 Synthesis of Findings

The main learning point from the current research is the fact that there are no independent resource constraints, since they all interrelate and support each other. Thus, for instance, the lack of money limits access to resources and labour, which in its turn generates pressure in terms of time management. Moreover, a lack of information flow may lead to the necessity of redoing work, which means extra spending of money and time. This connection between constraints only proves that leadership issues in construction are part of a system rather than individual occurrences. A leader does not just respond

to individual issues; he or she gets caught up in an interwoven network of pressures that constantly overlap with each other. So, the actions of construction leaders are highly adaptive, yet highly reactive too.

6.3.1 Practical Significance

The practical implementation of the findings of this research can therefore be seen in finding out those areas where improvements need to be made in constructing houses on a budget. It should be stated here that based on the findings of the research, it has been proved that leadership is an art that needs capability of the leader, along with finance and coordination.

6.4 Theoretical Contributions

Three major contributions have been made by this research to the fields of leadership and project management theory:

6.4.1 Extension of Situational Leadership Theory (SLT).

It has been found through the results of this research that limited resources from outside may hinder the process of choosing the right style of leadership. Resource limitations like that of time compel even efficient leaders to behave in directive ways even where coaching was required from their side.

6.4.2 Boundary conditions of Transformational Leadership.

This research has shown that the practice of Transformational Leadership necessitates a certain level of resources for its proper functioning. In cases where leaders are struggling

with budgetary problems, low quality of products, or high workloads, they are unable to offer personalized treatment and exercise idealized influence. This contradicts the claim that Transformational Leadership can be practiced in all contexts.

6.4.3 Extending the Conceptual Framework for Project Resource Management Framework (PRMF).

Based on the findings, it can be stated that resource management in the construction industry of Nepal takes place in a decentralized fashion. The division is present between the primary and secondary contractor. Hence, there is a problem associated with coordination. It is due to this reason that the current framework of PRMF lacks realism.

6.5 Overall Conclusion

To sum up, leadership in Nepali residential constructions is influenced by various factors including resource scarcity, organizational structure, and an informal approach to work. Leaders are expected to change their strategies according to different situations with the ultimate goal being survival rather than making a good decision.

Although adaptability is seen as a strength for Nepali residential construction leaders, this strength can be perceived as a lack of a stable system. Resource availability, better contract structures, and communication processes may solve some of the issues that have been mentioned. Otherwise, this list will remain relevant.

6.6 Recommendations

Based on the findings of this study, the following recommendations are offered for different stakeholder groups.

6.6.1 Recommendations for Primary Contractors

It is recommended that primary contractors use a proactive approach to managing resources in order to limit their dependence on reactive actions. These include preparing budgets before embarking on projects, focusing on important tasks, and using stages to procure materials to manage cash flow better. Having connections with different suppliers may assist in reducing the risk of being unable to pay for the materials, thus getting them on credit if necessary.

Time management is another area where contractors have to formulate work schedules taking into account any impediments in terms of weather conditions, shortage of material, and lack of manpower. Instead of adding manpower in situations of emergency, the contractor must pay attention to communication, division of duties, and coordination. When it comes to labour management, training and payment of wages in a timely manner are vital for maintaining productivity and loyalty, particularly when there are economic difficulties. It is also imperative to formulate overtime policies along with adequate remuneration and record keeping.

Lastly, contractors must not jeopardize structural quality for the sake of meeting project needs. In cases where there is a need for adjustment due to budgetary reasons, it must be documented and approved by the client.

6.6.2 Recommendations for Secondary Contractors

It is imperative for secondary contractors to use measures that minimize their dependence on primary contractors. One such measure involves negotiating for advance payment and even structured payments before the start of any work. Using contracts that spell out the terms of payment and the different stages of the project will help mitigate

issues related to late payments and uncertainty regarding payment schedules. Maintaining relationships with various primary contractors will also help diversify sources of income and minimize risk.

Documentation is important in mitigating risks related to lack of proper information. It is important for all instructions and any changes to the design to be documented in writing, and even illustrated by sketches, pictures, or any other form of evidence. Verbal communications make it easier for errors to occur and increase the probability of rework and conflict. Ensuring that all the instructions have been properly communicated to the workers is important.

Quality must not be compromised by secondary contractors even when there are financial challenges to their operations in the short term. Although the employment of inferior quality materials is likely to help solve financial difficulties, this is likely to tarnish their reputation in the long run and deny them business opportunities. In situations where they have no choice but to compromise on quality, the contractor should inform the main contractor about this and possibly make alternative suggestions.

6.6.3 Recommendations for Clients and Homeowners

The clients must be realistic about the connection between cost, time, and quality. The effort to cut costs or save time without changing the scope will have an impact on the projects. Payment to the contractors on time is necessary for smooth progress in the process. Any delay in payment will affect the whole process from material procurement to quality issues.

Lastly, it is necessary to finalize all drawings before starting the construction process. All alterations in the project should be documented along with the implications in terms of cost and timeline. It will also help if the client participates in site meetings.

6.6.4 Recommendations for Policymakers

The government needs to bolster institutional support for small-scale residential development by enhancing contractors' access to cheaper credit, developing standard contract agreements for their protection from non-payment, and providing a means for settling disputes quickly and efficiently.

Considering the magnitude of resource shortages within the industry, some form of government intervention is necessary to enhance the stability and success of projects undertaken in it.

Further, there should be compulsory training programs for contractors, which focus on managing finances and schedules and maintaining quality through proper subcontractor payments. Additionally, building inspections need to be enhanced to achieve compliance with all safety requirements.

6.6.5 Recommendations for Training Institutions

The importance of developing specific training courses for handling the situation in a resource-limited construction sector cannot be overemphasized. The focus of the course must be on skills such as financial planning in times of uncertainty, adaptive leadership, conflict resolution, and communication.

This will go a long way in making sure that the training is easily accessible through cost-effectiveness of the training process, as well as utilizing innovative means such as mobile training.

6.6.6 Recommendations for Industry Associations

Associations of contractors such as the Federation of Contractors' Associations of Nepal (FCAN) should establish peer mentorship schemes, linking senior and junior contractors together for the exchange of practical information and experiences. They should also strive for policy changes to safeguard the secondary contractors from delayed payments. Associations can help contractors through advertising standard contract forms, safer payment mechanism and transparent dispute resolution procedures.

Leadership in a restricted resources environment in residential construction should be flexible and pragmatic. Leaders should expect to make compromises but should work towards motivating their workforce while retaining their stakeholders' confidence. Effective leaders try to ensure that projects survive temporarily without jeopardizing their long-term reputation; it is imperative to appear dependable despite having to make concessions. Effective leaders work towards shielding their team from the adverse effects of limited resources and communicating realistic strengths and weaknesses to other parties. Everyone involved has a share of responsibilities, including the general contractor who requires better planning of its resources, the subcontractors who require better interdependency management, the clients who require realistic expectations in regard to duration, cost, and quality, the policy makers who require better assistance, and the training organizations who need to offer leadership courses under resource constraint circumstances.

Finally, increasing efficiency in the process of managing such construction projects requires cooperation from all relevant parties. Although each contractor may increase his managerial efficiency, more structural changes are required in order to improve efficiency in the process as a whole.

6.7 Limitations and future research

6.8 Limitations

First, the design is qualitative and has only 30 participants. Qualitative research has the benefit of providing deep, detailed knowledge about actual situations, but these cannot be generalized to all construction professionals in Nepal statistically. Qualitative research is about depth not sample size so it may not represent all geographic regions, sizes of projects, or work environments.

Second, this study is geographically specific and project specific. It was conducted only in Nepal and only around single-family residences. Nepal has some unique conditions including reconstruction after the earthquake, societal considerations, and institutional issues. Therefore, it cannot be generalized to other countries and cannot represent multi-story apartments or larger commercial/infrastructure projects, where more formal project management methods are in place.

Thirdly the data is self-reported. It is recorded via questionnaires. This can bring about several problems like portray themselves in a more favourable light than what is actually true social desirability bias and they may attribute blame to external causes rather than to themselves (attribution bias).

Fourth, cross-sectional design. The research was a cross-section survey where retrospective data regarding recent projects were gathered. In contrast, a longitudinal study tracing across a series of projects would address questions such as whether the leadership behaviour and management strategy would be adjusted based on past experiences. It would also examine if "quality sacrificing" would compromise the future reputation of a contractor, and what factors differentiate the contractors from escaping from resource-poor cycles.

Fifth, lacking objective measures for performance. The research did not obtain objective project performance indicators, such as actual versus expected completion time, variance in costs, quality examination findings and customer satisfaction reports. In order to prove any correlation between leadership strategies and the consequences of projects, these objective indicators are indispensable.

6.9 Future Research

First, future researches should apply both qualitative and quantitative approaches, with the inclusion of more respondents. Both primary and secondary contractors in the various parts of the country should be surveyed to discover how pervasive the problems are and to check the effects of constraints on project outcomes. Interviews could be used to elaborate on the reasons for the trend in a survey.

Second, future research should involve stakeholders within a single project. The clients, primary contractors, secondary contractors and workers on a single project should be surveyed to compare views of stakeholders. The survey would help to reveal what other stakeholders know or lack knowledge and demonstrate how communication gaps cascade among different stakeholders.

Third, longitudinal studies are needed. A 3-to-5-year longitudinal study of contractors, across more than one project, would illustrate development in leadership capabilities over time. It would highlight if early low-quality work had any lasting effect on future reputation and business and what factors are associated with certain contractors overcoming these issues whereas others may continue to experience them.

Fourth, Comparative studies of different countries. Further research should be carried out in other developing countries like India, Bangladesh, Sri Lanka, some African countries etc. By doing such comparative studies, it would be easy to distinguish the general

issues and constraints of construction in resource poor situations from the specific issues and constraints of construction in Nepal, and what role government policies play on the relation of resource constraint and leadership effectiveness.

Fifth, Positive deviant research. Research studies should also investigate what has gone right even with poor situations, i.e., identifying contractor performance as positive deviant and comparing it with the average performers. Studying such positive deviant contractors with poor project conditions who still manage to perform project at time and cost within the limit with quality could identify what specific practices, traits, behaviours are responsible for success so that they can be replicated by the general contractors.

Sixth, Intervention studies and action research. Intervention studies should also be carried out. These interventions could include leadership training, financial management training, skills on contract writing, access to credit support etc. Strong research methodology including randomized controls trials or quasi experiments should be adopted in such intervention studies to see their effectiveness.

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Appendices

Appendix 1: Coding Framework and Thematic Analysis

Theme	Code	Code Description	Example Quote (Respondent)
Financial Constraints	Payment Delay	Delay in receiving payments affecting workflow	"Delayed payment... slowed down the work." (R3)
Financial Constraints	Personal Financial Risk	Use of personal funds to sustain project	"Many times I had to use my pocket money." (R9)
Financial Constraints	Cost-Quality Conflict	Trade-off between affordability and quality	"Had to use low grade materials... difficult to maintain quality." (R1)
Financial Constraints	Supplier Pressure	Difficulty managing suppliers due to limited funds	"Suppliers demanding advance payments." (R5)
Financial Constraints	Profit Sacrifice	Reduced or no profit to sustain project	"When I provide good wages, then I have zero profit." (R16)
Time Constraints	Schedule Pressure	Pressure to complete work within tight deadlines	"Had to finish within 18 days." (R7)
Time Constraints	Coordination Delay	Delays caused by dependency on other teams	"Work depends on civil work... very little time." (R3)
Time Constraints	Rushed Work	Work completed quickly affecting quality	"Shuttering removed early... structure less strong." (R1)
Time Constraints	Overtime Dependency	Extended working hours to meet deadlines	"Worked extra hours to meet deadlines." (R3)
Time Constraints	Quality Compromise	Reduced quality due to limited time	"Difficult to maintain quality due to less time." (R1)
Manpower Constraints	Labour Shortage	Insufficient number of workers	"Shortage of skilled plumbers." (R3)
Manpower Constraints	Skill Gap	Lack of skilled labour affecting work quality	"Workers had different skill levels." (R5)
Manpower Constraints	Worker Absenteeism	Workers leaving or not reporting to work	"Workers left suddenly... major disruption." (R5)
Manpower Constraints	Work Overload	Excess workload on limited workers	"Had to work alone... very frustrating." (R10)

Manpower Constraints	Motivation Challenge	Difficulty motivating workers	"Hard to motivate workers for overtime." (R1)
Material Constraints	Material Shortage	Unavailability of required materials	"Materials were not available on time." (R3)
Material Constraints	Low-Quality Substitution	Use of inferior materials due to constraints	"Used low grade materials." (R19)
Material Constraints	Supplier Delay	Delayed delivery from suppliers	"Tile delivery delays caused stoppage." (R8)
Material Constraints	Workflow Disruption	Work stoppage due to material issues	"Work had to stop completely." (R3)
Material Constraints	Cost-Driven Selection	Material choice based on cost rather than quality	"Suggested cost-effective materials." (R5)
Equipment Constraints	Lack of Machinery	Absence of required equipment	"Didn't have dozer... used manpower." (R1)
Equipment Constraints	Manual Dependency	Reliance on manual work instead of machinery	"Used manual methods for work." (R1)
Equipment Constraints	Shared Equipment	Equipment shared across teams causing delays	"Tools shared across multiple teams." (R5)
Equipment Constraints	Productivity Loss	Reduced efficiency due to equipment issues	"Slowed down the work." (R8)
Equipment Constraints	Safety Risk	Increased safety risks due to lack of equipment	"Accidents due to lack of equipment." (R10)
Information Constraints	Unclear Drawings	Lack of clear design documents	"Drawings were unclear." (R3)
Information Constraints	Miscommunication	Poor communication among stakeholders	"Miscommunication created confusion." (R2)
Information Constraints	Lack of Documentation	Missing formal records or instructions	"No paper drawing available." (R1)
Information Constraints	Rework	Errors leading to repeated work	"Led to mistakes or rework." (R5)
Information Constraints	Decision Confusion	Uncertainty in decision-making	"Poor decision making due to lack of info." (R2)

Appendix 2. Summary Questionnaire

Survey on Leadership Challenges in Resource-Constrained Residential Construction Projects

Dear Participant,

I am Kusum Sharma, a Master's student in Industrial Engineering and Management, major in Strategic Project Management at the University of Vaasa. This survey is part of my thesis research on leadership challenges in residential construction projects under resource constraints.

This survey is intended for individuals who are currently working, or have recently worked, in residential construction projects as **primary contractors (main contractors)** or **secondary contractors (subcontractors)**.

Who are primary and secondary contractors?

Primary contractors are individuals responsible for overall project execution and coordination.

Secondary contractors are individuals involved in specialized tasks such as plumbing, electrical work, masonry, etc.

What are resource constraints in this study?

Resource constraints refer to limitations that affect project performance, including:

Cost (money) constraints – limited budget, delayed payments, or financial restrictions

Time constraints – tight deadlines and limited schedules

Material constraints – shortage or delay of materials

Equipment constraints – limited availability of tools and machinery, and many more constraints.

Labor constraints – shortage of skilled or unskilled workers, absenteeism, or low productivity

Information constraints – lack of clear instructions, incomplete drawings, poor communication, or delayed information flow

This survey consists of open-ended questions. There are no right or wrong answers, please share your experiences honestly.

Your participation is voluntary, and all responses will remain confidential and used only for academic purposes.

The survey will take approximately **5–10 minutes** to complete.

I sincerely appreciate your time and valuable contribution.

If you have any questions, please feel free to contact me at:

Email: x9284332@student.uwasa.fi

Phone no: +35844928426

** Indicates required question*

1. Name

2. Profession *

3. What is your contract type? *

Mark only one oval.

Primary Contractor

Secondary Contractor

4. Years of experience in construction? *

Mark only one oval.

Less than 2 years

2-5 years

5-10 years

More than 10 years

Instructions

Please answer the following questions based on your personal experience in construction projects. You may describe situations, challenges, or examples where relevant. Your detailed responses will help in understanding real-world leadership challenges.

5. What leadership challenges did u face in money constrained residential construction project?

6. What strategy did u apply to minimize or overcome the problem in money constrained project?

7. What leadership challenges did u face in time constrained residential construction project?

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8. What strategy did u apply to minimize or overcome the problem in time constrained project?

9. What leadership challenges did u face in manpower constrained residential construction project?

10. What strategy did u apply to minimize or overcome the problem in manpower constrained project?

11. What leadership challenges did u face in material constrained residential construction project?

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12. What strategy did u apply to minimize or overcome the problem in material constrained project?

13. What leadership challenges did u face in equipment constrained residential construction project?

14. What strategy did u apply to minimize or overcome the problem in equipment constrained project?

15. What leadership challenges did u face in information constrained residential construction project?

16. What strategy did u apply to minimize or overcome the problem in information constrained project?

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