

Determinants of construction enterprises' performance: Empirical study from Nepal

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Abstract - The purpose of this study is to investigate the determinants of business performance of construction firms in Nepal. The determinants considered in this study are financial conditions (FC), climatic conditions (CC), political conditions (PC), and regulatory provisions (RP). Similarly, the outcome variable is the business performance (BP) of construction firms in Nepal. The study used a quantitative approach to investigate the formulated hypotheses. This study utilized survey questionnaires of 216 (61.53 percent) respondents as useful questionnaires out of 351 distributed questionnaires. Thus, primary sources of data were used adopting purposive sampling methods. The statistical tools used in the study were descriptive and inferential analysis. The finding of the study showed a positive and significant influence of financial conditions, climatic conditions, political conditions, and regulatory provisions on the business performance of firms of construction enterprises in Nepal. The findings of this study are useful to construction business owners, small and micro-entrepreneurs (SMEs), policymakers, banks and financial institutions (BFIs), regulators, and other stakeholders.

Keywords: climatic conditions, construction enterprises, financial conditions, political conditions, SMEs, sustainability

1. Introduction

Business performance measurement (BPM) is an essential instrument that can increase information capture and, as a result, improve construction performance at the project and corporate levels. By recording and evaluating what occurs in the company environment, particularly through its clients, staff, suppliers, partners, and emerging technologies, BPM advances the growth of a learning organization (Olve et al. 1999). Moreover, business performance measurement enhances management techniques. It gives vital information by making it possible to regularly monitor



activities at various organizational levels. Strategic post-mortem and evaluation are informed by performance measurement (Jackson and Palmer 1989). Additionally, a business performance measurement (BPM) system is a collection of interconnected financial and non-financial metrics intended to give management critical insights into the company's present situation and potential future growth (Barford, 1999).

In addition, the global construction market continues to expand. In this regard, the worldwide construction industry's size increased from 9.5 trillion USD to 11.4 trillion USD between 2014 and 2019, for a two-year compound annual growth rate of 3.71 percent providing a forecast of the future growth prospects of the global building industry (Statista, 2022). This projection of the construction sector worldwide is expected to generate a total of USD 17.5 trillion by 2030, representing an 85 percent increase from 2014 and a compound annual growth rate of 3.9 percent. Interestingly, from 2016 to 2030, the global construction industry is estimated to produce a total of US\$212 trillion.

Moreover, the construction market is projected to grow significantly, increasing from a predicted value of USD 7.28 trillion in 2021 to USD 14.41 trillion by 2030. This growth represents a compound annual growth rate (CAGR) of 7.3 percent. Thus, the construction sector encompasses a wide range of activities, including the construction of roads, public utility infrastructure, and the ongoing maintenance and repair of buildings and other structures. It also involves structural modifications to external walls, beams, and load-bearing walls. Each construction project features its distinct planning, financing, design, execution processes, and enhancements for maintenance and repairs. Therefore, the construction market consists of the revenue generated by businesses, partnerships, and sole proprietorships engaged in engineering and construction projects, such as building roads and utilities (CMR, 2022).

In the context of Nepal, it is bordered to the north by China and to the east, west, and south by India. It lies between latitudes 26° 22' and 30° 27' north and longitudes 80° 4' and 88° 12' east. It is 147,516 square kilometers in size. Nepal may be broadly divided into three regions: terai, hill, and mountain. According to the 2021 census, 29.19 million people are living in Nepal, with 66.86% of them living in urban areas (CBS, 2021). Particularly, during the 1950s, India encountered significant challenges regarding infrastructure and industrialization, as highlighted (Baral, 1971). Interestingly, a key factor contributing to these challenges was the limited presence of professional engineering consulting enterprises and private civil construction enterprises, resulting in civil works primarily being carried out by government-employed individuals.

Similarly, the construction industry in Nepal contributes approximately 10 percent to the country's GDP and consumes nearly 35 percent of the government budget. Alongside increased public funding, civil construction projects have also expanded significantly. This sector is expected to create employment opportunities for around one million people. Furthermore, almost 60 percent of the development budget is allocated through contractors (FCAN, 2022). In Nepal, capital expenditure has consistently posed challenges. Most capital spending occurs in the final quarter of the fiscal year, often rushed to meet spending goals, while initial months see slow capital outlays. Capital expenditures encompass costs associated with building, infrastructure development, and other industries that enhance the nation's ability to generate real capital. The government's capital budget includes funds designated for civil works and for purchasing land, buildings, furniture, vehicles, plants, and machinery. Low levels of capital spending create significant barriers to economic growth in a country like Nepal, where infrastructure is severely underdeveloped. This lack of investment delays improvements in living conditions for the populace.

Moreover, Nepal is entering a new phase of development aimed at creating a more prosperous and equitable nation. To achieve this goal, development activities must accelerate considerably beyond current levels to promote inclusive growth and equal employment



opportunities, ultimately leading to poverty reduction. The construction industry, including sectors such as roads, airports, irrigation, hydropower projects, real estate, housing, and public-private partnerships in infrastructure development, plays a critical role in a nation's economic advancement. Nepal's construction industry holds significant potential in these areas, presenting multiple opportunities for development and progress.

The initial purpose of the Industrial Enterprises Academy (IEA) Act, of 1974 AD was to define the term 'Contractor' and establish a framework for the classification and registration of contractors as construction entrepreneurs. Under this act, construction enterprises must registered with the Government of Nepal (GOV/N), Ministry of Works and Transport and are classified as A, B, C, or D based on factors such as their technical workforce, the value and volume of their work, and their machinery and financial resources. Although Nepal's construction industry has a relatively short history, having begun only after 1951, its development accelerated following the implementation of the first five-year development plan in 1956. In 1957, the government of Nepal recognized construction as a "Priority Sector" industry in the Industrial Resolution.

The theory of entrepreneurship was first developed by Mishra and Zachary, (2014) both focused on entrepreneurial value creation that examines the core aspect of the entrepreneurial process by taking into account a two-stage value creation process and a proper framework. The box for the entrepreneurial prize and the discovery of an outside opportunity are said to be the major motivators for the entrepreneur throughout the initial phases of venture formation. This theory enhances the entrepreneurial behavior of construction enterprises that directly influences on profitability and sustainability.

The entrepreneurial discovery hypothesis was first presented by Kirzner Shockley and Frank, (2011); and Schumpeter and Kirzner (1973), who emphasized the crucial function of the entrepreneur in eliminating price discrepancies and establishing market equilibrium. The profit-making motive of purchasing items at a discount and reselling them at a premium drives the entrepreneurs. Kirzner holds the notion that market prices are set by business entrepreneurs. Consequently, the market's potential profit prospects drive the entrepreneur to a designed shape. The several factors consisting of economic conditions, climatic conditions, political conditions, and government regulatory provisions while being favorable can contribute to the economic growth and profitability of the business firms.

Construction businesses are now widely recognized as critical to the socio-economic development of the country (Contractor et al., 2020). Infrastructure projects are essential for the functioning of a modern economy and are typically built and maintained by contractors. Key aspects of infrastructure include roads, bridges, schools, hospitals, and other structures that support economic development. Furthermore, construction enterprises often employ large workforces and contribute to the local economy through wages and taxes. As a result, the projects undertaken and the economic activity initiated in the country can significantly benefit a nation's economic development. Thus, infrastructure projects' direct and indirect effects on the economy strength promote greater economic growth and employment creation. Next, construction enterprises play an equally vital role in the growth process (UNCHS, 1996; Juanzon & Muhi, 2017; Asante et al., 2018). Juanzon and Muhi (2017), depicted that in the heart of the construction industry's development, these play a crucial role in urban and rural construction. However, research has found that institutional impediments and challenges are associated with financing this business category, which limits its growth (Larcher, 1999; Bondinuba, 2012).

Berardi (2013) stated that the primary obstacle to adopting sustainable practices in building projects is the disinterest among authoritative parties due to insufficient knowledge and communication. Albino and Berardi (2012) conducted three case studies that concluded collaboration among construction stakeholders is essential. This study emphasized the importance



of engaging suppliers and leveraging the design team's expertise in sustainable practices. Abidin (2010) conducted research in the Malaysian context and found that developers were hesitant to implement sustainable construction concepts due to a lack of understanding and cost constraints. Shen B. (2014) evaluated 87 projects in China and found that the socioeconomic issue received the least attention in their sustainability performance reports.

In the case of Chile, Serpell et al. (2013) found that larger organizations and infrastructure projects were more environmentally aware, while stakeholders in the building industry lacked knowledge about sustainability. Developers in both sectors were viewed as the least competent. Chew (2010) analysed Singapore's strategic initiatives, which included government support, legislation for R&D assistance, demolition regulations, and a fund for developing sustainable construction capabilities. In this regard, gaining access to bank loans has been identified as a significant obstacle to the growth of small businesses, both in developed and developing countries (Bosa, 1969; Levy, 1993; Keasey & Watson, 1994; Meyer & Meyer, 2017; Mehrotra et al., 2018). In general, this issue is also common among small construction enterprises in developing countries, hindering their ability to attract skilled workers and specialists, as well as to purchase or rent the appropriate equipment. Consequently, this limitation prevents them from securing more profitable projects. Moreover, banks often consider small business lending to be risky due to uncertainties associated with small enterprises, including high failure rates, vulnerability to market fluctuations, and economic downturns (Levitsky, 1993; Cortés et al., 2020).

Likewise, in both the commercial and public sectors, underachievement is producing significant dissatisfaction among industry clients (DETR 1998; Ngosong & Tonga, 2015). Projects have largely failed to meet deadlines, budgets, and quality expectations. To summarize, construction frequently fails to fulfil the needs of modern organizations, reducing their competitiveness in worldwide markets and rarely delivering the best value. In terms of predictability, cost, time, and quality, construction must enhance its performance and meet its objectives and aims (Ofori, 2009).

Olomi et al. (2008) investigate small and medium-sized enterprises (SMEs) face three primary financial challenges. The first challenge relates to the SMEs themselves, which includes issues such as a lack of knowledge and skills, an underdeveloped company culture, the mixing of personal and business matters, poor credit history, and limited exploration of available funding options. The second challenge is the shortage of qualified employees. The third challenge involves a lack of legal protection, national identification systems, and credit reference bureaus, and financial management. Additionally, Fatoki and Smit (2011) classified various internal and external factors as constraints for SMEs. Internal factors include business knowledge, collateral, networking, and managerial skills, while external factors encompass the legal system, crime and corruption, moral standards, and macroeconomics. Furthermore, Weidig (2011) points out that a lack of technical expertise among banks serving SMEs may also contribute to these challenges.

Balogun et al. (2016) found that construction enterprises in South Africa face an information barrier when interacting with banking institutions for resource management. Their limited managerial skills hinder their ability to obtain credit. These firms are expected to provide collateral, a cash flow statement, audited financial statements, and business strategies; however, many are unable to do so. Numerous respondents reported that securing loans is challenging, and those who were successful often found the loans to be unaffordable. It can be concluded that financial strength enhances the business operation and sustainability.

Similarly, Bondinuba (2012) conducted research in Ghana and discovered that small and medium-sized construction enterprises struggle to secure financing due to their inability to provide collateral and necessary information, such as audited financial statements. Additionally, a study by Ofori et al. (2017) indicated that construction enterprises in Ghana continue to experience



financial difficulties, with minimal progress made to address these challenges. Thus, the study concluded that proper financial management improves the financial condition contributing to the better performance of construction enterprises. Next, the challenges in adopting lean construction in the Kingdom of Saudi Arabia (KSA) are influenced by the socio-cultural, economic, and operational factors prevalent in the country. The traditional customs and conservative nature of the KSA as an Islamic society are the main obstacles to implementing lean construction, while the cost-related barrier is less of an issue due to the country's economic prosperity (Sarhan et al., 2018).

Furthermore, the government's position and support in the construction sector create challenges for management in low- and middle-income countries (Bashir et al., 2015; Cano et al., 2015). Inconsistent policy-making has also been identified as a barrier to waste reduction initiated by government action ultimately hindering the financial performance of enterprises (Bashir et al., 2015; Small et al., 2017). Additionally, fluctuating prices for safety-related materials used in construction projects – such as personal protective equipment, signs, boards, demarcations, and alarms – can hinder effective waste management (Bashir et al., 2015). Furthermore, government policies influence financial challenges, including inflation, professional compensation, and corruption, as well as the management of Corporate Data Warehouses (Bashir, 2013).

Hai et al. (2012) identified five significant barriers, including construction nature, traditional contractual arrangements, construction players, organizational characteristics, and construction management strategy. Hossain (2009) argues that coordination is a qualitative concept that is difficult to quantify. By combining different qualities with the main barriers to coordination, it becomes possible to measure coordination. Measurement criteria include both these qualities and significant obstacles. In the construction business, key coordination barriers are described in different ways and classified into specific categories for better comprehension. The study identifies five major impediments: the nature of construction, conventional contractual arrangements, participation in construction, organizational characteristics, and construction management strategies affecting the overall financial performance of construction enterprises.

Daba and Pitroda (2018) thoroughly analyzed the existing literature regarding the primary causes of delays in construction projects. The study also offered insights into typical characteristics of construction projects, which include project duration, cost, quality requirements, and various factors affecting project management such as cost, quality, quantity, and time. The findings revealed that the primary factors contributing to project delays include consultant-related delays, contractor-related delays, owner-related delays, external delays, and resource-related delays. More specifically, the study identified labor-related, construction material-related, financial-related, equipment-related, and project-related delay factors, along with their respective causes, as significant contributors to these delays and all these circumstances influences the financial performance of the enterprises.

Owusu-Manu et al. (2019) conducted a thorough analysis of 56 conference papers that examined the barriers to technology adoption in the construction industry. The researchers employed a method of barrier frequency to identify the most commonly reported obstacles that significantly affect project efficiency and waste reduction. The specific aim of the study was to enhance the convenience, security, and accessibility of facilities within an intelligent network. The findings of the study revealed that if no efforts are made to address the identified barriers, a persistent gap will remain. It is important to highlight that the emerging issues need to be addressed to boost the financial performance of the enterprises. Similarly, Muhwezi et al. (2014) examined the causes of delays in construction projects and their impact on project outcomes. They conducted a survey targeting consultants, engineers, contractors, and clients to gather their insights. Based on the responses received, the factors contributing to delays were ranked according to their importance. The study highlights the significance of effectively managing the challenges



that arise during a construction project and within its working environment to enhance overall project performance.

Amarkhil et al. (2021) and Gündüz et al. (2013) investigated the causes of delays in construction projects using the Relative Importance Index (RII) approach. They began by classifying the factors contributing to delays and identifying the most critical ones. The factors were then organized based on their level of importance, with the most significant ones prioritized. To overcome the constraints and delays in the construction process and to improve the transparency and efficiency of projects, it is essential to identify and eliminate obstacles. However, the studies did not propose specific solutions to address these limitations which could influence the financial performance of construction enterprises. Similarly, Egwim et al. (2021) and Muhwezi et al. (2014) investigated the factors that contribute to delays in construction projects and analyzed their impact. Both studies reached consistent findings, identifying six main variables that lead to construction project delays: project quality control, project scheduling or work programs, financial issues faced by contractors, political influences, site conditions, and price volatility that are directly linked to the better performance of enterprises.

Construction business firms most significant factor affecting project cash flows, with faulty design being the only factor more influential (Odeyinka et al., 2008). The nature of construction activities makes them susceptible to weather conditions, which can impact the productivity of construction enterprises. The severity of this weather influence varies depending on the type of construction job. For instance, rainfall has a considerable effect on highway construction projects because it affects soil conditions (Moselhi et al., 1997). On the other hand, temperature plays a critical role in pipeline installations, primarily due to its impact on weld fusion times (Shahin et al., 2011). The peculiar weather and environmental circumstances have a considerable impact on construction in Pakistan. The country's climate is highly unpredictable; part of the northern region is covered in snow for half the year, and the southern areas endure extremely hot and humid temperatures during the summer months. This variability poses a key risk for the construction industry. Additionally, heavy rains are common across many regions during the monsoon season and in winter, often causing delays in building projects causing its direct influence to the performance (Farid et al., 2020).

Therefore, environmental regulations and concerns can significantly delay construction projects because responsible parties must secure project approval from the Environmental Department during the planning and design stages (Bhavsar & Solanki, 2020). Additionally, implementing environmental protection measures, such as air quality control, noise control, and tree preservation, can create technical limitations that may hinder project progress. If timely authorization is not obtained, it may result in the entire project being delayed or unable to move forward, ultimately increasing both the cost and duration of the project hindering its effective performance on time (Bhavsar & Solanki, 2020).

Moreover, the construction business firm is heavily dependent on outdoor operations and labor, making it particularly susceptible to the effects of adverse weather conditions (Alshebani & Wedawatta, 2014). Weather events are a significant source of uncertainty that can lead to decreased productivity with low financial performance and delays in construction projects (Sebt, Rajaei, & Pakseresht, 2007). Approximately 45 percent of all construction projects are affected by weather, resulting in billions of dollars in additional costs (Senouci & Mubarak, 2016). These weather-related challenges can have negative repercussions for project stakeholders, including delays in schedules, reduced worker safety, and potential legal ramifications. Construction workers also face a variety of difficulties. To mitigate these challenges, several strategies have been proposed, such as implementing work/rest periods, encouraging hydration, rotating job roles, allowing self-pacing to avoid fatigue, providing anti-slip footwear, and offering heating facilities along with individual



infrared heaters that eventually link determining business performance for its sustainability (Karthick, Kermanshachi, & Namian, 2022).

Construction enterprises (CEs) are often significantly influenced by political conditions, particularly due to a lack of government rules, policies and support, sustainable building codes, and legislative commitment. The successful implementation of construction projects relies heavily on stakeholders, especially governmental bodies, enacting laws that promote collaborative sustainability initiatives. Governments need to develop policy papers that enforce sustainability practices across all development sectors. By gradually integrating sustainable design and building practices into new construction endeavors, governments and agencies can unlock a myriad of benefits that can boost sound financial performance (Djokoto et al., 2014).

Moreover, the construction business is especially vulnerable to bribery and corruption due to its vast scope and complexity, which involves multiple parties, extensive geographical reach, and diverse legal frameworks. Distinguishing between acceptable legal practices and corrupt behavior can often be challenging in promoting positive outcomes for enterprises. Therefore, political engagement has been recognized as a significant factor that encourages corruption within construction procurement processes revealing the barrier to the better business performance. Moreover, cultural attitudes toward authority figures can shape perceptions of corruption, and evolving societal norms may lead to a misunderstanding of ethical conduct, thereby facilitating corrupt practices (Kalyongwe et al., 2018).

Furthermore, previous research has shown that, under some conditions, political participation in bureaucratic processes might improve the implementation of public projects. According to Foster and Rosenzweig (2004), democratization can result in more effective targeting in municipal welfare programs. However, there are situations where politicians use their position over bureaucratic bodies for personal or political advantage, negatively impacting government effectiveness. Evidence explored from India, for instance, identity politics can undermine the efficiency of public expenditure demonstrates the numerous hindrances in the growth and performance of construction enterprises (Keefer & Khemani, 2009). Additionally, the empirical evidence from Brazil highlights the complex interplay between political influence and the quality and availability of public goods. While political involvement can expedite project initiation and development, it often compromises overall project quality and can result in resource misallocation for political benefits that drive construction companies' practices toward declining financial performance of construction firms (Ferraz & Finana, 2011).

The lack of coordination among relevant agencies like political parties, social activists, social mobilizers, and women groups during decision-making processes, can significantly affect the successful implementation of construction businesses. Thus, political intervention, particularly from political leaders, has been identified as a frequent cause of project failure. Infrastructure projects are particularly vulnerable to political risks, including regulatory and policy shifts, due to the involvement of multiple government levels, both federal and regional in the financial and operational performance of construction enterprises (Enshassi et al., 2010; Yap et al., 2021).

From various legal perspectives, corruption can be defined through moral, social, political, or economic lenses (Kalyongwe et al., 2018). Despite differing definitions, all forms of corruption encompass the misuse of public power for personal gain, violations of ethical standards, and prioritization of personal interests over professional responsibilities that affects the construction business firm degrading its performance (Rodriguez et al., 2005; Kalyongwe et al., 2018). Corruption undermines the effective operation of public procurement processes, fostering unfair competition within the market (McKevitt & Davis, 2015; Kalyongwe et al., 2018). The construction sector, particularly in government-funded projects, is acutely susceptible to corruption. Political influence has been identified as the second highest contextual factor contributing to corruption



within the procurement cycle of construction endeavors, following low accountability. Other significant factors include the failure to blacklist offenders, poor governance, inadequate punishment measures, and insufficient regulation exerting higher complexities to the construction enterprises and affecting their performance (Kalyongwe et al., 2018).

A well-defined legal and regulatory framework regulating environmental policies and waste management responsibilities encourages the adoption of construction waste reduction methods (Yuan, Shen, & Wang, 2011). However, in many low- and middle-income countries, the implementation of waste reduction strategies is often impeded by legal and regulatory barriers. Yuan et al. (2011) and Manowong (2012), advocated that existing challenges include the lack of regulations, difficulties in policy implementation, and the absence of enforcement mechanisms, all of which hinder progress in waste reduction within the construction industry that ultimately influence the performance. Moreover, various regulations govern construction projects, leading to legal restrictions. Work legislation, safety standards, and monitoring plans constitute significant legal constraints. For example, certain types of construction work may be legally prohibited on Sundays and public holidays. These legal limitations can result in project delays and affect overall timelines exerting challenges for securing profitability (Bhavsar & Solanki, 2020).

Similarly, some scholars have identified various financial, technical, and institutional reasons for reducing construction waste. One significant reason is the high cost of waste disposal, which makes using recycled materials a more attractive option (Chini, 2007). Chini also noted that the public may be more inclined to accept recycled aggregates if specific regulations governing their use were established. Construction companies that prioritize waste management often invest in this area by employing waste management professionals, purchasing waste reduction equipment, and providing training for their staff. On the technical side, reasons for waste reduction include challenges such as ensuring adequate site space for waste management, developing low-waste construction technologies, acquiring expertise in the use of recycled materials, and creating clear specifications and guidelines for utilizing these materials that potentially foster the performance (Agamuthu, 2008).

Next, evidence from Costa Rica has manifested laws governing waste management, but there is a lack of regulations to implement these laws, leading to a failure of government enforcement that degrades the performance of construction enterprises. Additionally, companies lack knowledge about environmental regulations and how to comply with them, which poses a legal barrier to effective waste management (Abarca-Guerrero et al., 2017). Moreover, a study conducted by Abarca-Guerrero and Leandro-Hernandez (2016) found that private initiatives in Costa Rica were involved in collecting various materials, such as metals, glass, wood, plastics, and gypsum, for reuse or recycling. However, these initiatives faced limitations that hindered the growth of a more efficient and effective recycling market for construction materials generating the risk to the financial performance.

Further, four factors contribute to almost 10 percent of joint venture legal risk, including previous legal troubles of one consortium member leading to conflicts, only one contractor fulfilling the project requirements instead of both, changing construction laws and regulations causing legal ambiguities, and contractual provisions resulting in legal issues. Research shows that joint venture legal risk is a common concern in infrastructure projects, with different studies reporting varying numbers of risk factors. Contractual terms pose the most significant risk in underground metro railway projects appearing the evidence from Singapore and legal risk is one of the significant concerns in joint venture projects that generates the barrier to sound financial performance (Zhao et al., 2013; Yu et al., 2018).

Moreover, regarding legal risks associated with construction projects, the study found that legal disputes between project parties during the construction phase ranked first at 46.58 percent,



followed by delays in operational advances due to legal proceedings and difficulty obtaining licenses and work permits. It should be mentioned that these dangers are of moderate relevance because all parties appreciate the need to resolve disputes before going to court and the resulting access to time-consuming justice at significant expense (Kim, Shakir, & Nasrulloeva, 2020). Additionally, because the necessary laws and regulations and the new building method evaluation standard are not flawless, a prefabricated construction project poses a greater policy and legal risk than a typical one. Prefabricated building necessitates a significant number of low-cost approval procedures. Furthermore, the government places a lower priority on lobbying, public acceptability of prefabricated construction is poor, and prefabricated construction may not be compatible with the local humanistic context, all of which pose dangers to the project (Li, Li, Huang, & Deng, 2017).

Next, due to the relatively low technical specifications in the construction sector, various issues have arisen because of the industry's rapid development, such as technological lags, low production efficiency, a flawed legal structure, and unregulated industry. It has introduced a variety of legal hazards in nature, particularly for associated businesses' operating methods. To fix these issues, steps must be taken. It's frequently linked to an illegal subcontract for a construction company's affiliated business. During the process, several legal risks have emerged, including civil disputes, administrative disputes, criminal disputes, and so on. Thus, favourable regulatory provision enhances good governance in business organization contributing to its growth and sustainable operation leading to profitability (Yang, 2015). Thus, the main objective of this study is to examine the determinants of construction enterprise performance in Nepal embracing the independent variables of financial conditions, climatic conditions, political conditions, and regulatory provisions and the dependent variable is business performance. Based on the literature review and previous empirical findings the following hypothesis has been formulated:

H₁: Financial conditions have a positive and significant impact on the performance of construction enterprises in Nepal.

H₂: Climatic conditions have a positive and significant impact on the performance of construction enterprises in Nepal.

H₃: Political conditions have a positive and significant impact on the performance of construction enterprises in Nepal.

H₄: Regulatory provisions have a positive and significant impact on the performance construction enterprises in Nepal.

2. METHOD

The study aimed to investigate the determinants of business performance of construction enterprises in Nepal. This study employed descriptive and explanatory research design to test the formulated hypotheses. The primary sources of data were utilized in the study containing the purposive sampling techniques. The cross-sectional data of 216 received useful data out of a total of 351 distributed structured questionnaires. The questionnaire was divided into two different segments comprising the first part as demographic information of respondents and the second with five-point Likert scale opinion-based questionnaires. The statistical tools adopted in the study were descriptive statistics, Cronbach's alpha, and regression analysis. Before starting the investigation, Cronbach's alpha was tested to evaluate internal consistency. A reliability test was run on both the individual variables and the entire collection of variables. With a Cronbach alpha score of 0.822 for standardized questions, the questionnaires' internal consistency is well demonstrated. According to the aforementioned table, the questionnaires have outstanding internal consistency, with a Cronbach alpha score of 0.880. Thus, the survey questions showed a high degree of internal



consistency. The multiple linear regression model for the performance of small contractors is given by:

$$Y = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + \epsilon \dots \dots \dots (i)$$

Where,

Y = Business performance (BP) of construction enterprises

x_1 = Financial conditions (FC)

x_2 = Climatic conditions (CC)

x_3 = Political conditions (PC)

x_4 = Regulatory provisions (RP)

ϵ = Error term

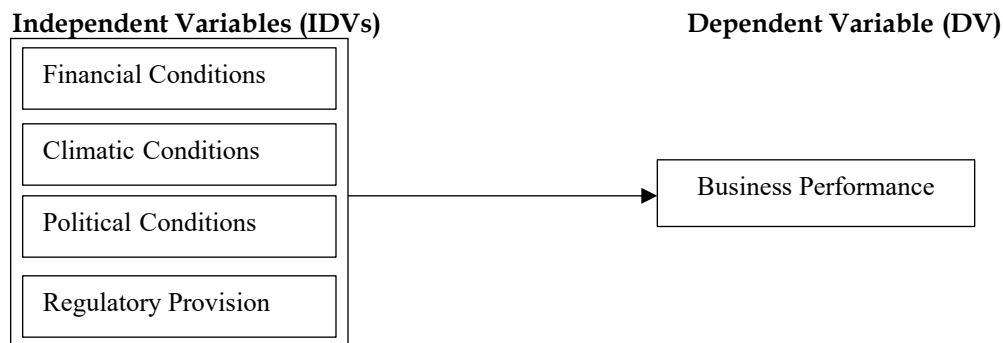


Figure 1. Conceptual Framework

Figure 1 shows the conceptual framework formulated for the study consisting the financial condition, climatic condition, political condition, and regulatory provision as independent variables and business performance as the dependent variable (DV). This framework is supportive of estimating the association and examining the impact of independent variables (IDVs) on dependent variables.

3. RESULTS AND DISCUSSION

3.1 Social and demographic profile of respondents

The social and demographic profiles of the respondents include contractors' class, age of the respondents, caste/ethnicity, marital status of the respondents, and educational status of the respondents. The following table shows the social and demographic profile of respondents used in the study.

Table 1 Social and Demographic Profile of the Respondents

Characteristics	Number	Percent
Age of the contractors (in years)		
20-30	4	1.85
31-40	64	29.64
41-50	76	35.18
51 and above	72	33.33
Caste/Ethnicity		
Dalit	19	8.8



Janajati and Adibasi	74	34.3
Others	123	56.9
Marital Status		
Married	201	93.1
Unmarried	11	5.1
Divorced	3	1.4
Widow	1	0.4
Educational status of the respondents		
Up to secondary education	60	27.8
10+2 Level	97	44.9
Bachelor Level	53	24.5
Master and above	6	2.8
Total	216	100.0

Table 1 shows the demographic characteristics of respondents. More than one-third of the contractors (35.2 percent) were from the age group 41 to 50 years. Further, almost one-third of them were from the age group 51 years and above, followed by 31 to 40 years, and the lowest percentage of the contractors were from the age group 20 to 30 years. More than half of the contractors (56.9 percent) were from a caste other than Janajati and Dalit. Just one-third (34.3 percent) of the contractors were from Janajati and Adivasi. Almost nine percent of the contractors were Dalit. More than nine in ten of the respondents were married, followed by unmarried (5.1 percent), divorced (1.4 percent), and widowed (0.5 percent). More than two-fifths of the contractors (44.9 percent) had +2 level or equivalent education followed by up to secondary education (27.8 percent), Bachelor Level (24.5 percent), and master's and above education (2.8 percent). It shows that very few construction business owners hold master's degrees and above education.

3.2. Regression analysis

Table 2 Regression Coefficient

Description	Beta	T-value	P-value	VIF
(Constant)	4.256	11.523	0.000	-
Economic condition	0.328	8.650	0.027	1.187
Climatic condition	0.434	12.961	0.033	2.670
Political condition	0.287	9.437	0.042	3.461
Regulatory provision	0.310	10.255	0.034	2.410
R-square: 0.731	Adjusted R-square: 0.748		F-value: 9.843	P-value: 0.000

Table 2 shows the regression coefficient of the linear regression analysis indicating the level of influence of predictors on outcome variables. The findings show a positive and significant effect of financial conditions on the business performance of construction enterprises ($\beta = 0.328$, $p = 0.027$). It means that a rise in the financial condition fosters the business performance of a construction enterprise. Further, a one percent increase in the financial condition increases the business performance by 0.328 percent. Similarly, the beta coefficient of climatic conditions showed a positive and significant impact on the business performance of construction enterprises ($\beta = 0.434$, $p = 0.033$). This shows that an increase in climatic conditions leads to an increase in the business performance of construction enterprises. As a one percent rise occurs in the climatic conditions, it boosts the business performance by 0.434 percent. Next, the beta coefficient of political condition



showed a positive and significant influence on the business performance of construction enterprises ($\beta = 0.287$, $p = 0.042$). It means that an increase in favorable and stable political conditions helps to enhance the sound business performance of construction enterprises in Nepal. Moreover, a one percent increase in stable or favorable political conditions in the country helps to boost the business performance of enterprises by 0.287 percent. Finally, the beta coefficient of regulatory provision showed a positive and significant impact on business performance ($\beta = 0.310$, $p = 0.034$). It demonstrates that an increase in supportive regulatory provision contributes to enhancing sound business performance in the country. Further, one percent increase occurs in the supportive regulatory provision bringing the changes in business performance by 0.310 percent.

3.3 Summary of hypothesis

Table 3 Summary of Hypotheses

Hypotheses	P-value	Remarks
<i>H₁: Financial conditions have a positive and significant impact on the performance of construction enterprises in Nepal.</i>	0.027	Confirmed
<i>H₂: Climatic conditions have a positive and significant impact on the performance of construction enterprises in Nepal.</i>	0.033	Confirmed
<i>H₃: Political conditions have a positive and significant impact on the performance of construction enterprises in Nepal.</i>	0.042	Confirmed
<i>H₄: Regulatory provisions have a positive and significant impact on the performance of construction enterprises in Nepal.</i>	0.034	Confirmed

Table 3 shows the summary of hypotheses formulated for the study. The first hypothesis: H₁: Financial conditions have a positive and significant impact on the performance of construction enterprises in Nepal which was found positive and significant as p-value < 0.05. Next, the second hypothesis: H₂: Climatic conditions have a positive and significant impact on the performance of construction enterprises in Nepal which was also confirmed by its p-value < 0.05. The third hypothesis: H₃: Political conditions have a positive and significant impact on the performance of construction enterprises in Nepal found to be supported by its p-value < 0.05. Finally, the fourth hypothesis: H₄: Regulatory provisions have a positive and significant impact on the performance of construction enterprises in Nepal found to be confirmed by its p-value < 0.05.

4. DISCUSSION

The research conducted in the Kathmandu Valley mainly aimed at determinants of business performance of construction firms in Nepal: Financial conditions, climatic conditions, Political conditions, and government regulatory provisions as independent variables and performance of construction enterprises as dependent variables. The findings of the investigation showed a positive and significant impact of financial conditions on the performance of construction firms. It indicates that the better financial condition of construction firms is a key factor in fostering the performance of construction enterprises. This finding is in line with earlier studies (Hossain, 2009; Bondinuba, 2012; Ofori et al. Bashir et al., 2015; 2017; Small et al., 2017).

Similarly, the findings of the research revealed a positive and significant impact of climatic conditions on the performance of the construction sector in Nepal. It depicts that better conditions of climatic foster the performance of construction business. This finding is in the same direction as the previous findings (Sebt, Rajaei, & Pakseresht, 2007; Shahin et al., 2011). Additionally, the findings of the research revealed a positive and significant impact of political conditions and stability on the performance of the construction sector in Nepal. It depicts that better nations' political conditions enhance the performance of the construction business. This finding is in the



same direction as the findings of the previous studies (Djokoto et al., 2014; Kalyongwe et al., 2018). Finally, the government regulations mechanism positively and significantly impacted the performance of construction firms. It shows that a sound and favorable regulation mechanism is always a driver of the better performance and governance of construction enterprises. This evidence is compatible with the previous findings (Agamuthu, 2008; Yang, 2015; Bhavsar & Solanki, 2020). Thus, the findings of the study found compatible with existing theoretical foundations.

5. CONCLUSION

The major purpose of the study was to examine the determinants of business performance of construction enterprises in Nepal. Further, political unpredictability, regulatory limitations, and bureaucratic hold-ups are some of the issues facing the construction business. Thus, this study employed study independent variables financial conditions, climatic conditions, political, and regulatory provisions, and the dependent variable is business performance. The findings revealed that construction business performance is negatively impacted by financial difficulties, a lack of government backing, ineffective law enforcement, and political instability. The environment for the construction sectors is further deteriorated by exploitation and delays in government payments.

Thus, this study analyzed the factors that influence business success in Nepalese construction enterprises, with financial conditions, climatic conditions, political stability, and government regulatory provisions serving as independent variables. The findings show that financial stability is critical for improving the performance of construction companies. Similarly, ideal climatic circumstances help the building industry thrive and operate more efficiently. Political stability is seen as a critical factor in increasing construction company performance. Finally, a good regulatory framework improves the governance and overall success of the construction sectors.

5.1 Scope for further study

This study is relevant to the small and medium contractors' perspectives. However, sustainable construction practices have not been covered by the researcher. Further research may be carried out on sustainable construction practices and approaches adopted by the stakeholders in the construction business for sustainable construction development in Nepal. However, this study has limitations because it only covered the Kathmandu Valley, had a limited sample size, used cross-sectional data, and included a small number of covariates as determining variables. Therefore, more sample sizes, variables, and approaches covering the various organizational and geographic locations can be used in future studies.

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